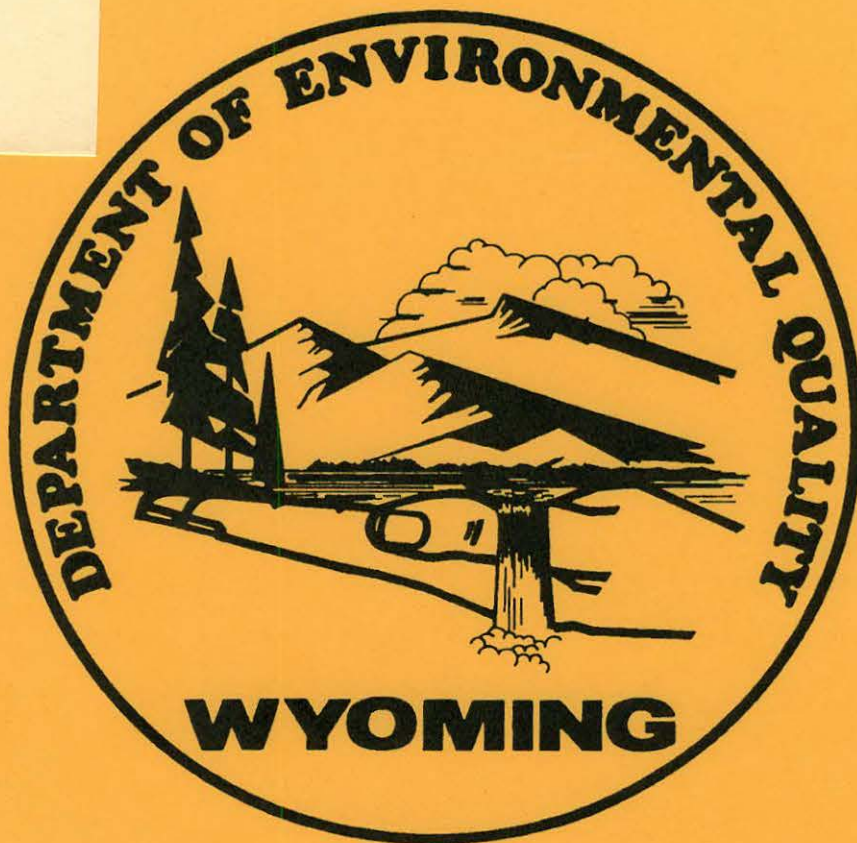


**DEPARTMENT OF ENVIRONMENTAL QUALITY
LAND QUALITY DIVISION**

Waitkus /



**NONCOAL
RULES AND REGULATIONS**

THESE RULES ARE CURRENT AS OF ~~1/27/2010~~

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CHAPTER 1

NONCOAL

AUTHORITIES AND DEFINITIONS

Section 1. **Authority.** These rules and regulations are adopted by the Environmental Quality Council and the Administrator of the Land Quality Division pursuant to the authority granted the Council and the Administrator by the Wyoming Environmental Quality Act, Sections 35-11-101 through 35-11-1106, Wyoming Statutes, 1977, as amended. These rules and regulations are effective upon filing with the Secretary of State.

Section 2. **Definitions.** The definitions included in the Wyoming Environmental Quality Act, are hereby adopted by this reference. All references to the "Act" herein refer to the Wyoming Environmental Quality Act, as amended.

(a) "Acid drainage" means water with a pH of less than 6.0 and in which total acidity exceeds total alkalinity, discharged from an active or inactive mine or from an area affected by mining and reclamation operations.

(b) "Acid-forming materials" means earth materials that contain sulfide minerals or other minerals which exist in a natural state or if exposed to air, water or weathering processes, will cause acid conditions that may hinder plant establishment or create acid drainage.

(c) "Adjacent areas" means land located outside the permit area upon which air, surface water, groundwater, fish, wildlife, or other resources protected by the Act may reasonably be expected to be adversely impacted by mining or reclamation operations. Unless otherwise specified by the Administrator, this area shall be presumptively limited to lands within one-half mile of the proposed permit area.

(d) "Administrator" means the Administrator of the Division of Land Quality.

(e) "Animal-unit" means one mature beef cow of approximately 1,000 pounds and a calf (up to 6 months old).

(f) "Applicant" means any "person" seeking a permit, permit revision, transfer, or other approval from the Administrator to conduct mining and reclamation operations, or "person" seeking a license to explore, but does not include subsidiaries or parents of the "person," as "person" is defined in W.S. § 35-11-103(a)(vi).

(g) "Aquifer" is a zone, stratum or group of strata that stores and transmits water in sufficient quantities for a specific use.

(h) "Best technology currently available" means equipment, devices, systems, methods, or techniques which, as determined by the Administrator, are currently available and practicable, and will:

(i) Prevent, to the extent possible, additional contributions of suspended solids to streamflow or runoff outside the affected land or permit area. But in no case shall contributions exceed requirements set by applicable State or Federal laws, and

(ii) Minimize, to the extent possible, disturbances and adverse impacts on fish, wildlife and related environmental values, and achieve enhancement of those resources where practicable.

(i) "Bond" means a surety or self-bond instrument by which the permit applicant assures faithful performance of all requirements of the Act, all rules and regulations promulgated thereunder, and the provisions of the permit and license to mine. This term shall also include any Federal insured certificates of deposit, cash, government securities, or irrevocable letters of credit which the operator has deposited with the Department of Environmental Quality in lieu of a Surety Bond or Self-Bond Instrument.

(j) "Combustible material" means organic material that is capable of burning.

(k) "Compaction" means the reduction of pore spaces among particles of soil or rock, generally done by controlled placement and running heavy equipment over the earthen material.

(l) "Comparison area" means a land unit which is representative, in terms of physiography, soils, vegetation and land use history, or a premining plant community from which no or insufficient vegetation data were collected prior to disturbance.

(m) "Complete application" means, for purposes of W.S. § 35-11-406(m)(i) and to indicate the Administrator's assessment of completeness and suitability for publication under W.S. § 35-11-406(h) and (j), an application for a permit which contains all information required by the Act and the Land Quality Division regulations that is necessary to make a decision on permit issuance.

(n) "Control area" means a land unit which is representative, in terms of physiography, soils, vegetation and land use history, of a plant community to be affected by mining activities as verified by a comparison of its quantitative and qualitative characteristics to similar information from the plant community it typifies and where a mathematical climatic adjustment is made.

(o) "Cover" means vegetation, litter, and rock over the soil which intercept rainfall.

(p) "Discoverer" means any person conducting or intending to conduct any exploration by drilling. This includes locator, owner or agent thereof who will drill or has drilled the hole.

(q) "Diversion" means a channel, embankment, device, or other manmade structure constructed for the purpose of diverting water from one area to another.

(i) "Permanent diversion" means a diversion remaining after bond release.

(ii) "Temporary diversion" means a diversion utilized during mining or reclamation operations, which must be removed and reclaimed prior to bond release.

(r) "Drill site" means all areas of land that are or will be disturbed or utilized by exploration drilling. This area includes drill holes or other drilled excavations, drilling pads, areas disturbed by mud pits, and any land over which drilling mud mixtures overflow or may disturb.

(s) "Embankment" means an artificial deposit of material that is raised above the natural surface of the land and used to contain, divert, or store water, support roads or railways, or other similar purposes.

(t) "Ephemeral stream" means a stream which flows only in direct response to precipitation in the immediate watershed or in response to snowmelt, and which has a channel bottom that is always above the prevailing water table.

(u) "Exploration area" means, for bonding purposes, one or more drill sites, comprising an integrated project conducted by a discoverer within one of the three districts presently established by the Land Quality Division of the Department of Environmental Quality.

(v) "Exploration by drilling" means any exploration drilling for the purpose of gathering subsurface geologic, physical or chemical data to determine the location, quantity or quality of the natural mineral deposit of an area, excluding holes drilled for use as water wells.

(w) "Gel strength" means the minimum shear stress which results in permanent deformation of a gel.

(x) "Groundwater" is subsurface water that fills available openings in rock or soil materials such that they may be considered water-saturated.

(y) "Hard rock surface mining" means surface mining of minerals deposited within or as igneous or metamorphic rocks or surface mining of rocks of sedimentary origin which are extremely well lithified. These include: anorthosite, copper ore, gold ore,

uranium, iron ore, dolomite, limestone, marble, serpentinite, phosphate, sandstone, pumice, feldspar, jade, and ballast rock.

(z) "Hazardous materials" means any material or substance which results from or is encountered in a mining operation which could reasonably be expected to cause physical harm if not controlled in an approved manner.

(aa) "Highest previous use" means a sustainable use of the land which has the greatest economic and social values to the people of the area prior to the commencement of the mining operation.

(ab) "Highwall" means the face of exposed overburden or minerals in an open cut of a surface mine or entry to an underground mine.

(ac) "Hydrologic balance" means the relationship between the quality and quantity of inflow to, outflow from, and storage in a hydrologic unit such as a drainage basin, aquifer, soil zone, lake or reservoir. It encompasses the quantity and quality relationships between precipitation, runoff, evaporation, and the change in ground and surface water storage.

(ad) "Hydrologic regime" means the entire state of water movement in a given area. It is a function of the climate and includes the phenomena by which water first occurs as atmospheric water vapor, passes into a liquid or solid form and falls as precipitation, moves thence along or into the ground surface, and returns to the atmosphere as vapor by means of evaporation and transpiration.

(ae) "Important habitat" means areas of especially high value for a diversity of wildlife or areas that provide certain elements essential to the existence of certain groups of wildlife. Examples of important habitat include, but are not limited to, wetlands, riparian areas, rimrocks, areas offering special shelter or protection, reproduction and nursery areas and wintering areas.

(af) "Impoundment" means a closed basin formed naturally or artificially built which is dammed or excavated for the retention of water, slurry or other liquid or semi-liquid material. A permanent impoundment is a structure that will remain after final bond release.

(ag) "Intermittent stream" means a stream or part of a stream that is below the local water table for some part of the year, but is not a perennial stream.

(ah) "Irreparable harm to the environment" means, for the purpose of W.S. § 35-11-406(o), any damage to the environment in violation of the Act or regulations, that cannot be corrected by actions of the applicant.

(ai) "Mine facilities" means those structures and areas incidental to the operation of the mine, including mine offices, processing facilities, mineral stockpiles, storage

facilities, shipping, loadout and repair facilities, utility corridors, mill facilities, tailings impoundment (excluding uranium mill tailings and mill facilities within the Nuclear Regulatory Commission license area), disposal areas, heap leach facilities, and spent ore disposal areas.

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

(ak) "Monitoring" means the collection of environmental and hydrological data by either continuous or periodic sampling methods.

(al) "Mulch" means plant residue or other suitable materials placed upon the soil surface to aid in soil stabilization and soil moisture conservation.

(am) "Outslope" means the face of the spoil or embankment sloping downward from the highest elevation to the toe.

(an) "Perennial stream" means a stream or part of a stream that flows continuously during all of the calendar year as a result of groundwater discharge or surface runoff.

(ao) "Permit area" means the area of land and water within the boundaries of the approved permit or permits during the entire life of the operation and includes all affected lands and water.

(ap) "Permit transfer" means a change in ownership or control over the right to conduct mining operations under a permit or license to mine.

(aq) "Potentiometric surface" means the surface that coincides with the static level of water in an aquifer. The surface is represented by the levels to which water from a given aquifer will rise under its full head.

(ar) "Precipitation event" means a quantity of water resulting from drizzle, rain, snow, sleet, or hail in a limited period of time. It may be expressed in terms of recurrence interval and duration.

(as) "Public road" means any thoroughfare open to the public which has been and is being used by the public for passage of vehicles, and is maintained by public funds.

(at) "Recharge capacity" means the ability of the soils and underlying materials to allow precipitation and runoff to infiltrate and reach the zone of saturation.

(au) "Reclaimed land surface" means affected land which has been backfilled,

graded, contoured, and revegetated in accordance with an approved reclamation plan.

(av) "Reference area" means a land unit which is representative, in terms of physiography, soils, vegetation and land use history, of a plant community to be affected by mining activities as verified by a statistical comparison of absolute values of percent cover and total herbaceous productivity between affected area and reference area data and no mathematical climatic adjustment is made.

(aw) "Revised mining or reclamation operations" means, except for incidental operation changes, mining and/or reclamation operations conducted during the term of a permit which differ from those operations described in the original mine permit application and approved under the original permit.

(ax) "Road(s)" means a surface right-of-way for purposes of travel by land vehicles including the roadbed, shoulders, parking areas, structures, and drainage features. Roads shall be classified to include:

(i) Haul roads: all roads utilized for the transport of the extracted mineral, overburden, or other earthen materials.

(ii) Access roads: all roads, exclusive of haul and light-use roads, utilized for the transportation of personnel, equipment, and small payloads of material within the permit area.

(iii) Light-use roads: those roads established and utilized for exploration, for occasional inspection of monitoring equipment, weather station, test plots, or for other purposes necessary to comply with the requirements of these regulations. Light-use roads shall be limited to:

(A) Roads or portions thereof which exist for less than six months and where the road is constructed by grading, cutting, filling or other methods whereby the natural land surface is disturbed; or

(B) Nonconstructed roads where the natural land surface is not physically altered by construction or grading; however, a two-tracked road occurs due to vehicle travel over the same course. Nonconstructed roads may include pioneer construction roads or roads used for transport of spoil and topsoil to stockpile sites which exist for not greater than two weeks and are then stabilized or replaced in accordance with these requirements.

(iv) Exempted roads: roads within the pit and those roads maintained by the county, State or Federal government, or those roads which are existing private roads except:

(A) When the existing road requires extensive regrading and resurfacing in order to render the road usable; or

(B) Upgrading of the road requires cuts, fills, and borrow areas.

(ay) "Safety factor" means the ratio of the available shear strength to the developed shear stress on a potential surface of sliding determined by accepted engineering practice.

(az) "Small operator" means any mining operation for which not more than 10,000 cubic yards of overburden are removed in any one year and the affected land does not exceed ten acres in any one year.

(ba) "Soft rock surface mining" means surface mining of materials deposited within or as sedimentary rock formations which include: uranium, sand and gravel, jade, bentonite, hot springs deposit, placer mining, clay, gypsum, oil shale, and scoria.

(bb) "Soil survey" means a field and other investigation which results in a map showing the geographic distribution of different kinds of soils based on taxonomic characteristics and includes a report that describes, classifies and interprets such soils for use in reclamation.

(bc) "Species composition" means number, kinds, amount, and quality of species.

(bd) "Species diversity" means number of species per unit area.

(be) "Spoil" means overburden removed during the mining operation to expose the mineral and does not include the marketable mineral, subsoil or topsoil.

(bf) "Stabilize" means to control movement of spoil, spoil piles, or areas of disturbed earth by modifying the geometry of the mass, adding control structures, or by otherwise modifying physical or chemical properties.

(bg) "Stagnant water" means naturally or artificially impounded water which, because of its poor quality or shallow depth, is unusable for livestock or wildlife watering, wildlife habitat, or recreational uses.

(bh) "Subsidence" means the measurable lowering of a portion of the earth's surface or substrata.

(bi) "Subsoil" means the B and C Horizons excluding consolidated bedrock material.

(bj) "Substantially affect" means to conduct activity which, in the determination of the Administrator will significantly impact land, air or water resources so as to disturb the

natural land surface.

(bk) "Surface water" means water, either flowing or standing, on the surface of the earth.

(bl) "Suspended solids" means organic or inorganic material carried or held in suspension in water which are retained by a standard glass fiber filter in the procedure outlined by the Environmental Protection Agency's regulations for wastewater analyses (40 CFR 136).

(bm) "Topsoil" means the A and E Horizons or any combination thereof.

(bn) "Toxic materials" means earthen materials or refuse which, if acted upon by air, water, weather, or microbiological processes, are likely to produce chemical or physical conditions in soils or water that are detrimental to biota or would restrict the common uses of water.

(bo) "Underground development waste" means earthen materials excavated, moved, and disposed of from underground workings in connection with mining activities.

(bp) "Underground mining activities" means underground operations necessary for the extraction of solid minerals by manmade excavations underneath the surface of the earth.

(bq) "Upland areas" means those geomorphic features located outside the area of unconsolidated streamlaid deposits and may include isolated higher terraces, alluvial fans, pediment surfaces, landslide deposits, and surfaces covered with residuum, mud flows or debris flows, as well as highland areas underlain by bedrock and covered by residual weathered material or debris deposited by sheetwash, rillwash, or windblown material.

(br) "Vegetation type" means a recognizable group of species growing together due to similar requirements and tolerances.

(bs) "Water table" means the upper surface of a zone of saturation, where the body of groundwater is not confined by an overlying impermeable zone.

Section 3. **Applicability.**

(a) All mining operations or operations by which solid minerals are intended to be extracted from the earth, which are commenced or conducted after the effective date of these rules and regulations, shall comply with the requirements hereof, except as specific exemptions are allowed by the Act.

(b) The discretionary exemptions shall be limited as follows:

(i) For the purpose of extraction of minerals pursuant to W.S. § 35-11-401(e)(ii), cooperative agreements between the individual counties and the Division may be entered into by the County Commissioners, the Director and the Administrator in order to facilitate the reclamation activities of those areas affected by the county.

(A) The County Commissioners of each county shall designate a person to coordinate the mining and reclamation activities of the individual county with the Division.

(B) The Division will assist each county in determining the best possible methods of reclamation and prevention of pollution and erosion arising from their mining operations.

(C) The county shall make an annual report to the Administrator detailing past year's activity of the county in mining and reclamation.

(c) Uranium mill tailings and uranium mill tailings impoundments permitted prior to March 13, 1987 may remain in or be removed from the permit area at the option of the permittee. Those tailings and impoundments remaining in the permit area will be regulated according to the conditions in the permit. Permit conditions relating to the uranium mill tailings and uranium mill tailing impoundments shall be amended as requested by the permittee. Removal of tailings areas and impoundment areas from the permit area shall be approved by the Administrator at the request of the permittee and may be accomplished either through a permit revision or through the annual report.

CHAPTER 2
REGULAR NONCOAL MINE
PERMIT APPLICATIONS

Section 1. General Requirements.

(a) All applications shall be filed in a format required by the Administrator and shall include, at a minimum, all information required by the Act and all the applicable information required under Section 2 of this Chapter.

(b) Information set forth in the application shall be current, presented clearly and concisely, and supported or authenticated, when appropriate, by references to technical material, persons, or public or private organizations which were used, consulted, or were responsible for collecting and analyzing the data.

(c) Maps submitted with the application shall be, or be the equivalent of, a U.S. Geological Survey topographic map at a scale determined by the Administrator, but in no event smaller than 1:24,000. All maps shall contain a title relative to the subject matter of the map, a map number, legend, and show the limits of the permit area.

(d) Applicants may reference materials. If used in the application, referenced materials shall either be provided to the Division or be readily available to the Division. Relevant portions of referenced materials shall be presented briefly and concisely in the application by photocopying or abstracting and with explicit citations.

(e) The applicant may consult with the local conservation district during preparation of the reclamation plan for conformance with technical standards and specifications which may have been adopted by the local conservation district for mined land reclamation.

(f) The applicant shall consult with both the Wyoming Game and Fish Department and the U. S. Fish and Wildlife Service prior to submission of the permit application. The Administrator shall also consult with both wildlife agencies during permit application review. The Administrator shall review recommendations from the wildlife agencies and may reject recommendations that are outside the scope of the Act. Those recommendations accepted by the Administrator shall be presented to the applicant for their review and comment. Those recommended mitigation plans from the wildlife agencies resulting from review and comment and accepted by the Administrator shall be incorporated into the permit application.

Section 2. General Application Content Requirements.

(a) In addition to that information required by W.S. § 35-11-406(a), each application for a mining permit shall contain:

(i) A description of the lands to be affected within the permit area, how these lands will be affected, for what purpose these areas will be used during the course of the mining operation, and a time schedule for affecting these lands. This description shall include:

(A) The major past and present uses of the proposed permit area and adjacent lands. Previous uses of affected lands must be ranked on an individual basis according to the overall economic or social value of the land use to the landowner, community, or area in which these lands are found. The Administrator of the Land Quality Division shall bear the responsibility of making the final decision on the ranking of land uses in a particular area. This decision must be based on information concerning the economy, historical use of the area, and the needs and desires of the landowner. The Land Quality Advisory Board may be consulted for suggestions or recommendations on the ranking of land uses in a given area.

(B) Vegetative cover.

(I) Grasses, forbs, trees and shrubs - the description shall include the common and scientific names of the predominating species and their estimated abundance within the proposed permit area. If trees are present within the proposed permit area, then the description shall include an estimate of the range of their heights and diameters.

(II) Noxious weeds - if any weeds or other plants listed by the local Weed and Pest Control District as harmful are present within the proposed permit area, the description shall include a list of their names, either common or scientific, and their abundance.

(III) Endangered or Threatened Species. If any State or Federally listed endangered or threatened plant species are known to exist within the permit area or in adjacent areas, their location shall be described and an evaluation provided on potential habitats within the permit area or in adjacent areas.

(C) Annual precipitation - the operator shall submit an estimated total annual precipitation for the proposed permit area. Data from the nearest official weather reporting station may be used. Operations more than 50 miles from an official weather station that are permanently staffed may be required to keep precipitation records.

(D) Average wind direction and velocity - the operator shall submit

the average wind direction and velocity recorded at the nearest official weather station or as measured at the site.

(E) Indigenous wildlife.

(I) The operator shall submit a list of the indigenous vertebrate wildlife species in the permit area by common and scientific names. Special attention shall be paid to the possible presence of wildlife on or adjacent to the proposed permit area which are listed on the "Threatened or Endangered Species List."

(F) Overburden, topsoil, subsoil, mineral seams or other deposits.

(I) Overburden - the operator shall submit a description including the thickness, geological nature (rock type, orientation, etc.), the presence of toxic, acid-forming, or vegetative-retarding substances, or any other factor that will influence the mining or reclamation activities.

(II) Topsoil - the operator shall submit a description of the thickness and nature of the topsoil, if any, over the proposed affected lands. A soils survey and soil analyses conducted in accordance with standard methods acceptable to the Administrator, may be required to show variations in topsoil depth and suitability.

(III) Subsoil - the nature, thickness and distribution of the subsoil, if any, shall be described over the proposed affected lands. Detailed analyses of the subsoil may be required, if there is reason to suspect it may be of better quality for revegetation than the topsoil, or if it is to function as a topsoil supplement in reclamation efforts. If the subsoil is suspected of containing substances that might cause pollution or hinder reclamation, analyses will provide a basis for determining how to handle this material during reclamation.

(IV) Mineral seams or other deposits - the operator shall submit a description of the mineral seams in the proposed permit area, including, but not limited to, their depth, thickness, orientation (strike and dip), and rock or mineral type. Maps or geologic cross-sections may be used to illustrate the description of the mineral seams.

(G) Surface waters.

(I) The operator shall list and describe the name and location for the present surface waters in and adjacent to the proposed permit area. The list shall include, but not be limited to, rivers, creeks, lakes, reservoirs, springs and marshes. Streams shall be classified as ephemeral, intermittent or perennial.

(II) The operator shall submit a description of the immediate drainage area which includes the proposed permit area. Surface water use shall be

identified as to domestic, municipal, industrial, agricultural, and wildlife.

(H) Groundwater.

The operator shall submit an estimate of the depth and quantity of any groundwater existing in the proposed permit area down to and including the strata immediately below the lowest mineral seam to be mined. The operator may be required to conduct test drilling and monitoring in order to determine the exact depth, quantity and quality of groundwater in geological formations affected by the mining operations. Such drilling will require permits from the State Engineer's Office.

(I) Water rights.

(I) The operator shall list by name and owner all known adjudicated and permitted water rights on the proposed permit area and adjacent lands.

(II) The operator shall submit a list by name and owner of all existing water wells on the proposed permit area and adjacent lands, including all wells filed with the State Engineer's Office three miles or less from the proposed permit area. A survey of the premining water levels in the above wells may be required.

(J) A description of any significant artifacts, fossil or other article of cultural, historical, archaeological or paleontological value. Upon recommendation by a qualified archaeologist or a qualified paleontologist, the Administrator may require an evaluation of the proposed permit area prior to the time that a permit or license is issued.

(b) In addition to that information required by W.S. § 35-11-406(b), each application for a mining permit shall contain:

(i) A description of the mining operation proposed to be conducted during the life of the mine, including:

(A) A narrative description of the type and method of mining, the number of acres that will be affected annually, overburden and mineral removal and transport, anticipated annual and total production by tonnage, and the major equipment to be used for all aspects of the operations.

(B) A map showing the estimated orderly progression of mining and reclamation on all proposed affected lands.

(ii) A time schedule for each major step in the reclamation which coordinates the operator's reclamation plan with the mining plan in such a manner so as to facilitate reclamation at the earliest possible time consistent with Chapter 3, Section 2(k) and the orderly development of the mining property.

(iii) A plan whereby the operator will reclaim the affected lands to the proposed postmining land use in accordance with Chapter 3, Section 2(a) which shall include:

(A) A plan for topsoil and subsoil removal, storage, protection, and replacement; and for handling and disposal of all toxic, acid-forming, or otherwise hazardous materials, in accordance with Chapter 3, Section 2(c). This shall include a description with location maps and, where appropriate, typical topographic profiles of the mine facility area, mineral stockpiles, spoil piles, and topsoil and subsoil stockpiles. The location, and where required, the capacity of each stockpile shall be described and shown on a map. The application shall also explain how the topsoil will be replaced on the affected land during reclamation, including a description of the thickness of topsoil to be replaced and procedures that will be followed to protect the topsoil from excessive compaction and wind and water erosion until vegetation has become adequately established.

(B) A plan for backfilling, grading and contouring of all affected lands in accordance with Chapter 3, Section 2(b). The plan shall include:

(I) A description of the reclaimed land surface with contour maps or cross-sections that show the final surface configuration of the affected lands;

(II) Where terraces or benches are proposed, detailed drawings shall be provided which show dimension and design of the terraces, check dams, any erosion prevention techniques and slopes of the terraces and their interval;

(III) Where permanent water impoundments are proposed, contour maps and cross-sections which show slope conditions around the impoundment and the anticipated high and low postmining water level. The plan shall contain a description of erosion control techniques and such other design criteria and water quality and quantity conditions to comply with Chapter 3, Section 2(g);

(IV) Maps and descriptions necessary to demonstrate that the slopes of the reclaimed land surface do not exceed the approximate premining slopes; and

(V) Procedures for assuring stability of the reclaimed land surface.

(C) A plan to assure revegetation of all affected land in accordance with Chapter 3, Section 2(d). The plan shall include the method and schedule of revegetation, including but not limited to species of plants, seeding rates, seeding techniques, mulching requirements or other erosion control techniques, and seeding times to be used in a given area for reclamation purposes. The plan shall also reflect reclamation recommendations accepted by the Administrator through consultation with the Wyoming Department of Agriculture if the applicant is proposing to reclaim an area to croplands.

(D) Descriptions, including maps and cross-sections, of the surface water diversion systems which meet the requirements of Chapter 3, Sections 2(e) and (f). Monitoring of surface and groundwater conditions may be required during the course of the operation based on the existing water conditions and the nature of the proposed operation. If so required, the application shall include a description of the location, construction, maintenance, and removal, where necessary, of such monitoring stations.

(E) Where a permanent water impoundment is proposed as final reclamation, the application shall include:

(I) Written consent from the surface landowner if different than the mineral owner;

(II) A description of the proposed use of the impoundment;

(III) A statement of the source, quality and quantity of water available for impoundment and a statement regarding its suitability for recreational, irrigation, livestock or wildlife watering. If, upon review of this information, water quality and quantity are not reasonably demonstrated to be suitable for the postmining use, the applicant shall be so notified in writing and shall be allowed to submit further documentation in support of the proposed impoundment to reasonably satisfy the Administrator. If the applicant is unable to demonstrate to the satisfaction of the Administrator that the water quality and quantity will be suitable for the postmining land use, the applicant shall provide an alternate plan;

(IV) The operator may be required to monitor surface and groundwater in order to determine that upon completion of the operation, the water quality and quantity will be consistent with the approved postmining use; and

(V) A description of the construction of the impoundment so as to meet the requirements of Chapter 3, Section 2(g).

(F) A plan to assure proper design, construction, operation, monitoring, maintenance and reclamation of any tailings impoundments, tailings disposal areas, heap leaching facilities and spent ore disposal areas utilizing best technology currently available in accordance with the Act and these regulations.

(G) A classification and description, including maps and cross-sections, if appropriate, of all roads (except exempted roads), other transportation facilities, shipping areas and rights-of-way to be built or utilized during the operation. The classification shall designate the road as either a haul road, access road, or light-use road. The description shall include:

(I) Legal ownership - if the operator includes roads or spur

lines within the permit area but does not possess the mineral rights or the right-to-mine for these lands, the legal land description shall then be listed in the application as a separate subsection in Appendix "C." The heading of the subsection shall make it clear that the right-to-mine is not claimed on the described lands. Surface owners shall be listed for all lands crossed by spur lines and roads.

(II) All information necessary to show compliance with the requirements of Chapter 3, Section 2(i).

(H) A plan for the disposal of buildings and structures erected, used or modified by the applicant in accordance with the requirements of Chapter 3, Section 2(j).

(I) A plan for the management and disposal within the proposed permit area of industrial solid wastes generated by the operation (such as, but not limited to, grease, lubricants, paints, flammable liquids, garbage, trash, discarded mining machinery, lumber and other combustible materials) in accordance with Chapter 3, Section 2(c) and with those provisions of the Solid Waste Management Rules and Regulations deemed appropriate by the Administrator.

CHAPTER 3

NONCOAL MINE

ENVIRONMENTAL PROTECTION PERFORMANCE STANDARDS

Section 1. General. This Chapter sets forth the environmental protection performance standards applicable to all mining operations. No mining operation shall be conducted except in compliance with the requirements hereof.

Section 2. General Environmental Protection Performance Standards.

(a) Land uses.

(i) Reclamation shall restore the land to a condition equal to or greater than the "highest previous use." The land, after reclamation, must be suitable for the previous use which was of the greatest economic or social value to the community area, or must have a use which is of more economic or social value than all of the other previous uses.

(ii) Operators are required to restore wildlife habitat, whenever the Administrator determines that this restoration is possible, on affected land in a manner commensurate with or superior to habitat conditions which existed before the land became affected, unless the land is private and the proposed use is for a residential or agricultural purpose which may preclude its use as wildlife habitat.

(iii) Water impoundments used for recreational purposes shall be constructed in accordance with the statutes and (g) of this Section. Recreational lands, other than water impoundments, represent changes in the land which may or may not be suitable for wildlife habitat.

(b) Backfilling, grading and contouring.

(i) Backfilling, grading, and contouring of affected land shall be accomplished by one or more of the following as detailed in the approved reclamation plan:

(A) Reestablishment of the contour of the land in a manner consistent with the proposed future use of the land;

(B) Reestablishment of adequate through drainage if such a provision is necessary to prevent pollution or diminution of the quantity and quality of the surface water and groundwater;

(C) Contouring of affected land to blend in with the topography of the surrounding terrain unless so doing would create an erosion problem or a hazard to man or beast; and

(D) Creation of water impoundments for a use certified in an approved plan in accordance with the statutes and (g) of this Section.

(ii) Soft rock surface mining.

(A) If the reclamation plan does not provide for a permanent water impoundment, the final pit area shall be backfilled, graded, compacted and contoured to the extent necessary to return the land to the use specified in the approved plan. In preparation of slope specifications in the plan, the operator shall consider an average of the measured slopes in the immediate area of the proposed mine site. Slopes in the reclaimed area shall approximate the premining slopes. Slopes greater than the approximate premining slopes may be approved if the operator can demonstrate to the satisfaction of the Administrator that returning the mined area to a slope equal to or less than the approximate premining slopes would create an unwarranted increase in the amount of affected lands or that greater slopes would enhance the postmining land use. Individual slope measurements, locations of the measurements, and the average measurement shall be submitted with the reclamation plan. In determinations of the approximate premining slope, the Land Quality Division may make an independent slope survey. All backfilling, grading, and contouring will be done in such a manner so as to preserve the original drainage or provide for approved adequate substitutes. No depressions to accumulate water will be permitted unless approved in the reclamation plan as being consistent with the proposed future use of the land.

(B) Terraces or benches may be used only when it can be shown to the Administrator's satisfaction that other methods of contouring will not provide the required result. If terracing is proposed, detailed plans indicating the dimensions and design of the terraces, check dams, any erosion prevention techniques, and slopes of the terraces and their intervals will be required.

(C) If the reclamation plan provides for a permanent water impoundment and this use has been approved according to the requirements outlined in the Act and these regulations, the exposed pit areas must be sloped, graded, and contoured so as to blend in with the topography of the surrounding terrain and provide for access and revegetation. Riprapping where necessary to prevent erosion will be required. Sloping requirements will be as described above. Under certain conditions wherein it can be demonstrated to the Administrator's satisfaction that the pitwall can be stabilized by terracing or other techniques it may be permissible to leave not more than one-half of a proposed shoreline composed of the stabilized pitwall. The remaining portion of the shoreline must be graded and contoured so as to provide access and blend in with the

topography of the surrounding terrain. In the event that a partial pitwall is proposed as final reclamation, the operator must submit a detailed explanation of the techniques to be used to establish the stability of the pitwalls in his reclamation plan. At the Administrator's discretion, a study of the proposed pitwall stabilization techniques may be required from an independent engineering company for purposes of verifying the effectiveness of the proposed stabilization techniques. The Land Quality Division will determine the acceptability of the proposed stabilization techniques based on this information and an on-site inspection.

(D) Highwall retention may be considered on a case-by-case basis for enhanced wildlife habitat. The Wyoming Game and Fish Department shall be consulted by the applicant for need and design of the land form. Any approval under this paragraph shall be based on a demonstration of safety, stability, environmental protection, and equal or better land-use considerations.

(iii) Hard rock surface mining.

(A) If the reclamation plan does not provide for a permanent water impoundment, all disturbed areas shall be returned to a condition suitable for the use specified in the approved plan. The final pit area shall be backfilled, graded, and contoured as much as possible considering the physical characteristics of the land and rock materials. Whenever possible, pitwalls shall be reduced, graded, and contoured to blend in with the topography of the surrounding terrain. Where it is not possible to reduce pitwalls, based on the character of the rock encountered or economic considerations, the pitwalls must be stabilized by terracing or other acceptable engineering techniques. Plans for pitwall stabilization shall be submitted in compliance with procedures specified. The base of the pits which will be partially surrounded by highwalls must be graded, contoured and prepared for topsoil placement. Graded and contoured access to the base of such pits must be provided.

(B) If the reclamation plan provides for a permanent water impoundment and this use has been approved, all sources of possible water contamination within the pit must be covered with overburden or stabilized in such a manner so as not to contaminate the water in the resulting impoundment. Where possible, based on the characteristics of the rock, nature and extent of the mining operation, pitwalls extending above the projected water level within the pit area must be reduced, graded and contoured so as to blend in with the topography of the surrounding terrain. Where it is not possible to reduce pitwalls, based on the character of the rock involved or economic feasibility of reducing the highwalls, the highwalls must be stabilized by terracing or other acceptable engineering techniques. Plans for pitwall stabilization must be submitted following the procedure as indicated in this Chapter. Graded and contoured access to the impoundment must be provided. Backfilling, grading and contouring of affected areas above the projected high water line that is not occupied by stabilized highwalls will be required when the physical land characteristics are such that this activity is possible.

(c) Topsoil, subsoil, overburden, and refuse.

(i) Topsoil.

(A) All topsoil or approved surface material shall be removed from all areas to be affected in the permit area prior to these areas being affected unless otherwise authorized by the Administrator. The topsoil may be mixed with the subsoil but shall be segregated so as not to become mixed with spoil or waste material, stockpiled in the most advantageous manner and saved for reclamation purposes. 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, utility lines, fences, monitoring stations and drilling provided that the minor disturbance will not destroy the protective vegetative cover, increase erosion, or adversely affect the soil resource.

(B) When topsoil is not promptly redistributed, the topsoil or approved surface material shall be stockpiled on stable areas within the permit area in such a manner so as to minimize wind and water erosion and unnecessary compaction. In order to accomplish this, the operator shall establish, through planting or other acceptable means, a quick growing cover of vegetation on the topsoil stockpiles. The topsoil shall also be protected from acid or toxic materials, and shall be preserved in a usable condition for sustaining vegetation when placed over affected land. Provided however, where long-term disturbance will occur, the Administrator may authorize the temporary distribution of topsoil to enhance stabilization of affected lands within the permit area. Where this is authorized, the Administrator shall find that the topsoil or subsoil capacity and productive capabilities are not diminished, that the topsoil is protected from erosion, and will be available for reclamation.

(C) Reclamation shall follow mining as soon as is feasible so as to minimize the amount of time topsoil must be stockpiled. Where topsoil has been stockpiled for more than one year, the operator may be required to conduct nutrient analyses to determine if soil amendments are necessary.

(D) Topsoil stockpiles shall be marked with a legible sign containing letters not less than six inches high on all approach roads to such stockpiles. Said signs shall contain the word "Topsoil" and shall be placed not more than 150 feet from any and all stockpiles of topsoil. Such signs must be in place at the time stockpiling is begun.

(E) Topsoil, or an approved substitute, shall be distributed at an approximate uniform depth on the surface of all lands affected consistent with the approved permit and the postmining land use.

(F) If abundant topsoil is present, and it is not all needed to

accomplish the reclamation required in the approved reclamation plan, the Administrator may approve of use of this topsoil by this or another operator in another area for reclamation purposes.

(G) Trees, large rocks and other waste material which may hinder redistribution of topsoil shall be separated from the topsoil before stockpiling.

(ii) Subsoil.

(A) Except as provided in (B), all subsoil determined by field methods or chemical analysis to be suitable as a plant-growth medium shall be removed from all areas to be affected and handled in accordance with the topsoil requirements of this Section.

(B) Upon an adequate demonstration by the operator that all or a portion of the subsoil material is not needed to meet the revegetation and land use requirements of these regulations, the Administrator may authorize all or a portion of the subsoil to not be used for reclamation. The unused subsoil may then be regarded as overburden material and handled in accordance with the requirements of this Section.

(iii) Topsoil and subsoil substitutes.

(A) If insufficient suitable topsoil or subsoil is available for salvage or redistribution, then an operator may use selected overburden as a topsoil substitute. The operator shall demonstrate by analysis or test plots that the substitute material is suitable as an alternative material.

(B) Topsoil substitute stockpiles shall be segregated from topsoil and overburden piles and shall be identified as substitute material. Identification signs shall be placed not more than 150 feet from all stockpiles of substitute material. Such signs shall be in place at the time stockpiling is begun.

(C) If overburden is to be used in reclamation as a substitute for topsoil, all large rocks and other waste material which may hinder redistribution shall be separated before stockpiling.

(iv) Overburden, spoil and refuse.

(A) All overburden, spoil material and refuse shall be segregated from the topsoil and subsoil and stockpiled in such a manner to facilitate the earliest reclamation consistent with the approved reclamation plan.

(B) Except where diversions are authorized by these regulations, all overburden, spoil material, and refuse piles must be located to avoid

blocking intermittent or perennial drainages and floodplains in order to minimize loss and spread of material due to water erosion. Ephemeral drainages may be blocked if environmentally sound methods for dealing with runoff control and sedimentation are approved by the Administrator.

(I) For temporary stockpiles, material should be replaced in pits as soon as possible consistent with the approved reclamation plan to minimize the amount of time material is stockpiled.

(II) If permanent overburden, spoil, or refuse piles have been approved by the Administrator, they shall be designed, graded and contoured so as to blend in with the topography of the surrounding terrain. Spoil material shall not be deposited on slopes that exceed 20 degrees, unless the operator demonstrates to the satisfaction of the Administrator that this material will be stable and can be revegetated as required by this Section. The slopes of all spoil areas must be designed so that they will be stabilized against wind and water erosion. After the grading and contouring of these stockpiles, topsoil or approved subsoil must be distributed over them in preparation for the revegetation procedure. Revegetation must be completed in accordance with requirements of this Chapter. A permanent drainage system must be established consistent with these regulations.

(C) All topsoil shall be removed from areas to be used for piling spoil material prior to the beginning of piling this material.

(D) The operator may be required to have analyses made of spoil material in order to determine if it will be a source of water pollution through reaction with leaching by surface water. If it is determined that this condition may exist, the operator shall describe proposed procedures for eliminating this condition.

(E) All overburden and spoil material that is determined to be toxic, acid-forming or will prevent adequate reestablishment of vegetation on the reclaimed land surface, unless such materials occur naturally on the land surface, must be properly disposed of during the mining operation.

(v) Management and final burial on the permit area of all industrial solid wastes generated by the operation (such as, but not limited to, grease, lubricants, paints, flammable liquids, garbage, trash, discarded mining machinery, lumber and other combustible materials) shall be in accordance with this Section and with provisions of the Solid Waste Management Rules and Regulations deemed appropriate by the Administrator.

(d) Revegetation.

(i) Revegetation of all affected lands shall be accomplished in a

manner consistent with the approved reclamation plan and the proposed future use of the land.

(ii) Land which did not support vegetation prior to becoming affected land need not be revegetated unless subsoil or overburden from such affected land will support vegetation. The operator shall demonstrate to the Administrator's satisfaction that revegetation or reforestation is not possible if he seeks to proceed under the provisions of this subsection.

(iii) After backfilling, grading, and contouring and the replacement of topsoil, and/or approved substitutes, revegetation shall be commenced in such a manner so as to most efficiently accommodate the retention of moisture and control erosion on all affected lands to be revegetated. In addition, any fertilizer requirements as determined on the basis of previous analysis must be fulfilled.

(iv) Seeding which is accomplished by mechanical drilling shall be on the topographic contour, unless for safety reasons it is not practicable, or perpendicular to the prevailing wind on flat areas. Seeding of affected lands shall be conducted during the first normal period for favorable planting conditions after final preparation unless an alternative plan is approved. Any rills or gullies that would preclude successful establishment of vegetation or achievement of postmining land use shall be removed or stabilized. The species of vegetation to be used in revegetation efforts shall be described in the reclamation plan indicating the composition of seed mixtures and the amount of seed to be distributed on the area on a per acre basis. Seed types will depend on the climatic and soil conditions prevailing in the permit area and the proposed use of the land after reclamation. Species to be planted as permanent cover shall be self-renewing. Seeding rates will depend on seed types, climatic and soil conditions and the techniques to be used in seeding.

(v) Introduced, naturalized or non-indigenous native plant species, may be included in the approved seed mixture if they support the approved postmining land uses. The operator shall document, unless otherwise authorized by the Administrator, the suitability of these species using data from published literature, from experimental test plots, from on-site experience, or from other information sources.

(vi) The Administrator shall not release the entire bond of any operator until such time as revegetation is completed, if revegetation is the method of reclamation as specified in the operator's approved reclamation plan. Revegetation shall be deemed to be complete when: (1) the vegetation species of the reclaimed land are self-renewing under natural conditions prevailing at the site; (2) the total vegetation cover of perennial species (excluding noxious weed species) and any species in the approved seed mix is at least equal to the total vegetation cover of perennial species (excluding noxious weed species) on the area before mining; (3) the species diversity and composition are suitable

for the approved postmining land use; and (4) the requirements in (1), (2) and (3) are achieved during one growing season, no earlier than the fifth full growing season on the reclaimed lands. The Administrator shall specify quantitative methods and procedures for determining whether equal total vegetation cover has been established and procedures for evaluating postmining species diversity and composition. The following options or an alternative success standard approved by the Administrator are available:

(A) The method utilizing control areas may be selected. If selected, the control areas shall be sampled for total vegetation cover and species diversity and composition in the same season that the area to be affected is sampled for baseline data. Quantitative premining and postmining vegetation data from the control areas shall be used to mathematically adjust premining affected area data for climatic change. Premining affected area total vegetation cover data will be directly compared by statistical procedures to data from the reclaimed vegetation type when evaluating revegetation success for final bond release. Species diversity and composition data will be qualitatively or quantitatively evaluated as determined by the Administrator;

(B) The method utilizing reference areas may be selected. If selected, the representativeness of the reference area is verified by a statistical comparison to the plant community that it typifies. Postmining total vegetation cover data from the reference area are directly compared by standard statistical procedures to total vegetation cover data from the reclaimed area when evaluating revegetation success for final bond release. Species diversity and composition data will be qualitatively or quantitatively evaluated as determined by the Administrator;

(C) Where the premining total vegetation cover and species diversity and composition data cannot be collected, or where the area to be affected is small and incidental to the operation, comparison areas may be selected. For purposes of this method, postmining qualitative and quantitative data from the comparison area are directly compared by procedures acceptable to the Administrator to data from the reclaimed lands when evaluating success of revegetation for final bond release;

(D) Without regard to the type of method selected, control, reference or comparison areas should be at least two acres in size, located in areas where they will not be affected by future mining, while serving their designated use, managed in a fashion which will not cause significant changes in the vegetation parameters of total vegetation cover and species diversity and composition and be representative of the postmining land use;

(E) If reforestation for commercial harvest is the method of revegetation, reforestation shall be deemed to be complete when a reasonable population density as established in the reclamation plan has been achieved, the trees have shown themselves capable of continued growth for a minimum period of five years following planting, and the understory vegetation is adequate to control erosion and is appropriate

for the land-use goal. Quality and quantity, vegetation cover, productivity, and species diversity shall be determined in accordance with scientifically acceptable sampling procedures approved by the Administrator; and

(F) When the approved reclamation plan is to return to cropland, reclamation shall be deemed to be complete when productive capability is equivalent, for at least two consecutive crop years, to the premining conditions or approved reference areas. The premining production data for the reclaimed site shall be considered in judging completeness of reclamation whenever said data are available.

(vii) Any plans for irrigation must be explained.

(viii) The operator must protect young vegetative growth from being destroyed by livestock by fencing or other approved techniques for a period of at least two years, or until the vegetation is capable of renewing itself with properly managed grazing and without supplemental irrigation or fertilization. The Administrator, permittee and the landowner or land managing agency shall determine when the revegetated area is ready for livestock grazing.

(ix) In those areas where there were no or very few noxious weeds prior to being affected by mining, the operator must control and minimize the introduction of noxious weeds into the revegetated areas for a period of at least five years after the initial seeding.

(e) Diversion systems - unchannelized surface water and ephemeral streams.

(i) Surface water shall be diverted around the operation for the following purposes:

- (A) To control water pollution;
- (B) To control unnecessary erosion;
- (C) To protect the on-going operation; and
- (D) To protect the water rights of downstream users.

(ii) Temporary diversion of surface runoff or diversions used for erosion control shall meet the following standards:

- (A) In soils or other unconsolidated material, the sides of diversion ditches shall be no steeper than 1.5:1;
- (B) In rock, the sides of diversion ditches shall not overhang;

(C) In soils or unconsolidated materials, the sides and, in ditches carrying intermittent discharges, the bottom shall be seeded with approved grasses so as to take advantage of the next growing season;

(D) Rock riprap, concrete, soil cement or other methods shall be used where necessary to prevent unnecessary erosion;

(E) Culverts or bridges shall be installed where necessary to allow access by the surface owner for fire control and other purposes; and

(F) Diversion ditches shall in a nonerosive manner pass the peak runoff from a 2-year, 6-hour precipitation event, or a storm duration that produces the largest peak flow, as specified by the Administrator.

(iii) In no case shall diversion ditches discharge upon topsoil storage areas, spoil or other unconsolidated material such as newly reclaimed areas.

(iv) Permanent diversion structures shall be designed to be erosionally stable during the passage of the peak runoff from a 100-year, 6-hour precipitation event, or a storm duration that produces the largest peak flow, as specified by the Administrator.

(f) Diversion of intermittent and perennial streams.

(i) In no case shall spoil, topsoil, or other unconsolidated material be pushed into, or placed below the flood level of a perennial or intermittent stream except during the approved construction of the diversion of said stream.

(ii) The Wyoming Game and Fish Department shall be consulted prior to the approval of a diversion of a perennial or intermittent stream.

(iii) The banks of a diverted perennial or intermittent stream shall be protected by vegetation by planting approved species to take advantage of the next growing season.

(iv) The banks and channel of a diverted perennial or intermittent stream shall be protected where necessary by rock, riprap or similar measures to minimize erosion and degradation of water quality. Permanent diversions shall be designed and constructed to be erosionally stable. The design of the permanent diversion shall also be consistent with the role of the fluvial system.

(v) Mining on the floodplain of a perennial or intermittent stream shall not be permitted if it would cause the uncontrolled diversion of the stream during periods of high water.

(vi) Waters flowing through or by the mining operation shall meet the standards set by the U.S. Environmental Protection Agency and the Wyoming Water Quality Division in regard to the effect of the operation upon such waters.

(vii) Channel and floodplain shall be designed to pass, in a nonerosive manner, the 10-year, 6-hour precipitation event, if temporary, or the 100-year, 6-hour precipitation event, if permanent, or a duration having a greater peak flow, as specified by the Administrator. Cross-sections of the existing stream above, below and within the disturbed area may be used to determine the flow capacities, channel configuration and shape.

(g) Permanent water impoundments. Permanent water impoundments shall be constructed in accordance with the following requirements:

(i) Dams must contain an overflow notch and spillway so as to prevent failure by overfilling and washing. Overflow notches and spillways must be riprapped with rock or concrete to prevent erosion;

(ii) The slopes around all water impoundments must be gentle enough so as not to present a safety hazard to humans or livestock and so as to accommodate revegetation. Variations from this procedure may be approved by the Administrator based on the conditions present at the individual locality;

(iii) Mineral seams and other sources of possible water contamination within the impoundment area must be covered with overburden or stabilized in such a manner to prevent contamination of the impounded water; and

(iv) Bentonite or other mire-producing material within the impoundment basin shall be removed or covered with materials which will prevent hazards to man or beast.

(h) Tailings impoundments, tailings disposal areas, heap leach facilities, and spent ore disposal areas, excluding uranium mill tailings facilities regulated by the United States Nuclear Regulatory Commission.

(i) Tailings impoundments, tailings disposal areas, heap leach facilities and spent ore disposal areas shall be designed, constructed, and operated in accordance with established engineering principles using best technology currently available to ensure long term stability and to prevent contamination of surface or groundwater. Appropriate leak detection and groundwater monitoring systems shall be installed to detect any movement of contaminated fluids from the facility. Any leakage or movement of contaminated fluids shall be promptly controlled and remediated using the best technology currently available subject to the Administrator's approval. Impoundments shall be permitted by the Wyoming State Engineer's Office and copies of

the State Engineer's permits shall be attached to the application.

(ii) Reclamation of tailings impoundments, tailings disposal areas, heap leach facilities, and spent ore disposal areas shall be accomplished by removal and storage of all topsoil present within the affected lands. After termination of operations, the facility shall be reclaimed in accordance with the approved plan using best technology currently available to ensure long term stability, prevent contamination of surface or groundwater and facilitate the approved postmining land uses. Placement of tailings and spent ore within mine pits or underground mine areas is considered to be a preferred option which shall be thoroughly evaluated in the development of the mine and reclamation plan. The topsoil shall be replaced and revegetated in accordance with these rules and regulations. If other methods of reclamation and stabilization against wind and water erosion are found to be necessary because of natural conditions, this must be stated and described subject to the Administrator's approval.

(i) Roads and railroads. Constructed or upgraded roads and railroad spurs shall be included within the permit area from that point that they provide exclusive service and shall be covered by a reclamation bond.

(i) Roads shall not be constructed up a stream channel or so close that the material shall spill into the channel, unless specifically approved by the Administrator.

(ii) Streams shall be crossed at or near right angles unless contouring down to the streambed will result in less potential streambank erosion. Structure of ford entrances and exits must be constructed to prevent water from flowing down the roadway.

(iii) Drainage control structures shall be used as necessary to control runoff and to minimize erosion, sedimentation and flooding. Drainage facilities shall be installed as road construction progresses.

(iv) Culverts shall be installed at prominent drainageways, or as required by the Administrator. Where necessary, culverts must be protected from erosion by adequate rock, concrete or riprap. Culverts and drainage pipes shall be constructed to avoid plugging, collapsing, or erosion at inlets and outlets.

(v) Trees and vegetation may be cleared only for the essential width necessary to maintain slope stability and to serve traffic needs.

(vi) Access, haul roads and drainage structures shall be routinely maintained.

(vii) Other transport facilities and utilities shall be constructed and maintained to control diminution of degradation of water quality and quantity and to the

extent possible prevent additional contributions of suspended solids to streamflow outside the permit area.

(viii) Exemptions concerning roads.

(A) If approval is obtained from the surface landowner to leave a road unreclaimed, an operator may request in writing to the Land Quality Division that a road be permitted to remain unreclaimed. The operator must furnish proof of the surface landowner's approval. Final decision of road reclamation will be made by the Land Quality Division Administrator.

(B) In the event that the surface landowner, a city or town, another agency of the State of Wyoming or an agency of the United States Government has requested that a road not be reclaimed, no bond shall be required of the applicant for the reclamation of the road and reclamation of the road shall not be required; provided, however, that the Administrator receives a copy of the written request from the surface owner, city or town, or agency of the State or Federal Government, for retention of the road.

(j) Disposal of buildings and structures.

(i) All buildings and structures constructed, used or improved by the operator must be removed or dismantled unless it can be demonstrated to the Administrator's satisfaction that the buildings or structures will be of beneficial use in accomplishing the proposed use of the land after reclamation or for environmental monitoring.

(ii) If the operator does not wish to remove certain buildings or facilities, he must obtain the written consent of the surface landowner to leave the buildings or facilities intact. The operator must make a request in writing, providing written proof of the above to the Land Quality Division, that the buildings or facilities be permitted to remain intact.

(k) Time schedule.

(i) Reclamation must begin as soon as possible after mining commences and must continue concurrently until such time that the mining operation is terminated and all of the affected land is reclaimed. If conditions are such that final reclamation procedures cannot begin until the mining operation is completed, this must be explained in the reclamation plan. A detailed time schedule for the mining and reclamation progression must be included in the reclamation plan. This time schedule shall:

(A) Apply to reclamation of all lands to be affected in the

permit area;

(B) Designate times for backfilling, grading, contouring and reseedling;

(C) Be coordinated with a map indicating the areas of progressive mining and reclamation;

(D) Establish reclamation concurrently with mining operations, whenever possible. If not possible, the schedule shall provide for the earliest possible reclamation consistent with the orderly and economic development of the property; and

(E) If the Administrator approves a schedule where reclamation follows the completion of mining, describe the conditions which will constitute completion or termination of mineral production.

(ii) If reclamation of an area is delayed beyond 180 days after termination of a mining operation on the basis that economic conditions may make it profitable to continue mining in the area in the future, this must be explained in a written request for interim mine stabilization.

(A) The Administrator has the authority to approve or disapprove a request for interim mine stabilization for a period not to exceed five years. The Administrator shall evaluate the operator's written request for interim mine stabilization on the operator's demonstration that:

(I) Economic conditions are such that mining cannot continue at the present time;

(II) There are marginal reserves remaining in the area. The permit mine plan must show a plan for mining these reserves; if the mine plan does not, the operator shall submit a permit revision subject to the requirements of Chapter 7;

(III) Certain affected lands must remain unreclaimed in order to provide practicable access to, or development of, the marginal reserves identified in (II) above. These areas must be stabilized to protect public health, safety and welfare; and

(IV) Sufficient means are employed to reclaim and stabilize all affected lands, excluding those identified in (III) above, to protect the public health, safety and welfare and the environment. This shall include the prevention of surface and subsurface water pollution, avoid public nuisance and provide safety measures to protect human and animal life.

(B) All interim mine stabilization requests and renewals must be accompanied by written consent from the surface landowners to the proposed plan. The Council may issue an order in lieu of consent if it finds that:

(I) The stabilization plan has been submitted to the surface landowner for approval;

(II) All affected lands, excluding those identified in (A)(III), have been or are being reclaimed; and

(III) The interim mine stabilization will not substantially interfere with the operations of the surface landowners.

(C) All bonding and monitoring requirements shall be maintained during the approved interim period.

(D) Renewal for interim mine stabilization, not to exceed five years, may be requested of and approved by the Environmental Quality Council upon referral by the Administrator. This is provided that the request contains supporting evidence for the continued delay, and shows that interim mine stabilization monitoring requirements have been and are being maintained.

(E) Public notice requirements for requests and renewals of Interim Mine Stabilization for minerals other than coal.

(I) The initial request for Interim Mine Stabilization requested under this regulation shall include an affidavit from the newspaper verifying that notice of the request for interim mine stabilization has been published once a week for two consecutive weeks in the newspaper of general circulation in the locality of the mined area.

(II) The second request after approval of Interim Mine Stabilization shall include an affidavit from the newspaper verifying that notice of the renewal request was published for three consecutive weeks in a newspaper of general circulation in the locality of the mine area, and if requested, a public hearing will be held.

(III) Subsequent renewal requests shall require a public hearing. At the public hearing the operator shall present to the Council the requirements of (A), (B), (C), and (D) and the public shall have the opportunity to present their comments.

(F) Marginal reserves, for the purpose of Interim Mine Stabilization, shall be as defined in U.S. Geological Survey Circular 831, 1980, i.e., "that part of the reserve base which, at the time of determination, borders on being

economically producible. Its essential characteristic is economic uncertainty. Included are resources that would be producible, given postulated changes in economic or technical factors."

(l) Unanticipated conditions.

(i) An operator encountering unanticipated conditions shall notify the Administrator as soon as possible and in no event more than five days after making the discovery.

(ii) An unanticipated condition is any condition encountered in a mining operation and not mentioned by the operator in his mining or reclamation plan which may seriously affect the procedures, timing, or outcome of mining or reclamation. Such unanticipated conditions include but are not limited to the following:

(A) The uncovering during mining operations of any acid-forming, radioactive, inflammable, or toxic materials which must be burned, impounded, or otherwise disposed of in order to eliminate pollution or safety hazards;

(B) The discovery during mining operations of a significant flow of groundwater in any stratigraphic horizon;

(C) The occurrence of slides, faults, or unstable soil and overburden materials which may cause sliding or caving in a pit which could cause problems or delays with mining or reclamation;

(D) The occurrence of uncontrolled underground caving or subsidence which reaches the surface, causing problems with reclamation and safety hazards; and

(E) A discovery of significant archaeological or paleontological importance.

(iii) In the case of the uncovering of hazardous materials, the operator shall take immediate steps to notify the Administrator and comply with any required measures to eliminate the pollution or safety hazard. Under all conditions the operator must take appropriate measures to correct, eliminate, or adapt to an unanticipated condition before mining resumes in the immediate vicinity of that condition.

CHAPTER 4
NONCOAL
UNDERGROUND MINING

Section 1. Underground Mining Permit Application Content Requirements.

(a) In addition to the requirements of W.S. § 35-11-406, and the applicable regulations contained in Chapter 2, Sections 1 and 2, applications for an underground mining permit shall contain:

(i) A description of the effects of possible mine land subsidence along with the proposed measures to be taken to minimize the effects of subsidence, and procedures that will be taken in terms of backfilling, grading, and contouring in the event any subsidence occurs; and

(ii) Plans for controlled subsidence such as would be the result of mining techniques similar to longwall mining.

Section 2. Environmental Protection Performance Standards Applicable to Underground Mining Operations.

(a) General performance standards.

(i) All surface land affected in conjunction with an underground mining operation will be subject to the appropriate backfilling, grading, and contouring requirements as described in Chapter 3, Section 2(b), depending on the physical land description in the permit area and the nature of the surface disturbance.

(ii) All shafts and adits to underground mine workings must be properly sealed at closure.

(iii) Portal entries into adits must be backfilled, graded and contoured so as to blend in with the topography of the surrounding terrain.

(iv) All substantial surface disturbances due to subsidence into underground workings within five years after completion of mining shall be backfilled, graded, contoured and revegetated so as to blend in with the topography of the surrounding terrain. If conditions prevent such reclamation, the Administrator, after considering the conditions, and after consultation with the Advisory Board, will determine the reclamation requirements.

(v) The applicable performance standards contained in the Act and Chapter 3 shall apply to underground mining operations.

CHAPTER 5

NONCOAL

EXPLORATION BY DOZING

Section 1. **Requirements.**

(a) Any person desiring to engage in exploration by dozing so as to substantially affect less than 40 acres in any four contiguous sixteenth sections shall submit an application to the Administrator for a license to explore by dozing.

(b) If the proposed exploration by dozing will substantially affect 40 or more acres in any four contiguous sixteenth sections, the application shall conform to the reclamation standards and requirements governing surface mining, and the provisions of this Chapter shall not apply.

(c) The application for a license to explore by dozing shall be made upon the form furnished by the Administrator, in duplicate, and shall contain the following information:

(i) Name, address and telephone number of the person making the application;

(ii) The name, address and telephone number of the person who will be present at and/or responsible for the exploration operation;

(iii) An original USGS topographic map, if one has been issued, showing the general area in which exploration is to be conducted, any access roads to be constructed, locations of public roads providing access to the area, dwellings, surface drainage, utilities, surface waters and impoundments, springs, land excavations to be conducted, exploratory holes to be drilled or altered, and earth and debris disposal areas. The area of activity shall be shown in more detail and distinctly outlined and identified. In lieu of a topographic map, an aerial photo of suitable scale may be substituted provided the above information is submitted and all section, township and range lines, identifying numbers, and a north arrow are added. These may be approximated where the land has not been surveyed and section corners set;

(iv) The estimated acreage of land which the applicant proposes to substantially affect in each section;

(v) The location of the lands to be explored by legal subdivision, section, quarter section (when available), township, and range;

(vi) A general description of the land within the area covered by the license cross-referenced to the map required in (iii) above, which shall include, as nearly as possible, its surface topography and geology, surface water, vegetative cover, past and present uses, and nature and depth of the overburden, topsoil, and mineral seams;

(vii) Names and addresses of the owners of record of the surface of all land to be affected;

(viii) Names and addresses of the owners of record of the mineral rights to all land to be affected;

(ix) A reclamation plan which shall include a description of the measures to be used to comply with the requirements of Section 2 of this Chapter;

(x) A timetable showing:

(A) An anticipated length of time between initial surface disturbance and the beginning of reclamation.

(B) A date for the completion of all reclamation activities.

(C) A proposed termination date for all exploration activities.

(xi) An estimate, prepared in accordance with established engineering principles, of the cost of hiring an independent contractor to accomplish the reclamation of all land in the license area which will be affected by the exploration for which license is sought. Such estimate shall also give a breakdown of costs including the costs per acre of backfilling, replacement of topsoil, and the cost of seed or seedlings, and the planting thereof; and

(xii) Such other information as the Administrator deems necessary to enable him to ensure compliance with the Wyoming Environmental Quality Act and all rules and regulations adopted pursuant thereto.

(d) For the purpose of this Chapter, the application for a license to explore by dozing is a report or information which, if made public, would divulge trade secrets. Upon request by the licensee, the Director and Administrator shall consider this report or information confidential pursuant to W.S. § 35-11-1101. This shall be deemed a request to hold the information confidential only until the proposed termination date set forth in (c)(x)(C) of this Section, unless the licensee justifies a longer period of time.

Section 2. Exploration and Reclamation Standards.

(a) Backfilling, regrading and recontouring shall be conducted in a manner

consistent with Chapter 3, Section 2(b), Land Quality Rules and Regulations.

(b) Topsoil removal and stockpiling shall precede any dozing activities, unless otherwise approved by the Administrator.

(c) The vegetative cover shall be reestablished where removed or destroyed by the exploration by dozing, by seeding, planting, transplanting, or by other methods approved by the Administrator in a manner consistent with Chapter 3, Section 2(d), Land Quality Rules and Regulations.

(d) All areas disturbed by dozing for the purpose of providing access (as a road or for the ease of off-road travel) shall be reclaimed in accordance with this Chapter.

(e) All acid-forming or toxic materials or materials constituting a fire, health or safety hazard uncovered during or created by the exploration by dozing shall be promptly treated or disposed of during the exploration activity in a manner designed to prevent pollution of surface or subsurface water or threats to human or animal health and safety. Such method may include covering, burying, temporarily impounding or otherwise containing or disposing of the acid, toxic, radioactive or otherwise dangerous material.

(f) Procedures shall be implemented to avoid constituting a public nuisance, endangering the public safety, human or animal life, property, and plant life in and adjacent to the license area, including but not limited to fencing all pits and refuse or waste areas to protect the surface owner's on-going operations.

Section 3. **Timetables.** Reclamation and restoration shall begin as early as practicable so as to prevent unnecessary erosion, sedimentation, and pollution. In no event shall reclamation begin later than the end of the special license period unless the Administrator approves such a delay in writing.

Section 4. **License Issuance and Renewal.**

(a) Within 30 days following receipt of a complete application for a license to explore, the Administrator shall notify the applicant of the amount of bond to be required for the applicant. Such bond shall be in an amount sufficient to pay all costs which would be incurred by the State in the event it is necessary for the State to forfeit such bond and accomplish reclamation of the affected area including access roads, drill pads, and exploration pits.

(i) Upon receipt of a satisfactory bond in the amount required by the Administrator, the Administrator shall approve the application if it is otherwise in order and shall return a duplicate to the applicant to serve as his license to explore by dozing. No holder of a license to explore shall produce and save or sell any minerals from within the license area without first obtaining a permit and license to mine. The only material which may be

removed from the permit area shall be that necessary for assay and testing purposes.

(ii) It shall be the operator's responsibility to inform the Administrator whenever an increase in the bond is necessary should the amount of affected land be greater than that estimated in the license application. The operator shall take immediate steps to obtain an increase in the amount of the bond for such contingencies.

(b) The Administrator may deny the issuance of a license to explore by dozing if he finds the following:

(i) If the application is in violation of the intent of the Wyoming Environmental Quality Act, which is to reclaim the land to a use equal to or higher than the highest previous use;

(ii) If the application is incomplete;

(iii) If the bond is insufficient to reclaim the area listed within the license as to be affected;

(iv) If the operation will irreparably harm lands which lie within an area designated by the Council as of unique and irreplaceable, historical, archaeological, scenic or natural value; and

(v) If information submitted by the operator is found to be intentionally misrepresentative.

(c) The license to explore may be renewed annually. Renewal reports shall be filed within 30 days before the anniversary date of the license on forms provided by the Land Quality Division and shall include:

(i) Name of licensee and license number;

(ii) Location of area by section, quarter section (when available), township, and range;

(iii) Number of acres disturbed during the last year;

(iv) Estimated number of acres to be disturbed in the next 12 months;

(v) Updated maps;

(vi) Current status of reclamation performed; and

(vii) Estimated cost of reclaiming the land to be disturbed during the renewal

period and the estimated cost of completing reclamation of unreleased lands disturbed during prior periods of time.

Section 5. **Forfeiture and Release of Bonds.** Forfeiture proceedings and release of bonds shall be equivalent to that procedure set forth in W.S. §§ 35-11-421 through 35-11-423 substituting therein "person engaging in exploration by dozing" for "operator" and "exploration by dozing" for "surface mining."

CHAPTER 6

NONCOAL

SELF-BONDING PROGRAM

Section 1. **Definitions.**

(a) "Self-bond" means an indemnity agreement in a sum certain executed by the permittee and/or the parent company or Federal agency guarantor and made payable to the State, with or without separate surety.

(b) "Collateral" means the actual or constructive deposit, as appropriate, with the Administrator of one or more of the following kinds of property to support a self-bond:

(i) A perfected, first-lien security interest in real property located within the State of Wyoming, in favor of the Wyoming Department of Environmental Quality which meets the requirements of this Chapter;

(ii) Securities backed by the full faith and credit of the United States Government or State Government securities acceptable to the Administrator. These securities must be endorsed to the order of, and placed in the possession of, the Administrator; and

(iii) Personal property located within the State, owned by the operator, which in market value exceeds one million dollars per property unit.

(c) "Comparative balance sheet" means item amounts from a number of the operator's successive yearly balance sheets arranged side-by-side in a single statement.

(d) "Comparative income statement" means an operator's income statement amounts for a number of successive yearly periods arranged side-by-side in a single statement.

(e) "Current assets" means cash and assets that are reasonably expected to be realized in cash or sold or consumed within one year or within the normal identified operating cycle of the business.

(f) "Current liabilities" means debts or other obligations that must be paid or liquidated within one year or within the normal identified operating cycle of the business. This shall also include dividends payable on preferred stock within one quarter if declared, or one year if a pattern of declaring dividends each quarter is apparent from the business' past practices.

- (g) "Fixed assets" means plants and equipment.
- (h) "Liabilities" means obligations to transfer assets or provide services to other entities in the future as a result of past transactions.
- (i) "Parent corporation" means a corporation which owns or controls the applicant.
- (j) "Tangible net worth" means net worth minus intangibles such as goodwill, patents or royalties.
- (k) "Net worth" means total assets minus total liabilities and is equivalent to owners' equity.

Section 2. **Initial Application to Self-bond.**

(a) Initial application to self-bond shall be made at the time the operator makes written application to the Administrator for a license to mine. The application shall be on forms furnished by the Administrator and shall contain:

- (i) Identification of operator by:
 - (A) For corporations, name, address, telephone number, state of incorporation, principal place of business and name, title and authority of person signing application, and statement of authority to do business in the State of Wyoming, or
 - (B) For all other forms of business enterprises, name, address and telephone number and statement of how the enterprise is organized, law of the State under which it is formed, place of business, and relationship and authority of the person signing the application.
- (ii) Amount of bond required, to be determined in accordance with W.S. § 35-11-417(c)(i). If the self-bond amount is proposed to be less than the full bond amount, the amount which is proposed to be under a self-bond.
- (iii) Type of operation and anticipated dates performance is to be commenced and completed.
- (iv) Brief chronological history of business operations conducted within the last five years which would illustrate a continuous operation for five years immediately preceding the time of application.
 - (A) The Administrator may allow a joint venture or syndicate with less than five years of continuous operation to qualify under this requirement, if each member of the joint venture or syndicate has been in continuous operation for at least five years immediately preceding the time of application.

(B) When calculating the period of continuous operation, the Administrator may exclude past periods of interruption to the operation of the business entity that were beyond the applicant's control.

(v) Information in sufficient detail to show good-faith performance of past mining and reclamation obligations.

(vi) A statement, in detail, so as to show a history of financial solvency. For an initial bond, each operator must provide:

(A) Audited financial statements supporting the following comparative documents, prepared and certified by an independent Certified Public Accountant who, by reason of education, experience or special training, and disinterest, is competent to analyze and interpret the operator's financial solvency. All statements shall be prepared following generally accepted principles of accounting.

(I) A comparative balance sheet which shows assets, liabilities and owner equity for five years. The operator may provide common-size documents for confidentiality.

(II) A comparative income statement which shows all revenues and expenses for five years. The operator may provide common-size documents for confidentiality.

(III) A report for the most recently completed fiscal year containing the accountant's audit opinion or review opinion of the balance sheet and income statement with no adverse opinion.

(IV) Notwithstanding the language in (A) above, unaudited financial statements may be submitted to support the comparative documents where current fiscal year quarters have ended but a CPA opinion has not yet been obtained because the fiscal year has not yet ended.

(vii) For all mining operations, financial information in sufficient detail to show that the operator meets one of the following criteria (the specified criterion relied upon shall be identified).

(A) The operator has a rating for all bond issuance actions over the past five years of "A" or higher as issued by Moody's Investor Service, Standard and Poor's Corporation or any other nationally recognized rating organization that is acceptable to the regulatory authority. Any additional rating organization must be a "nationally recognized statistical rating organization" as approved by the Securities and Exchange Commission. If the additional rating organization uses a different rating system, only ratings that are equivalent to a rating of "A" or higher by either Moody's Investor Service or Standard and Poor's Corporation will qualify (the rating organization should be identified together with any further breakdown of specific ratings).

(B) The operator has a tangible net worth of at least 10 million dollars, and a ratio of total liabilities to net worth of 2.5 times or less, and a ratio of current assets to current liabilities of 1.2 times or greater. The two ratio requirements must be met for the past year, and documented for the four years preceding the past year. Explanations should be included for any year where the ratios fall below the stated limits.

(C) The operator's fixed assets in the United States total at least 20 million dollars, and the operator has a ratio of total liabilities to net worth of 2.5 times or less, and a ratio of current assets to current liabilities of 1.2 times or greater. The two ratio requirements must be met for the past year, and documented for the four years preceding the past year. Explanations should be included for any year where the ratios fall below the stated limits.

(D) If the operator chooses (B) or (C), the two ratios shall be calculated with the proposed self-bond amount added to the current or total liabilities for the current year. The operator may deduct the costs currently accrued for reclamation which appear on the balance sheet.

(viii) For noncoal mining operations:

(A) Any rating for bond issuance actions over the past five years (the rating service should be identified);

(B) The value of the operator's fixed assets in the United States and the operator's tangible net worth;

(C) The ratio of total liabilities to net worth and the ratio of current assets to current liabilities, both computed over the past five years. A separate computation for the current year should be made which includes the proposed self-bond amount added to the current or total liabilities for the current year. The operator may deduct the costs currently accrued for reclamation which appear on the balance sheet; and

(D) The criteria listed in (vii) shall be considered in determining whether the operator can qualify to self-bond. However, the criteria in (vii) need not be determinative, based upon other financial demonstrations which may be made by the applicant to meet W.S. § 35-11-417(d).

(ix) A statement listing any notices issued by the Securities and Exchange Commission or proceedings initiated by any party alleging a failure to comply with any public disclosure or reporting requirements under the securities laws of the United States. Such statement shall include a summary of each such allegation, including the date, the requirement alleged to be violated, the party making the allegation, and the disposition or current status thereof.

(x) A statement identifying by name, address and telephone number:

(A) A registered office which may be, but need not be, the same as the operator's place of business;

(B) A registered agent, which agent must be either an individual resident in this State, whose business office is identical with such registered office, or a domestic corporation, or a foreign corporation authorized to transact business in this State, having a business office identical with such registered office. The registered agent so appointed by the operator shall be an agent to such operator upon whom any process, notice or demand required or permitted by law to be served upon the operator may be served;

(C) If the operator fails to appoint or maintain a registered agent in this State, or whenever any such registered agent cannot be reasonably found at the registered office, then the Director shall be an agent for such operator upon whom any process, notice or demand may be served. In the event of any such process, the Director shall immediately cause one copy of such process, notice or demand to be forwarded, by registered mail, to the operator at his principle place of business. The Director shall keep a record of all processes, notices, or demands served upon him under this paragraph, and shall record therein the time of such service and his action with reference thereto;

(D) Should the operator change the registered office or registered agent, or both, a statement indicating such change shall be filed immediately with the Land Quality Division; and

(E) Nothing herein contained shall limit or affect the right to serve any process, notice or demand required or permitted by law to be served upon an operator in any other manner now or hereafter permitted by law.

(xi) The Administrator may accept a written guarantee for an operator's self-bond from a parent corporation guarantor, a foreign parent corporation guarantor, foreign non-parent corporation guarantor or from a Federal agency, if the guarantor or Federal agency satisfies the financial criteria of this Chapter as if it were the operator. The operator must only supply information addressing requirements not met by the parent corporation guarantor, the foreign parent corporation guarantor or the foreign non-parent corporation guarantor. The terms of the parent corporate, foreign parent corporate, foreign non-parent corporate or Federal agency guarantee shall provide for the following:

(A) If the operator fails to complete the reclamation plan the guarantor shall do so or the guarantor shall be liable under the indemnity agreement to provide funds to the State sufficient to complete the reclamation plan, but not to exceed the bond amount; and

(B) The parent corporate, foreign parent corporate, foreign non-parent corporate or Federal agency guarantee shall remain in force unless the guarantor sends notice of cancellation by certified mail to the operator and to the Administrator at least 90 days in advance of the cancellation date, and the Administrator accepts the

cancellation. The cancellation shall be accepted by the Administrator if the operator obtains suitable replacement bond before the cancellation date, if the lands for which the self-bond, or portion thereof, was accepted have not been disturbed, or if the lands have been released under W.S. §§ 35-11-417(e) and 423.

(xii) If the operator chooses to include assets outside the United States in their tangible net worth, the Administrator shall require the information required under subsection (xiii).

(xiii) If the Administrator accepts a foreign parent corporate guarantee or a foreign non-parent corporate guarantee, the Administrator shall require:

(A) A legal opinion from a firm recognized to do business in the country of the firm's international headquarters concerning the collectability of the self-bond under the laws of that foreign country. The firm shall be selected by the Administrator from a list provided by the applicant. The applicant shall be responsible for the cost of the opinion;

(B) A separate bonding instrument to cover the estimated cost of recovering the reclamation bond in the foreign country. This separate bond shall be highly liquid such as cash, letters of credit, certificates of deposit or government securities and be redeemable within 90 days of forfeiture. The Administrator may also require additional information that is deemed necessary to support the self-bond;

(C) All audited financial statements shall be in English and shall be prepared with generally accepted accounting principles as adopted by the United States Financial Accounting Standards Board.

(xiv) For a noncoal operator, the obligation shall not exceed 50 percent of the operator's tangible net worth in the United States. For the Administrator to accept a corporate guarantee, the total amount of the parent or non-parent corporation guarantor's present and proposed self-bonds and guaranteed self-bonds shall not exceed 50 percent for noncoal, of the guarantor's tangible net worth in the United States.

Section 3. Approval or Denial of Operator's Self-bond Application.

(a) The Administrator, within 60 days of operator's submission of all materials necessary to base a decision on the application shall:

(i) Approve or reject such application and declare in writing his reasons for such action to the operator or his registered agent. The decision shall be based on all the information submitted and shall be sufficient to meet the demonstrations required by W.S. § 35-11-417(d); and

(ii) If a rejection is based on inadequate information or failure of the operator to supply all necessary material, the Administrator shall allow the operator 30

days to remedy the deficiencies. Such corrections must be made to the satisfaction of the Administrator. The Administrator shall have an additional 60 days to approve or reject the corrected application.

(b) If the Administrator accepts an uncollateralized self-bond, an indemnity agreement shall be submitted subject to the following requirements:

(i) The indemnity agreement shall be executed by all persons and parties who are to be bound by it, including the parent corporation or Federal agency guarantor, and shall bind each jointly and severally;

(ii) Corporations applying for a self-bond or parent corporation guaranteeing a subsidiary's self-bond shall submit an indemnity agreement signed by two corporate officers who are authorized to bind the corporation. A copy of such authorization shall be provided to the Administrator. A Federal agency guaranteeing an operator's self-bond shall submit an indemnity agreement signed by two officers of the agency who are authorized to bind the agency and a copy of their authorization. The agency shall also submit documents supporting the availability of a cause of action against the Federal agency for performance under the indemnity agreement;

(iii) If the applicant is a partnership, joint venture or syndicate, the agreement shall bind each partner or party who has a beneficial interest directly or indirectly, in the operator; and

(iv) The indemnity agreement shall provide that the persons or parties bound shall pay all litigation costs incurred by the State in any successful effort to enforce the agreement against the operator.

(c) If the application is rejected based on the information required in Section 2, or based on the limitations set in Section 2(a)(xii) through (xiv), then the operator may offer collateral and an indemnity agreement to support the self-bond application. The indemnity agreement shall be subject to the requirements of (b) above.

(i) For any collateral offered to support a self-bond, the following information shall be provided:

(A) The value of the property. The property shall be valued at the difference between the fair market value and any reasonable expense anticipated by the Department in selling the property. The fair market value shall be determined by an appraiser or appraisers proposed by the operator. The appraiser or appraisers shall be selected by the Administrator. The Administrator has the option to reject any appraiser proposed by the operator. The appraisal shall be expeditiously made, and copy thereof furnished to the Administrator and the operator. The expense of the appraisal shall be borne by the operator; and

(B) A description of the property satisfactory for deposit to further assure that the operator shall faithfully perform all requirements of the Act. The Administrator shall have full discretion in accepting any such offer.

(I) Real property shall not include any lands in the process of being mined, reclaimed, or the subject of this application. The operator may offer any lands the bonds for which have been released or lands within a permit area which will not be affected. In addition, any land used as a security shall not be mined while it is a security.

(II) Securities shall only include those which are United States Government securities or those State Government securities acceptable to the Administrator. Securities shall meet the requirements specified in the definition of "Securities" found in Section 1(b)(ii).

(III) Personal property shall be in the possession of the operator, shall be unencumbered, and shall not include:

(1.) Property which is already being used as collateral, or

(2.) Goods which the operator sells in the ordinary course of his business, or

(3.) Fixtures, or

(4.) Certificates of deposit which are not Federally insured or where the depository is unacceptable to the Administrator.

(C) Evidence of ownership submitted in one of the following forms:

(I) If the property offered for deposit is real property, the operator's interest must be evidenced by:

(1.) In the case of a Federal or State lease, a status report prepared by an attorney, satisfactory to the Administrator as disinterested and competent to so evaluate the asset, and an affidavit from the owner in fee establishing that the leasehold could be transferred upon default; and

(2.) In the case of a fee simple interest, a title certificate or similar evidence of title and encumbrances prepared by an abstract office authorized to transact business within the State and satisfactory to the Administrator.

(II) If the property offered for deposit is a security, the operator's interest must be evidenced by possession of the original or a notarized copy of the certificate or a certified statement of account from a brokerage house.

(III) If the property offered for deposit is personal property as defined in Section 1(b)(iii), evidence of ownership shall be submitted in the form satisfactory to the Administrator to establish unquestionable title to the property by the operator.

(ii) In addition to submitting the above information, if the operator offers personal property as collateral to support a self-bond, he must meet the financial criteria contained in (A) or (B) below:

(A) The operator must have a tangible net worth of at least 10 million dollars, a ratio of total liabilities to net worth of 3.0 times or less, and a ratio of current assets to current liabilities of 1.0 times or greater. The two ratios shall be calculated with the proposed self-bond amount added to the current or total liabilities for the current year. The operator may deduct the costs currently accrued for reclamation which appear on the balance sheet; and

(B) The operator must have fixed assets in the United States that total at least 20 million dollars, a ratio of total liabilities to net worth of 3.0 times or less, and a ratio of current assets to current liabilities of 1.0 times or greater. The two ratios shall be calculated with the proposed self-bond amount added to the current or total liabilities for the current year. The operator may deduct the costs currently accrued for reclamation which appear on the balance sheet.

(iii) If the Administrator accepts personal property as collateral to support a self-bond, he shall require:

(A) Quarterly maintenance reports prepared by the operator, and

(B) A perfected, first-lien security interest in the property used, in favor of the Wyoming Department of Environmental Quality. This security interest shall be perfected by filing a financing statement or taking possession of the collateral in accordance with (iv)(B) below. In addition, he may also require quarterly inspections of the personal property by a qualified representative of the Department.

(iv) If the Administrator accepts any property as collateral to support a self-bond, the Administrator shall, as applicable, require possession by the Department of the personal property, or a mortgage or security agreement executed by the operator in favor of the Department of Environmental Quality. The requirement shall be that which is sufficient to vest such interest in the property in the Department to secure the right and power to sell or otherwise dispose of the property by public or private proceedings so as to ensure reclamation of the affected lands in accordance with the Act. Personal property

collateral to support a self-bond shall be secured under the provisions of uniform commercial code as required by (B) below.

(A) Any mortgage shall be executed and duly recorded as required by law so as to be first in time and constitute notice to any prospective subsequent purchaser of the same real property or any portion thereof.

(B) Any security interest created by a security agreement shall be perfected by filing a financing statement or taking possession of the collateral in accordance with W.S. §§ 34-21-950 through 34-21-955 (1977). The Department shall have all rights and duties set forth in W.S. § 34-21-926 (1977) when the collateral is in its possession as a secured party, as defined in W.S. § 34-21-905(a)(ix). Any money received from the collateral during this period of time shall be remitted to the operator. When the collateral is left in the possession of the operator, the security agreement shall require that, upon default, the operator shall assemble the collateral and make it available to the Department at a place to be designated by the Department which is reasonably convenient to both parties.

(v) The operator may, with written consent from the Administrator, substitute for any of the property held hereunder other property upon submittal of all information required under this subsection and compliance with all requirements of this subsection so as to secure all obligations under all periods of time as they relate to mining operations.

(vi) For collateral posted to support a self-bond, all persons with an interest in the collateral shall be notified by the operator of the posting, and of all other actions affecting the collateral.

Section 4. **Renewal Bonds.**

(a) Information for the renewal bond under the self-bonding program which shall accompany the annual report shall include:

(i) Amount of bond required, which shall be determined in accordance with W.S. § 35-11-417(c)(ii). If the self-bond amount is proposed to be less than the full bond amount, the amount which is proposed to be under a self-bond;

(ii) Financial information in sufficient detail to show that the guarantor still meets the information in Section 2(a)(viii), and the limitations in Section 2(a)(xii) through (xiv). The Administrator may request financial statements for the most recently completed fiscal year together with an independent certified public accountant's audit opinion or review opinion of the financial statements with no adverse opinion. Additional unaudited information may be requested by the Administrator;

(iii) If the Administrator has accepted a mortgage, any changes in evidence of value, title and possession of the property shall be submitted; and

(iv) If the Administrator deems it necessary to value any asset, he may appoint the appraiser or appraisers mutually acceptable to the Administrator and the operator. Any such appraisal shall be expeditiously made, and a copy thereof furnished to the Administrator and the operator. The expense of the appraisal shall be borne by the operator. The findings of the appraisal shall be final and binding unless both parties agree to a reappraisal.

(b) Any valid initial self-bond shall carry the right of successive renewal as long as the above-listed information is submitted which demonstrates that the guarantor remains qualified under W.S. § 35-11-417(d).

Section 5. Substitution of the Operator's Self-bond.

(a) The Administrator may require the operator to substitute a good and sufficient corporate surety licensed to do business in the State if the Administrator determines in writing that the self-bond of the operator fails to provide the protection consistent with the objectives and purposes of this Act. The Administrator shall require this substitution if the financial information submitted or requested under Section 4(a)(ii) indicates that the operator no longer qualifies under the self-bonding program. Substitution of an alternate bond shall be made within 90 days. The operator may also request substitution. This request is contingent upon the operator meeting all the requirements of the bond provisions (W.S. §§ 35-11-417 to 424) of the Act. If these requirements are met, the Administrator shall accept substitution.

(b) If the operator fails within 90 days to make a substitution for the revoked self-bond with a corporate surety, cash, governmental securities, or Federally insured certificates of deposit, or irrevocable letters of credit, the Administrator shall suspend or revoke the license of the operator to conduct operations upon the land described in the permit until such substitution is made.

(c) All methods of substitution shall be made in accordance with the bonding provisions (W.S. §§ 35-11-417 to 35-11-424) of the Act. The Administrator shall either:

(i) Require substitution of a good and sufficient corporate surety licensed to do business in the State that will stand as surety so as to cover all periods of time as they relate to the mining operations, or

(ii) Retain from the operator sufficient assets within the Department so as to cover that period of time of the mining operation which is not covered by the substituted surety. Those assets not retained shall be returned to the operator within 60 days free from the Department's encumbrances, liens, mortgages or security interests.

Section 6. Requirements for Forfeiture and Release.

(a) All requirements as to bond forfeiture proceedings and the release of bonds shall be consistent with W.S. § 35-11-417(e) and W.S. §§ 35-11-421 through 35-

11-424 of the Act, excepting the requirements as to notification to the surety. When the Administrator has required a mortgage, and the bond has been forfeited, foreclosure procedures shall be in accordance with W.S. §§ 34-4-101 through 34-4-113.

(b) For self-bonds supported by collateral, upon bond release property returned shall be of that form sufficient for the Department to release that portion of the interest or mortgage commensurate with the amount of the bond released less any disposed of in accordance with the mortgage or indemnity agreement.

Section 7. Existing Operations.

(a) An operator conducting an existing, ongoing operation may at any time submit to the Administrator an application to self-bond. The application shall contain all information required in Section 2 of this Chapter except Section 2(a)(ii) shall read: "Amount of bond required to be determined in accordance with W.S. § 35-11-417(c)(ii)."

(b) If the Administrator determines that the operator qualifies for self-bonding, then the operator shall execute all required agreements or instruments and sign a new bond payable to the State of Wyoming which covers all periods of time as they relate to the mining operation. At this time, the prior bond shall be released. This release shall not be governed by any requirements as to the release of bonds which occur upon completion in whole or in part of the reclamation program.

(c) Any operation which holds a self-bond on the effective date of this Chapter shall be presumed to meet the requirements of this Chapter. To continue the self-bond, within one year from the effective date of this Chapter an application for a renewal self-bond shall be filed with the Administrator which meets all requirements in Section 3. A new indemnity agreement shall be executed which includes the requirements in Section 4(b).

CHAPTER 7

NONCOAL MINE

PERMIT OR RESEARCH AND DEVELOPMENT TESTING LICENSE REVISIONS

Section 1. **Submittal of Revisions.**

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

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

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

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

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

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

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

(e) Each application shall contain:

(i) The name and address of the operator;

(ii) The permit number and date approved;

(iii) The following information, if different from that submitted in the

original permit or Research and Development Testing License application:

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

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

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

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

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

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

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

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

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

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

Section 2. Criteria for Public Notice Requirements.

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

for public hearing is required.

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

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

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

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

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

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

(D) The construction or relocation of mills, tailings disposal facilities, or heap leach facilities;

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

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

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

Section 3. Notice and Opportunity for Public Hearing.

(a) When required under Section 2 of this Chapter, the operator shall cause notice of the application for permit, non-Class III Well portions of an in situ permit and

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

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

Section 4. Decision.

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

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

(ii) If notice is required:

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

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

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

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

(a) The Administrator, with the concurrence of the Director, may require the operator to submit an application for a permit or Research and Development Testing License revision and comply with all requirements of this Chapter. Any such requirement shall be based on written findings that, upon review of the operator's annual

report for an in situ mine permit or annual request for renewal of a Research and Development Testing License or upon inspection of the existing operation, there is or is intended to be conducted a revised mining, reclamation or Research and Development Testing operation. Such review or inspection shall be conducted at least each year upon receipt of the operator's annual report for an in situ mine permit or annual request for renewal of a Research and Development Testing License, or inspection of the existing operation, there is or is intended to be conducted a revised mining or reclamation operation. Right of review shall be afforded as provided in the Wyoming Administrative Procedure Act. Nothing contained herein shall be construed to require compliance with any provision of the Act or regulation from which the existing operation has been specifically excepted.

DEPARTMENT OF ENVIRONMENTAL QUALITY

LAND QUALITY DIVISION

NONCOAL RULES AND REGULATIONS

CHAPTER 8

EXPLORATION BY DRILLING

Section 1. Conducting Exploration by Drilling.

(a) Any discoverer conducting exploration by drilling within this State, shall do so in strict compliance with all the provisions of W.S. § 35-11-404 (2007) and this Chapter. The requirements of this Chapter shall apply to exploration drilling within permitted mine operations.

(b) Prior to conducting any exploration by drilling outside of a permitted mine operation, the discoverer shall provide notification (Drilling Notification) and a reclamation bond acceptable to the Administrator. Construction of water wells outside of a permitted mine operation may be authorized under a drilling notification in accordance with Section 7 and in compliance with applicable requirements of the Wyoming State Engineer's Office. The Drilling Notification shall be in a form as specified by the Administrator and shall include information describing the approximate number and depth of holes to be drilled and a map showing approximate hole locations within the exploration area. The Administrator shall review the notification and the bond and notify the discoverer in a timely manner not to exceed 60 days from receipt whether the drilling is approved or additional information is required.

Section 2. General Drill Hole Abandonment Requirements.

(a) All drill holes sunk for the purpose of conducting exploration by drilling, including those drilled within a permitted mine operation, shall be capped, sealed or plugged in the manner described hereinafter.

(b) Drill holes that have artesian flow of groundwater to the surface shall be plugged with cement-based sealant material, as specified and in the manner described below, to prevent fluid communication and adverse changes in water quality or quantity.

(c) Drill holes that have encountered any ground water or saturated stratum shall

be sealed utilizing sealant materials and emplacement methods as prescribed hereinafter to prevent fluid communication and adverse changes in water quality or quantity.

(d) "Sealant materials" are materials that are stable, have low permeability and possesses minimum shrinking properties such that they are optimal sealing materials for well plugging and drill hole abandonment. Sealant materials shall be either: 1) a fluid mixture of water plus a cement-based or bentonite-based material, or 2) a dry bentonite-based material, either chips or pellets specifically designed for sealing drill holes. Sealant materials shall meet the technical requirements for making a proper seal, shall meet applicable recognized industry standards and shall be prepared according to manufacturer's directions for specific site requirements. The following are approved sealant materials:

(i) Neat Cement Slurry must consist of a mixture of Portland Cement and not more than 6 gallons of clean water per bag (1 cubic foot or 94 pounds) of cement;

(ii) Sand Cement Slurry must consist of a mixture of Portland Cement, sand, and water in the proportion of not more than 1 part by weight of sand to 1 part of cement with not more than 6 gallons of clean water per bag of cement (1 cubic foot or 94 pounds);

(iii) Concrete Slurry must consist of a mixture of Portland Cement, sand and gravel aggregate, and water in the proportion of not more than 1 part by weight of aggregate to 1 part of cement with not more than 6 gallons of clean water per bag of cement;

(iv) Cement/Bentonite Slurry must consist of a mixture of cement and bentonite in the proportion of not more than 6.5 gallons of water and 3 to 5 pounds of powdered bentonite per 94-pound sack of Portland cement;

(v) High Solids Bentonite Slurry means an inorganic mixture with a slurry density of 9.4 lbs./gal. minimum (20%) by weight of solids bentonite, with polymers, water, or other additives for the yield/rate control, which forms a low permeability seal (not greater than 1×10^{-7} cm/sec), and is mixed to the manufacturer's specifications; and

(vi) Nonslurry Bentonite must consist of chipped or pelletized bentonite varieties specifically designed to be used to seal drill holes.

(vii) Abandonment Gel means a mixture of bentonite with polymers and other additives and water in the proportion of one (1) barrel of water to 15 pounds of abandonment material with a minimum slurry density of 8.6 lbs./ gal. Abandonment Gel used to seal boreholes shall meet the following specifications when using American Petroleum Institute Standard Procedures for Testing Drilling Fluids:

(A) Ten minute gel strength of at least 20 lbs. / 100 sq. ft.

(B) Filtrate volume not to exceed 13.5 cc.

(C) Minimum Marsh Funnel viscosity of 60 sec. / quart.

(e) Sealant materials shall be emplaced in a manner that provides a water tight seal utilizing one of the following approved methods:

(i) By placing sealant materials by drill pipe, tremie pipe, or similar device in an upward direction from the bottom of the drill hole to within approximately five (5) feet of the ground surface; or

(ii) By placing nonslurry bentonite from the bottom of the drill hole to within approximately five (5) feet of the ground surface. Nonslurry bentonite shall not be utilized unless the drill hole is four inches or greater in diameter and less than 500 feet in depth and the material must be placed in such a manner that a bridge does not occur. Nonslurry bentonite may not be placed in more than 300 feet of standing liquid.

(f) For any hole that has been sealed with a sealant material, the discoverer responsible for sealing the drill hole shall:

(i) Measure the depth of the top of the sealant material column with the appropriate equipment after sufficient time (minimum 24 hours) has been allowed for the column of sealant material to set up; and

(ii) If the column of sealant material has dropped or fallen back, the discoverer shall continue to install sealant material until the top of the sealant material column remains at least 50 feet above the top of the uppermost saturated groundwater stratum; and

(iii) Install uncontaminated fill material, drill cuttings or one of the approved sealant materials listed herein from the top of the sealant material column to within approximately 5 feet of the ground surface.

(g) If a hole is drilled without the use of drilling fluids and the bottom of the hole is above the preexisting natural elevation of the uppermost saturated groundwater stratum, the drill hole shall be abandoned by completely backfilling from the bottom of the drill hole to the surface with uncontaminated earthen material or drill cuttings or approved grout materials described herein. When using uncontaminated earthen material or drill cuttings as a backfill material, this material should be emplaced in a manner to promote settling and compaction and to minimize voids caused by bridging. If the drill hole is backfilled to the natural ground surface with dry nonslurry materials then no surface cap is necessary.

(h) All drill holes shall be backfilled to the surface with dry nonslurry materials or capped with a concrete cap set at least 2 feet below the ground surface and then backfilled to

the surface with native earthen materials to ensure the safety of people, livestock, wildlife, and machinery in the area.

(i) Drill holes shall be capped or backfilled immediately after drilling and probing in accordance with W.S. 35-11-404(h). If it is necessary to temporarily delay the abandonment or keep the drill hole open for any reason, the drill hole must be securely covered with a temporary cap in a manner which will prevent injury to persons or animals. Drill holes shall not be left open for more than 30 days without specific authorization from the Administrator.

(j) For inspection and verification purposes, each drill hole shall be marked with a temporary marker that clearly identifies the name of the discoverer and the hole number until bond release is authorized. Holes shall not be marked with rebar, metal pipe or metal posts which could pose a hazard to people, livestock, wildlife or equipment.

(k) The Administrator may approve other drill hole abandonment procedures, and/or sealant materials, at the request of the discoverer.

Section 3. Reclamation of Drill Sites and Affected Lands.

(a) Drill sites and associated Light-use roads, as defined in Chapter 1, shall be restored as nearly as possible to their original condition.

(b) All drilling fluids, drill cuttings and geologic samples shall be confined and buried below grade to the extent possible. Excess drilling mud and drill cuttings or any acid-forming or toxic materials uncovered during or created by exploration by drilling, including petroleum contaminated soils, shall be properly disposed of so as not to constitute a fire, health, or safety hazard during or after the exploration by drilling.

(c) To the extent possible, any surface preparation of the drill site shall be accomplished in a manner consistent with Chapter 3, Section 2(b), Land Quality Noncoal Rules and Regulations.

(d) To the extent possible, topsoil removal and stockpiling shall precede any excavation within the drill site and associated light-use roads in a manner consistent with Chapter 3, Section 2(c) and 2(i), Land Quality Noncoal Rules and Regulations.

(e) To the extent possible, the discoverer shall reestablish the vegetative cover where vegetation has been removed or destroyed within the drill site and associated light-use roads by seeding, planting, transplanting, or by other adequate methods in a manner consistent with Chapter 3, Section 2(d) and 2(i), Land Quality Noncoal Rules and Regulations.

(f) All lands, including access roads or terrain damaged in gaining access to or

clearing the site, or lands whose natural state has been substantially disturbed as a result of the exploration by drilling, shall be restored as nearly as possible to their original condition, including reseeding if grass or other crop was destroyed.

Section 4. Bond.

(a) In order to assure and secure performance of the discoverer's obligations, each discoverer shall agree to post a bond for each exploration area. The amount of the bond shall be computed in accordance with established engineering principles, for accomplishing proper drill hole abandonment and surface restoration in accordance with the standards set out in this Chapter.

(b) The bond amount for any drill holes or any portion of the exploration area may be reduced when the discoverer demonstrates to the satisfaction of the Administrator that drill hole abandonment has been accomplished in accordance with the standards set out in this Chapter. The amount by which the bond is reduced may be returned to the discoverer or applied towards additional drilling. The bond for any drill sites or any portion of the exploration area may be released when reclamation has been completed and the Administrator finds that vegetation has been re-established.

(c) The Administrator may accept the bond of the discoverer itself without separate surety when the discoverer demonstrates to the satisfaction of the Administrator substantial compliance with the applicable provisions of Chapter 6, Land Quality Noncoal Rules and Regulations.

Section 5. Termination and Report of Operations.

(a) Within 12 months after the completion and proper abandonment of any exploration drill hole, the discoverer shall comply with the reporting requirements of W.S. § 35-11-404(e) or (f). The report shall be in a form as specified by the Administrator. After receipt of such report, the Administrator shall have one year to inspect and evaluate the abandoned drill holes, drill sites, and access routes and make a determination of whether to release the bond to the discoverer, require additional reclamation, or institute forfeiture proceedings. The abandoned drill hole reports shall be held as confidential for a period of five years from the date of filing. The period may be extended for additional five (5) year periods upon request of the person filing the report.

(b) Forfeiture proceedings and release of bonds shall be according to the procedure set forth in W.S. §§ 35-11-421 through 35-11-423; substituting therein "discoverer" for "operator;" "surface restoration" for "reclamation," and "exploration by drilling" for "surface mining."

(c) Failure to so inspect and evaluate abandoned drill holes shall constitute a decision by the Administrator that the discoverer has complied with this Chapter for release

of bond purposes only. This one year limitation shall not be construed to alter or affect W.S. § 35-11-404(k)-(n), or any other rights of action against the discoverer granted pursuant to the statutory provisions of the Wyoming Environmental Quality Act.

Section 6. Exceptions.

Sections 2 and 3 of this Chapter, relating to drill hole abandonment and site reclamation, shall not apply to holes drilled in conjunction with open-pit development within an existing permitted surface mine operation that are within 500 feet of the active pit and are projected to be mined through within 12 months of drilling. This Chapter shall not apply to holes drilled for the purpose of conducting oil and gas exploration operations. Specific exceptions from certain requirements of this Chapter shall also be preserved in accordance with W.S. § 35-11-404(g) and (h).

Section 7. Installation of Wells for Collection of Baseline Information.

(a) Construction of wells may be authorized by the Administrator under a Drilling Notification for the purpose of collecting ground water baseline data in preparation of a mine permit application.

(b) Prior to installation, the discoverer is encouraged, but not required, to submit a plan for review by the Administrator that describes the location and completion details of each proposed well. The Administrator shall review the plan and respond within 30 days.

(c) Wells shall be permitted in accordance with requirements of the State Engineer's Office, in accordance with W.S. 35-11-404 (c)(iv).

(d) Wells shall be constructed according to the standards contained in Chapter 11, Sections 6(b), 6(c), 6(d), 6(e), and 6(f), Land Quality Noncoal Rules and Regulations.

(e) Provisions shall be made such that each well is secured to prevent contaminant entry.

(f) Adequate bond shall be provided to assure that all wells are properly plugged and sealed and the sites restored.

(g) Well plugging and sealing and site reclamation shall follow the procedures outlined in Sections 2 and 3. Well casing shall be cut off at least two (2) feet below ground surface and any pump and associated appurtenances removed, as applicable, before the well is plugged and sealed.

(h) Well abandonment reports shall be filed with the Administrator and the State Engineer's Office within 12 months of abandonment.

DEPARTMENT OF ENVIRONMENTAL QUALITY

LAND QUALITY DIVISION

NONCOAL RULES AND REGULATIONS

CHAPTER 9

PERMIT APPLICATION REQUIREMENTS FOR SMALL MINING OPERATIONS

Section 1. **General.**

(a) Small mine operations are defined pursuant to W.S. § 35-11-401(j) as surface mining operations that remove no more than 10,000 cubic yards of overburden, topsoil and subsoil, and disturb no more than 10 acres of land in any one year.

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

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

(d) Prior to the commencement of a small surface mining operation involving not more than 10,000 cubic yards of overburden, topsoil and subsoil, and ten acres of affected land in any one year, an application shall be submitted to the Administrator in duplicate on forms supplied by the Division. Each application shall contain the information as set out in this Chapter and in a format as required by the Administrator.

Section 2. **Adjudication Information.**

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

(i) The name and address of the applicant, and, if the applicant is a partnership, association, or corporation, the names and addresses of all managers, partners and executives directly responsible for operations in this state;

(ii) A sworn statement that the applicant has the right and power by legal estate owned to mine from the land for which the permit is desired;

(iii) A sworn statement that the applicant has not forfeited a bond posted

for reclamation purposes and that all statements contained in the permit application are true and correct to the best knowledge of the applicant;

(iv) The names and last known addresses of the owners of record of the surface and mineral rights on the land to be covered by the proposed permit. If more than one landowner is included, then a map shall be provided to illustrate land ownership;

(v) The names and last known addresses of the owners of record of the surface rights on the lands adjacent to the proposed permit area. Adjacent means all lands within one-half mile of the proposed permit area. If more than one landowner is included, then a map shall be provided to illustrate land ownership;

(vi) An instrument of consent from the surface landowner, if different from the owner of the mineral estate, to the proposed mining and reclamation plan. If surface owner consent cannot be obtained, the options contained in W.S. § 35-11-406(b)(xii) shall apply;

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

(A) A legal description of the proposed permit area by legal subdivision, section, township and range. If the permit area or any portion thereof cannot be properly described using legal subdivisions then the permit area shall be described by protracted survey or metes and bounds description, which shall be accompanied by a map prepared by a licensed surveyor;

(B) The name, if any, by which such lands or any part thereof are known;

(C) The total number of acres in the area covered by the permit application and the approximate number of acres to be affected by the proposed operation; and

(D) The nearest town, village or city.

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

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

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

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

(C) Buildings, structures and dwellings;

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

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

(x) The mineral or minerals to be mined;

(xi) The estimated dates of commencement and termination of the proposed permit operation;

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

(xiii) If the proposed operation will affect any lands within 300 feet of any existing occupied dwelling, home, public building, school, church, community or institutional building, park or cemetery, the written consent of the appropriate landowner shall be provided; and

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

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

(c) The applicant shall post a reclamation bond in the amount and in a form

acceptable to the Administrator prior to approval of the small mine permit application.

Section 3. Environmental Baseline Information.

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

- (i) A description of the present land use(s) within the permit boundary;
- (ii) A map of vegetation types, range sites or ecological response units and a range site-range condition survey, or equivalent, on the proposed permit area, including a list of species and a ranking of their relative abundance in each vegetation type. The applicant shall submit labeled photographs to demonstrate each vegetation type and to document areas of sparse vegetation and any areas containing noxious weeds. Locations photographed shall be shown on the vegetation map;
- (iii) A description of any surface waters within the proposed permit area including estimated average flow rates, storage volume of any reservoirs and associated water rights within the permit area of any stream, reservoir, or lake. Depth to the groundwater within the mine area shall be stated, including a description of how the groundwater depth was determined;
- (iv) A soil map which identifies the soil types, sampling locations, and proposed salvage depths;
- (v) A report describing the soil types and their suitability for reclamation and depths and volume of suitable topsoil present on the proposed affected lands. Also, a description of the subsoil and/or overburden material existing between the topsoil and mineral seams;
- (vi) The applicant shall consult with both the Wyoming Game and Fish Department and the U.S. Fish and Wildlife Service prior to submission of the permit application and shall address their recommendations relative to wildlife surveys, monitoring and mitigation in the mine permit application as required by State and Federal law. Copies of all correspondence to and from these agencies shall be included in the permit application. The Administrator shall also consult with both wildlife agencies during the review of the mine permit application to insure that their recommendations are addressed to the extent that they are within the scope of the Act; and
- (vii) A copy of the appropriate National Wetlands Inventory Map with the permit area and disturbance boundary delineated. If potential wetlands exist that will be disturbed or impacted by mine related activity, then the applicant shall perform a wetland delineation according to Army Corps of Engineers accepted procedures. If the proposed operation will avoid any impact to the potential wetland, either through direct disturbance or

by affecting the watershed, then this should be clearly stated in the mine plan.

Section 4. Mine Operations Plan.

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

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

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

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

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

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

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

(vii) The procedures proposed to avoid constituting a public nuisance, endangering the public safety, human or animal life, property, wildlife and plant life in or adjacent to the permit area. The plan shall include fencing as necessary to prevent

unauthorized access of persons, livestock or wildlife and to protect the surface owner's ongoing operations; and

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

Section 5. Reclamation Plan.

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

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

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

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

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

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

(A) The applicant shall consult with and comply with all applicable requirements of the Wyoming State Engineer's Office. Copies of correspondence and any permit from the State Engineer shall be provided;

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

(C) Documentation that the size of the impoundment and the expected quantity and quality of water will be suitable for the proposed uses. If the applicant is unable to demonstrate to the satisfaction of the Administrator that the water quantity and quality will be suitable for the proposed use, the applicant shall provide an alternate plan; and

(D) The applicant may be required to monitor the water in the impoundment following construction to demonstrate that the quantity and quality are suitable for the proposed uses.

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

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

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

(ix) A projected timetable for accomplishment of the reclamation plan; and

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

Section 6. Evaluation of Revegetation Success.

Revegetation success shall be evaluated by the Administrator utilizing qualitative methods, no sooner than the fifth growing season following completion of reclamation. In consultation with the landowner revegetation shall be deemed successful when: 1) the established vegetation species are self-renewing; 2) the total vegetative cover of perennial species, excluding noxious weeds, and any species in the approved seed mix is at least equal to the total vegetative cover of perennial species, excluding noxious weeds, on the area before mining; and 3) the species diversity and composition are suitable for the approved postmining land uses.

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

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

(i) Application on forms supplied by the Division,

(ii) Revised mining and reclamation plans and schedules,

- (iii) Revised maps, in such detail as required by the Administrator,
 - (iv) Updated environmental baseline information in such detail as required by the Administrator,
 - (v) An appropriate reclamation bond.
- (b) The provisions of W.S. § 35-11-406(d), (j) and (k) will be required. Any public hearing shall apply only to the request of the operator to expand his operation, and the valid small mining permit already held by the operator will not be affected.

DEPARTMENT OF ENVIRONMENTAL QUALITY

LAND QUALITY DIVISION

NONCOAL RULES AND REGULATIONS

CHAPTER 10

LIMITED MINING OPERATIONS

FOR TEN ACRES OR LESS OF AFFECTED LAND

Section 1. **Commencement.**

(a) Prior to the commencement of surface mining operations for the removal of sand, gravel, scoria, limestone, dolomite, shale, ballast, or feldspar from an area of ten acres or less of affected land, a notification shall be submitted by the operator to the Administrator on forms supplied by the Division and shall contain the following:

- (i) The name, address, and telephone number of the operator.
- (ii) The written consent for the operation from the surface owner and surface lessee, if any, of the land to be affected.
- (iii) The location of the area of the operation by legal subdivision, section, township, and range. If there is no other survey, the location by protracted survey, metes and bounds, or claims.
- (iv) The mineral to be mined.
- (v) The proposed commencement and completion dates of the operation.
- (vi) A USGS topographic map:

(A) Each notification (Form 10) must be accompanied by an original quadrangle map (photo copies or other similar copies are not acceptable unless prior approval is obtained from the Land Quality Division).

(B) The following information shall be shown on the quadrangle map:

- (I) A legal description of the ten acres or less of land to be affected.

(II) If any previous mining has taken place, or is taking place, within the ten acres or less to be affected, show the location and identity of this mining as an existing mining operation.

(III) Show any existing or proposed access or haul roads into, or away from the proposed mining operation. Any roads to be constructed or upgraded by the operator shall be included as part of the ten-acre operation from that point that they provide exclusive service and shall be covered by a reclamation bond.

(vii) The operator shall provide a description of the proposed mining operation. This description shall include:

- (A) Number of acres to be affected.
- (B) Maximum depth to which mining will occur.
- (C) Depth to groundwater where known.
- (D) Brief description of the mining operation(s) and methods.
- (E) The premining and proposed postmining land use.

(viii) A sworn statement that all information contained in the notification is true and correct to the best knowledge of the operator.

Section 2. Bond.

The operator shall file a bond pursuant to W.S. § 35-11-401(e)(vii).

Section 3. Annual Reports.

The operator shall file annual reports pursuant to W.S. § 35-11-401(k).

Section 4. Operation.

(a) A sign shall be posted and maintained at the entrance of the operation that, at a minimum, clearly shows:

- (i) The name, address, and telephone number of the operator;
- (ii) The name of the operator's local authorized agent; and
- (iii) The LQD limited mining operation number.

(b) All topsoil from affected lands shall be saved and stockpiled in such a manner to minimize wind and water erosion. Such stockpiles shall be clearly identified by a sign.

(c) In no case shall any materials be pushed or dumped over natural escarpments.

Section 5. **Reclamation.**

(a) After the mining operations have ceased or within 30 days after the abandonment of the mining operation, the operator shall notify the Administrator of such fact and commence reclamation and restoration. Provided however, that immediate reclamation will not be required if the landowner advises the Department in writing of his intent to further utilize the product of the mine, and if he assumes the obligation of reclamation and furnishes an appropriate bond to the Administrator.

(i) The operation will be considered to be abandoned if any of the following occur:

(A) The individual, partnership, or corporation conducting the operation goes out of business.

(B) No further mining or reclamation work has been done from one annual report to the next.

(C) The mineral being mined has been exhausted.

(D) The period of time for which the surface owner (or lessee) gave permission has expired and a written extension has not been obtained.

(b) The reclamation of the affected lands shall be in accordance with the following:

(i) Reclamation shall be consistent with the proposed postmining land use.

(ii) On commencement of reclamation the topsoil shall be redistributed evenly over the affected area.

(iii) The affected land shall be reclaimed using sound agricultural practices. Surface preparation of affected areas to be seeded, seed types, amounts, methods of seeding and time shall be subjected to approval by the Division prior to seeding.

(iv) Mulching and/or fertilization may be required at the Administrator's discretion to ensure revegetation.

(v) Petroleum wastes and other toxic materials shall be disposed of by methods which ensure that topsoil, vegetation, surface water and groundwater are not contaminated.

(vi) For soft rock operations, final slopes shall be gentle enough to allow for contour seeding and final topography shall be approved by the Division, provided that the final slope shall not be greater than a ratio of 3:1.

(vii) For hard rock operations, whenever possible, the highwall shall be reduced to no greater than a 3:1 slope. The operator must demonstrate the stability of any steeper slope or of any remaining highwall, so that the reclaimed area is left in a condition so as not to create a potential erosion problem or safety hazard to the public or wildlife. Slopes, including any remaining highwall, shall be modified to blend as much as possible to the native landscape.

Section 6. Transfers

The right to operate under a limited mining exemption may be transferred to a new operator with written approval of the existing operator and written acceptance by the Administrator, provided the new operator submits a new Form 10 and bond required for the new operation and assumes the reclamation liability of the existing operator and does not violate the limitations provided in Section 8 below.

Section 7. Release of Bonds and Forfeiture of Bonds.

Bond release. Forfeiture and cancellation shall be handled as provided in W.S. §§ 35-11-417 through 35-11-424.

Section 8. Limitation of Operations.

(a) The operator will not be allowed to:

(i) Conduct more than one operation under W.S. § 35-11-401(e)(vi) within adjacent areas when the operations are to mine the same minerals, or

(ii) Conduct more than one operation of ten acres or less within any six-mile radius when the two operations are to mine the same mineral, so as to circumvent the general requirements of the Environmental Quality Act. The Administrator may allow two operations for the same mineral within the six-mile radius if one of the operations has completed reclamation work and is awaiting bond release. Complete reclamation for the purposes of this section means backfilling, grading, topsoil application and final seeding activities have been completed.

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 (94 pounds) 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 ($\frac{1}{4}$ $\frac{1}{4}$) section boundary that is at least one quarter ($\frac{1}{4}$) 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) 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 (ii), 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).

CHAPTER 12

NONCOAL

LETTERS OF CREDIT

Section 1. **Conditions on the Letter of Credit.**

(a) Letters of credit as authorized by W.S. § 35-11-418, shall be subject to the following conditions:

(i) The letter shall be irrevocable during its term, which shall coincide with the annual bonding period. The Administrator may approve the use of letters of credit as security in accordance with a schedule approved with the permit. Any bank issuing a letter of credit shall notify the Director in writing at least 90 days prior to the maturity date of such letter or the expiration of the letter of credit agreement. Letters of credit utilized as security in areas requiring continuous bond coverage shall be forfeited and collected by the Director if not replaced by other suitable evidence of financial responsibility at least 30 days before the expiration date of the letter of credit agreement;

(ii) The letter must be payable to the Department in part or in full upon demand and receipt from the Director of a notice of forfeiture issued in accordance with W.S. § 35-11-421;

(iii) The letter shall not be in excess of ten percent of the bank's capital surplus account as shown on a balance sheet certified by a certified public accountant;

(iv) The Administrator shall not accept letters of credit from a bank for any person, on all permits held by that person, in excess of three times the limitation imposed by W.S. § 13-3-402; and

(v) The letter of credit shall provide that:

(A) The bank will give prompt notice to the permittee and the Director of any notice received or action filed alleging the insolvency or bankruptcy of the bank, or alleging any violations of regulatory requirements which could result in suspension or revocation of the bank's charter or license to do business;

(B) In the event the bank becomes unable to fulfill its obligations under the letter of credit for any reason, notice shall be given immediately to the permittee and the Director; and

(C) Upon the incapacity of a bank by reason of bankruptcy,

insolvency, or suspension or revocation of its charter or license, the permittee shall be deemed to be without performance bond coverage in violation of the Act. The Director shall issue a notice of violation against any operator who is without bond coverage, specifying a reasonable period to replace bond coverage, not to exceed 90 days. During this period the Director or his designated representative shall conduct weekly inspections to ensure continuing compliance with other permit requirements, the regulations and the Act. If the notice is not abated in accordance with the schedule, a cessation order shall be issued.

Section 2. Agent for Service of Process.

(a) The letter may only be issued by a bank organized to do business in the U.S. which identifies by name, address, and telephone number an agent upon whom any process, notice or demand required or permitted by law to be served upon the bank, may be served.

(i) If the bank fails to appoint or maintain an agent in this State, or whenever any such agent cannot be reasonably found, then the Director shall be an agent for such bank upon whom any process, notice or demand may be served for the purpose of this Chapter. In the event of any such process, the Director shall immediately cause one copy of such process, notice or demand to be forwarded by registered mail to the bank at its principal place of business. The Director shall keep a record of all processes, notices, or demands served upon him under this paragraph, and shall record therein the time of such service and his action with reference thereto.

(ii) Nothing herein contained shall limit or affect the right to serve any process, notice or demand required or permitted by law to be served upon the bank in any other manner now or hereafter permitted by law.

CHAPTER 13

NONCOAL

REQUIREMENTS FOR EXISTING BENTONITE MINING OPERATIONS

Section 1. Applicability. The provisions of this Chapter apply to all bentonite operations permitted as of August 31, 1981. If a conflict occurs between any particular requirements of this Chapter and any other Chapter of Land Quality Division Rules and Regulations, this Chapter shall be controlling.

Section 2. Information Submittal Requirements.

(a) Except as required to implement the provisions of (b) below, the requirements of Chapter 2, Land Quality Division Rules and Regulations, shall not apply to previously issued bentonite mining permits.

(b) For lands for which permits were issued by August 31, 1981, but which have not been affected by August 31, 1981, the following general information shall be provided to the Administrator:

(i) The location, extent, and time schedule for mining and reclamation operations.

(ii) A description of overburden, topsoil and subsoil present and a plan for removal, handling and stockpiling of it. For soil surveys, the SCS Order 2 Soils Survey and Soils Analysis shall be used.

(iii) Establishment of vegetation data to fulfill the requirements of Section 3(a)(ii) below.

(iv) The applicant shall consult with both the Wyoming Game and Fish Department and the U.S. Fish and Wildlife Service prior to submission of the mine and reclamation plan. The Administrator shall also consult with both wildlife agencies during review of the proposed mine and reclamation plan. The Administrator shall review recommendations from the wildlife agencies and may reject recommendations that are outside the scope of the Act. Those recommendations accepted by the Administrator shall be presented to the applicant for their review and comment. Those recommended mitigation plans from the wildlife agencies resulting from review and comment and accepted by the Administrator shall be incorporated into the mine and reclamation plan.

(v) A reclamation plan for the lands identified in (i) including the proposed revegetation and/or any reclamation features planned for those sites such as

impoundments, spoil piles and the final grading plans.

(c) Within one year from August 31, 1981, the information required by (b) shall be furnished for lands to be affected between August 31, 1981, and August 31, 1983. Thereafter, data for a one-year period shall be furnished one year in advance of the time that additional lands will be affected. In the event that the operator encounters an exceptional situation where mining is necessary on a site that had not been described in the above plan, he will notify the Administrator and provide the above information prior to affecting the land. Provided, however, this shall not affect the requirements applicable to permit revisions.

Section 3. **Environmental Protection Performance Standards.**

(a) For permitted bentonite mining operations, the requirements of Chapter 3, Sections 1 and 2, Land Quality Division Rules and Regulations shall apply only to lands affected after August 31, 1981, with the following exceptions:

(i) Subsoil suitability tests shall be conducted, if required by the Administrator, in accordance with standard methods.

(ii) Standards for the success of revegetation shall consist of a combination of scientific (objective) and visual (subjective) methods of determining if revegetation is complete. For these methods, the operator may select, upon the Administrator's approval, one of the following techniques:

(A) **Control Areas.** A control area is defined as an area of at least one acre, which will not be disturbed by mining activities, and which is managed in a fashion equivalent to non-affected lands within the permit area, and which is to be used to adjust the vegetation data for climatic changes which is collected on affected areas prior to mining.

(B) **Reference Areas.** A reference area is a land unit of at least one acre, managed in a fashion equivalent to non-affected lands within the permit area, to be used for the purpose of judging reclamation success. Reference areas must be representative of geology, slope and vegetation that was present on the affected areas prior to mining. Locations of reference areas shall be mutually agreed upon by the Administrator and the operator. The location of reference areas shall be illustrated on a map, and metes and bounds description of their location will be provided. Reference areas will be sampled in accordance with standard techniques at the time the operator requests bond release. The operator, with the Administrator's prior approval, may employ the reference area concept without premining vegetation sampling.

(iii) The Department will consult with the landowners prior to bond release.

(iv) There is no requirement to divert all unchannelized surface water or ephemeral streams except as required to meet State laws.

(v) Road regulations shall only apply to those roads constructed or improved by the permittee or licensee.

(vi) The time schedule for reclamation shall require that reclamation begin within two years and be completed within four years of the date the land is affected, except where field drying is to take place, in which case reclamation must begin within three years and be completed within five years of the date the land is affected. The time schedule shall:

(A) Apply to reclamation of all lands to be affected in the permit area;

(B) Designate times for backfilling, grading, contouring and reseeding;

(C) Be coordinated with a map indicating the areas of progressive mining and reclamation; and

(D) Establish reclamation concurrently with mining operations, whenever possible.

(b) For permitted bentonite mining operations, the reclamation standards of W.S. § 35-11-402(a)(i)-(vi) shall apply to lands affected before August 31, 1981, which shall assure at a minimum that land is reclaimed to an acceptable use after mining, considering the land's utility and capacity to support such uses.