

DEPARTMENT OF ENVIRONMENTAL QUALITY

LAND QUALITY DIVISION

CHAPTER 1

AUTHORITIES AND DEFINITIONS FOR COAL MINING OPERATIONS

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 35-11-1104, Wyoming Statutes, 1977, as amended. These rules and regulations are effective upon filing with the Secretary of State. They become an official part of Wyoming's coal regulatory program when approved by the U.S. Secretary of the Interior or his designee.

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) "Amendment" means the addition of new lands to a previously approved permit area, as allowed by W. S. § 35-11-406(a)(xii).

(f) "Annual" means a plant which completes its life cycle in 12 months or fewer.

(g) "Applicant" means any "person" seeking a permit, permit revision, renewal, 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).

(h) “Approximate original contour” means that surface configuration achieved by backfilling and grading of the mined areas so that the reclaimed land surface closely resembles the general surface configuration of the land prior to mining and blends into and complements the drainage pattern of the surrounding terrain.

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

(j) “Augmented seeding” means reseeding in response to the unsuccessful germination, establishment or permanence of revegetation efforts. Augmented seeding resets the applicable liability period. A synonym is reseeding.

(k) “Barren” means any land unit devoid of vegetation, or practically so.

(l) “Baseline vegetation inventory” means a vegetation sampling program executed prior to any significant surface disturbance cause by proposed mining activities. The inventory will quantitatively and qualitatively classify the different plant communities to the specification of Wyoming State Law.

(m) “Belt transect” means a rectangular sampling plot used for the estimation of shrub density (premining and postmining) and postmining species diversity and species composition, each belt transect shall be at least 100 square meters and a minimum of 50 meters in length.

(n) “Best practicable Technology” means a technology based on methods and processes that are both practicable and reasonably economic and is justifiable in terms of existing performance and achievability in relation to the establishment of shrubs in the required density, aerial extent and species.

(o) “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.

(p) “Biennial” means a plant that lives for two years, producing vegetative growth the first year and usually blooming and fruiting and senescing in the second year and then dying.

(q) “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 the following, which the operator has deposited with the Department of Environmental Quality in lieu of a Surety Bond or Self-Bond Instrument:

(i) Federal insured certificates of deposit;

(ii) Cash;

(iii) Government securities;

(iv) Irrevocable letters of credit;

(v) An alternative method of financial assurance that is acceptable to the Administrator and provides for a comparable level of assurance for performance of reclamation obligations. The alternative method of financial assurance must first be approved by the Office of Surface Mining; or

(vi) A combination of any of these bonding methods.

(r) “Bond responsibility period” means the minimum 10 year period during which the bond, in part or wholly, remains in effect.

(s) “Cactus” means any member of the Cactaceae plant family. Members of the Cactaceae plant family are in the lifeform category of succulent.

(t) “Coal exploration” means either:

(i) The field gathering of surface or subsurface geologic, physical, or chemical data by mapping, trenching, drilling, geophysical or other techniques necessary to determine the quality and quantity of overburden and coal of an area. If this activity results in the extraction of coal, the coal shall not be offered for commercial sale (except for test burns); or

(ii) The gathering of environmental data to establish the conditions of an area before beginning coal mining and reclamation operations.

(u) “Coal mine waste” means coal-processing waste and underground development waste.

(v) “Coal preparation plant” means a facility where coal is subjected to chemical or physical processing or cleaning, concentrating, or other processing or preparation. It includes facilities associated with coal preparation activities, including, but not limited to the following: loading facilities; storage and stockpile facilities; sheds, shops, and other buildings; water treatment and water storage facilities; settling basins and impoundments; and coal-processing and other waste disposal areas.

(w) “Coal-processing waste” means earthen materials which are wasted or otherwise separated from product coal during cleaning, concentrating or other processing or preparation of coal.

(x) “Combustible material” means organic material that is capable of burning.

(y) “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.

(z) “Cool season” means a plant which generally makes the major portion of its growth during late fall, winter, and early spring. Cool season species generally exhibit the C3 photosynthetic pathway.

(aa) “Cover” means the percent of the ground surface which is covered by the vertical projection of objects on or above that ground surface. The objects may include standing plant material and cryptogams, litter or rock. “Absolute cover” means the percent cover of a given category independent of other categories. The following cover categories or descriptions used are:

(i) “Absolute cover of litter” means the percent of the ground surface which is overlain by litter;

(ii) “Absolute cover of rock” means the percent of the ground surface which is covered by rock;

(iii) “Absolute cover of vegetation” means the percent of the ground surface which is covered by the vertical projections of all live vascular plants;

(iv) “Absolute cover of vegetation by species” means the percent of the ground surface covered by individual live vascular plants;

(v) “Absolute cover of cryptogams” means the percent of the ground surface which is covered by cryptogams.

(vi) “Absolute cover of total ground cover” means the sum of vegetation, cryptogams, litter and rock cover.

(vii) “Absolute cover of bare ground” means the percent of the ground surface which is not covered by the vertical projection of vascular plants and cryptogams, litter or rock.

(viii) “Relative cover” means the expression of any number of cover categories in relation to each other such that the sum of the chosen relative cover values total 100 percent.

(ab) “Cover crop” means a preparatory crop of one or more species seeded and grown prior to the seeding of the permanent seed mixture, for the chief purpose of protecting the soil from erosion and also for improving the soil fertility and structure. The term is synonymous with stubble crop and is considered a type of mulch.

(ac) “Critical habitat” means those areas essential to the survival and recovery of species listed by the Secretary of the Interior as threatened or endangered under the authority of 50 CFR, Part 17.

(ad) “Crucial habitat” means those areas, designated as such by the Wyoming Game and Fish Department, which determine a population's ability to maintain and reproduce itself at a certain level over the long term.

(ae) “Cryptogam” means a plant (vascular or non-vascular) that reproduces by spores rather than seeds. A plant in any of these groups: Lichens, Bryophytes (mosses, liverworts, hornworts), Pteridophytes (ferns, moonworts, horsetail, club mosses, spike mosses, quillworts, pepperwort) will be considered cryptogams.

(af) “Density means the number of individuals per unit area.

(ag) “Designated authorized representative” means, for the purposes of issuing a cessation order, either the Administrator, the district engineer, or other qualified inspector designated by the Director.

(ah) “Developmental drilling” means drilling down to and including the lowest coal seam to be mined which occurs in or within 500 feet of an active mine pit.

(ai) “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.

(aj) “Diversion” means a channel, embankment, device, or other man-made 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.

(ak) “Dominant” means for the purpose of calculating Chapter 4 shrub restoration performance standard, the full shrub or subshrub species with the greatest relative density.

(al) “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, and areas disturbed by mud pits, and any land over which drilling mud mixtures overflow or may disturb.

(am) “Eligible land” means all land to be affected by a mining operation after August 6, 1996 which carries the grazingland land use designation and all affected pastureland land use units which have a full shrub density greater than one full shrub per square meter. Pastureland is eligible only if the surface owner requests that the pastureland be eligible and only if the land units are included in a new permit or permit amendment application which is submitted to the Administrator after approval of this rule by the Office of Surface Mining.

(an) “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.

(ao) “Endangered species” means any species which is in danger of extinction throughout all or a significant portion of its range and which has been listed under the federal Endangered Species Act.

(ap) “Enhancement wetland” means a reclaimed postmining wetland which exceeds the minimum required mitigation wetlands acreage required by the Army Corps of Engineers under Section 404 of the Federal Clean Water Act.

(aq) “Ephemeral stream” means a stream which flows only in direct response to precipitation in the immediate watershed or in response to snow melt, and which has a channel bottom that is always above the prevailing water table.

(ar) “Essential hydrologic functions” means with respect to alluvial valley floors, those conditions of surface and groundwater hydrology that make water of a suitable quality and quantity usefully available for subirrigation or flood irrigation agricultural activities. These conditions may include, but are not limited to, the erosional state of the stream, the surface water balance, the groundwater balance, the physical and chemical properties of the soils, water and substrata, and topographic configuration.

(as) “Establishment practices” means practices used to facilitate actual establishment of targeted plants and are not intended to continue throughout the bond

responsibility period. These practices are acceptable practices, but delay the start of the bond responsibility period until they are discontinued.

(at) “Excess spoil” means spoil material disposed in a location other than the mined-out area, except that spoil material used to achieve the approximate original contour or to blend the mined-out area with the surrounding terrain.

(au) “Existing structure” means a structure or facility used in connection with or to facilitate coal mining and reclamation operations for which construction begins prior to the approval of a State program pursuant to Section 503 of P.L. 95-87.

(av) “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.

(aw) “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.

(ax) “Farm” means, with respect to alluvial valley floors, one or more land units on which agricultural activities are conducted. A farm is generally considered to be the combination of land units with acreage and boundaries in existence prior to August 3, 1977, or, if established after August 3, 1977, with those boundaries based on enhancement of the farm's agricultural productivity and not related to surface coal mining operations.

(ay) “Flood irrigation” means, with respect to alluvial valley floors, supplying water to plants by natural overflow or the diversion of flows, so that the irrigated surface is largely covered by a sheet of water.

(az) “Forb” means any herbaceous plant species other than the members of the grass (Poaceae [Gramineae]), sedge (Cyperaceae) or rush (Juncaceae) plant families.

(ba) “Full shrub” means a perennial woody plant which differs from a tree by normally being shorter in height and by often having several stems arising near the base.

(bb) “Gel strength” means the minimum shear stress which results in permanent deformation of a gel.

(bc) “General area” means, with respect to hydrology, the topographic and groundwater basin surrounding a permit area which is of sufficient size, including areal extent and depth, to allow assessment of the impacts resulting from the mining operation

on the quality and quantity of surface water and groundwater systems in the basins, including consideration of the interaction of the impacts with adjacent mines.

(bd) “Graminoid” means a plant species of the grass (Poaceae [Gramineae]), sedge (Cyperaceae) or rush (Juncaceae) plant families.

(be) “Grass” means a plant species of the Poaceae (Gramineae) plant family.

(bf) “Grass-like” means a plant species of the sedge (Cyperaceae) or rush (Juncaceae) plant families that vegetatively resemble members of the grass family Poaceae (Gramineae).

(bg) “Grazing exclosure” means a land unit surrounded and/or covered by fencing or other materials which prevents livestock grazing in order to more accurately estimate the current year’s herbaceous production on the land unit.

(bh) “Groundwater” means subsurface water that fills available openings in rock or soil materials such that they may be considered water-saturated.

(bi) “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.

(bj) “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.

(bk) “Highwall” means the face of exposed overburden or coal in an open cut of a surface mine or entry to an underground mine.

(bl) “History of intensive agricultural use” means those lands which, if nonirrigated, have had a cultivated crop, small grains or hay crops harvested for five out of any ten year period, or if irrigated has water of sufficient quantity to sustain production of cultivated crops, small grain, or hay crops for eight out of ten years and have had a cultivated crop, small grain, or hay crop harvested for any one year.

(bm) “Husbandry practice” means, when preceded by the word “normal”, those management practices that may be used to achieve revegetation success without restarting the bond responsibility period. Normal husbandry practices are sound management techniques which are commonly practiced on native lands in the area of the mine and, if discontinued after the area is bond released, shall not reduce the probability of permanent vegetation success.

(bn) “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.

(bo) “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.

(bp) “Imminent danger to the public” means the existence of any condition or practice, or any violation of a permit or other requirements of the Act in a coal mining and reclamation operation, which could reasonably be expected to cause substantial physical harm to persons outside the permit area before the condition, practice, or violation can be abated. A reasonable expectation of death or serious injury before abatement exists if a rational person, subjected to the same condition or practice giving rise to the peril, would avoid exposure to the danger during the time necessary for abatement.

(bq) “Important habitat” means that habitat which, in limited availability, supports or encourages a maximum diversity of wildlife species or fulfills one or more living requirements of a wildlife species. 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.

(br) “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.

(bs) “Inclusion” means, with respect to vegetation, an area no more than two acres in size, which is distinctly different from the surrounding vegetation community due to substantial, visible differences in species composition, cover, or production.

(bt) “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.

(bu) “Interseed” means a secondary seeding into established vegetation in order to improve composition, diversity or seasonality. Interseeding is done to enhance revegetation rather than to augment the revegetation that is unsuccessful in terms of germination, establishment, or permanence.

(bv) “Introduced” means a plant species that is not a component of the original flora of North America.

(bw) “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.

(bx) “Joint agency approval” means, for coal mining operations, the approval of mining or reclamation plans that would adversely affect any publicly owned park or any place included in the National Register of Historic Places by the federal, state, or local agency with jurisdiction over the park or place.

(by) “Land use” means for coal mining operations, specific uses or management-related activities, rather than the vegetation or cover of the land. Land uses may be identified in combination when joint or seasonal uses occur. Changes of land use or uses from one of the following categories to another shall be considered as a change to an alternative land use which is subject to approval by the Administrator. Land used for mine facilities in support of the operations which are adjacent to or an integral part of these operations are also included. Support facilities include, but are not limited to, parking, storage or shipping facilities.

(i) “Cropland” means land used for the production of adapted crops for harvest, alone or in a rotation with grasses and legumes, and includes row crops, small-grain crops, hay crops, nursery crops, orchard crops, and other similar specialty crops.

(ii) “Pastureland” means land used primarily for the long-term production of adapted, domesticated forage plants to be grazed by livestock or occasionally cut and cured for livestock feed. In addition, for the purpose of determining premining land use, the relative cover of introduced perennial forage species must be greater than 40% of the relative cover of total vegetation in order for the land to be pastureland. If the full shrub density is greater than one shrub per square meter on those lands and the surface owner requests the lands to be eligible, the land use is still pastureland but the land is also “eligible land” in terms of shrub reclamation.

(iii) “Grazingland” means rangelands and forest lands where the indigenous native vegetation is actively managed for grazing, browsing, and occasional hay production, and occasional use by wildlife.

(iv) “Forestry” means land used or managed for the long-term production of wood, wood fiber, or wood-derived products.

(v) “Residential” means land used for single and multiple-family housing, mobile-home parks, and other residential lodgings.

(vi) “Industrial commercial” means land used for:

(A) Extraction or transformation of materials for fabrication of

products, wholesaling of products or for long-term storage of products. This includes all heavy and light manufacturing facilities and such short-term uses as petroleum refining and oil and gas production.

(B) Retail or trade of goods or services, including hotels, motels, stores, restaurants, and other commercial establishments.

(vii) “Recreational” means land used for public or private leisure activities, including developed recreation facilities such as parks, camps, and amusement areas, as well as areas for less intensive uses such as hiking, canoeing, and other undeveloped recreational uses.

(viii) “Fish and wildlife habitat” means land dedicated wholly or partially to the production, protection or management of species of fish or wildlife.

(ix) “Developed water resources” means land used for storing water for beneficial uses such as stockponds, irrigation, fire protection, flood control, and water supply.

(x) “Undeveloped land of no current use or land management” means land that is undeveloped or, if previously developed, land that has been allowed to return naturally to an undeveloped state or has been allowed to return to forest through natural succession.

(xi) “Treated grazingland” means grazingland which has been altered to reduce or eliminate shrubs provided such treatment was applied at least five years prior to submission of the state program permit application. However, grazingland altered more than five years prior to submission of the state program permit application on which full shrubs have reestablished to a density of at least one per nine square meters does not qualify as treated grazingland.

(bz) “Lichen” means those organisms formed by the symbiotic relationship between fungal and algal species. For the purpose of estimating ground cover lichens are cryptogams.

(ca) “Life form” means the structure, form, habit, life history and physiology of an organism that display an obvious relationship to important environmental factors in its native or current habitat. For data presentation the preferred life form categories are: annual/biennial forb, annual grass, cryptogam, grass-like, native cool season perennial grass, native warm season perennial grass, introduced perennial grass, perennial forb, shrub, subshrub, succulent and tree.

(cb) “Litter” means, for the purposes of estimating ground cover, the uppermost layer of organic debris, usually considered to be the standing dead, freshly fallen or slightly decomposed vegetal material on the soil surface. Decomposing plant

material which has lost its structural integrity or which is no longer recognizable as plant tissue is not litter.

(cc) “Major species” means a plant species whose relative cover value equals or exceeds two percent as estimated by a quantitative sampling program.

(cd) “Material damage to the hydrologic balance” means a significant long-term or permanent adverse change to the hydrologic regime.

(ce) “Materially damage the quantity or quality of water” means, with respect to alluvial valley floors, changes in the quality or quantity of the water supply to any portion of an alluvial valley floor where such changes are caused by coal mining and reclamation operations and result in changes that significantly decrease the capability of the alluvial valley floor to support subirrigation or flood irrigation agricultural activities.

(cf) “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, and utility corridors.

(cg) “Mitigation wetland” means a type of reclaimed, postmining wetland authorized and approved by the Army Corps of Engineers as replacement for jurisdictional wetlands whose disturbance was authorized by the Army Corps of Engineers under Section 404 of the Federal Clean Water Act.

(ch) “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.

(ci) “Monitoring” means the collection of environmental and hydrological data by either continuous or periodic sampling methods.

(cj) “Moss” means a member of the Bryophyte plant group, including liverworts and hornworts, which have a comparatively small, simple growth form and which lack true xylem and phloem tissue. For the purposes of estimating ground cover, mosses are cryptogams.

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

(cl) “Native” means a plant species which is a component of the original flora of North America.

(cm) “Noxious weed” means an undesirable, troublesome, aggressive or difficult to control plant species whose seeds are severely limited in or totally excluded

from commercial seed sales. The Wyoming Department of Agriculture exclusively makes the noxious weed designation, which includes both “designated” and “prohibited” noxious weeds, under the Wyoming Weed and Pest Control Act. This definition does not include “declared weeds” published by individual Wyoming counties.

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

(co) “Perennial” means a plant which takes at least three years to complete its life cycle and usually persists after flowering and producing seed.

(cp) “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.

(cq) “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.

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

(cs) “Plant species inventory” means a list of plant species, organized by life form and scientific binomial, obtained by conducting a field reconnaissance of a specific land unit.

(ct) “Plotless Sampling” means estimation of vegetation without the use of two-dimensional areal reference units.

(cu) “Point intercept” means a cover estimation method based upon the vertical projection of a point through the vegetation. The point may be an ocular sighting device, a sharpened rod or a series of sharpened rods on a point frame or a handheld sharpened rod. The ocular sighting devices may be either crosshairs or a laser source and shall be mounted on a frame which ensures that each estimation point is projected from above the canopy (maximum of one meter) to the ground surface without bias. Each pin shall be a rod with a sufficiently small or sharpened point which ensures unbiased visual determination of each object intercepted by the pin’s vertical movement from above the canopy to the ground surface. Under the point intercept method, absolute cover at each sample point is determined as follows:

$$\% \text{ absolute cover of A} = \frac{\text{number of hits on A}}{\text{total number of hits}} \times 100$$

(cv) “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.

(cw) “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.

(cx) “Primary shrub species” means, in relation to the shrub standard Option IV, each full shrub and each subshrub species which has a relative density equal to or greater than 0.1 (10 percent). Furthermore, under Option IV, the relative density of fringed sagewort (*Artemisia frigida*) must be equal to or exceed 0.2 (20 percent) of the relative density to qualify as a primary shrub species. Under shrub stand Options I, II, and III, a primary shrub species means each full shrub species which has a relative density equal to or greater than 0.1 (10 percent).

(cy) “Principal shareholder” means any person who is the owner of record of ten percent or more of any class of voting stock.

(cz) “Probable hydrologic consequences” means the projected impacts or changes to the hydrologic regime caused by the proposed coal mining and reclamation operation including the effects of adjacent mining operations.

(da) “Production” means an estimate of the total quantity of herbaceous matter produced within a growing season. The estimate includes all plant parts which remain attached to the current growing season plant and includes only above ground herbaceous material.

(db) “Property to be mined” means, for coal mining operations, both the surface estates and mineral estates within the area covered under the term of the permit and the area covered by underground workings.

(dc) “Public building” means any structure that is owned or leased, and principally used by a governmental agency for business or meetings.

(dd) “Public Parks” means an area designated by a federal, state or local agency for public recreational use.

(de) “Public road” means a road:

(i) Which has been designated as a public road pursuant to the laws of the jurisdiction in which it is located;

(ii) Which is maintained with public funds in a manner similar to other public roads of the same classification within the jurisdiction;

(iii) For which there is substantial (more than incidental) public use;

and

(iv) Which meets road construction standards for other public roads of the same classification in the local jurisdiction.

(df) “Quadrat” means a two-dimensional, rectangular, square or circular unit which is superimposed on the ground surface for the purpose of estimating cover or production. The quadrat shall be sized appropriately for the sampled vegetation community and shall be at least one half square meter but no larger than one square meter.

(dg) “Qualitative” means, in the context of a vegetation sampling program and/or evaluation of sampling data, that the program and/or evaluation process are conducted using non-numerical information derived from defined sources and/or defined field reconnaissance regimes.

(dh) “Quantitative” means, in the context of a vegetation sampling program and/or evaluation of sampling data, that the program and/or evaluation processes are conducted using statistical analyses of numerical data derived from defined sampling regimes.

(di) “Random” means every point or location in an area has an equal chance of being chosen for sampling as any other point in that area.

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

(dk) “Reclaimed land surface” means affected land which has been backfilled, graded, contoured, and revegetated in accordance with an approved reclamation plan.

(dl) “Reference area” means a land unit established to evaluate revegetation success. A “Reference area” is representative of a vegetation community or communities that will be affected by mining activities, in terms of physiography, soils, vegetation and land use history. The “Reference area” and its corresponding postmine vegetation community (or communities) must be approved by LQD and shall be defined in the approved Reclamation Plan. All “Reference areas” shall be managed to not cause significant changes in the vegetation parameters which will be used to evaluate Chapter 4 revegetation success performance standards. A “Reference area” can be a “Comparison area”, “Control area”, “Extended reference area”, or “Limited reference area”, depending on how it is established and used, in accordance with the following provisions:

(i) “Comparison area” means a type of “Reference area” that is established after a vegetation community has been affected. A qualitative determination shall be used to evaluate if the proposed “Comparison area” adequately represents the affected vegetation community. A “Comparison area” may be used when other types of

“Reference areas” are not available for measuring revegetation success or when other types of “Reference areas” will not be representative of revegetation success. “Comparison areas” shall be approved by the Administrator prior to their establishment. When evaluating Chapter 4 revegetation success performance standards, data from the “Comparison areas” are directly compared by statistical procedures to data from the reclaimed area.

(ii) “Control area” means a type of “Reference area” that is established during baseline sampling. Quantitative comparisons of vegetation cover, total ground cover, and production between the proposed “Control area” and the vegetation community to be affected are used to demonstrate the representative nature of the “Control area”. When evaluating revegetation success, baseline data are climatically adjusted using equations. These adjusted data are directly compared by statistical procedures to vegetation data from the reclaimed area. The Administrator may determine to make a direct comparison without the climatic adjustment between the “Control area” and the reclaimed area. Each “Control area” shall be at least two acres.

(iii) “Extended reference area” means a type of a “Reference area” that includes a major portion of one or more premine vegetation communities within the permit area. During baseline sampling, the “Extended reference area” includes areas proposed to be affected and areas that will be unaffected. Postmine, the unaffected areas constitute the “Reference area” for revegetation success evaluation. “Extended reference areas” should be established during baseline sampling, but in some circumstances, may be established after mining begins. The representative nature of the vegetation community within the “Extended reference area” is demonstrated by vegetation community mapping procedures, sampling data, soil data, physiography and land use history. To evaluate revegetation success, data from the “Extended reference area” are directly compared by the statistical procedures to data from the reclaimed area. Each “Extended reference area” will be as large as possible.

(iv) “Limited reference area” is one type of a “Reference area” that is established during baseline sampling to represent one vegetation community to be reestablished. The representative nature of the “Limited reference area” is determined by quantitative comparisons of vegetation cover, and production between the “Limited reference area” and proposed affected areas at the 90 percent confidence level. To evaluate revegetation success, data from the “Limited reference area” are directly compared by statistical procedures to data from the reclaimed area. Each “Limited reference area” shall be at least five acres.

(dm) “Regulatory categories” means the following time frames that encompass the major regulatory periods from which the different performance standards and reclamation standards for specified lands within the permit area are established:

(i) “Category 1” means those lands which were affected to conduct and/or support mining operations and were completed or substantially completed prior to

May 24, 1969 (the implementation date of the Open Cut Land Reclamation Act).

(ii) “Category 2” means those lands which were affected on or after May 24, 1969 (the implementation date of the Open Cut Land Reclamation Act) in order to conduct and/or support mining operations and were completed or substantially completed prior to or on June 30, 1973 (day prior to the effective date of the Wyoming Environmental Quality Act).

(iii) “Category 3” means those affected lands and support facilities if those lands supported operations which were not completed or substantially completed prior to July 1, 1973 (the effective date of the Wyoming Environmental Quality Act) and any affected lands or support facilities taken out of use on or after July 1, 1973 and before May 25, 1975 (the effective date of the Division’s 1975 Rules and Regulations).

(iv) “Category 4” means those affected lands if coal was removed from those land prior to May 3, 1978 and which do not qualify for any of the previous categories. It also means those affected lands and support facilities if they were taken out of use on or after May 25, 1975 (the effective date of the Division’s 1975 Rules and Regulations) and before May 3, 1978 (the effective date of the Office of Surface Mining’s (OSM) Initial Regulatory Program).

(v) “Category 5” means those affected lands and support facilities if coal was not removed from those lands prior to May 3, 1978 (the effective date of OSM’s Initial Regulatory Program) or those lands were used on or after May 3, 1978 to facilitate mining (including support facilities and associated lands constructed before May 3, 1978 but still in use on or after May 3, 1978.)

(dn) “Revised mining or reclamation operations” means 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.

(do) “Road(s)” means a surface corridor of affected land associated with travel by land vehicles used in coal mining and reclamation operations or coal exploration. A road consists of the roadbed, shoulders, parking and side areas, approaches, structures, ditches, and surface. The term includes access and haulroads constructed, used, reconstructed, improved, or maintained for use in coal mining and reclamation operations or coal exploration, including use by coal hauling vehicles to and from transfer, processing, or storage areas. The term does not include ramps and routes of travel within the immediate mining area or within spoil or coal mine waste disposal areas. Immediate mining area refers to areas subject to frequent surface changes. This includes areas where topsoil and overburden are being moved and areas undergoing active reclamation.

(dp) “Rock” means, for the purposes of estimating ground cover, mineral or rock fragments which are one square centimeter in size or larger and occur on or in the

soil. A synonym is coarse fragments.

(dq) “Rough Backfilling” means replacement of sufficient material in the pit or pits including special disposal practices for toxic and acid-forming materials, special handling and placement of materials for stream reconstruction or alluvial valley floors, and compaction as required so as to render the affected area in a condition whereby the reclaimed land surface generally resembles the approved postmining contours.

(dr) “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.

(ds) “Sample unit” means for the purposes of verifying certain Chapter 4 performance standards and applying for Chapter 15 incremental bond release, a permanently reclaimed land unit established by mutual agreement between the permittee and the Administrator. The unit constitutes the fundamental unit for revegetation success verification. The unit may contain portions of one or more vegetation communities.

(dt) “Seasonal variety” means the characteristic or normal season of growth of a plant species where season of growth is described as cool-season or warm-season.

(du) “Sedimentation pond” means a sediment control structure designed, constructed, and maintained to slow down or impound precipitation runoff to reduce sediment concentrations in a point source discharge, including dams or excavated depressions. The term does not include straw dikes, riprap, check dams, mulches, collection ditches, toe ditches, vegetative buffers, gabions, contour furrows and other traditional soil conservation techniques and non-point source runoff controls.

(dv) “Self-renewing” means a plant species which has a demonstrated capacity to germinate, establish, grow, flower and produce viable seed and/or mature and produce vegetative reproductive structures under the climatic regime which prevails on the reclaimed lands.

(dw) “Semi-quantitative” means, in the context of a vegetation sampling program and/or evaluation of sampling data that the program and/or evaluation process is/are conducted using a non-statistical assessment of numerical data derived from a defined field reconnaissance regime.

(dx) “Shrub” means a perennial plant with persistent, woody stems and which produces several basal shoots instead of a single main stem. Shrubs have a relatively low growth form and differ from trees by their low stature and lack of arborescent form. A synonym is full shrub.

(dy) “Shrub mosaic” means a pattern of shrub patches. The boundary of a mosaic unit encompasses the areal extent of the individual shrub patches and the

reclaimed community occupying the land among the shrub patches.

(dz) “Shrub patch” means a mapable concentration of postmining shrubs which is at least 0.05 acres in extent and which intends to fulfill the shrub density and shrub composition required by Chapter 4 shrub restoration performance standard.

(ea) “Significant, imminent environmental harm to land, air or water resources” means:

(i) An environmental harm is an adverse impact on land, air, or water resources which resources include, but are not limited to, plant and animal life.

(ii) An environmental harm is imminent, if a condition, practice, or violation exists which:

(A) Is causing such harm; or

(B) May reasonably be expected to cause such harm at any time before the end of the reasonable abatement time.

(iii) An environmental harm is significant if the harm is appreciable, not contemplated in the approved permit application, and not immediately repairable.

(eb) “Soil Horizons” means contrasting layers of soil material approximately parallel to the land surface and differing from adjacent layers in physical, chemical and biological properties or characteristics.

(i) “A Horizon” means the uppermost mineral or organic layer, often referred to as the surface soil. It is the part of the soil in which organic matter is most abundant and leaching of soluble or suspended particles is typically the greatest.

(ii) “E Horizon” means the layer commonly near the surface below the A Horizon and above the B Horizon. An E Horizon is the most commonly differentiated from an overlying A Horizon by lighter color and generally, has measurably less organic matter, and from the underlying B Horizon in the same sequum by color of higher value or lower chroma, by coarser texture, or by a combination of these properties.

(iii) “B Horizon” means the layer that typically is immediately beneath the E Horizon and often called the subsoil. This middle layer commonly contains more clay, iron, and aluminum than the A, E or C Horizons.

(iv) “C Horizon” means the deepest layer of soil profile. It consists of loose material or weathered rock that is relatively unaffected by biological activity, and is often called the subsoil.

(ec) “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.

(ed) “Species composition” means number, kinds and amount of species.

(ee) “Species diversity” means number of species per unit area.

(ef) “Species lacking creditable value” means the cover and production of these species will be estimated but will not be credited or counted towards meeting the revegetation success standards for cover, production or species diversity and composition. Species lacking creditable value include noxious weeds listed under the Wyoming Weed and Pest Control Act, *Bromus japonicus*, *Bromus tectorum*, *Taeniatherum caput-medusae*, *Halogeton glomeratus*, *Kochia scoparia* and *Salsola tragus* and all synonyms for these species as listed in the Natural Resources Conservation Service’s Plants Database.

(eg) “Species of Special Concern” means those plant species required to be surveyed by the U.S. Fish and Wildlife Service, U.S. Forest Service, and Bureau of Land Management.

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

(ei) “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.

(ej) “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.

(ek) “Steep slope” means any slope of more than 20 degrees or such lesser slope as may be designated by the Administrator after consideration of soil, climate, and other characteristics of the area.

(el) “Study area” means the land surface area which was mapped and quantitatively sampled during the baseline vegetation inventory. The study area generally coincides with the permit area (or amendment area) but may exceed those boundaries with prior approval from the Administrator.

(em) “Subirrigation” means, with respect to alluvial valley floors, the supplying of water to plants from underneath or from a semi-saturated or saturated subsurface zone where water is available for use by vegetation.

(en) “Subirrigation or flood irrigation agricultural activities” means the past and present use of any tract of land for the successful production of animal or vegetable life, based on regional agricultural practices, where the use is enhanced or facilitated by subirrigation or flood irrigation. These uses include, but are not limited to, the pasturing, grazing, and the cropping, cultivation, or harvesting of agriculturally useful plants whose production is enhanced or facilitated by the availability of water from subirrigation or flood irrigation. These uses do not include agricultural practices which do not benefit from the availability of water from subirrigation or flood irrigation.

(eo) “Subshrub” means a perennial plant with a persistent, woody base and which produces several basal shoots or stems. The upper stems die back at the end of each growing season. Half-shrub is a synonym.

(ep) “Subsidence” means the measurable lowering of a portion of the earth's surface or substrata.

(eq) “Subsoil” means the B and C Horizons excluding consolidated bedrock material.

(er) “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.

(es) “Substantially complete” means, for the purposes of determining the appropriate regulatory category of affected lands, the overburden was removed above the coal and some recoverable tons were removed from those lands.

(et) “Substantially disturb” means, for purposes of coal exploration, to significantly impact land or water resources by blasting; by destruction of the vegetative cover or removal of topsoil, subsoil or overburden; by drilling coal exploratory holes; by digging pits; by construction of roads or other access routes; by placement of excavated earthen or waste material on the natural land surface or by other such activities; or to remove more than 250 tons of coal.

(eu) “Succulent” means a plant species with one or more of its morphological parts exhibiting fleshy or juicy characteristics.

(ev) “Surface water” means water, either flowing or standing, on the surface of the earth.

(ew) “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 Environmental Protection Agency's regulations for waste water analyses (40 CFR 136).

(ex) “Systematic sampling” means a sampling design where sample locations are selected using uniform spatial pattern, such as a grid, that covers the entire sample population area, and where all locations are sampled. The first sample point is randomly selected, and the locations of all other sample points are determined by the initial location. Calculations for systematic sampling may be done by assuming the sample is random.

(ey) “Technical revegetation success standard” means a set of quantitative data which are representative of the absolute cover of total vegetation and annual herbaceous production of one or more premining vegetation communities affected by the mining operation. Each technical standard shall be assembled from quantitative data collected from vegetation communities within a permit area and/or from adjacent lands and shall be based upon a minimum of five independent sampling programs executed over a minimum of five years. The Administrator shall approve the specific data sets and the quantitative treatment of the data sets used to establish each technical standard.

(ez) “Threatened species” means any species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range and which has been listed under the Federal Endangered Species Act.

(fa) “Topsoil” means the A and E Horizons or any combination thereof.

(fb) “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.

(fc) “Toxic mine drainage” means water that is discharged from active or abandoned mines and other areas affected by coal mining operations and which contains a substance which through chemical action or physical effects is likely to kill, injure, or impair biota commonly present in the area that might be exposed to it.

(fd) “Trade secret” means, for purposes of coal mining or exploration operations:

(i) Information pertaining to the analyses of the chemical and physical properties of the coal (excepting information regarding such mineral or elemental content which is potentially toxic in the environment) may be kept confidential in accordance with W.S. § 35-11-1101(a);

(ii) Information pertaining to the coal seam itself, except as to any person who demonstrates to the satisfaction of the Director an interest which is or may be adversely affected by the decision to hold such information confidential; and

(iii) Information relating to coal exploration operations which concerns privileged commercial or financial information relating to the competitive rights of the person intending to conduct the coal exploration operations.

(fe) “Transect” means a sampling method which involves the establishment of a long, continuous line or strip. The starting point and orientation of the line should be randomly established.

(ff) “Tree” means a woody, perennial plant which usually has a single trunk or stem and a defined crown shape and which has the potential to reach a mature height of at least four meters in optimal conditions.

(fg) “Unconsolidated streamlaid deposits” means earthen material transported and deposited within a body of water flowing downslope along a definite path. Flood plains and terraces located in the lower portions of topographic valleys are generally composed of unconsolidated streamlaid deposits.

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

(fi) “Underground mining activities” means a combination of:

(i) Underground operations necessary for the extraction of solid minerals by man-made excavations underneath the surface of the earth; and

(ii) For the extraction of coal, surface operations incident to the underground operation such as construction, use, maintenance, and reclamation of roads, surface repair shops, storage areas, etc., and areas on which materials incident to underground operations are placed.

(fj) “Undeveloped rangeland” means unimproved land, the use of which is generally limited to grazing of livestock. Undeveloped rangeland does not include areas within the alluvial valley floor where cultivated crops, small grains, and hay crops have been successfully grown, the land has been improved by the introduction of certain vegetation for enhanced agricultural utility, or native vegetation on the alluvial valley floor contributes substantially to the carrying capacity of a specifically controlled or managed grazing unit.

(fk) “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.

(fl) "Valid existing rights (VER)" means: a set of circumstances under which a person may, subject to regulatory authority approval, conduct surface coal mining operations on lands where Section 522(e) of P.L. 95-87 (2009) (<http://www.gpoaccess.gov/uscode/>) and 30 C.F.R. §761.11 (2009) (<http://www.gpoaccess.gov/cfr/retrieve.html>) would otherwise prohibit or limit such operations. A person seeking to exercise VER shall comply with all other applicable requirements of the Act and rules and regulations promulgated thereunder and meet the standards below.

~~(i) Except for haul roads, that a person possesses valid existing rights on August 3, 1977, if the application of any of the prohibitions contained in Chapter 12, Section 1(a)(v) to the property interest that existed on that date would effect a taking of the person's property which would entitle the person to just compensation under the fifth and fourteenth amendments to the United States Constitution;~~

(i) Except as provided in subsection (iii) below, a person claiming VER shall demonstrate that a legally binding conveyance, lease, deed, contract, or other document vests that person, or a predecessor in interest, with the right to conduct the type of surface coal mining operations intended and that this right existed at the time the land came under protection of Section 522(e) of P.L. 95-87 (2009) or 30 C.F.R. §761.11 (2009).

(ii) Except as provided in subsection (iii) below, a person claiming VER shall also demonstrate compliance with one of the following standards. Procedures and requirements related to the demonstration are detailed in Chapter 12 of the Division's Coal Rules and Regulations.

(A) "Good faith/all permits standard" means all permits and other authorizations required to conduct surface coal mining operations had been obtained, or a good faith effort to obtain all necessary permits and authorizations had been made, before the land came under the protection of Section 522(e) of P.L. 95-87 (2009) or 30 C.F.R. §761.11 (2009). At a minimum, a permit application was submitted as required in Chapter 2 of these regulations.

(B) "Needed for and adjacent standard" means the land is needed for and immediately adjacent to a surface coal mining operation for which all permits and other authorizations required to conduct surface coal mining operations had been obtained or a good faith attempt to obtain all permits and authorizations has been made, before the land came under the protection of Section 522(e) of P.L. 95-87 (2009) or 30 C.F.R. §761.11 (2009). To meet this standard a person shall demonstrate that prohibiting expansion of the operation onto that land would unfairly impact the viability of the operation as originally planned before the land came under the protection of 522(e) of P.L. 95-87 (2009) or 30 C.F.R. §761.11(2009). Except for operations in existence before August 3, 1977, or for which a good faith effort to obtain all necessary permits had been made before August 3, 1977, this standard does not apply to lands already under the

protection of 522(e) of P.L. 95-87 (2009) or 30 C.F.R. §761.11 (2009) when the Department approved the permit for the original operation or when the good faith effort to obtain all necessary permits for the original operation was made. In evaluating whether a person meets this standard, the agency making the determination may consider factors such as:

(I) The extent to which coal supply contracts or other legal and business commitments that predate the time the land came under the protection of 522(e) of P.L. 95-87 (2009) or 30 C.F.R. §761.11 (2009) depend upon the use of that land for surface coal mining operations;

(II) The extent to which plans used to obtain financing for the operation before the land came under the protection of 522(e) of P.L. 95-87 (2009) or 30 C.F.R. §761.11 (2009) rely upon use of that land for surface coal mining operations;

(III) The extent to which investments in the operation before the land came under the protection of 522(e) of P.L. 95-87 (2009) or 30 C.F.R. §761.11 (2009) rely upon use of that land for surface coal mining operations; and

(IV) Whether the land lies within the area identified on the life-of-mine map submitted before the land came under the protection of 30 C.F.R. §761.11 (2009).

(iii) Roads. A person who claims valid existing rights to use or construct a road across the surface of lands protected by 522(e) of P.L. 95-87 (2009) or 30 C.F.R. §761.11 (2009) must demonstrate that one or more of the following circumstances exist if the road is included within a surface mining operation ~~For haul roads, valid existing rights means:~~

(A) The road existed when the land upon which it is located came under the protection of 522(e) of P.L. 95-87 (2009) or 30 C.F.R. §761.11 (2009) and the person has a legal right to use the road for surface coal mining operations;

(B A) A properly recorded right of way or easement for a road in that location existed when the land came under the protection of 522(e) of P.L. 95-87 (2009) or 30 C.F.R. §761.11 (2009) and under the document creating the right of way or easement, and under subsequent conveyances, the person has a legal right to use or construct a road across the right of way or easement for surface coal mining operations; ~~A recorded right of way, recorded easement or a permit for a coal haul road recorded as of August 3, 1977, or~~

(C B) A valid permit for use or construction of a road in that location for surface coal mining operations existed when the land came under the

protection of 522(e) of P.L. 95-87 (2009) or 30 C.F.R. §761.11 (2009); or Any other road in existence as of August 3, 1977.

(D) VER exist under subsections (i) and (ii) above.

~~(iii) A person possesses valid existing rights if the person proposing to conduct coal mining operations can demonstrate that the coal is both needed for, and immediately adjacent to, an ongoing coal mining operation which existed on August 3, 1977. A determination that coal is "needed for" will be based on a finding that the extension of mining is essential to make the coal mining operation as a whole economically viable;~~

~~(iv) The prohibitions and limitations Where an area comes under the protection of Chapter 12, Section 1(a)(v) do not apply to surface coal mining operations for which a valid permit issued by the Department exists when the land comes under the protection of 30 C.F.R. §761.11 (2009). This exception applies only to lands within the permit area as it exists when the land comes under the protection of 30 C.F.R. §761.11 (2009). after August 3, 1977, valid existing rights shall be found if:~~

~~(A) On the date the protection comes into existence, a validly authorized coal mining operation exists on that area; or~~

~~(B) The prohibition, if applied to the property interest that exists on the date the protection comes into existence would effect a taking of the person's property which would entitle the person to just compensation under the fifth and fourteenth amendments to the United States Constitution.~~

(v) Interpretation of the terms of the document relied upon to establish valid existing rights shall be based either upon applicable Wyoming case law concerning interpretation of documents conveying mineral rights or, where no applicable case law exists, upon the usage and custom at the time and place where it came into existence.

(fm) "Vegetation community" means a recognizable group of species growing together.

(fn) "Warm season" means a plant, which makes most or all its growth during the spring, summer, or fall and is usually dormant during the winter. Warm season plants usually exhibit the C-4 photosynthetic pathway.

(fo) "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) W.S. § 35-11-401(g), (h) and (j) shall not apply to coal mining operations.

(ii) In order to qualify for the exemption provided for in W.S. § 35-11-401(e)(ii), approval must be obtained from the Administrator for the extraction of any coal after a finding that:

(A) The extraction is necessary to enable the construction to be accomplished and occurs within the right-of-way or boundary of the area directly affected by the construction;

(B) The construction is funded 50 percent or more by funds appropriated or obtained from a government financing agency's budget or general revenue bonds; and

(C) The person agrees to possess on-site documents which show a description of the project, its exact location, and information showing the source, kind and amount of public financing, including the percentage of the entire construction costs represented by the government financing.

(c) If any provision of these regulations or the applicability thereof to any person or circumstances related to coal mining operations is held invalid, the provision or its applicability to other mining operations or circumstances shall not be affected thereby.

DEPARTMENT OF ENVIRONMENTAL QUALITY

LAND QUALITY DIVISION

CHAPTER 2

PERMIT APPLICATION REQUIREMENTS

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, for coal mining operations, all the applicable information required under Sections 2 through 5 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. 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. The maps shall distinguish among the following phases of the operation:

- (i) Prior to August 3, 1977;
- (ii) After August 3, 1977 and prior to May 3, 1978;
- (iii) After May 3, 1978 and prior to approval of the State Program;
- (iv) After the estimated date of issuance of the permit; and
- (v) The five regulatory periods as defined in Chapter 1, Section 2(dm).

(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.

Section 2. **Adjudication Requirements.**

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

(i) A complete identification of interests, which shall include:

(A) All owners of record of the property to be mined including legal and equitable owners, holders of record of any leasehold interest, and any purchaser of record under a real estate contract for the property to be mined;

(B) The names, addresses and telephone numbers of any operators, if different from the applicant. If the applicant is a business entity other than a single proprietorship, then the names, addresses and telephone numbers of all limited and general partners, or if a corporation then the names, addresses and telephone numbers of principal shareholder, officers and director or other person performing a function similar to a director, and resident agent(s) of the applicant. This shall also include the names under which the applicant, partner or principal shareholder operates or previously operated a coal mining operation in the United States within the five years preceding the date of application;

(C) A statement and identification of any pending, current or previous coal mining permit in the United States held by the applicant, partner or principal shareholder during the five years preceding the date of the application. This shall also identify the regulatory authority with jurisdiction over the operation;

(D) A statement of all lands, interests in lands, options, or pending bids on interests held or made by the applicant for lands which are contiguous to the proposed permit area; and

(E) 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) A complete statement of compliance which shall include:

(A) A brief statement, including identification and current status of the interest, identification of the regulatory authority, and description of any proceedings and their current status, of whether the applicant or entities controlled by or under common control with the applicant has:

(I) Had any Federal or State coal mining permit

suspended or revoked in the five years preceding the date of application; or

(II) Forfeited a Federal or State coal mining performance bond or similar security deposited in lieu of bond.

(B) The listing of notices of violation required by W. S. § 35-11-406(a)(xiv) shall describe or identify the violation, when it occurred, any abatement action taken, the issuing regulatory authority, and any proceedings initiated concerning the violation. This listing shall include only notices issued to the applicant and any subsidiaries, affiliates, or persons controlled by or under common control with the applicant.

(iii) The right of entry statements and documents required by W.S. § 35-11-406(a)(ii) and (b)(xi) shall clearly explain and support the legal rights claimed by the applicant and shall also include whether that right is the subject of pending litigation;

(iv) A statement on whether the proposed area to be mined during the term of the permit is within an area designated unsuitable for coal mining operations pursuant to W.S. § 35-11-425, under study for any designation, or within an area where mining is prohibited pursuant to Chapter 12, Section 1(a)(v), Land Quality Rules and Regulations. This shall also include the basis on which the applicant claims any available exemption so as to obtain the permit to mine;

(v) A list identifying the Mine Safety and Health Administration identification number for all mine facilities that require MSHA approval and licenses, permits or approvals needed by the applicant to conduct the proposed operation, whether and when they have been issued, the issuing authority, and the steps to be taken to comply with the requirements. To the extent possible, the Administrator and Director shall advise, consult and cooperate with the identified authorities so as to provide for the coordination of review and issuance of these licenses, permits or approvals with the permit to mine. This list shall contain:

(A) Copies or identifying numbers of all permits obtained from the State Engineer or from any other division of the Department, including the Solid and Hazardous Waste Management Division, together with the following:

(I) Water Quality Information. The information from the application for the approved Water Quality permit which affirmatively demonstrates:

(1.) There is a detailed plan, with appropriate maps and cross-sections, for the construction and operation of any mine facility capable of causing or contributing to pollution of surface and groundwater. The plan shall be in accordance with Chapters III and XI, and as applicable Chapter X, of the Water Quality Division Rules and Regulations. As applicable, any plans shall include a copy of the NPDES permit granted by the Water Quality Division and quantitative limits on

pollutants in discharges of water from all point sources.

(2.) There is a plan for the collection, recording, and reporting of groundwater quality and surface water quality according to Chapter II, Section 12, Water Quality Rules and Regulations. This plan shall, at a minimum, be adequate to measure accurately and record water quantity and quality of the discharges from the permit area in order to plan for modification of mining activities, if necessary, to minimize adverse effects on the water of the State.

(II) Solid Waste Information. The information from the application for the approved permit(s) for any Solid Waste Management Facility(ies) located within the proposed permit area. Note that a Solid Waste Management Facility, as defined by W.S. § 35-11-103(d)(ii), is a facility that receives solid waste which is generated outside the proposed permit area by any activity other than a mine mouth power plant or mine mouth coal drier. Solid Waste Management Facilities are subject to the permitting, bonding and performance standards of Article 5 of the Environmental Quality Act in addition to the performance standards in Chapter 4, Section 2(c)(xiii)(C) of these rules.

(III) State Engineer Information. The information from the application for the approved permit to construct a reservoir to store or impound water which affirmatively demonstrates that the reservoirs will be constructed and maintained in accordance with the requirements set out in Chapter V, Section 8, State Engineer Rules and Regulations. In addition, if the application includes a proposed transfer of a well for use as a water well, the application shall contain information from the approved application for a permit to appropriate groundwater which affirmatively demonstrates a plan for construction, completion and removal of wells in accordance with requirements which are at least as stringent as those governing wells drilled in conjunction with coal mining or exploration operations.

(B) For any permits or approvals which have not been obtained, the information required by (A) above which has been or will be submitted to the agencies involved, including a description of the steps to be taken to comply with the relevant requirements.

Section 3 Vegetation Baseline Requirements.

(a) The plan for a baseline vegetation study to establish baseline conditions shall be submitted to the Administrator prior to the field sampling season for review and approval, prior to implementation, unless otherwise approved by the Administrator.

(b) If baseline information was previously collected in the area for a different permit or project, then the Administrator may require resampling. The Administrator's determination as to whether resampling is required, and to what extent, will be based

upon:

- (i) Differences in scope between the permits or project;
 - (ii) Differences in existing and historic conditions;
 - (iii) Improvements in sample collection techniques;
 - (iv) The elapsed time since the last evaluation of the presence of threatened and endangered species; or
 - (v) Concerns with sampling methodology.
- (c) The applicant shall map the vegetation communities within the permit area and adjacent area and shall sample and describe the characteristics of vegetation communities within the permit area, to include:
- (i) The map shall show the vegetation communities in the permit and adjacent lands. Communities that are 2 acres and larger shall be mapped. Inclusions within larger communities do not need to be mapped as separate vegetation communities. The applicant may use the terminology used by the NRCS in naming vegetation communities;
 - (ii) The map shall be of a scale approved by the Administrator and use an aerial mosaic or USGS topographic, or equivalent, map as a base;
 - (iii) The vegetation community map shall identify:
 - (A) Sample locations for cover and shrub density;
 - (B) Reference Areas unless a technical success standard is proposed for evaluation of revegetation;
 - (C) Areas to be affected by mining and associated activities;
 - (D) The locations and orientations of all photographs provided with the descriptions of the vegetation communities and Reference Areas, as required in Chapter 2, Section 3(j);
 - (E) The general location of trees;
 - (F) The location and extent of designated and/or prohibited noxious weeds per Chapter 2, Section 3(1); and
 - (G) Extent of existing disturbance.

(iv) The vegetation communities in the study area may be mapped any time the ground is clear of snow, but must be field checked and verified prior to the sampling.

(d) Percent cover, by vegetation community, shall be estimated using either:

(i) Quantitative methods, as approved by the Administrator, when the applicant intends to develop a technical standard or when the Administrator determines the study area is in a location that baseline vegetation has not been adequately described.

(ii) With approval of the Administrator, semi-quantitative methods as outlined below shall be used when the applicant does not intend to use a technical standard or those areas where the Administrator determines there is sufficient quantitative vegetation baseline in the general areas.

(A) The quadrat or point intercept method shall be used except there is not a sample adequacy requirement. The number of samples per vegetation community and reference area shall be:

<u>Vegetation Community size</u>	<u>No. of samples</u>
0 to 5 acres	3
>5 to 50 acres	5
>50 acres	10

(e) If the applicant intends to propose a technical success standard, annual herbaceous production, by community, shall be estimated using quantitative methods. Annual herbaceous production shall also be quantitatively estimated when the Administrator determines that previously collected baseline vegetation data inadequately describes the proposed permit area. If semi-quantitative methods are approved for baseline, no production for baseline is necessary.

(f) A "Reference area", as defined in Chapter 1, Section 2(dl), shall be established for each vegetation community which will be disturbed unless a technical success standard is proposed for evaluation of revegetation.

(g) Shrub density sampling shall use the quantitative methods as approved by the Administrator unless the applicant commits to the maximum shrub reestablishment performance standard of one full shrub per square meter within shrub patches distributed over 20 percent of the eligible land for Option II. If the applicant accepts this maximum shrub reestablishment performance standard, the applicant shall use the following provisions to complete the calculations in Appendix 4A, Tables 1 and 2.

(i) For Option II, the full shrub with the highest baseline relative cover value across all premining vegetation communities shall be listed as the dominant

premine full shrub species and the target postmine species. No calculations for Appendix 4A, Table 1 or Table 2, shall be performed. In Table 2, the Density of the Dominant Postmining (Full) Shrub shall be 0.5 per square meter, and the Density of Residual (Full) Shrubs shall be 0.25 per square meter and the Density of Approved Subshrubs shall be 0.25 per square meter.

(h) If trees are present within the proposed permit area, then the description shall include the number, general distribution, and species.

(i) The applicant shall compile an inventory, by vegetation community, of all plants species observed within the study area and corresponding Reference Areas, in accordance with the following requirements:

(i) The plant species shall be listed:

(A) By life forms as described in Chapter 1, Section 2(ca).

(B) By scientific binomial (with reference to the botanic key used);

(C) By common name; and

(D) Identified as a native (native to North America) or introduced species.

(ii) The plant inventory shall be field checked and updated at least three times from April through September during the baseline sampling year to capture the phenological expression of species that do not express themselves every month. The plant inventory shall not be compared to any qualitative, semi-quantitative or quantitative criteria.

(iii) The plant inventory shall note the names and field locations of:

(A) Any herbarium samples collected;

(B) Any Designated Noxious Weeds or Prohibited Noxious Weeds defined by the State of Wyoming;

(C) Any plant species or habitat of special concern at the time of sampling; and

(D) Any species not previously recorded in Wyoming or outside its known range.

(j) Each baseline vegetation study shall present descriptions of the vegetation

communities and, unless a technical success standard is proposed for evaluation of revegetation, present descriptions of the Reference Areas/Unit. The descriptions shall include:

- (i) The general vegetation composition;
 - (ii) The major species in each life form;
 - (iii) The characteristic topography, including overall slope and aspect;
 - (iv) The characteristic soil types;
 - (v) The number, sizes, and types of inclusions;
 - (vi) The degree of interspersion between communities;
 - (vii) A summary of the quantitative, semi-quantitative, and qualitative vegetation information for each community;
 - (viii) The presence of Designated Noxious Weeds or Prohibited Noxious Weeds identified in Chapter 2, Section 3(k), the description shall include information on the present and historical weed treatment; and
- (iv) A three-inch by five-inch (or larger) color photograph, color copy or digital photograph panorama, showing the general features of each “Vegetation community” and “Reference area”.
- (k) Each baseline vegetation study shall include documentation of the presence or absence of Designated Noxious Weeds or Prohibited Noxious Weeds as defined by the State of Wyoming, Department of Agriculture.
- (i) If any Designated Noxious Weeds or Prohibited Noxious Weeds are present within the proposed permit area, the description shall include a list of their names, either common or scientific, and a visual estimate of their relative cover.
 - (ii) If any Designated Noxious Weeds or Prohibited Noxious Weeds are estimated to comprise more than 25% of the relative vegetation cover on two or more contiguous acres, that acreage shall be identified on the vegetation community map.
 - (l) 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 and in adjacent areas.
 - (m) Cropland, either as a vegetation community and/or a land use category, is

exempt from Chapter 2, Sections 3 (d) through (g), (i) and (j).

Section 4 **Other Baseline Requirements.**

(a) 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 description of:

(i) 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. The present land uses shall be listed using the definitions of Chapter 1, and the vegetation communities which comprise each land use shall be presented.

(ii) The capability of the land prior to mining to support a variety of uses, giving consideration to soil and foundation characteristics, topography, vegetative cover, and the land's history of previous mining, if any, and the uses of the land preceding mining; as well as the land use classification under local law, if any, of the proposed permit area and adjacent areas.

(iii) 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.

(iv) 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.

(v) Prime farmland information, which shall include, after a preapplication investigation of the proposed permit area, either:

(A) A request for a determination that the land not be considered prime farmland on the basis that either the land has not had a history of intensive agricultural use; or there are no soil map units that have been designated prime farmland by the Natural Resource Conservation Service in accordance with 7 CFR 657 (Federal Register Vol. 43, No. 21) and the Memorandum of Understanding between the Conservation Districts and the Soil Conservation Service, or

(B) Where prime farmland occurs on proposed affected land, an application which shall be submitted in accordance with Chapter 3.

(vi) Studies of fish, wildlife, and their habitats, in the level of detail and for those areas as determined by the Administrator, after consultation with the Wyoming Game and Fish Department in accordance with the Memorandum of Understanding between the two agencies; and Federal agencies having responsibilities for the management or conservation of such environmental values, including:

(A) A list of indigenous vertebrate wildlife species within and adjacent to the permit area by common and scientific names. The area of survey for the possible presence of threatened or endangered species shall be on or within one mile of the permit area.

(B) If critical habitat disruption is likely, the U.S. Fish and Wildlife Service and Wyoming Game and Fish Department shall be contacted by the Administrator. If crucial or important habitat or migration route disruption is likely, the Wyoming Game and Fish Department shall be contacted by the Administrator. Contacting the appropriate agency(ies) is required in order to determine the types and numbers of wildlife likely to be disturbed or displaced.

(vii) A detailed description, prepared or certified by a licensed professional geologist, or other qualified professional (as required by W.S. § 33-41-101 through 121), of the geology within the proposed permit area down to and including any aquifer to be adversely affected by mining below the lowest coal seam to be mined. The description shall include the aerial and structural geology of the permit area and, by extrapolation, adjacent areas, including geologic parameters which influence the required reclamation, and the occurrence, availability, movement, quantity, and quality of potentially affected surface and groundwaters.

(viii) For the proposed permit area and, by extrapolation, adjacent areas, characterization of the geologic strata down to and including the deeper of either the stratum immediately below the lowest coal seam to be mined, or any aquifer below the lowest coal seam to be mined which may be adversely impacted by mining. This information shall include a statement of the results of test borings or core samples which have been collected and analyzed to show:

(A) Location of any groundwater;

(B) Lithologic characteristics and thickness of each stratum and each coal seam;

(C) Physical and chemical properties including the toxic and acid-forming properties of each stratum within the overburden; and

(D) Chemical analyses for acid or toxic-forming substances of the coal seam, including the total sulphur and pyritic sulphur content. The Administrator may waive in whole or in part the requirements of these paragraphs if he makes a written finding that the testing is unnecessary because other equivalent information is available to him in a satisfactory form.

(ix) Maps and cross-sections of the area, certified by a registered professional engineer, licensed professional geologist, or other qualified professional (as required by W.S. § 33-29-139 and 33-41-101 through 121), showing:

(A) Nature, depth and thickness of any coal seams to be mined or above those to be mined, each stratum of the overburden, and the stratum below the lowest coal seam to be mined;

(B) All coal crop lines and the strike and dip of the coal to be mined within the proposed permit area;

(C) Location and extent of existing or previously surface mined or underground mined areas within the proposed permit area and adjacent areas;

(D) Sufficient slope measurements of the proposed permit area measured and recorded at such distances as the Administrator determines to be representative of the premining configuration and reflect geomorphic differences of the land to be mined;

(E) The location of water supply intakes for current users of surface water flowing into, out of and within a hydrologic area defined by the Administrator, and those surface waters which will receive discharges from affected areas in the proposed permit area;

(F) The location of areas on which mining is limited or prohibited within or adjacent to the permit area, pursuant to Chapter 12, Section 1(a)(v), Land Quality Rules and Regulations;

(G) Elevations and locations of test borings and core samplings;

(H) Elevations and locations of monitoring stations used to gather data for water quality and quantity, fish and wildlife, and air quality in preparation of the application; and

(I) Other relevant information required by the Administrator.

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

(A) 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.

(B) Topsoil and subsoil information including a soil survey of the affected lands conducted in accordance with the standards of the National Cooperative Soil Survey of the U.S. Department of Agriculture. If alternative materials are proposed to be used as a supplement to or substitute for topsoil, their suitability shall be demonstrated in accordance with Chapter 4, Section 2(c)(ix).

(I) 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.

(II) 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.

(C) 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.

(xi) Complete information on surface water for the permit area and adjacent areas. This shall include the following:

(A) 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;

(B) 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;

(C) Baseline monitoring information of surface water quantity within the permit area which is representative of the surface hydrologic system. Water quantity descriptions shall include, at a minimum, baseline information on seasonal flow rates, and identification of drainage area acreage; and

(D) Water quality data sufficient to identify seasonal variation. All surface water-quality sampling and analyses performed to meet the requirements of this Section shall be conducted according to the methodology in the 20th edition of "Standard Methods for the Examination of Water and Wastewater," or the methodology in 40 CFR Part 136 - "Guidelines Establishing Test Procedures for the Analysis of Pollutants," as amended on January 16, 2001. Contact the Land Quality Division for information on how to obtain a copy of either reference materials. The data shall include at a minimum:

- (I) Total dissolved solids (mg/l);
- (II) Total suspended solids (mg/l);
- (III) pH (standards units);
- (IV) Total and dissolved iron (mg/l); and
- (V) Total manganese (mg/l).

(E) Baseline alkalinity and acidity information shall be provided if there is a potential for acid drainage from the proposed mining operation.

(xii) Complete information on groundwater which may be affected in the permit area and adjacent areas. This shall include the following:

(A) 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;

(B) The lithology and thickness of all known aquifers;

(C) All water-quality sampling and analyses performed to meet the requirements of this Section shall be conducted according to the methodology in the 20th edition of "Standard Methods for the Examination of Water and Wastewater" or the methodology in 40 CFR Part 136 - "Guidelines Establishing Test Procedures for the Analysis of Pollutants," as amended on January 16, 2001. Contact the Land Quality Division for information on how to obtain a copy of either reference materials. The data shall include at a minimum:

- (I) Total dissolved solids (mg/l);

- (II) Total and dissolved iron (mg/l);
- (III) Total manganese (mg/l); and
- (IV) pH (standard units).

(D) According to the parameters and in the detail required by the Administrator, the recharge, storage, and discharge characteristics of the groundwater.

(xiii) Water rights.

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

(B) 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.

(xiv) A description of the surface water and groundwater and related geology in the permit area and general area sufficient to assess the probable hydrologic consequences (PHC). If the determination of the PHC required by Chapter 19, Section 2(a)(i) indicates that adverse impacts on or off the proposed permit area may occur to the hydrologic balance, or that acid-forming or toxic material is present that may result in the contamination of groundwater or surface water supplies, then information supplemental to that required under (a)(xi) and (a)(xii) of this Section shall be provided to evaluate such PHC and to plan remedial and reclamation activities. Such supplemental information may be based upon drilling, aquifer tests, hydrogeologic analysis of the water-bearing strata, flood flows, or analysis of other water-quality or quantity characteristics.

(xv) Information concerning the presence or absence of an alluvial valley floor within the permit area or on adjacent areas in accordance with Chapter 3.

(xvi) The location of existing man-made features to include roads, railroads, reservoirs, public or private rights-of-way and easements, utility lines, pipelines, oil wells, gas wells, and water wells.

(xvii) Boundaries and descriptions of all cultural, historic and archaeological resources listed on, or eligible for listing on, the National Register of Historic Places. In compliance with the Archaeological Resources Protection Act of 1979 (P.L. 96-95), this information shall not be placed on display at the county clerk's office (as required by W.S. § 35-11-406(d)) where such resources occur on lands owned by the United States. This information shall be clearly labeled as "Confidential" and submitted separately from the remainder of the application materials. Requests to

disclose confidential information shall be administered under the Department of Environmental Quality, Rules of Practice and Procedure, the Wyoming Public Records Act (W.S. §§ 16-4-2001 thru 16-4-2005 (2007)) and the Wyoming Environmental Quality Act (2007).

(xviii) 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.

Section 5 **Mine Plan.**

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

(i) A complete operations plan 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.

(C) The size, sequence and timing of the areas for which it is anticipated that renewed permits for mining will be requested over the estimated total life of the proposed operation.

(D) Cross-sections, and/or maps and plans of the area to be mined during the term of the permit, unless required for the permit area by the Administrator or as specified below, certified by a registered professional engineer or professional geologist, showing:

(I) Location of proposed water treatment control and monitoring facilities;

(II) Location of each proposed explosive storage and handling facility;

(III) Location and construction of each proposed waste disposal facility relating to coal processing or pollution control;

(IV) Location of and typical design for surface water and

groundwater hydrologic control methods including proposed temporary impoundments, sedimentation ponds, diversions, stream channels, erosion control methods, and water treatment, water storage, water collection and discharge facilities. The location and typical design of permanent impoundments and general location of the above described hydrologic control methods shall be provided for the permit area;

(V) The location, construction and maintenance of coal stockpiles, temporary and excess spoil piles shall be provided for the permit area;

(VI) Location of permanently fixed signs and markers in accordance with and meeting the requirements of Chapter 4, Section 2(o); and

(VII) Location and description of any undisturbed natural barrier which is proposed to be provided to prevent slides and erosion, in accordance with the requirements of Chapter 4, Section 2(s).

(ii) A narrative and a map of the permit area identifying the location of existing structures, a description of their use and maintenance, and an explanation of whether they meet the requirements of Chapter 4 or the plan for removal, if required, or modification to comply with those standards in a manner which protects the environment and public health and safety.

(iii) A description of the measures to be used to maximize the use and conservation of the coal resource as required in Chapter 4, Section 2(v).

(iv) A description of the contingency plans which have been developed to preclude sustained combustion of any materials constituting a fire hazard.

(v) A description, plans, and drawings for each mine facility to be constructed, used, or maintained within the proposed permit area. The plans and drawings shall include a map, appropriate cross-sections, design drawings, and specifications sufficient to demonstrate compliance with section 2(n) of Chapter 4 for each facility.

(vi) A map of the permit area which clearly shows that a railroad spur(s) which provides exclusive service to that particular permit is being included within the permit boundary from the point that it provides such service. This spur(s) shall be covered by a reclamation bond.

(vii) A blasting plan for the area to be mined during the term of the permit, which shall include:

(A) Proposed compliance with limitations on ground vibration and airblast, the basis for those limitations, and methods to be applied in controlling the adverse effects of blasting operations. The applicant should also include:

(I) A blasting plan which depicts the worst-case scenario (i.e., the maximum probable amount of explosives to be detonated in any eight millisecond period).

(II) The identification, direction and distance, in feet to the nearest dwelling, public building, school, church, and community or institutional building from any blasting area during the term of the permit. This paragraph shall not apply if the building is owned by the operator and not leased to another or, if leased, the lessee signs a waiver relieving the operator from meeting the limitations in Chapter 6.

(B) If blasting operations will be conducted within 1,000 feet of any building used as a dwelling, public building, school, church, and community or institutional building outside the permit area, or within 500 feet of an active or abandoned underground mine, an anticipated blast design, prepared and signed by a certified blaster. The design shall contain sketches of the drill patterns, delay periods, and decking and shall indicate the type and amount of explosives to be used, critical dimensions, and the location and general description of structures to be protected, as well as a discussion of design factors to be used which protect the public and meet the applicable airblast, flyrock and ground vibration standards in Chapter 6. This paragraph shall not apply if the building is owned by the operator and not leased to another or, if leased, the lessee signs a waiver relieving the operator from meeting the limitations in Chapter 6.

(C) Description and location of blasting monitoring, warning and site access control equipment and procedures proposed to be used pursuant to Chapter 6, Section 4.

(D) Description of procedures and plans for recording and retaining information required by Chapter 6, Section 5.

(E) A sample copy of the public notices required by Chapter 6, Section 3.

(F) Other information requested by the Administrator which he determines necessary to ensure compliance with Chapter 6.

(viii) A plan for minimizing adverse impacts to fish, wildlife and related environmental values within and adjacent to the permit area during the operation, including:

(A) Whether such resources will be enhanced through successful revegetation in accordance with Chapter 4, Section 2(r);

(B) A statement of how the applicant will utilize monitoring methods as specified in Appendix B of these rules and regulations, and impact control

measures and management techniques to protect or enhance the following, if they are likely to be affected by the proposed operation:

(I) Threatened or endangered species of plants or animals listed by the Secretary under the Endangered Species Act of 1973, as amended (16 U.S.C. Section 1531 et seq.) and their critical habitats;

(II) Species identified through the consultation process described in Section 2(a)(vi)(G); and

(III) Important habitats for fish and wildlife, such as wetlands, riparian areas, rimrocks, areas offering special shelter or protection, reproduction and nursery areas, and wintering areas.

(C) Upon request, the Administrator shall provide the resource information required under paragraph (B) of this Section and that required by Section 2(a)(vi)(G) of this Chapter to the U.S. Department of the Interior, Fish and Wildlife Service regional or field office for their review. This information shall be provided within 10 days of receipt of the request from the Service.

(ix) A plan to ensure the protection of the quantity and quality of, and rights to, surface water and groundwater both within and adjacent to the permit area, which shall include:

(A) A plan and timetable for control and treatment of surface water and groundwater in accordance with Chapter 4, Section 2(e)-(h);

(B) A plan for sediment removal and disposal;

(C) A plan to restore the approximate recharge capacity of the permit area in accordance with Chapter 4, Section 2(h);

(D) A plan to collect, record and report water quantity and quality data according to Chapter 4, Section 2(i); and

(I) Surface water monitoring plan.

(1.) The application shall include a monitoring plan based upon the PHC determination required under subsection 2(b)(xii) of this Chapter and the analysis of all baseline hydrologic, geologic, and other information in the permit application. The plan shall provide for the monitoring of parameters that relate to the suitability of the surface water for current and approved postmining land uses and to the objectives for protection of the hydrologic balance as set forth in subsection 2(b)(xi) of this Chapter.

(2.) The plan shall identify the surface water quantity and quality parameters to be monitored, sampling frequency, and site locations. At a minimum, the parameters specified in Section 2(a)(vi)(L)(III) and (IV) of this Chapter shall be measured. Results of monitoring shall be available for inspection at the mine and available to the Director's designated authorized representative, and shall be reasonably current. Surface water monitoring shall be conducted quarterly unless an alternate frequency, appropriate to the monitored site, is approved by the Administrator. Results of monitoring shall be submitted in the annual report for each monitoring location.

(3.) The plan shall describe how the data may be used to determine the impacts of the operation upon the hydrologic balance.

(II) Groundwater monitoring plan.

(1.) The application shall include a groundwater monitoring plan based upon the PHC determination required under subsection 2(b)(xii) of this Chapter and the analysis of all baseline hydrologic, geologic, and other information in the permit application. The plan shall provide for the monitoring of parameters that relate to the suitability of the groundwater for current and approved postmining land uses and to the objectives for protection of the hydrologic balance set forth in subsection 2(b)(xi) of this Chapter.

(2.) The plan shall identify the quantity and quality parameters to be monitored, sampling frequency, and site locations. It shall describe how the data may be used to determine the impacts of the operation upon the hydrologic balance. At a minimum, the parameters specified in Section 2(a)(vi)(M)(III) of this Chapter and water levels shall be measured. Groundwater monitoring shall be conducted quarterly unless an alternate frequency, appropriate to the monitored site, is approved by the Administrator. Results of monitoring shall be available for inspection at the mine and available to the Director's designated authorized representative, and shall be reasonably current. Results of monitoring shall be submitted in the annual report for each monitoring location.

(E) A plan to provide alternative sources of water in accordance with W.S. § 35-11-415(b)(xii), where the protection of quantity or quality cannot be ensured as determined under the requirements of (x) below.

(x) Probable hydrologic consequences determination (PHC). A determination of the PHC of the proposed operation on the hydrologic regime and the quantity and quality of surface water and groundwater systems within the permit area and the general area consistent with the information required in Chapter 19, Section 2 of these regulations. The PHC determination shall be based on baseline hydrologic, geologic and other information collected for the permit application and may include data statistically representative of the site. This determination shall specifically address potential adverse

hydrologic consequences and describe preventive and remedial measures.

(xi) An evaluation of the impact of the proposed mining activities that may result in contamination, diminution, or interruption of the quality and quantity of groundwater or surface water within the proposed mine permit area or adjacent areas that are used for domestic, agricultural, industrial, or other legitimate purposes. If contamination, diminution, or interruption may result, then the application shall identify the alternative sources of water supply that could be developed to replace the existing sources in accordance with State law.

(xii) A general plan for each coal-processing waste bank. It shall contain a description, map, and cross-section of the structure and its location, preliminary hydrologic information required to assess the hydrologic impact of the bank, and any additional information the Administrator may deem necessary to show compliance with Chapter 4, Section 2(c). Where the applicant proposes to return coal-processing waste to abandoned underground workings, the application shall:

(A) Describe the design, operation and maintenance of any proposed coal-processing waste disposal facility, including flow diagrams and any other necessary drawings and maps, for the approval of the Administrator and the Mine Safety and Health Administration;

(B) Describe the sources and quality of waste to be stowed, area to be backfilled, percent of the mine void to be filled, method of constructing underground retaining walls, influence of the backfilling operation on active underground mine operations, surface area to be supported by the backfill and the anticipated occurrence of surface effects following backfilling;

(C) Describe the source of the hydraulic transport mediums, method of dewatering the placed backfill, retainment of water underground, treatment of water if released to surface streams, and the effect on the hydrologic regime;

(D) Describe each permanent monitoring well to be located in the backfilled area, the stratum underlying the mined coal, and gradient from the backfilled area except where pneumatic backfilling operations are exempted from hydrologic monitoring; and

(E) Be approved by MSHA as well as the Administrator prior to implementation.

(xiii) For surface mining activities to be conducted within 500 feet of an underground mine, measures to be used to comply with Chapter 4, Section 2(t).

(xiv) Plans describing the measures to be taken to obtain permit approval regarding areas where mining would be otherwise limited or prohibited pursuant

to Chapter 12, Section 1(a)(v).

(xv) Descriptions, including appropriate maps and cross-sections of any proposed excess spoil disposal site and design of the spoil piles in accordance with the requirements of Chapter 4, Section 2(c). This shall contain the results of a geotechnical investigation of the proposed excess spoil disposal site, including the following:

(A) The character of bedrock and any adverse geologic conditions in the disposal area;

(B) A survey identifying all springs, seepage, and groundwater flow observed or anticipated during wet periods in the area of the disposal site;

(C) Where applicable, an evaluation of the potential effects of subsidence of the subsurface strata due to past and future mining operations;

(D) A stability analysis including, but not limited to, strength parameters, pore pressures and long-term seepage conditions. These data shall be accompanied by a description of all engineering design assumptions and calculations and the alternatives considered in selecting the specific design specifications and methods; and

(E) If, under Chapter 4, Section 2(c)(xi)(F), special structural provisions are required for spoil disposal on overall slopes greater than 20 degrees, information on:

(I) The number, location and depth of borings or test pits which shall be determined with respect to the size of the spoil disposal structure and subsurface conditions; and

(II) The engineering designs, design rationale and design calculations for the special structural provisions, which are based on the information required in paragraph (D) above.

(xvi) Road Systems.

(A) Each applicant shall submit plans and drawings for each road as defined in Chapter 1 to be constructed, used, or maintained within the proposed permit area. The plans and drawings shall:

(I) Include a map, appropriate cross-sections, design drawings and specifications for road widths, gradients, surfacing materials, cuts, fill embankments, culverts, bridges, drainage ditches, drainage structures and low-water crossings;

(II) Contain the drawings and specifications of each proposed road that is located in the channel of an ephemeral stream that has the potential for sufficient flow to cause substantial environmental harm unless a downstream sediment control structure exists within the permit boundaries, any intermittent or any perennial stream, as necessary for approval of the road by the Administrator in accordance with Chapter 4, Section 2(j)(iv)(A);

(III) Contain the drawings and specifications for each proposed ford of intermittent or perennial streams that is used as a temporary route, as necessary for approval of the ford by the Administrator in accordance with Chapter 4, Section 2(j)(vii)(C)(II);

(IV) Contain a description of measures to be taken to obtain approval from the Administrator for alteration or relocation of a natural stream channel under Chapter 4 Section 2(j)(vii)(D)(IV);

(V) Contain the drawings and specifications for each low-water crossing of an ephemeral stream channel that has the potential for sufficient flow to cause substantial environmental harm unless a downstream sediment control structure exists within the permit boundaries, any intermittent stream channel or any perennial stream channel so that the Administrator can maximize the protection of the stream in accordance with Chapter 4, Section 2(j)(vii)(D)(VI); and

(VI) Describe the plans to remove and reclaim each road that would not be retained under an approved postmining land use, and the schedule for this removal and reclamation.

(B) The plans and drawings for each primary road (as defined in Chapter 4, Section 2(j)(i)(B)) shall be prepared by, or under the direction of, and certified by a qualified registered professional engineer as meeting the requirements of this Chapter and current, prudent engineering practices.

(xvii) Plans for compliance with the temporary and permanent cessation of operations requirements contained in Chapter 4, Section 2(k) and (u).

(xviii) Plans of mine facilities (including overstrip areas) that are to be shared by two or more separately permitted mining operations may be included in one permit application and referenced in the other application(s). Each permittee shall bond the mine facilities unless the permittees sharing it agree to another arrangement for assuming their respective responsibilities. If such agreement is reached, the application shall include a copy of the agreement between or among the parties setting forth the respective bonding responsibilities of each party for the mine facilities. The agreement shall demonstrate to the satisfaction of the Administrator that all responsibilities under the Act and regulations for the mine facilities will be met.

(xix) A Cultural Resources Management Plan which:

(A) Describes the measures to be used to prevent impacts to public parks or places listed on the National Register of Historic Places or, in cases of valid existing rights or where joint agency approval has been obtained, to minimize impacts to such parks or places;

(B) Provides for the mitigation of adverse effects to historic or archaeological properties eligible for listing on the National Register of Historic Places; and

(C) Ensures that the appropriate treatment measures or mitigation will be undertaken prior to the commencement of any specific mining operation that would affect such parks, places or properties.

~~(xx) A plan for the management and disposal of noncoal mine waste, including any noncoal wastes generated by a mine mouth electric power plant, coal drier or coal preparation plant within the proposed permit area of industrial solid wastes generated by the operations (such as, but not limited to, grease, lubricants, paints, flammable liquids, garbage, trash, discarded machinery, lumber and other combustible material), in accordance with Chapter 4, Section 2(c)(xiii)(C), and with those provisions of the Solid Waste Management Rules and Regulations deemed appropriate by the Administrator.~~

~~(xxi) Plans for the management and disposal within the permit area of any solid wastes generated by a mine mouth power plant or mine mouth coal drier, in accordance with Chapter 4, Section 2(c) and with provisions of the Solid Waste Management Rules and Regulations deemed appropriate by the Administrator.~~

Section 6 **Reclamation Plan.**

(a) The reclamation plan shall include 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 4, Section 2(k) and the orderly development of the mining property.

(b) The reclamation plan shall also describe how the operator will reclaim the affected lands to the proposed postmining land use in accordance with Chapter 4, Section 2(a) which shall include:

(i) 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 4, 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.

(ii) A plan for backfilling, grading and contouring of all affected lands in accordance with Chapter 4, Section 2(b). The plan shall include:

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

(B) 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.

(C) 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 4, Section 2(g)(ii).

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

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

(iii) A plan to assure revegetation of all affected land in accordance with Chapter 4, Section 2(d). The plan shall include:

(A) The method and schedule of revegetation, including but not limited to species of plants, seeding rates, seeding techniques, mulching requirements and other erosion control techniques, and seeding times to be used in a given area for reclamation purposes.

(B) For crucial habitat and critical habitat, consultation with and approval obtained from the Wyoming Game and Fish Department for tree and shrub species composition and ground cover for minimum stocking and planting arrangements of trees and shrubs. Crucial habitat must be declared as such prior to the submittal of a permit application or any subsequent amendment.

(C) For important habitat, consultation with and recommendations obtained from the Wyoming Game and Fish Department for tree and

shrub species composition and ground cover for minimum stocking and planting arrangements.

(D) The tree species, the number per species, and the location of tree plantings.

(E) A separate seed mix(es) shall be developed for each approved postmining land use, considering the dominant postmining topographic features and landowner desires.

(I) The species 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.

(II) The species and varieties shall depend upon the climatic and soil conditions prevailing in the permit area and the proposed postmining landuses.

(III) The species shall be self-renewing;

(IV) Seeding rates shall depend upon seed types, climatic conditions and the techniques to be used in seeding;

(V) The seed mix shall contain introduced species only if:

or

(1.) Additional herbaceous species are needed;

(2.) Suitable, native species are unavailable; or

(3.) For cropland or pastureland or;

(4.) Needed to achieve a quick, temporary, stabilizing cover to control erosion; or

(5.) Conducive to achieve a postmining land use approved by the Administrator.

(VI) The operator shall document, unless otherwise authorized by the Administrator, the suitability of introduced species using data from published literature, from experimental test plots, from on-site experience, or from other information sources.

(VII) For grazingland, the seed mix shall contain full

shrub and/or subshrub species when these species will support the postmining land uses. To increase postmining species diversity and establish shrub mosaics, shrub mixtures shall be developed and seeded separately from the herbaceous mixtures.

(VIII) For federally owned surface, the federal land managing agency shall be consulted for mulching requirements and seeding requirements for cover crops, temporary and permanent reclamation.

(IX) The proposed postmining location of each seed mix shall be illustrated on a post mining contour map.

(F) Locations and/or conditions where the operator specifically requests approval not to use mulch.

(G) A weed control plan for State of Wyoming Designated Noxious and Designated Prohibited Weeds and, on federal surface, any additional weeds listed by the federal land managing agency.

(H) An explanation of any plans for irrigation.

(I) An explanation of pest and disease control measures, if appropriate;

(J) A plan for monitoring permanent revegetation on reclaimed areas, specifically including quantitative sampling, as required by Chapter 4, Section 2(d)(i)(J).

(iv) A plan for measurement of revegetation success to include:

(A) How a "Reference area" shall be used for cover and production, unless technical standards for cover and production have been approved for a projected postmine community. A "Reference area" is defined in Chapter 1, Section 2(dl).

(B) The methods to be used for measuring the shrub density standard as approved by the Administrator.

(C) The methods to be used for evaluating the shrub density goal as approved by the Administrator, where applicable.

(D) The procedures to be used for measuring species diversity and composition as approved by the Administrator.

(E) If proposed, a technical success standard for a specified vegetation parameter. The technical success standard:

(I) Is derived from a sufficient number of years of baseline data so the standard value can be considered representative over a range of climatic conditions or a relationship between the parameter and climatic variables can be determined. For technical standards for cover and production, a minimum of five years of baseline data is necessary; and

(II) May be extended to an amendment area if the baseline information indicates the standard is applicable in that area.

(F) The procedures to be used as approved by the Administrator for the evaluation of restored postmining vegetation communities which carry the Cropland or Pastureland land use designation.

(G) 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.

(v) Descriptions, including maps and cross-sections, of the surface water diversion systems which meet the requirements of Chapter 4, Section 2(e). 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.

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

(A) Written consent from the surface landowner if different than the mineral owner.

(B) A description of the proposed use of the impoundment.

(C) 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.

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

(E) A description of the construction of the impoundment so as to meet the requirements of Chapter 4, Section 2(g)(ii).

(vii) A plan to assure proper construction and reclamation of any tailings impoundments in accordance with the Act and these regulations.

(viii) A plan for the disposal of mine facilities, erected, used or modified by the applicant in accordance with the requirements of Chapter 4, Section 2(m).

(ix) A description of the measures to be used to seal or manage mine openings in accordance with Chapter 4, Section 2(p), and to cap, plug and seal all exploration holes, bore holes, wells and other openings, excepting developmental drill holes which will be mined through within one year, within the area to be mined during the term of the permit in accordance with Chapter 14. For developmental drilling the application shall contain general descriptions relating to spacing, data collection, and techniques which will be employed, including those which may be needed to comply with the plugging and sealing requirements of W.S. § 35-11-404.

(x) A postmining land use plan, including:

(A) The necessary support and maintenance activities that may be needed to achieve the proposed land use.

(B) Where a land use is proposed different from the premining land use:

(I) A discussion of the utility and capacity of the reclaimed land to support a variety of uses and the relationship of the proposed use to existing land use policies and plans; and

(II) A comparison of the premining and postmining land uses. The premining uses of land to which the postmining land use is compared shall be those uses which the land previously supported, if the land has not been previously mined and has been properly managed.

(1.) The postmining land use for land that has been mined and not reclaimed shall be judged on the basis of the highest and best use that can be achieved and is compatible with surrounding areas without requiring unreasonable disturbance of areas previously unaffected by mining.

(2.) The postmining land use for land that has received improper management shall be judged on the basis of the premining use of surrounding lands that have received proper management.

(3.) If the premining use of the land was changed within five years of the beginning of the mining, the comparison of postmining use to premining use shall include a comparison with the historic use of the land as well as its use immediately preceding mining.

(C) Approval of alternative land uses shall require a demonstration that:

(I) The alternative land use is equal to or greater than the highest previous use;

(II) There is reasonable likelihood for achievement of the use;

(III) The use does not present any actual or probable hazard to public health or safety, or threat of water diminution or pollution; and

(IV) The use will not:

(1.) Be impractical or unreasonable;

(2.) Be inconsistent with applicable land use policies or plans;

(3.) Involve unreasonable delay in implementation; or

(4.) Cause or contribute to violation of Federal, State, or local law.

DEPARTMENT OF ENVIRONMENTAL QUALITY

LAND QUALITY DIVISION

CHAPTER 4

ENVIRONMENTAL PROTECTION PERFORMANCE STANDARDS

FOR COAL MINING OPERATIONS

Section 1. **General.**

This Chapter sets forth the environmental protection performance standards applicable to all coal 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) Rough backfilling and grading shall follow coal removal as contemporaneously as possible based upon the mining conditions. The operator shall include within the application for a permit to mine a proposed schedule for backfilling and grading with supporting analysis.

(ii) Backfilled materials shall be replaced in a manner which

minimizes water pollution on and off the site and supports the approved postmining land use. Preparation of final graded surfaces shall be conducted in a manner that minimizes erosion and provides a surface for replacement of topsoil that will minimize slippage.

(iii) All affected lands shall be returned to their approximate original contour, except as authorized by a variance or exemption under Chapter 5, Sections 6 and 7, or Chapter 8, or Chapter 9.

(iv) All spoil shall be transported, backfilled, compacted (where necessary to insure stability or to prevent leaching) and graded to eliminate all highwalls, spoil piles, and depressions, except that:

(A) Soil conservation techniques and or small depressions may be employed to retain moisture, minimize erosion, create and enhance wildlife habitat or assist revegetation.

(B) Incomplete elimination of highwalls may be authorized in accordance with Chapter 5, Section 7.

(C) Retention of selected portions of a highwall or other steep feature created during the mining operation may be approved by the Administrator to remain as replacement for natural features that were mined out or are planned to be mined out under the current Mine Plan if the operator demonstrates that the retained highwall will:

(I) Have a static safety factor of 1.3 or greater and be of similar erosive resistance;

(II) Not pose a hazard to people using the area;

(III) Be backfilled to cover the uppermost mineable coal seam to a minimum depth of 4 feet;

(IV) Not exceed the length and height of the premine feature it is replacing;

(V) Be contoured into the surrounding terrain; and

(VI) Enhance or restore important wildlife habitat or hydrologic conditions.

(D) Spoil may be placed on an area outside the mined-out area to restore the approximate original contour by blending the spoil into the surrounding terrain if the following requirements are met.

(I) All vegetative and organic material shall be

removed from the area.

(II) The topsoil on the area shall be handled in accordance with Section 2(c) of this Chapter.

(III) The spoil shall be backfilled and graded on the area in accordance with the requirements of this subsection 2(b).

(v) Postmining slopes shall not exceed a slope necessary to achieve a minimum long-term static safety factor of 1.3, to prevent slides and restore stable drainages and hillslopes.

(vi) Thin overburden. Where surface coal mining operations are proposed to be carried out continuously in the same limited pit area for more than one year from the day coal removal operations begin and where the volume of all available spoil and suitable waste materials over the life of the mine is demonstrated to be insufficient to achieve the approximate original contour considering bulking factor and coal removal, surface mining activities shall be conducted to use all available spoil and suitable waste materials to attain the lowest practicable stable grade, but not more than the angle of repose, and to meet the requirements of paragraphs (ii) and (iv) above.

(vii) Thick overburden. Where the volume of spoil over the life of the mine is demonstrated to be more than sufficient to achieve the approximate original contours considering bulking factor, coal removal and subsidence of backfilled material, excess spoil may be placed outside the pit area in accordance with the requirements of subsection (c).

(viii) Permanent Impoundments: Where permanent impoundments are authorized in accordance with Chapter 2, Section 6(b)(vi), spoil that may result from the impoundment will be handled in accordance with the requirements of this subsection.

(c) Topsoil, subsoil, overburden, spoil, excess spoil, refuse, coal mine waste, acid-forming materials, toxic materials and other wastes.

(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 such as signs, power poles, light traffic, fence lines, monitoring stations or drilling provided that the minor disturbance will not destroy the protective vegetative cover and will not increase erosion.

(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) 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.

(F) 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) The topsoil (A and E horizons) shall be segregated from the subsoil (B and C horizons) where the Administrator determines that this practice is necessary to achieve the revegetation requirements of these regulations.

(iv) Before redistribution of topsoil or subsoil the regraded land shall be treated, if necessary, to reduce potential for slippage and encourage root penetration.

(v) Topsoil, subsoil, and/or an approved topsoil substitute shall be redistributed in a manner that:

(A) Achieves an approximate uniform, stable thickness consistent with the approved permit and the approved postmining land uses, contours and surface water drainage system;

(B) Prevents compaction which would inhibit water infiltration and plant growth;

(C) Protects the topsoil from wind and water erosion before and after it is seeded until vegetation has become adequately established; and

(D) Conserves soil moisture and promotes revegetation.

(vi) All rills and gullies which either preclude achievement of the approved postmining land use or the reestablishment of the vegetative cover, or cause or contribute to a violation of water quality standards for the receiving stream, shall be regraded or otherwise stabilized. Topsoil shall be replaced and the areas shall be reseeded or replanted.

(vii) Nutrients and soil amendments in the amounts determined necessary by soil test or field trials shall be applied to the replaced topsoil, subsoil or substitute material so that adequate nutrient levels are available to establish the vegetative cover. Fertilizer shall be applied at appropriate seasons and in amounts that will minimize pollution of surface waters or groundwaters.

(viii) The Administrator may not require topsoil or subsoil replacement on structures or within impoundments where replacement of this material is inconsistent with the intended use and the structures are otherwise stable.

(ix) If a sufficient volume of suitable topsoil or subsoil is not available for salvage or redistribution, then selected spoil material may be used as a topsoil or subsoil substitute or supplement. The operator shall demonstrate that the resulting plant growth medium is equal to, or more suitable for sustaining vegetation than the existing topsoil or subsoil and that it is the best available in the permit area to support revegetation. A demonstration of the suitability of the substitutes or supplements shall be based upon analysis of the texture, percent coarse fragments and pH. The Administrator

may require other chemical and physical analyses, field site trials, or greenhouse tests if determined to be necessary or desirable to demonstrate the suitability of the topsoil or subsoil substitutes or supplements.

(x) Topsoil and subsoil substitutes.

(A) 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.

(B) 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.

(xi) Overburden, spoil, excess 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 flood plains 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.

(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.

(F) All temporary overburden and spoil piles shall be located, designed and constructed using prudent engineering practices. Slopes shall be stable and temporary piles shall not be located or placed on slopes that exceed 20 degrees unless the Administrator authorizes such placement based upon demonstrations that the pile will have a safety factor of 1.5 or better, and/or other precautionary design factors are provided to mitigate the steepness of the slope.

(G) Excess Spoil. In addition to the requirements provided in subsections (xi)(A) through (xi)(D) above (with the exception of (xi)(B)(I)), excess spoil piles shall be located, designed, constructed and inspected as prescribed below.

(I) Location Requirements:

(1.) All excess spoil shall be placed in approved excess spoil disposal sites located within the permit area. They shall be:

a. Located on moderately sloping and naturally stable areas where placement provides for stability and prevents mass movement.

b. Located in areas which do not contain springs, seeps, natural or man-made drainages (excluding rills and gullies), croplands, or important wildlife habitat.

(2.) Excess spoil may be returned to underground mine workings in accordance with the plan approved by the Administrator and by MSHA.

(II) Design Standards:

(1.) All excess spoil shall be:

a. Designed, graded and contoured so as to blend in with the topography of the surrounding terrain. Excess spoil pile sites shall not be located on an overall slope that exceeds 20 degrees unless keyway cuts (excavations to stable bedrock), rock toe buttresses or other special structural provisions are constructed to ensure fill stability. The operator must demonstrate to the satisfaction of the Administrator that this material will be stable and can be revegetated as required by this Section.

b. Designed so that all slopes 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. Designed using current, prudent professional standards and certified by a qualified registered professional engineer. All piles shall be designed and constructed in accordance with the standards of this subsection. Special structural provisions shall be designed using prudent current engineering practices, in accordance with Chapter 2, Section 5(b)(xv)

(2.) The foundation and abutments of the fill shall be stable under all conditions of construction. Sufficient foundation investigation and any necessary laboratory testing of foundation materials shall be performed in order to determine the design requirements for foundation stability. Analyses of foundation conditions shall include the effect of underground mine workings, if any, upon the stability of the structure.

(3.) The Administrator may specify additional design criteria on a case-by-case basis as necessary to meet the general requirements of this subsection.

(III) Construction Standards:

(1.) Excess spoil shall be placed in a controlled manner to:

a. Prevent pollution from leachate and surface runoff from the fill on surface water or groundwater of the State.

b. Ensure mass stability and prevent mass movement during and after construction and provide for stable drainages and hillslopes.

c. Ensure that the land mass designated as the disposal site is suitable for reclamation and revegetation compatible with the natural surroundings and approved postmining land use.

(2.) The spoil pile shall be transported and placed in horizontal lifts in a controlled manner, concurrently compacted as necessary to ensure mass stability and prevent mass movement, covered, and graded to allow surface and subsurface drainage to be compatible with the natural surroundings and ensure a minimum long-term static safety factor of 1.5. The Administrator may limit the horizontal lifts to four feet or less as necessary to ensure the stability of the fill or to meet other applicable requirements.

(3.) No water impoundments or large depressions shall be constructed on the fill. Soil conservation techniques may be approved if they are needed to minimize erosion, enhance wildlife habitat or assist

revegetation, as long as they are not incompatible with the stability of the fill.

(4.) Slope protection shall be provided to minimize surface erosion at the site. Diversion of surface water runoff shall conform with the requirements of subsection (e) of this Section. All disturbed areas, including diversion ditches that are not ripped, shall be vegetated upon completion of construction.

(5.) Terraces may be constructed on the outslope of the fill if required for stability, control of erosion, to conserve soil moisture, or to facilitate the approved postmining land use. The grade of the outslope between terrace benches shall not be steeper than 2h:lv (50 percent).

(6.) Excess spoil that is toxic, acid-forming or combustible shall be adequately covered with suitable material or treated to prevent pollution of surface and groundwater, to prevent sustained combustion, and to minimize adverse affects on plant growth and the approved postmining land use.

(IV) Inspection of excess spoil piles.

(1.) The fill shall be inspected for stability by a qualified registered professional engineer or other qualified professional specialist under the direction of a professional engineer experienced in the construction of earth and rockfill embankments at least quarterly throughout construction and during the following critical construction periods:

- a. foundation preparation, including the removal of all organic material and topsoil;
- b. placement of diversion systems;
- c. installation of final surface drainage systems; and
- d. final grading and revegetation.

(2.) Regular inspections by the engineer or specialist shall be conducted during placement and compaction of the fill materials. The registered professional engineer shall promptly provide certified reports to the Administrator which demonstrate that the fill has been maintained and constructed as specified in the design contained in the approved mining and reclamation plan. The report shall discuss appearances of instability, structural weakness, and other hazardous conditions. A copy of all inspection reports shall be retained at the mine site.

(xii) Coal mine waste.

(A) Coal mine waste shall be disposed only in existing or, if new, in an approved disposal site within a permit area. Coal mine wastes shall not be used in the construction of dams, embankments, or diversion structures. The disposal area shall be designed, constructed and maintained:

(I) In accordance with the excess spoil disposal requirements of (xi)(F)-(I), and (K)-(O) above; and

(II) To prevent combustion and not create a public health hazard.

(B) Disposal of coal mine waste in excess spoil piles may be approved if such waste is:

(I) Placed in accordance with the excess spoil requirements of (xi) above;

(II) Demonstrated to be nontoxic and nonacid-forming (or properly treated); and

(III) Demonstrated to be consistent with the design stability of the fill.

(C) In addition to (A) above, coal mine waste piles shall meet the following requirements:

(I) The disposal facility shall be designed to attain a minimum static safety factor of 1.5. The foundation and abutments must be stable under all conditions of construction.

(II) Following final grading of the waste pile, the site shall be covered with a minimum of four feet of the best available, nontoxic, nonacid-forming and noncombustible material, in a manner that directs runoff away from the waste pile. The site shall be revegetated in accordance with this Chapter. The Administrator may allow less than four feet of cover material based on physical and chemical analyses which show that the revegetation requirements will be met.

(III) Surface drainage from above the pile and from the crest and face of the pile shall be permanently diverted around the waste in accordance with subsection (e) of this Section.

(IV) All coal mine waste piles shall be inspected in accordance with the excess spoil requirements of (xi) above. More frequent inspections shall be conducted if a danger or harm exists to the public health and safety or the

environment. Inspections shall continue until the waste pile has been finally graded and revegetated or until later time as required by the Administrator. If any inspection discloses that a potential hazard exists, the Administrator shall be notified immediately, including notification of any emergency protection and remedial procedures which will be implemented. If adequate procedures cannot be formulated or implemented, the Administrator shall inform the appropriate emergency agencies of the hazard to protect the public from the area.

(V) All coal mine waste piles shall meet the requirements of 30 CFR §§ 77.214 and 77.215.

(D) Dams and embankments constructed to impound coal mine waste shall comply with the following:

(I) Each impounding structure shall be designed, constructed and maintained in accordance with the requirements applicable to temporary impoundments. Such structures may not be retained permanently as part of the approved postmining land use. Approval by the State Engineer's Office is not required.

(II) If the impounding structure meets the criteria of 30 CFR § 77.216(a), the combination of principal and emergency spillways shall be able to safely pass or control runoff from the probable maximum precipitation of a 6-hour precipitation event or a storm duration having a greater peak flow, as may be required by the Administrator.

(III) Spillways and outlet structures shall be designed to provide adequate protection against erosion and corrosion. Inlets shall be protected against blockage.

(IV) Be designed so that 90 percent or more of the water stored during the design precipitation event can be removed within ten days and at least 90 percent of the water stored during the design precipitation event shall be removed within the ten day period following the design precipitation event.

(V) Runoff from areas above the disposal facility or runoff from the surface of the facility that may cause instability or erosion of the impounding structure shall be diverted into stabilized diversion channels designed to meet the requirements for diversions, and designed to safely pass the runoff from a 100-year, 6-hour design precipitation event or a storm duration having a greater peak flow.

(E) The Administrator may specify additional design criteria for waste piles or impounding structures on a case-by-case basis as necessary to meet the general performance standards of this subsection.

(F) Coal mine waste fires shall be extinguished by the operator

in accordance with a plan approved by the Administrator and the Mine Safety and Health Administration. The plan shall contain, at a minimum, provisions to ensure that only those persons authorized by the operator, and who have an understanding of the procedures to be used, shall be involved in the extinguishing operations. No burning or burned coal mine waste may be removed from a permitted disposal area without a removal plan approved by the Administrator. Consideration shall be given to persons working or living in the vicinity of the structure.

(G) Coal preparation plants shall be included within a permit area. Refer to Chapter 3, Section 6 for requirements applicable to coal preparation plants.

(xiii) Acid-forming and toxic materials, ~~and~~ other waste and noncoal mine waste.

(A) All exposed coal seams remaining after mining and any acid-forming, toxic, and combustible materials, or any waste materials that are exposed, used or produced during mining shall be adequately covered, within 30 days of its exposure with nontoxic, nonacid-forming and noncombustible material, or treated. Compaction followed by burial or treatment shall be provided to prevent pollution of surface and groundwater quality, prevent sustained combustion and to minimize adverse effects on plant growth and postmining land uses. Such materials may be stored in a controlled manner until final burial and/or treatment first becomes feasible as long as storage will not result in any risk of water pollution or other environmental or public health and safety damage. Storage, final burial and treatment shall be done in accordance with all local, State and Federal requirements.

(B) Acid-forming or toxic material, or any other waste material capable of polluting water, shall not be buried or stored in the proximity of a drainage channel or its flood plain so as to cause or pose a threat of water pollution.

(C) Disposal of noncoal mine wastes. ~~Final burial of noncoal mine waste materials (such as grease, lubricants, paints, flammable liquids, garbage, trash, abandoned mining machinery, lumber and other combustible materials) and any wastes classified as hazardous shall be in a designated disposal site authorized by the Solid Waste Management Section of the Department.~~

(I) Temporary storage of noncoal mine wastes. Noncoal mine wastes including, but not limited to grease, lubricants, paints, flammable liquids, garbage, abandoned mining machinery, lumber and other combustible materials generated during mining activities shall be placed and stored in a controlled manner in a designated portion of the permit area. Placement and storage shall ensure that leachate and surface runoff do not degrade surface or groundwater, that fires are prevented, and that the area remains stable and suitable for reclamation and revegetation compatible with the natural surroundings.

(II) Final disposal of noncoal mine wastes. Final disposal of noncoal mine wastes, including any solid wastes generated by a mine mouth power plant, coal drier or coal processing facility shall be in a designated disposal site in the permit area or a State-approved solid waste disposal area. Disposal sites in the permit area shall be designed and constructed to ensure that leachate and drainage from the noncoal mine waste does not degrade surface or underground water. Wastes shall be routinely compacted and covered to prevent combustion and wind-borne waste. When the disposal is completed, a minimum of four (4) feet of suitable cover material shall be placed over the site, slopes stabilized and revegetation accomplished in accordance with Section 2(d) of this Chapter. Operation of the disposal site shall be conducted in accordance with all local, State and Federal requirements.

(III) At no time shall any noncoal mine waste be deposited in a refuse pile or impounding structure, nor shall an excavation for a noncoal mine waste disposal site be located within eight (8) feet of any coal outcrop or coal storage area.

~~(D) Management and final burial on the permit are of solid wastes generated by a mine mouth power plant or mine mouth coal drier 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) General Revegetation Performance Standards

(A) The operator shall establish on all affected lands a diverse, permanent vegetative cover of the same seasonal variety native to the area or a mixture of species that will support the approved postmining land use in a manner consistent with the approved reclamation plan. This cover shall be self-renewing, and capable of stabilizing the soil.

(B) Land which did not support vegetation prior to becoming affected because of natural soil conditions need not be revegetated unless subsoil 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 the subsection.

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

(D) Mulch or other equivalent procedures which will control

erosion and enhance soil moisture conditions shall be used on all retopsoiled areas.

(E) Any tillage and/or drill seeding 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.

(F) Any rills or gullies that would preclude successful establishment of vegetation or achievement of postmining land use shall be removed or stabilized.

(G) The bond for revegetation shall be retained for not less than ten years after the operator has completed seeding, fertilizing, irrigation, or other work to ensure revegetation. The bond responsibility period shall not be affected where normal husbandry practices are being followed as described in Chapter 4, Section 2(d)(i)(M). The success of revegetation shall be determined in accordance with Chapter 4, Section 2(d)(ii).

(H) 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.

(I) Trees shall be returned to a number equal to the premining number. On affected lands, the total number of postmining trees shall be at least equal to the premining total number on those lands. The Reclamation Plan shall specify the tree species, the number per species and the location of tree plantings. The operator may also receive credit for tree species which invade the reclaimed lands if those tree species support the postmining land use and are approved by the Administrator. Planted trees counted to meet the approved stocking rate shall be healthy, and at least 80 percent shall have been planted for at least eight years. All planted trees must have been in place at least two growing seasons. Invaded trees that are counted to meet the approved stocking rate shall be healthy and may be of any age.

(J) Monitoring of permanent revegetation on reclaimed areas before and after grazing shall be conducted at intervals throughout the bond responsibility period in accordance with the plan required by Chapter 2, Section 6(b)(iv). Monitoring results shall be presented in the annual report.

(K) 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, operator, and the landowner or land managing agency shall determine when the revegetated area is ready for livestock grazing.

(L) The operator must control and minimize the introduction and/or spread of noxious weeds on all affected lands in accordance with Federal and State requirements throughout the entire bond responsibility period.

(M) The following is a list of normal husbandry practices which, if conducted in a prudent manner, will not restart the minimum ten-year bond responsibility period for re-establishing vegetation.

(I) The operator may interseed species contained in the approved seed mix over established revegetation, but not within 6 years before the end of the bond responsibility period. The operator may add mulch to an interseeded area to facilitate plant establishment. Augmented seeding (reseeding) is not considered normal husbandry practice.

(II) Using approved species, the operator may transplant tree and shrub stock and/or plant containerized or bare root tree or shrub stock into reclamation provided the performance standards of Chapter 4 Section 2(d)(i)(H) for trees, and Chapter 4 Section 2(d)(ii)(A)(II)(2) for shrubs are not compromised.

(III) Grazing of reclamation is a normal husbandry practice.

(IV) For trees and shrubs planted in an approved shelterbelt, the practices of fertilization, irrigation and rototilling may be used as normal husbandry/nursery practices in accordance with standard practices.

(V) Beyond establishment, fertilization is a normal husbandry practice for cropland and pastureland throughout the bond responsibility period. Irrigation is a normal husbandry practice beyond establishment for cropland and pastureland, provided the approved postmine land use is irrigated cropland or irrigated pastureland.

(VI) Mechanical husbandry practices such as selective cutting, mowing, combining, aerating, land imprinting, raking, or harrowing to stimulate permanent vegetation establishment, increase decomposition of organic matter, control weeds, harvest hay, and/or reduce standing dead vegetation and litter are considered normal husbandry practices. Other mechanical practices may be used if approved by the Administrator prior to their application.

(VII) Tillage and replanting are considered normal husbandry practices for croplands.

(VIII) Acceptable weed and pest control techniques representing normal husbandry practices include manual or mechanical removal,

controlled burning, biological controls, and herbicide/pesticide applications. The operator may reseed treated areas of less than five acres per year as a component of this husbandry practice without restarting the bond responsibility period.

(IX) Controlled burning may be used to reduce the buildup of litter, weed seeds, and to control undesirable species. The operator may interseed any portion of the treated area, or reseed up to five acres, as a component of this husbandry practice without restarting the bond responsibility period.

(X) Subsidence, settling, and erosional features, such as rills, gullies, or headcuts less than five acres in size may be repaired as a normal husbandry practice. Repairs considered to be normal husbandry practices include hand work, mechanical manipulation, installation of erosion-control matting, silt fences, straw bales, or other similar work. The operator may reseed treated areas of less than five acres as a component of this husbandry practice without restarting the bond responsibility period.

(XI) Removal of pipelines, small culverts, and small sediment control measures, such as traps, riprap, rock or straw bale check dams, small sediment ponds, and silt fences are considered normal husbandry practices. The operator may reseed treated areas of less than five acres as a component of this husbandry practice without restarting the bond responsibility period, provided the structures are reclaimed at least two years prior to the end of the bond responsibility period.

(N) The following actions have been administratively identified as those which qualify as routine land management activities; implementing these actions will not restart the bonding liability period:

(I) Installation and/or removal of power lines and substations;

(II) Installation and/or removal of fences;

(III) Installation and/or removal of any monitoring equipment or features;

(IV) Establishment and/or reclamation of two-track trails; and

(V) Emplacement and/or removal of above-ground pipelines.

(ii) Revegetation Success Standards

(A) Success standards vary by land use. Where standards for cover, production, and shrub density apply, they are quantitative and must be

demonstrated to equal or exceed the success standards using methods and statistical analyses approved and published by the Administrator as required by OSM rules (CFR §816.116 (a)(1), August 30, 2006). Statistical analyses must use a 90-percent statistical confidence interval.

(B) Grazingland and Pastureland

(I) Revegetation shall be deemed to be complete when:

(1) the vegetation cover of the affected land is shown to be capable of renewing itself under natural conditions prevailing at the site, and the absolute total vegetative cover is at least equal to the cover on the reference area or technical standard, (2) the annual herbaceous production is at least equal to the annual herbaceous production on the reference area or technical standard, (3) the species diversity and composition are suitable for the approved postmining land use, and (4) the requirements in (1), (2) and (3) are all met during the same two out of four years beginning no sooner than year seven of the bond responsibility period. Species diversity and composition suitable to the postmine land use must be demonstrated using methods approved by the Administrator. The following reference area type options are available:

(1.) The operator may choose to use control areas for lands where control areas were originally selected for revegetation success evaluation. Control areas will not be approved for new amendments or permits, after (date of rule approval

(2.) The operator shall choose one type of “Reference area” as defined in Chapter 1, Section 2(dl). The “Reference area” shall be approved by the Administrator.

(3.) The Administrator may set or approve quantitative technical success standards for cover and/or production based on data collected from undisturbed portions of the permit area or adjacent areas during a minimum of five independent sampling programs over a minimum of five years. The technical success standards may be approved for a single mine or a group of mines in the same geographical area.

(II) The shrub standard for grazingland shall include the postmining density, composition, and distribution of shrubs, and shall be based upon site-specific evaluation of premining vegetation and wildlife use. Shrub reclamation procedures shall be conducted through the application of best technology currently available as approved in the permit.

(1.) For lands affected between May 3, 1978 and August 6, 1996, a goal of a minimum of one shrub (full shrubs plus subshrubs) per square meter within a mosaic of shrub patches shall be restored using the best practicable technology. These shrub patches shall: cover a minimum of 10 percent of the postmining

(affected area) landscape; be no smaller than 0.05 acres; and be arranged in a mosaic that will optimize interspersions and edge effect.

a. Acreage from permit-wide shrub goal mosaics that is in excess of the required acreage may be banked for credit toward shrub standard lands provided (1) the shrub goal requirement for all shrub goal lands is met, and (2) the methods used to evaluate the shrub goal lands meet the methods and statistical analyses required to achieve the shrub standard.

(2.) Except where a lesser density is justified from premining conditions in accordance with Appendix 4A of Chapter 4, at least 20 percent of the eligible lands shall be restored to shrub patches supporting an average density of one shrub per square meter. Patches shall be no less than 0.05 acres each and shall be arranged in a mosaic that will optimize habitat interspersions and edge effect. Criteria and procedures for establishing the standard are specified in Appendix 4A of Chapter 4. This standard shall apply to all lands affected after August 6, 1996. For bond release purposes, the average postmine total density and species specific density(ies) shall be at least 90 percent of the calculated criteria for the applicable standard.

a. The shrub density standard requires a statistical test using a 90% confidence interval to demonstrate achievement of the standard. The standard must be demonstrated for one year, the last year of the bond responsibility period. At least 80% of the shrubs shall have been planted for at least 60% of the ten-year bond responsibility period, and all planted shrubs shall have been in place for at least two years.

b. Approved shrub species and seeding techniques shall be applied to all remaining grazingland.

c. Shrub mosaic patches must pass the standard for shrub density, based on the shrub option chosen from Appendix 4A of Chapter 4. Shrub patches must also be included in the Sample Unit for evaluation of the standards for total absolute vegetative cover and species diversity and composition. Shrub patches are exempt from the production standard. The operator may change the selected shrub option during the bond responsibility period, if baseline data support the new shrub option, and subject to Administrator approval.

d. For areas designated as crucial or critical habitat, consultation and approval by the Wyoming Game and Fish Department shall be required for minimum stocking rates and planting arrangements of shrubs, including species composition. The approved shrub success standards shall be specified in the Reclamation Plan. Habitat shall be designated as crucial prior to the submittal of a permit application or any subsequent amendment. For areas determined to be important habitat, the Wyoming Game and Fish Department shall be consulted for recommended minimum stocking and planting arrangements of shrubs, including species composition,

that may exceed the programmatic standard discussed above. Approval of shrub stocking plans by the Wyoming Game and Fish Department is not required for areas designated as important habitat.

(C) Cropland

(I) When the approved postmining land use is cropland, the reclaimed area shall be stabilized and revegetated to control erosion unless cropping shall immediately occur. The bond responsibility period shall begin the first season a crop is planted.

(II) Reclamation shall be deemed complete when productive capability is equivalent to an approved reference area (Chapter 1 Section 2(dl)) or published county production data collected the same years the crops are harvested. This standard shall be demonstrated for the two out of four years of the bond responsibility period, starting no sooner than year seven.

(1.) When using a reference area comparison, the operator may choose a reference area under operator control or on a nearby property. The comparison may be made using production quadrats or total field harvest. Appropriate statistical tests will be used for quantitative production quadrat comparisons. Total field harvest comparisons do not require a statistical test. The Administrator shall approve the reference area.

(2.) When using county production data, the total field harvest will be used for a comparison. No statistical test will be required for this comparison.

(D) Fish and Wildlife Habitat. The operator shall gain approval from the Administrator and Wyoming Game and Fish for development of permit-specific performance standards for fish and/or wildlife habitat. These standards shall be stated in the reclamation plan. Specific information shall include:

(I) Which vegetation parameters are used in the standard (e.g. cover, shrubstocking, species diversity and composition);

(II) If shrub stocking is required, then the standards Section 2(d)(ii)(A)(II)(2.) (a.) of this chapter apply; and

(III) Indicate if the standards require a statistical test, a numerical comparison with no statistical test, or a qualitative comparison.

(E) Postmining Wetlands

(I) Reclamation plans for postmining mitigation

wetlands shall be reviewed and approved by the Army Corps of Engineers and the Administrator and incorporated into the Land Quality Division permit. Wetland mitigation shall be considered successful when the Army Corps of Engineers determines that mitigation was successful.

(1.) The operator may create and receive success credit for up to 25 percent additional acreage over the Army Corps of Engineers' required mitigation acreage for each mitigation wetland type.

(2.) The minimum bond responsibility period for areas containing mitigation wetlands is ten years and no request for Phase 3 Incremental Bond release shall be made earlier than the last year of the bond responsibility period. A statement of successful mitigation from the Army Corps of Engineers shall be submitted by the operator to the Administrator as demonstration of successful mitigation. If successful mitigation is approved by the Army Corps of Engineers prior to the last year of the bond responsibility period, then the wetland will be evaluated as part of the surrounding area using the standards applied to that area.

(II) Reclamation plans and success standards for postmining enhancement wetlands shall be reviewed and approved by the Administrator and the Game and Fish Department as a type of wildlife habitat and incorporated into the Land Quality Division permit. The reclamation plan and success standards shall be determined by the postmining land use, and fish and wildlife habitat standards in Section 2(d)(ii)(C) of this chapter apply. The minimum bond liability period for enhancement wetlands is ten years and no demonstration of successful reclamation shall be made earlier than the last year of the bond responsibility period.

(F) Industrial, Commercial, and Residential. When the approved postmining land use is residential or industrial/commercial, the reclaimed area shall be stabilized and revegetated to control erosion unless development shall immediately occur.

(I) Industrial, commercial and residential areas may be released from area and all incremental bond costs as soon as the area is reclaimed to a condition that is ready for the approved land use. The exact criteria will vary with the postmine land use, and shall be specified in the approved Reclamation Plan.

(G) Developed water resource. For lands within the high water line of a developed water resource there are no revegetation reclamation standards.

(H) Recreational. The operator shall gain approval from the Administrator and the appropriate agency for development of permit-specific performance standards. The standards and the reclamation plan shall be included in the permit. If the reclamation plan includes stocking of trees or shrubs approved by Wyoming Game and Fish, then successful tree/shrub establishment must be demonstrated

for one year, the last year of the bond responsibility period. At least 80% of the trees/shrubs shall have been planted for at least 60% of the last ten years of the bond responsibility period, and all planted trees/shrubs shall have been in place for at least two years.

(I) Forestry. Standards for the success of reforestation for commercial harvest shall be established in consultation with and approval from forest management agencies, prior to approval of any mining and reclamation plan that proposes reforestation. The quality and quantity of trees, and the cover of the understory vegetation community shall be not less than that required to achieve the postmining landuse and shall be determined in accordance with scientifically acceptable sampling procedures approved by the Administrator. Successful tree establishment must be demonstrated for one year, the last year of the bond responsibility period. At least 80% of the trees shall have been planted for at least 60% of the last ten years of the bond responsibility period, and all planted trees shall have been in place for at least two years.

(J) Special Success Standards.

(I) For areas previously disturbed by mining and not reclaimed to the requirements of these regulations, the areas shall, at a minimum, be revegetated to a ground cover and productivity level existing before redisturbance and shall be adequate to control erosion.

(II) For lands and facilities that were affected prior to May 3, 1978, and continuously used by the mining operation since that date, the areas shall be reclaimed to the performance standards that were in effect in Rule and Regulation at the time of initial disturbance. At a minimum, the area must be revegetated to a ground cover adequate to control erosion.

(e) Diversion systems and drainage control.

(i) Diversion of streams.

(A) All diversions shall be designed to assure public safety, prevent material damage outside the permit area, and minimize adverse impacts to the hydrologic balance.

(B) All diversions and associated structures shall be designed, constructed, maintained and used to ensure stability, prevent, to the extent possible using best technology currently available, additional contribution of suspended solids to streamflow outside the permit area, and comply with all applicable local, State and Federal rules.

(C) Permanent diversions of intermittent and perennial streams shall be designed and constructed so as to be erosionally and geomorphically compatible

with the natural drainage system.

(D) The design and construction of all diversions for perennial or intermittent streams shall be certified by a qualified registered professional engineer as meeting the diversion standards of these regulations and the approved permit.

(E) When permanent diversions are constructed or stream channels restored after temporary diversions, the operator shall:

(I) Restore, enhance where practicable, or maintain natural riparian vegetation on the banks and flood plain of the stream;

(II) Establish or restore the stream characteristics, including aquatic habitats to approximate premining stream channel characteristics; and

(III) Establish and restore erosionally stable stream channels and flood plains.

(F) The operator shall renovate all permanent diversions in accordance with the approved reclamation plan prior to abandonment of the permit area.

(G) When no longer needed to achieve the purpose for which they were authorized, all temporary diversions shall be removed and the affected land regraded and revegetated, in accordance with this Chapter. Before diversions are removed, downstream water treatment facilities previously protected by the diversion shall be modified or removed, as necessary, to prevent overtopping or failure of the facilities. This requirement shall not relieve the operator from maintaining water treatment facilities as otherwise required.

(ii) Control of discharge or drainage.

(A) Discharge from sedimentation ponds, permanent and temporary impoundments, coal-processing waste dams and embankments, and diversions shall be controlled, by energy dissipators, riprap channels, and other devices, where necessary, to reduce erosion, to prevent deepening or enlargement of stream channels, and to minimize disturbance of the hydrologic balance. Discharge structures shall be designed according to standard engineering design procedures.

(B) Drainage from acid-forming and toxic-forming material into ground and surface water shall be avoided by:

(I) Identifying, burying, and treating where necessary, material which, in the judgment of the Administrator may adversely affect water quality if not treated or buried;

(II) Preventing water from coming into contact with acid-forming and toxic-forming material and other measures as required by the Administrator; and

(III) Complying with the requirements of subsection (c)(xiii) of this Section and such other measures deemed necessary by the Administrator to protect surface water and groundwater.

(C) Surface water shall not be diverted or otherwise discharged into underground mine workings unless specifically authorized by the Administrator per the requirements of Chapter 19, Section 2(a) of these regulations.

(iii) In addition to meeting the standards of this Section, all diversions of groundwater discharge flows shall meet the standards of Section 2(e).

(iv) Diversion systems - Unchannelized surface water and ephemeral streams.

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

(I) To control water pollution.

(II) To control unnecessary erosion.

(III) To protect the on-going operation.

(IV) To protect the water rights of downstream users.

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

(I) In soils or other unconsolidated material, the sides of diversion ditches shall be no steeper than 1½:1.

(II) In rock, the sides of diversion ditches shall not overhang.

(III) 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.

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

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

(VI) 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.

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

(D) 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.

(v) Diversion of intermittent and perennial streams.

(A) 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.

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

(C) 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.

(D) 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.

(E) Mining on the flood plain 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.

(F) 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.

(G) If temporary, the channel and flood plain shall be designed to pass, in a nonerosive manner, the 10-year, 6-hour precipitation event, or the capacity of the unmodified stream channel immediately above and below the diversion, whichever capacity is greater, 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.

(H) If permanent, the channel and flood plain shall be designed to pass, in a nonerosive manner, the 100-year, 6-hour precipitation event, 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.

(f) Sedimentation ponds.

(i) All surface drainage from affected lands excluding sedimentation ponds, diversion ditches, and road disturbances, shall pass through a sedimentation pond(s) before leaving the permit area. Sedimentation control devices shall be constructed prior to disturbance. The Administrator may grant exemptions to the use of sedimentation ponds where, by the use of alternative sediment control measures, the drainage will meet effluent limitation standards or will not degrade receiving waters.

(ii) Where the sedimentation pond(s) results in the mixing of drainage from affected lands with the drainage from undisturbed areas, the permittee shall comply with the applicable effluent limitation standards for all of the mixed drainage where it leaves the permit area.

(iii) Sedimentation ponds shall be designed and constructed to comply with the applicable requirements of subsection (g)(iv-vii) of this Chapter. They shall be located as near as possible to the affected lands and out of intermittent or perennial streams; unless approved by the Administrator.

(iv) Sedimentation ponds shall be operated and maintained to comply with the requirements of the Water Quality Division and the State Engineer's Office and satisfy the following requirements:

(A) Chemicals that will harm fish, wildlife, and related environmental values shall not be used for flocculation or other water treatments or if used these ponds will be protected.

(B) Sedimentation ponds shall be designed and maintained to contain adequate sediment storage as determined by acceptable empirical methods.

(C) Sluicing of collected sediments shall be prevented for the design precipitation event.

(D) All areas disturbed by the construction of the sedimentation pond shall be revegetated as soon as practicable to reduce erosion.

(v) The design, construction, and maintenance of a sedimentation pond or other sediment control measures in accordance with this subsection shall not relieve the operator from compliance with applicable effluent limitation standards of the Water Quality Division.

(vi) Sediment ponds shall be maintained until removal is authorized by the Division and the affected lands have been stabilized and initial vegetation established in accordance with the approved reclamation plan and the requirements of this Chapter. In no case shall sediment ponds treating reclaimed lands be removed sooner than two years after the last augmented seeding.

(vii) Sediment control measures for affected lands. Appropriate sediment control measures shall be designed, constructed, and maintained using the best technology currently available to prevent additional contributions of sediment to streamflow or to runoff outside the affected land. Such measures may consist of limiting the extent of disturbed land and stabilizing, diverting, treating or otherwise controlling runoff.

(g) Permanent and temporary water impoundments.

(i) Permanent water impoundments are prohibited unless authorized by the Administrator on the basis that:

(A) The impoundment and its water quality and quantity will support or constitute a postmining use equal to or greater than the highest previous use of the land.

(B) Discharge of water, if any, from the impoundment shall not degrade the quality of receiving waters.

(C) The surface landowner, if different from the mineral owner, has consented to the impoundment.

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

(A) 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.

(B) 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.

(C) 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.

(D) 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.

(iii) The phrase "major impoundment" shall mean any structure impounding water, sediment or slurry:

(A) To an elevation of 20 feet or more above the upstream toe to the crest of the emergency spillway; or

(B) To an elevation of five feet above the upstream toe of the structure and has a storage volume of 20 acre-feet or more; or

(C) Which will be retained as part of the postmining land use, and:

(I) Has an embankment height greater than 20 feet as measured from the downstream toe of the embankment to the top of the embankment; or

(II) Has an impounding capacity of 20 acre-feet or greater.

(iv) The design, construction and maintenance of permanent and temporary impoundments shall be approved by the State Engineer's Office. In addition, the following design and construction requirements shall be applicable:

(A) The design of impoundments shall be certified by a qualified registered professional engineer as designed to meet the requirements of this part and the applicable requirements of the State Engineer, using current, prudent engineering practices. For major impoundments, the certification also shall be filed with the State Engineer.

(B) The vertical portion of any remaining highwall shall be located far enough below the low water line along the full extent of highwall to provide adequate safety and access for the proposed water users.

(C) Faces of embankments and surrounding areas shall be vegetated, except that faces where water is impounded may be riprapped or otherwise stabilized in accordance with accepted design practices, or where appropriate, Water Quality Division rules and regulations.

(D) The embankment, foundation, and abutments for all impoundments shall be designed and constructed to be stable. For any major impoundment or any impoundment which may present a danger to life, property or the environment, the Administrator shall require sufficient foundation investigations and laboratory testing to demonstrate foundation stability, and shall require a minimum static safety factor of 1.5 for the normal pool with steady seepage saturation conditions, and a seismic safety factor of at least 1.2.

(E) All vegetative and organic materials shall be removed and foundations excavated and prepared to resist failure. Cutoff trenches shall be installed if necessary to ensure stability.

(F) All impoundments shall be inspected regularly during construction and immediately after construction by a qualified registered professional engineer or qualified professional specialist under the direction of a qualified professional engineer. These individuals shall be experienced in impoundment construction. Immediately following each inspection a report shall be prepared and certified by the engineer describing the construction work observed and its conformance with the approved designs. All inspection reports shall be retained at the mine site and submitted in the annual report to the Administrator.

(G) After completion of construction and until final bond release or removal, all impoundments shall be inspected annually by a qualified registered professional engineer, or by a qualified professional specialist under the direction of the qualified professional engineer. These individuals shall be experienced in impoundment construction. Immediately following each inspection a report shall be prepared and certified by the engineer describing:

(I) Existing and required monitoring procedures and instrumentation;

(II) Depth and elevation of any impounded water;

(III) Existing storage capacity;

(IV) Aspects of the dam that may affect its stability or present any other hazardous condition; and

(V) If the impoundment is being maintained in accordance with the approved design and this Chapter. All annual inspection reports shall be retained at the mine site and annually submitted to the Administrator.

(H) In addition to the post-construction annual inspection requirements contained in paragraph (G) immediately above, all impoundments must be inspected during each of the intervening calendar quarters by a qualified individual

designated by the operator. These inspections shall look for appearances of structural weakness and other hazardous conditions.

(I) Those impoundments subject to 30 CFR § 77.216 shall also be inspected in accordance with 30 CFR § 77.216-3.

(J) If any examination of inspection discloses that a potential hazard exists, the operator shall promptly inform the Administrator of the finding and of the emergency procedures formulated for public protection and remedial action. If adequate procedures cannot be formulated or implemented the Administrator shall be notified immediately. The Administrator shall then notify the appropriate agencies that other emergency procedures are required to protect the public.

(K) Impoundments meeting the criteria of 30 CFR § 77.216(a) shall comply with the requirements of 30 CFR § 77.216. The plan required to be submitted to the District Manager of MSHA under 30 CFR § 77.216 shall also be submitted to the Administrator as part of the permit application.

(L) Impoundments shall include either a combination of principal and emergency spillways or a single open channel spillway designed to pass the design precipitation events discussed in subsection (v) below at non-erosive velocities.

(M) In lieu of meeting the requirements in section (L) above, the Administrator may approve a temporary impoundment that relies primarily on storage to control the runoff from the design precipitation event when it is demonstrated by the operator and certified by a qualified registered professional engineer or qualified registered professional land surveyor that the impoundment will safely control the design precipitation event, the water from which could be safely removed in accordance with current, prudent, engineering practices. Such an impoundment shall be located where failure would not be expected to cause loss of life or serious property damage.

(v) The design precipitation event for the spillways for temporary water impoundments shall be a 25-year, 6-hour precipitation event, or a storm duration having a greater peak flow, as may be required by the Administrator or as specified below:

(A) The design precipitation event for spillways on temporary impoundments which meet the criteria of 30 CFR § 77.216(a) shall be a 100-year, 6-hour precipitation event, or a storm duration having a greater peak flow, as may be required by the Administrator; and

(B) Temporary impoundments which meet the criteria of 30 CFR § 77.216(a) and that are intended to impound coal mine waste shall have sufficient spillway and/or storage capacity to safely pass or control runoff from the probable maximum precipitation of a 6-hour precipitation event, or a storm duration having a

greater flow, as may be required by the Administrator.

(vi) The design precipitation event for the spillways for a permanent impoundment shall be a 100-year, 6-hour precipitation event, or a storm duration having a greater peak flow, as may be required by the Administrator.

(vii) Before abandoning an area or seeking bond release, the operator shall ensure that all temporary structures are removed and reclaimed, and that all permanent structures are renovated, if necessary to meet the requirements of this subsection and to conform to the approved reclamation plan.

(viii) Tailings impoundments.

(A) Impoundments to contain mill tailings or slurry tailings shall be constructed in accordance with established engineering principles and shall be approved by the Wyoming State Engineer's Office. A copy of the State Engineer's approval shall be attached to the application.

(B) Reclamation of tailings impoundments shall be accomplished by removal and storage of all topsoil present within the tailings basin. After termination of operations, 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.

(h) Protection of Groundwater Recharge Capacity - The recharge capacity of the reclaimed lands shall be restored to a condition which:

(i) Supports the approved postmining land use;

(ii) Minimizes disturbances to the prevailing hydrologic balance in the permit area and in adjacent areas; and

(iii) Provides a rate of recharge that approximates the premining recharge rate.

(i) Surface water and groundwater quality and quantity shall be monitored until final bond release to determine the extent of the disturbance to the hydrologic balance. Monitoring shall be adequate to plan for modification of surface mining activities, if necessary, to minimize adverse affects on the water of the State. The operator is responsible for properly installing, operating, maintaining and removing all necessary monitoring equipment. In addition, the operator is responsible for conducting monitoring in accordance with the requirements of Chapter 2, Section 5(a)(xv) and the approved monitoring plan. Noncompliance results for NPDES discharges shall be promptly reported by the operator to the Water Quality Division Administrator. The

operator shall promptly report all other noncompliance results to the Land Quality Division Administrator and shall, after consultation with the Administrator, implement appropriate and prompt mitigative measures for those noncompliance situations determined to be mining caused. The monitoring system shall be based on the results of the probable hydrologic consequences assessment and shall include:

(i) A groundwater monitoring program to determine:

(A) Infiltration rates, subsurface flows, and storage characteristics of the reclaimed land and adjacent areas; and

(B) The effects of reclamation on the recharge capacity of the reclaimed lands.

(ii) A surface water monitoring program which includes monitoring of surface water flow and quality from affected lands including those that have been graded and stabilized. Results of the monitoring will be used to demonstrate that the quality and quantity of runoff from affected lands with or without treatment will minimize disturbance to the hydrologic balance. Water quality monitoring results for discharges other than those authorized by Water Quality Division shall be reported whenever results indicate noncompliance with effluent limitation standards or degradation of the quality of receiving water shall be reported immediately. Monitoring results shall be available for inspection at the mine site.

(j) Roads.

(i) Road classification system.

(A) Each road, as defined in Chapter 1, shall be classified as either a primary road or an ancillary road.

(B) A primary road is any road which is:

(I) Used for transporting mineral or spoil;

(II) Frequently used for access or other purposes for a period in excess of six months; or

(III) To be retained for an approved postmining land use.

(C) An ancillary road is any road not classified as a primary road.

(ii) General performance standards. Each road shall be located, designed, constructed, reconstructed, used, maintained and reclaimed so as to:

(A) Control or prevent erosion, siltation, and the air pollution attendant to erosion, including road dust as well as dust occurring on other exposed surfaces, by measures such as vegetating, watering, using chemical or other dust suppressants, or otherwise stabilizing all exposed surfaces in accordance with current, prudent engineering practices;

(B) Control or prevent damage to fish, wildlife, or their habitat and related environmental values;

(C) Control or prevent additional contributions of suspended solids to stream flow or runoff outside the permit area;

(D) Neither cause nor contribute to, directly or indirectly, the violation of State or Federal water quality standards applicable to receiving waters;

(E) The normal flow of water in streambeds and drainage channels shall not be seriously altered;

(F) Prevent or control damage to public or private property, including the prevention or mitigation of adverse effects on lands listed in Chapter 12, Section 1(a)(v)(A); and

(G) Use nonacid- and nontoxic-forming substances in road surfacing.

(iii) Design and construction limits and establishment of design criteria. To ensure environmental protection appropriate for their planned duration and use, including consideration of the type and size of equipment used, the design and construction or reconstruction of roads shall incorporate appropriate limits for grade, width, surface materials, surface drainage control, culvert placement, and culvert size, in accordance with current, prudent engineering practices.

(iv) Location.

(A) No part of any road shall be located in the channel of an ephemeral stream that has the potential for sufficient flow to cause substantial environmental harm unless a downstream sediment control structure exists within the permit boundaries, any intermittent stream channel or any perennial stream channel unless specifically approved by the Administrator in accordance with subsections 2(c), 2(e), 2(f), 2(h), 2(i), 2(r)(ii) and 2(w) of this Chapter and Section 2(a)(i) of Chapter 19.

(B) Roads shall be located to minimize downstream sedimentation and flooding.

(v) Maintenance.

(A) A road shall be maintained to meet the performance standards of this Chapter.

(B) A road damaged by a catastrophic event, such as a flood or earthquake, shall be repaired as soon as is practicable after the damage has occurred.

(vi) Reclamation. A road not to be retained under an approved postmining land use shall be reclaimed in accordance with the approved reclamation plan as soon as practicable after it is no longer needed for mining and reclamation operations. This reclamation shall include:

(A) Closing the road to traffic;

(B) Removing all bridges unless approved as part of the postmining land use and removing all culverts unless approved as part of the postmining land use or approved for burial in place;

(C) Removing or otherwise disposing of road-surfacing materials that are incompatible with the postmining land use and revegetation requirements;

(D) Reshaping cut-and-fill slopes as necessary to be compatible with the postmining land use and to complement the natural drainage pattern of the surrounding terrain;

(E) Protecting the natural drainage patterns by installing dikes or cross drains as necessary to control surface runoff and erosion; and

(F) Scarifying or ripping the roadbed, replacing topsoil, subsoil or substitute material and revegetating disturbed surfaces in accordance with subsections 2(c)(i) through 2(c)(x) and 2(d) of this Chapter.

(vii) Primary roads.

(A) Certification. The construction or reconstruction of primary roads shall be certified in a report to the Administrator by a registered professional engineer. The report shall indicate that the primary road has been constructed or reconstructed as designed and in accordance with the approved plan. The report shall be available for review at the mine site within 30 days following the completion of construction of each primary road.

(B) Each primary road embankment shall have a minimum static safety factor of 1.3 or meet the requirements established under Chapter 2, Section

5(a)(xvi)(B).

(C) Location.

(I) To minimize erosion, a primary road shall be located, insofar as is practicable, on the most stable available surface.

(II) Fords of intermittent or perennial streams by primary roads are prohibited unless they are specifically approved by the Administrator as temporary routes during periods of road construction.

(D) Drainage control. In accordance with the approved plan:

(I) Each primary road shall be constructed or reconstructed and maintained to have adequate drainage control, using structures such as, but not limited to, bridges, ditches, cross drains, and ditch relief drains. The drainage control system shall be designed to safely pass the peak runoff from a 10-year, 6-hour precipitation event, or greater event as specified by the Administrator;

(II) Drainage pipes and culverts shall be installed as designed, and maintained in a free and operating condition and to prevent or control erosion at inlets and outlets;

(III) Drainage ditches shall be constructed and maintained to prevent uncontrolled drainage over the road surface and embankment;

(IV) Culverts shall be installed, and maintained to sustain the vertical soil pressure, passive resistance of the foundation, and the weight of vehicles using the road;

(V) Natural stream channels shall not be altered or relocated without the prior approval of the Administrator in accordance with applicable Sections 2(c), 2(e), 2(f), 2(h), 2(i), 2(r)(ii) and 2(w) of this Chapter and Section 2(a)(i) of Chapter 19; and

(VI) Except as provided in (vii)(C)(II) of this section, structures for channel crossings of ephemeral streams that have the potential for sufficient flow to cause substantial environmental harm unless a downstream sediment control structure exists within the permit boundaries, any intermittent stream or any perennial stream shall be made using bridges, culverts, low-water crossings or other structures designed, constructed, and maintained using current, prudent engineering practices. The Administrator shall ensure that low-water crossings are designed, constructed and maintained to prevent erosion of the structure or streambed and additional contributions of suspended solids to streamflow.

(E) Surfacing: Primary roads shall be surfaced with material approved by the Administrator as being sufficiently durable for the anticipated volume of traffic and weight and speed of vehicles using the road.

(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.

(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.

(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.

(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.

(m) Disposal of mine facilities.

(i) All mine facilities constructed, used or improved by the operator must be removed or dismantled and shall be reclaimed in accordance with the requirements of this Chapter when no longer needed for the operation 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 mine facilities, the operator must obtain the written consent of the surface landowner to leave the mine facilities intact. The operator must make a request in writing, providing written proof of the above to the Land Quality Division, that the mine facilities be permitted to remain intact.

(n) Mine Facilities.

(i) Mine facilities shall be operated in accordance with the permit issued for the mine or coal preparation operation to which it is incident or from which its operation results.

(ii) In addition to the other provisions of this Chapter, mine facilities shall be located, maintained, and used in a manner that:

(A) Prevents or controls erosion and siltation, water pollution, and damage to public or private property;

(B) To the extent possible using the best technology currently available;

(1.) Minimizes damage to fish, wildlife, and related environmental values; and

(2.) Minimizes additional contributions of suspended solids to streamflow or runoff outside the permit area. Any such contributions shall not be in excess of limitations of State or Federal law.

(o) Signs and markers. Uniform and durable signs and markers of an adequate size shall be posted by the operator at those points applicable to the areas or activities to which they pertain. Such signs and markers shall include mine and permit identification signs, perimeter markers, buffer zone markers, blasting signs and soil markers. The operator shall place and maintain all signs and markers prior to commencement and until the completion of the activities to which they pertain, which, for mine and permit identification signs, shall be at the time the bond is released.

(p) Drilled holes and other exposed underground openings: Plugging, sealing and capping of all drilled holes except those used solely for blasting or developmental drill holes which will be mined through within one year shall meet the requirements of Chapter 14. Developmental drilling shall meet the plugging and sealing requirements of W.S. § 35-11-404, where necessary. Temporary sealing and use of protective devices may be approved by the Administrator if the hole will be used for returning coal-processing waste or water to underground workings or monitoring groundwater conditions, and shall be used, at a minimum, for developmental drilling. Other exposed underground openings shall be properly managed as required by the Administrator to

prevent access to mine workings and to keep acid or other toxic drainage from entering ground or surface water.

(i) With the prior approval of the Administrator and the State Engineer, wells may be transferred to another party for further use. The permittee shall remain responsible for the proper management of the well until final bond release.

(q) Air resources protection. All exposed surface areas shall be protected and stabilized to effectively control erosion and air pollution attendant to erosion.

(r) Fish and wildlife performance standards.

(i) An operator shall, to the extent possible using the best technology currently available and consistent with the approved postmining land use, minimize disturbance and adverse impacts on fish, wildlife, and related environmental values, and achieve enhancement of such resources where practicable, which activities shall include:

(A) Properly construct, locate and operate roads and powerlines, including proper design of powerlines to avoid electrocution of raptors.

(B) Prevent access to areas such as roadways or ponds with hazardous materials, to avoid damage to wildlife without limiting access to known important routes.

(C) Afford protection, restore and enhance where practicable important habitats to fish and wildlife. This shall include, but is not limited to, wetlands and riparian vegetation along rivers and streams and bordering ponds and lakes.

(D) Select plant species with shrubs well represented, which will enhance the nutritional and cover aspects of fish and wildlife habitat, where such habitat is identified as part of the postmining use, and distribute the reestablished habitat in a manner which includes a diversity and interspersion of habitats, optimizes edge effect, cover and other benefits for fish and wildlife, and is consistent with Section 2(d)(x)(E).

(E) Promptly report to the regulatory authority any species or critical habitat of such species listed as threatened or endangered, or any golden or bald eagle nest in or adjacent to the permit area, which was not reported or investigated in the permit application. Upon notification the Administrator shall consult with the Wyoming Game and Fish Department and the U.S. Fish and Wildlife Service and, after consultation, shall identify whether and under what conditions the operator may proceed.

(F) Where the postmining land use is for cropland, to the extent not inconsistent with this intended use, operators shall restore habitat types to break up large blocks of monocultures.

(ii) Stream buffer zone.

(A) No land within 100 feet of a perennial or intermittent stream shall be affected unless the Administrator specifically authorizes such activities closer to or through such a stream upon a finding that:

(I) Surface mining activities will not cause or contribute to the violation of applicable state or federal water quality standards, and will not adversely affect the water quantity and quality or other environmental resources of the stream; and

(II) If there will be a temporary or permanent stream-channel diversion, it will comply with all stream diversion requirements.

(B) The area not to be affected shall be designated a buffer zone, marked in the field and on the mine plan map.

(iii) No surface mining activity shall be conducted which is likely to jeopardize the continued existence of endangered or threatened species listed by the State or the Secretary of the Interior or which will result in the destruction or adverse modification of designated critical habitats of such species in violation of the Endangered Species Act (16 U.S.C. 1531 et seq.). No surface mining activity shall be conducted in a manner which would result in the unlawful taking of a bald or golden eagle, its nest, or any of its eggs. The Administrator shall consult with the State and Federal Fish and Wildlife Agencies to identify whether and under what conditions the operation may continue under this provision.

(iv) The operator shall perform periodic surveys, in the level of detail and for those areas as determined by the Administrator, in accordance with Appendix B of these rules and regulations.

(s) Slides and other damage. Where instability may exist in backfill materials, an undisturbed natural barrier shall be provided to prevent slides and erosion, beginning at the elevation of the lowest coal seam to be mined and extending from the outslope for such distance as may be determined by the Administrator.

(t) Only those operations designed to protect disturbed surface areas and which result in improved resource recovery, abatement of water pollution, or elimination of hazards to the public shall be conducted within 500 feet of an active or abandoned underground mine. Approval for such operation shall be obtained from MSHA for operations proposed to be conducted within 500 feet of an active underground mine. The Administrator shall specifically approve operations proposed to be conducted within 500 feet of an abandoned underground mine.

(u) Cessation of operations. When it is known that a temporary cessation of operations will extend beyond 30 days, the operator shall submit to the Administrator that information required in an annual report.

(v) The operator shall conduct operations so as to maximize the utilization and conservation of the solid fuel resource being recovered so that re-affecting the land in the future can be minimized.

(w) The operator shall conduct all operations in such a manner as to minimize disturbance of the hydrologic balance within the permit and adjacent areas, to prevent material damage to the hydrologic balance outside the permit area, to assure the protection or replacement of water rights, and to support approved postmining land uses in accordance with the terms and conditions of the approved permit and the performance standards of this Chapter. The Administrator may require additional preventative, remedial, or monitoring measures to assure that material damage to the hydrologic balance outside the permit area is prevented. Mining and reclamation practices that minimize water pollution and changes in flow shall be used in preference to water treatment.

(x) Utility installations which are not part of the surface coal mining operation. All operations shall be conducted in a manner which minimizes damage, destruction, or disruption of services provided by oil, gas, and water wells; oil, gas, and coal-slurry pipelines; railroads; electric and telephone lines; and water and sewage lines which pass over, under or through the permit area, unless otherwise approved by the Administrator or owner of the utility installation.

DEPARTMENT OF ENVIRONMENTAL QUALITY

LAND QUALITY DIVISION

CHAPTER 7

UNDERGROUND COAL MINING

Section 1. Underground Coal 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, Section 1, applications for a permit for underground coal mining operations shall contain all information required by Chapter 2, ~~Section 2~~, except Section ~~5 2(a)(ix)~~(C), (E) and (xi), and as limited below:

(i) Information required on soils, vegetation, archaeology, fish and wildlife resources, topography, geology, and mineral deposits shall be limited to those areas affected by surface operations or subsidence. Information required on surface water shall be limited to the immediate drainage area of those lands affected by surface operations or subsidence. Information required for the geological description pursuant to Chapter 2, Section ~~4 2(a)(viii)~~(F) shall be as follows:

(A) For areas where surface operations and facilities will cause removal of overburden down to the level of the coal seam (this does not include test boring and core sampling areas), all information outline in Chapter 2, Section ~~4 2(a)(viii)~~(F);

(B) For all other areas, all information outlined in Chapter 2, Section ~~4 2(a)(viii)~~(F), except that the information called for in paragraph (C) ~~(H)~~ is restricted to the strata immediately overlying and underlying the coal seam(s) to be mined; and

(C) For areas where room-and-pillar operations are proposed, information on the thickness and engineering properties of clays or soft rock, if any, in the mined coal overlying and underlying strata.

(ii) The pre-application investigation to determine whether lands may be prime farmland shall be limited to the area proposed to be affected by surface operations or subsidence.

(iii) A narrative description of the construction, modification, use, maintenance, and removal of mine development waste.

(iv) A detailed description, with appropriate drawings of permanent entry

seals and downslope barriers designed to ensure stability under anticipated hydraulic heads within the mine workings, or measures to prevent or control gravity discharges of water.

(v) Information and evaluations on the potential for and the extent of subsidence, and the effect it may have on structures, the continued use of the surface land and aquifers or recharge areas. Such information shall include a map of all underground workings showing areas of planned and potential subsidence. If the Administrator determines that subsidence may cause material damage to the reasonably foreseeable use of structures, the land surface or groundwater, a subsidence control plan shall be developed and shall include:

(A) A description of the mining methods;

(B) Extent and effect of any planned and controlled subsidence;

(C) Except for areas where planned subsidence is projected to be used, measures to be taken in the mine to prevent or minimize subsidence, including backfilling of voids and leaving areas in which no coal is removed; and

(D) Measures to be taken to prevent, lessen, or mitigate material damage or loss of value to property, including reinforcement, relocation, restoration, or replacement of structures and features; monitoring; and purchase of property or insurance. The manner of determining the degree of material damage or loss of value of property shall be described.

(vi) A description including detailed maps and cross-sections for the location, design and construction of surface entries and access to underground workings including ventilation shafts.

(vii) A detailed reclamation plan which shall demonstrate that reclamation shall be accomplished in accordance with Section 2 of this Chapter.

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 4, 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 4 shall apply to underground mining operations.

(b) Performance standards applicable to underground coal mining operations:

(i) Underground development waste and excess spoil shall be disposed of in accordance with Chapter 4, Section 2(c).

(ii) Surface entries and accesses to underground workings, including adits and slopes, shall be located, designed, constructed, and utilized to prevent or control gravity discharge of water from the mine in excess of State or Federal water quality standards.

(iii) Underground mining activities shall be planned and conducted so as to prevent subsidence from causing material damage to structures, the land surface, and groundwater resources.

(iv) Underground mining shall not be conducted beneath or adjacent to any park, cemetery, public building, facility (churches, schools, hospitals, etc.), or body of water with a volume of 20 acre-feet or more, unless the Administrator approves otherwise on the basis of detailed subsurface information demonstrating that subsidence will not cause material damage or reduce the reasonably foreseeable use of the feature or facility.

(v) Underground mining activities beneath any aquifer that serves as a source of water for public drinking, domestic, industrial or agricultural use should be conducted so as to avoid disruption of the aquifer and consequent exchange of groundwater between the aquifer and other strata. The Administrator may prohibit mining in the vicinity of the aquifer or may limit extraction to protect the aquifer and water supply.

(vi) The Administrator shall suspend underground mining under urbanized areas, cities, towns and communities, and adjacent to industrial or commercial buildings, major impoundments or permanent streams, if imminent danger is found to inhabitants of the urbanized areas, cities, towns, or communities or material damage is threatened to the urbanized areas, cities, towns or communities.

(vii) All applicable regulations contained in the Act and Chapter 4, Section 2 shall apply to underground coal mining operations. The approximate original contour requirements of Section 2(b) may be waived in situations where settled surface disturbances have become stabilized and revegetated.

(viii) The performance standards contained in the Act and Chapter 5 shall apply to underground mining operations, excluding Section 1 for areas that will be actively used over extended periods and which affect a minimal amount of land.

(ix) Noncoal mine waste shall be managed in accordance with Chapter 4, Section 2(c).

(c) The operator of an underground coal mining operation shall submit a plan of underground workings pursuant to a schedule approved by the Administrator. The plan shall include maps and descriptions of significant features of the underground mine, extraction ratios, measures taken to prevent or minimize subsidence and related damage, areas of full extraction and other information, as required by the Administrator.

Section 3. **Public Notice.**

(a) The public notice required pursuant to W.S. § 35-11-406(j) shall include the following additional information for proposed underground coal mining operations:

(i) Dates when the underground mining activities could cause subsidence and affect specific structures; and

(ii) Any proposed measures which may be taken to prevent or control adverse surface effects.

(b) The applicant shall send a notice to owners and occupants of surface property or structures within the area covered under the term of the permit.

(c) The information required by (a) may be submitted at a later date if approved by the Administrator. Any late submittal shall occur at least six months prior to mining.

Section 4. **Surface Owner Protection.**

(a) Each operator who conducts underground coal mining activities shall:

(i) Correct any material damage resulting from subsidence caused to surface lands by restoring the land to a condition capable of maintaining the value and reasonably foreseeable uses which it was capable of supporting before subsidence; and

(ii) Either correct material damage resulting from subsidence caused to any structures or facilities by repairing the damage or compensate the owner of such structures or facilities in the full amount of the reduction in value resulting from the

subsidence. Repair of damage includes rehabilitation, restoration, or replacement of damaged structures or facilities.

DEPARTMENT OF ENVIRONMENTAL QUALITY

LAND QUALITY DIVISION

CHAPTER 10

COAL EXPLORATION

Section 1. General Requirements: Exploration of 250 Tons or Less

(a) Any person who intends to conduct coal exploration outside a permit area during which 250 tons or less of coal will be removed in the area to be explored shall, before conducting the exploration, file with the Administrator a notice of intent to explore.

(b) The notice shall include:

(i) The person's name, address, and telephone number.

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

(iii) A narrative describing the proposed exploration area and a map at a scale of 1:24,000, or greater, showing the proposed area of exploration and the general location of drill holes and trenches, existing and proposed roads, occupied dwellings, topographic features, bodies of surface water, and pipelines. This description shall clearly describe the areas to be disturbed as well as the natural and man-made features in and immediately around the exploration area.

(iv) A statement of the period of the proposed exploration.

(v) A description of the method of exploration to be used and the practices proposed to protect the environment and reclaim the area, including those necessary to comply with Section 4 of this Chapter.

Section 2. General Requirements: Exploration of More than 250 Tons or in an Area Designated as Unsuitable.

(a) Any person who intends to conduct coal exploration outside a permit area during which more than 250 tons of coal will be removed in the area to be explored or which will take place on lands designated as unsuitable for surface mining under Chapter 17 and those protected under Chapter 12, Section 1(a)(v) shall, before conducting the exploration, file with the Administrator and obtain approval for an application for a coal mine exploration license.

- (b) The application shall include at a minimum, the following information:
- (i) The applicant's name, address, and telephone number.
 - (ii) The name, address and telephone number of the applicant's representative who will be present at, and responsible for, conducting the exploration activities.
 - (iii) A narrative describing the proposed exploration area.
 - (iv) A narrative description of the methods and equipment to be used to conduct the exploration and reclamation.
 - (v) An estimated timetable for conducting and completing each phase of the exploration and reclamation.
 - (vi) The estimated amount of coal to be removed, a description of the methods to be used to determine the amount, and a statement of why extraction of more than 250 tons of coal is necessary for exploration.
 - (vii) A description of historic or cultural features or resources listed or known to be eligible for listing on the National Register of Historic Places. This shall include a detailed description of all archeological and historic resources located within the areas to be directly affected by the proposed exploration activities. This shall also include any other information which the Administrator may require regarding known or possible historic or archeological resources.
 - (viii) A description of any endangered or threatened species listed pursuant to the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq.) identified within the proposed exploration area.
 - (ix) A description of the measures to be used to comply with Section 4 of this Chapter.
 - (x) The name and address of the owner of record of the surface land and of the subsurface mineral estate of the area to be explored.
 - (xi) A map(s) at a scale of 1:24,000 or larger, showing the areas of land to be disturbed by the proposed exploration and reclamation. The map shall specifically show existing roads, occupied dwellings, topographic and drainage features, bodies of surface water, and pipelines; proposed locations of trenches, roads, and other access routes and structures to be constructed; the location of proposed land excavations; the location of exploration holes or other drill holes or underground openings; the location of excavated earth or waste material disposal areas; and the location of critical habitats of any endangered

or threatened species listed pursuant to the Endangered Species Act.

(xii) If the surface is owned by a person other than the applicant, a description of the basis upon which the applicant claims the right to enter the area for the purpose of conducting the exploration and reclamation.

(xiii) For any lands listed under Chapter 12, Section 1(a)(v) of the Division's Coal Rules and Regulations, a demonstration that to the extent technologically and economically feasible, the proposed exploration activities have been designed to minimize interference with the values for which those lands were designated as unsuitable for surface coal mining operations. The application shall include documentation of consultation with the owner of the feature causing the land to come under the protection of Chapter 12, Section 1(a)(v), and, when applicable, with the agency with primary jurisdiction over the feature with respect to the values that caused the land to come under the protection of Chapter 12, Section 1(a)(v).

(c) Within 30 days after submittal of an application for a license to explore under this Section, the Administrator will notify the applicant whether the application is complete. Upon a determination that the application is administratively complete, the Administrator shall require the applicant to publish a notice of filing in a newspaper of general circulation in the county of the proposed exploration area. The notice shall state the name and address of the person seeking approval, the filing date of the application, the address where written comments on the application may be submitted, the closing date of the comment period, and a description of the area of exploration. Any person having an interest which is or may be adversely affected shall have the right to file written comments on the application within 30 days from the date of publication.

Section 3. Approval of Applications for Exploration of More than 250 Tons or in an Area Designated as Unsuitable for Surface Coal Mining Operations.

(a) No later than 40 days after newspaper publication, the Administrator shall notify the applicant, any appropriate government agencies and other commenters, in writing of his intention to approve the application, or if he has denied it. If the application is denied, the notice shall include a statement of the reasons for denial. A copy of the notice shall also be posted at the district office covering the area for the proposed exploration.

(b) Any person having an interest which is or may be adversely affected by the decision of the Administrator shall have the right to file written objections to the application within 30 days after the notification. Such persons shall have the opportunity for administrative and judicial review as outlined in W.S. § 35-11-406(k). The final decision, to issue or deny the license, shall be done in accordance with W.S. § 35-11-406(p). If there are no objections, the Administrator shall promptly approve and issue the license in accordance with (c) immediately below.

(c) The Administrator shall approve a complete application and issue the license only if he finds in writing that the exploration and reclamation:

(i) Will be conducted in accordance with Section 4 of this Chapter;

(ii) Will not jeopardize the continued existence of an endangered or threatened species list pursuant to Section 4 of the Endangered Species Act of 1973 (16 U.S.C. 1533) or result in the destruction or adverse modification of critical habitat of those species; and

(iii) Will not adversely affect any cultural or historical resources listed on the National Register of Historic Places, pursuant to the National Historic Preservation Act, as amended, unless the proposed exploration has been approved by the Administrator and the agency with jurisdiction over such matters.

(iv) With respect to exploration activities on any lands protected under Chapter 12, Section 1(a)(v) of the Division's Coal Rules and Regulations, minimize interference, to the extent technologically or economically feasible, with the values for which those lands were designated as unsuitable for surface coal mining operations. Before making this finding, the Administrator shall provide reasonable opportunity to the owner of the feature causing the land to come under the protection of Chapter 12, Section 1(a)(v), and, when applicable, to the agency with primary jurisdiction over the feature with respect to the values that caused the land to come under the protection of Chapter 12, Section 1(a)(v), to comment on whether the finding is appropriate.

Section 4. **Exploration and Reclamation Performance Standards.**

(a) Any person who conducts coal exploration operations which substantially disturb the natural land surface shall minimize environmental damage to the area by complying with the requirements of this Section.

(b) Backfilling, regrading and recontouring shall be conducted as is necessary to promptly return the affected land to its approximate original contour.

(c) Topsoil removal, storage and redistribution practices shall be used, including those measures designed to assure successful revegetation.

(d) Revegetation shall be conducted by seeding or planting to the same seasonal variety native to the areas disturbed, so as to encourage stabilization of the affected land and prompt recovery of a diverse, effective and permanent vegetative cover.

(e) Critical habitats of threatened or endangered species identified pursuant to the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq.) shall not be disturbed during coal exploration. Crucial or important habitat for wildlife shall not be disturbed during coal

exploration unless written evidence of consultation with the Wyoming Game and Fish Department and any resulting recommendations are submitted to the Administrator as part of either a coal exploration license or notice of intent to explore application.

- (f) Diversions shall be made in accordance with Chapter 4, Section 2.
- (g) All drill holes shall meet the requirements of Section 3, Chapter 14, Land Quality Rules and Regulations.
- (h) Vehicular travel and road construction, maintenance and reclamation shall meet the requirements of Section 2, Chapter 4, Land Quality Rules and Regulations.
- (i) Toxic or acid-forming materials shall be handled and disposed of in accordance with Section 2(c), Chapter 4, Land Quality Rules and Regulations.
- (j) Activities shall be conducted to minimize disturbance to the prevailing hydrologic balance, including, at a minimum, sediment control measures or sedimentation ponds, which comply with Chapter 4, Section 2(e)(ii)(A) and Chapter 4, Section 2(f).
- (k) Facility removal shall be conducted in accordance with Chapter 4, Section 2(m).

Section 5. Additional Requirements.

Where the proposed coal exploration activity falls within that activity described as exploration by dozing or exploration by drilling, any requirements imposed by the Act or the regulations which may be additional to the above described requirements, including the bonding requirement, may be applicable to the proposed operation. The Administrator shall make a determination, on a case-by-case basis, as to whether any additional requirements shall be imposed.

Section 6. Public Availability of Information.

(a) Except for trade secrets, as defined in Chapter 1, Section 2, Land Quality Rules and Regulations, all information submitted under this Chapter shall be made available for public inspection and copying at the Land Quality Division of the Department of Environmental Quality. For confidentiality, the person submitting the information must request in writing that it be kept confidential and that it meets the requirements for "trade secrets."

(b) Information requested to be held confidential shall not be made publicly available until after notice and opportunity to be heard is afforded persons both seeking and opposing disclosure of the information.

Section 7. Existing Operations.

The exploration and reclamation performance standards contained in Section 5 shall apply to all coal exploration operations which substantially disturb the natural land surface two months after final approval of a State program pursuant to Section 503 of P.L. 95-87.

Section 8. Commercial Use or Sale of Coal Extracted under a Coal Exploration License.

(a) Except as provided under subparagraph (b) below, any person who intends to commercially use or sell coal extracted during coal exploration operations under an exploration license, shall first obtain a permit to conduct surface coal mining operations for those operations.

(b) With the prior written approval of the Administrator, no permit to conduct surface coal mining operations is required for the sale or commercial use of coal extracted during exploration operations if such sale or commercial use is for coal testing purposes only. The person conducting the exploration shall file an application for such approval with the Administrator. The application shall demonstrate that the coal testing is necessary for the development of a surface coal mining and reclamation operation for which a surface coal mining operations permit application is to be submitted in the near future, and that the proposed commercial use or sale of coal extracted during exploration operations is solely for the purpose of testing the coal. The application shall contain the following:

(i) The name of the testing firm and the locations at which the coal will be tested.

(ii) If the coal will be sold directly to, or commercially used directly by, the intended end user, a statement from the intended end user, or if the coal is sold indirectly to the intended end user through an agent or broker, a statement from the agent or broker. The statement shall include:

(A) The specific reason for the test, including why the coal may be so different from the intended user's other coal supplies as to require testing;

(B) The amount of coal necessary for the test and why a lesser amount is not sufficient; and

(C) A description of the specific tests that will be conducted.

(iii) Evidence that sufficient reserves of coal are available to the person conducting exploration or its principals for future commercial use or sale to the intended end user, or agent or broker of such user identified above, to demonstrate that the amount of coal to be removed is not the total reserve, but is a sampling of a larger reserve.

(iv) An explanation as to why other means of exploration, such as core drilling, are not adequate to determine the quality of the coal and/or the feasibility of developing a surface coal mining operation.

DEPARTMENT OF ENVIRONMENTAL QUALITY

LAND QUALITY DIVISION

CHAPTER 12

PROCEDURES APPLICABLE TO SURFACE COAL MINING OPERATIONS

Section 1. **Permitting Procedures.**

(a) In addition to the permitting procedures described in the Act, the following shall be applicable to applications for a permit for a surface coal mine operation:

(i) For the purposes of alluvial valley floors, prior to determining that an application is suitable for publication in accordance with W.S. § 35-11-406(j) and upon the basis of sufficient information, the Administrator shall make a determination in writing as to the existence and extent of an alluvial valley floor within the permit area or on adjacent areas where the mining operation may affect surface water or groundwater that supply an alluvial valley floor unless the preapplication determination in Chapter 3, Section 2(a) has already been made. Any preapplication determination and all information submitted for this determination shall be included in the permit application and shall be available for public notice, opportunity for comment and any conference or hearing. The Administrator shall determine that an alluvial valley floor exists when, in accordance with W.S. § 35-11-103(e)(xviii), it is found that:

(A) Unconsolidated streamlaid deposits holding streams are present; and

(B) There is sufficient water to support subirrigation or flood irrigation agricultural activities.

(ii) The public notice required by W.S. § 35-11-406(j) shall:

(A) Contain detailed information which identifies a USGS map(s) and appropriate landmarks locating and allowing local residents to readily identify the proposed permit area.

(B) Be sent by the Administrator to Federal, State, and local governmental agencies, including planning agencies, with jurisdiction over or an interest in the proposed operation or permit area, and local sewage and water treatment authorities. At a minimum this shall include the U.S. Department of Agriculture Soil Conservation Service District office, the local U.S. Army Corps of Engineers District Engineer, the National Park Service if NPS lands are adjacent, State and Federal fish and wildlife agencies, and the State Historic Preservation Officer. Such entities and any person who filed a comment or objection

shall also receive the final decision on the application. In addition, the Administrator will publish a summary of his decision in a newspaper of general circulation in the general area of the proposed operation.

(iii) Any subsequent revision of the application, or objections or comments to the application, shall be filed in the offices of the county clerks of the counties in which the proposed permit area is located. Copies of comments and objections shall also be transmitted to the applicant.

(iv) In addition to the specific findings required by W.S. § 35-11-406(n), no permit shall be approved unless the Administrator also finds in writing that:

(A) The proposed operation will not be inconsistent with other surface coal mining and reclamation operations proposed or contemplated in pending or approved mining permits;

(B) The effect of the proposed operation on properties listed on and properties eligible for listing on the National Register of Historic Places has been taken into account; and

(I) Mining has been prohibited within 100 feet of any such properties by permit condition; or

(II) The applicant has provided for the protection of such properties in the approved mining and reclamation plan; or

(III) The Administrator has determined, in consultation with the State Historic Preservation Officer, that no additional protection measures are necessary.

(v) The criteria contained in W.S. § 35-11-406(n)(iv) regarding Section 522(e) of P.L. 95-87 shall mean that, prior to approval of any complete application for a surface coal mining permit, the applicant must demonstrate and the Administrator determine, utilizing the assistance of the appropriate Federal, State or local government agency, if necessary, that the application does not propose a surface coal mining operation on those lands where such operation is prohibited or limited by Section 522(e) of P.L. 95-87; or if one is so proposed, that the applicant either has valid existing rights or was conducting a surface coal mining operation on those lands on August 3, 1977. Subject to the above stated limitations, surface coal mining operations are prohibited or limited:

(A) On any lands within the boundaries of the National Park System, the National Wildlife Refuge System, the National System of Trails, the National Wilderness Preservation System, the Wild and Scenic Rivers System, including study rivers designated under Section 5(a) of the Wild and Scenic Rivers Act or study rivers or study river corridors as established in any guidelines pursuant to that Act and National Recreation

Areas designated by Act of Congress;

(B) On any federal lands within the boundaries of any national forest unless the applicant demonstrates compliance with 30 CFR §761.11(b) and submits a finding by the Secretary in his favor using the procedures at 30 C.F.R. §761.13 (2009) (<http://www.gpoaccess.gov/cfr/retrieve.html>);

(C) On any lands where mining will adversely affect any publicly owned park or any properties listed on and any properties eligible for listing on the National Register of Historic Places, unless jointly approved by the Administrator and the Federal, State or local agency with jurisdiction over the park or place;

(D) Within 100 feet, measured horizontally, of the outside right-of-way line of any public road, except where mine primary roads join such right-of-way line. Provided, however, the Administrator may specifically authorize operations where the road is to be relocated, closed, or where the area affected lies within 100 feet of a public road. Such specific authorization shall follow notice and an opportunity for public hearing in the locality of the proposed operation together with a written finding on whether the interests of the public and the affected landowners will be protected from the proposed operation. If a hearing is requested, a public notice shall be published at least two weeks prior to the hearing in a local newspaper of general circulation. If a hearing is held, the authority shall make this finding within 30 days after the hearing or if a hearing is not held the authority must make this finding within 30 days after the end of the public comment period. The Administrator may rely upon ~~the procedures and~~ findings of the public road authority with jurisdiction over the road in specifically authorizing road relocations or closures;

(E) Within 300 feet from any occupied dwelling except when the owner has provided a written waiver consenting to operations within a closer distance, clarifying that the owner and signator had the legal right to deny mining and knowingly waived that right. Such a waiver shall remain effective, regardless of when it was obtained, against subsequent purchasers who had actual or constructive knowledge of the existing waiver at the time of purchase. Subsequent purchasers shall be deemed to have constructive knowledge if the waiver has been properly filed in the public property records or if the mining has proceeded to within the 300-foot limit prior to the date of purchase;

(F) Within 300 feet, measured horizontally, of any public building, school, church, community, or institutional building, or public park; or

(G) Within 100 feet, measured horizontally, of a cemetery.

(vi) For Federal lands described in subsections (v)(A) and (v)(B) above the Office of Surface Mining Reclamation and Enforcement shall be the responsible agency for making valid existing rights (VER) determinations. For Non-Federal lands described in

subsection (v)(A) above the Division is the responsible agency for making VER determinations and shall make evaluations using the Federal VER definition.

(vii) VER submission requirements and procedures.

(A) A request for a VER determination shall be submitted to the appropriate agency identified in subsection (vi) above. Requests may be submitted prior to submitting an application for a permit or boundary revision for the land.

(I) Property rights demonstrations that rely on the good faith/all permits standard or the needed for and adjacent standard shall include the following:

(1.) A legal description of the land to which the request pertains;

(2.) Complete documentation of the character and extent of the current interests in the surface and mineral estates of the land to which the request pertains;

(3.) A complete chain of title for the surface and mineral estates of the land to which the request pertains;

(4.) A description of the nature and effect of each title instrument that forms the basis of the request, including any provision pertaining to the type or method of mining or mining related surface disturbances and facilities;

(5.) A description of the type and extent of surface coal mining operations that the requestor claims the right to conduct, including the method of mining, any mining related surface activities and facilities, and an explanation of how those operations would be consistent with State property law;

(6.) Complete documentation of the nature and ownership, as of the date that the land came under the protection of 522(e) of P.L. 95-87 (2009), (<http://www.gpoaccess.gov/uscode/>) or 30 C.F.R. §761.11 (2009), (<http://www.gpoaccess.gov/cfr/retrieve.html>), of all property rights for the surface and mineral estates of the land to which the request pertains;

(7.) Names and addresses of the current owners of the surface and mineral estates of the land to which the request pertains;

(8.) If the coal interests have been severed from other property interests, documentation that the requestor has notified and provided reasonable opportunity for the owner of other property interests in the land to which the request pertains to comment on the validity of the property rights claims made; and

(9.) Any comments that are received in response to the notification discussed in (8.) above.

(II) If the VER determination request relies on the good faith/all permits standard, the request shall include the documentation discussed in (I) above, and:

(1.) Approval and issuance dates and identification numbers for any permits, licenses and authorizations that the person seeking the request or a predecessor in interest obtained before the land came under the protection of 522(e) of P.L. 95-87 (2009) or 30 C.F.R. §761.11 (2009);

(2.) Application dates and identification numbers for any permits, licenses and authorizations that the person seeking the request or a predecessor in interest submitted an application before the land came under the protection of 522(e) of P.L. 95-87 (2009) or 30 C.F.R. §761.11 (2009); and

(3.) An explanation of any other good faith effort that was made by the person seeking the request or a predecessor in interest made to obtain the necessary permits, licenses and authorizations as of the date that the land came under the protection of 522(e) of P.L. 95-87 (2009) or 30 C.F.R. §761.11 (2009).

(III) If the request relies on the needed for and adjacent standard, the request shall include the documentation discussed in (I) above and shall also explain how and why the land is needed for and immediately adjacent to the operation on which the request is based including a demonstration that prohibiting expansion of the operation onto that land would unfairly impact the viability of the operation as originally planned before the land came under the protection of 522(e) of P.L. 95-87 (2009) or 30 C.F.R. §761.11 (2009).

(III) If the request relies on the needed for and adjacent standard, the request shall include the documentation discussed in (I) above and shall also explain how and why the land is needed for and immediately adjacent to the operation on which the request is based including a demonstration that prohibiting expansion of the operation onto that land would unfairly impact the viability of the operation as originally planned before the land came under the protection of 522(e) of P.L. 95-87 (2009) or 30 C.F.R. §761.11 (2009).

(IV) If the request relies on one of the standards for roads the request shall include documentation that:

(1.) The road existed when the land on which it is located came under the protection of 522(e) of P.L. 95-87 (2009) or 30 C.F.R. §761.11 (2009) and that the person making the request has a legal right to use the road for surface

coal mining operations;

(2.) A properly recorded right of way or easement for a road in that location existed when the land came under the protection of 522(e) of P.L. 95-87 (2009) or 30 C.F.R. §761.11 (2009) and under the document creating the right of way or easement, and under any subsequent conveyances the person making the request has a legal right to use or construct a road across the right of way or easement to conduct surface coal mining operations; or

(3.) A valid permit for use or construction of a road in that location for surface coal mining operations existed when the land came under the protection of 522(e) of P.L. 95-87 (2009) or 30 C.F.R. §761.11 (2009).

(B) Initial review of request.

(I) The responsible agency shall conduct an initial review to determine whether the request includes all applicable components of the submission requirements discussed in subsection (A) above. This review examines completeness only.

(II) If the request does not include all applicable components of the submission requirements, the responsible agency shall notify the requestor and establish a reasonable time for submitting the missing components.

(III) When the request contains all applicable submission requirements the responsible agency shall implement the notice and comment requirements discussed in subsection (C) below.

(IV) If the information requested in (II) above is not submitted within the time specified or amended the responsible agency shall issue a determination that the VER has not been demonstrated as discussed below.

(C) Notice and comment requirements and procedures.

(I) When the VER request satisfies the completeness requirements of (B) above, the VER applicant must publish a notice in a newspaper of general circulation in the county in which the land is located. This notice must invite comment on the merits of the request. The applicant must provide the Division with a proof of publication. Each notice shall include:

(1.) Location of land to which the VER request pertains;

(2.) A description of the type of surface coal mining operations planned;

(3.) A reference to and brief description of the applicable standards for which the VER request will be determined;

a. If the request relies upon the good faith/all permits standard or the needed for and adjacent standard, the notice shall also contain a description of the property rights claimed and the basis for the claim.

b. If the request relies upon the standard in subsection (IV)(1.) above, the notice shall also include a description of the basis for the claim that the road existed when the land came under the protection of 522(e) of P.L. 95-87 (2009) or 30 C.F.R. §761.11 (2009). In addition the notice shall include a description of the basis for your claim that the VER requestor has a legal right to use that road for surface coal mining operations.

c. If the request relies upon the standard in subsection (IV)(2.) above, the notice shall also include a description of the basis for the claim that a properly recorded right-of-way or easement for a road in that location existed when the land came under the protection of 522(e) of P.L. 95-87 (2009) or 30 C.F.R. §761.11 (2009). In addition the notice shall include a description of the basis for the claim that, under the document creation the right of way or easement, and under any subsequent conveyances, the VER requestor has a legal right to use or construct a road across the right of way or easement to conduct surface coal mining operations.

d. If the request relies upon one or more of the standards in Chapter 1, VER definition, a statement that the Division will not make a decision on the merits of the request if, by the close of the comment period under this notice or the notice required below, a person with a legal interest in the land initiates appropriate legal action in the proper venue to resolve any differences concerning the validity or interpretation of the deed, lease, easement or other documents that form the basis of the VER claim.

e. A description of the procedures that the agency will follow to process a VER request.

f. The closing date of the comment period, which must be a minimum of 30 days after the publication date of the notice.

g. A statement that interested persons may obtain a 30-day extension of the comment period on request.

h. The name and address of the agency office where a copy of the request is available for a public inspection and to which comments and requests for extension of the comment period should be sent.

(II) The Division shall promptly provide a copy of the notice required under this Section to:

(1.) All reasonably locatable owners of surface and mineral estates in the land included in the VER request.

(2.) The owner of the feature causing the land to come under the protection of 522(e) of P.L. 95-87 (2009) or 30 C.F.R. §761.11 (2009) and, where applicable, the agency with primary jurisdiction over the feature with respect to the values causing the land to come under the protection of 522(e) of P.L. 95-87 (2009) or 30 C.F.R. §761.11 (2009).

(III) The letter transmitting the notice required under subsection (II) above shall provide a 30-day comment period, starting from the date of service of the letter, and specify that another 30 days is available upon request.

(D) How a VER decision will be made.

(I) The Land Quality Division shall review the materials submitted, any comments received and any other relevant reasonably available information to determine whether the record is sufficiently complete and adequate to support a decision on the merits of the request. If not, the Division shall notify the requestor in writing, explaining the inadequacy of the record and requesting submittal, within a specified reasonable time, of any additional information that the agency deems necessary to remedy the inadequacy.

(II) Once the record is complete and adequate, the Division shall determine whether the requestor has demonstrated VER. The decision document shall explain how the requestor has or has not satisfied all the applicable elements, shall contain findings of fact and conclusions and shall specify the reasons for the conclusions.

(III) Impact of property rights disagreements. This subsection only applies when the request relies upon on or more of the standards in the Chapter 1, VER definition.

(1.) The Division shall issue a determination that the requestor has not demonstrated VER if the property rights claims are the subject of pending litigation in a court or administrative body with jurisdiction over the property rights in question. A requestor may refile the request once the property rights dispute is finally adjudicated. This subsection only applies if the legal action has been initiated as of the closing date of the comment periods discussed above.

(2.) If the record indicates disagreement as to the accuracy of the requestor's property rights claims, but the disagreement is not the subject of

pending litigation in a court or administrative agency of competent jurisdiction, the responsible agency shall evaluate the merits of the information in the record and determine whether the requestor has demonstrated that the requisite property rights exist under the VER definition in Chapter 1 of these Rules and Regulations, as appropriate. The responsible agency shall then proceed to subsection (C)(II) above.

(IV) The Division must issue a determination that the requestor has not demonstrated VER if the requestor has not submitted the information requested under subsections (B)(II) and (D)(I) above within the time specified or as subsequently extended. A requestor may submit a revised request at any time after that determination has been made.

(V) After making a VER determination, the Division shall:

(1.) Provide a copy of the determination, together with an explanation of appeal rights and procedures to the VER requestor, the owner or owners of the land to which the determination applies, the owner of the feature causing the land to come under the protection of 522(e) of P.L. 95-87 (2009) or 30 C.F.R. §761.11(2009) and when applicable, to the agency with primary jurisdiction over the feature with respect to the values that caused the land to come under the protection of 522(e) of P.L. 95-87 (2009) or 30 C.F.R. §761.11 (2009).

(2.) Require the VER requestor to publish notice of the determination in a newspaper of general circulation in the county in which the land is located and provide the Division with proof of publication. If the initial VER request contained Federal lands with an area listed in subsections (v)(A) and (B) above, the OSM will publish the determination, together with an explanation of appeal rights and procedure in the Federal Register.

(E) Administrative and judicial review. A determination that the VER requestor does or does not have VER is subject to administrative and judicial review.

(F) When the Division is the agency responsible for processing a request subject to notice and comment under subsection (C) above shall make a copy of that request and related materials available to the public in the same manner as public availability of permit applications under these Rules and Regulations.

(G) Procedures for joint approval of surface coal mining operations that will adversely affect publicly owned parks or historic places.

(I) If the regulatory authority determines that the proposed surface coal mining operation will adversely affect any publicly owned park or any place included in the National Register of Historic Places, the regulatory authority must request that the Federal, State, or local agency with jurisdiction over the park or place either approve

or object to the proposed operation. The request shall:

(1.) Include a copy of applicable parts of the permit application.

(2.) Provide the agency with 30 days after receipt to respond, with a notice that another 30 days is available upon request.

(3.) State that failure to interpose an objection within the time specified under subsection (2.) above will constitute approval of the proposed operation.

(II) The regulatory authority may not issue a permit for a proposed operation subject to subsection (I) above unless all affected agencies jointly approve.

(III) Subsections (I) and (II) above do not apply to:

(1.) Lands for which a person has VER, as determined under Section 1(a)(vi) and (vii) of this Chapter;

(2.) Lands within the scope of the exception for existing operations contained in the Chapter 1, "valid existing rights" definition.

(viii) If the Administrator is unable to determine whether or not the proposed operation is on lands where surface coal mining operations are prohibited, lands described in (v) immediately above, then a copy of relevant portions of the application shall be sent to appropriate State, Federal and local government agencies with an interest or jurisdiction in the lands in question. Along with the copy a notice shall be sent asking for clarification or determination of relevant boundaries or distances, and stating that the agency has 60 days from receipt of the notice to respond. If no response is received, the Administrator may make a determination based on the information available.

(ix ~~vii~~) The criteria for permit approval where prime farmland will be affected by the mining operation shall be that, upon the basis of the complete application:

(A) The postmining land use of the prime farmland will be capable of supporting crop yields equivalent to the surrounding nonmined prime farmland under equivalent levels of management.

(B) Adequate consideration has been given to any soil reconstruction revisions recommended by the local conservation district and Soil Conservation Service.

(C) The applicant has the technological capability to restore the prime farmland.

(~~x viii~~) In addition to the specific findings required by W.S. § 35-11-406(n), no permit authorizing a delay in the contemporaneous reclamation requirements for a proposed combined surface and underground mining operation shall be approved unless the Administrator finds that:

(A) The proposed underground mining activities will assure maximum practical recovery of the resource and avoid multiple future disturbances of surface land or waters.

(B) The permit for the surface mining activities contains specific conditions:

(I) Delineating the particular surface area for which a delay in reclamation is authorized; and

(II) Identifying the alternative reclamation standards in lieu of those otherwise applicable, together with a detailed schedule for timely compliance.

(~~xi ix~~) In granting surface coal mining permits, the Director shall impose the following conditions on the operation:

(A) All operations shall be conducted in accordance with the approved mining and reclamation plan and any conditions of the permit or license;

(B) The rights of entry shall be provided as described by the Act and any regulations promulgated pursuant thereto;

(C) The operation shall be conducted in a manner which prevents violation of any other applicable State or Federal law;

(D) All possible steps shall be taken to minimize any adverse impact to the environment or public health and safety resulting from noncompliance with the approved mining and reclamation plan and other terms and conditions of any permit or license, including monitoring to define the nature of the noncompliance and warning of any potentially dangerous condition; and

(E) All reclamation fees shall be paid as required by Title IV, P.L. 95-87, for coal produced under the permit for sale, transfer or use.

(b) All procedural requirements of the Act and the regulations relating to review, public participation, and approval or disapproval of permit applications, and permit term and

conditions shall, unless otherwise provided, apply to permit revisions, amendments, renewals and transfers. In addition, the following requirements are applicable.

(i) All requirements imposed by W.S. § 35-11-405(e) for permit renewals. The application shall be filed at least 120 days before the expiration of the permit term and shall include at a minimum:

(A) A statement of the name and address of the permittee, the term of the renewal requested, the permit number, a description of any changes to the matters set forth in the original application for a permit or prior permit renewal;

(B) A copy of the public notice and proof of publication;

(C) Evidence that the bond and a liability insurance policy will be provided; and

(D) Additional revised or updated information required by the Administrator.

(E) If an application for renewal includes any proposed revisions to the mine or reclamation plan, such revisions shall be identified and subject to the requirements of Chapter 13.

(ii) All requirements imposed by W.S. § 35-11-408 and this provision for permit transfers. These requirements shall be met, as evidenced by the written approval of the statement of qualifications by the Administrator and Director, prior to any permit transfer. Permit transfers shall not be subject to the requirements of W.S. § 35-11-406(g).

(A) The potential transferee shall obtain a renewal bond by either transfer of the permit holder's bond, written agreement with the permit holder, or providing other sufficient bond or equivalent guarantee.

(B) The statement of qualifications shall contain all information which would be required if the potential transferee were the original applicant for the permit and, in addition, the name of the existing permit holder.

Section 2. **Bonding and Insurance Procedures.**

(a) For surface coal mining operations, the following two types of bond calculations shall be required for setting a single bond amount:

(i) **Area Bond:** This bond calculation shall be no less than the estimated cost of completing the maximum amount of rough backfilling during the annual bonding period set forth in W.S. §§ 35-11-411 and 35-11-417(c), in order to meet the applicable

rough backfilling standards in Chapter 4 of these regulations and any other rough backfilling requirements of the approved permit.

(ii) Incremental Bond: This bond calculation shall be no less than the estimated cost of performing all reclamation requirements other than those covered by (a)(i) above, during the annual bonding period in order to meet the standards of the Act, the regulations, and the provisions of the permit.

(b) For purposes of determining bond amounts, the estimated cost shall include all costs necessary, expedient or incidental to achieve required rough backfilling and reclamation. This shall reflect the probable difficulty of reclaiming the affected lands, giving consideration, as applicable, to such factors as topography, geology of the site, hydrology and revegetation potential. The estimated cost shall be based on the operator's cost estimate submitted with the permit, plus the Administrator's estimate of the additional cost to the State of bringing in personnel and equipment should the operation fail or the site be abandoned, plus an additional amount covering reclamation cost for any land which may reasonably be expected to be affected, as determined by the Administrator's assessment of the applicant's mine plan, prior to filing the renewal bond. All bonds shall be calculated on, and never fall below, the amount necessary to assure that the operator shall faithfully perform all requirements of the Act and comply with all rules and regulations and any provisions of the approved permit.

(c) Upon receipt of the annual report required by W.S. § 35-11-411, the Administrator shall publish a notice in a newspaper of general circulation in the locality of the mining operation, notifying all interested persons that the annual report is available for review, and that the renewal area and incremental bond calculations will be determined. Interested persons may submit information relating to the bond amounts within 30 days of the notice. This information, together with information submitted by the operator and developed by the Division, shall be considered by the Administrator and Director in setting bond amounts.

(d) Liability.

(i) Liability under the bond(s) shall be for the entire permit area.

(ii) Liability under the area bond shall be for a duration sufficient to assure that all rough backfilling has been achieved pursuant to the applicable standards of Chapter 4, Section 2.(b) and the approved permit.

(iii) Liability under the incremental bond shall be for the entire duration of the operation and for the ten-year period of revegetation responsibility described in Chapter 4, Section 2(d). The liability period and area for an incremental bond may be limited if it is posted and approved to guarantee only specific increments of reclamation within the permit. Actions of third persons to implement an approved alternative postmining land use, which

are beyond the control of the permittee or operator need not be covered by the bond.

(iv) Isolated increments of bonded land.

(A) Isolated and clearly defined portions of the permit area requiring extended liability or limited areas or increments being assessed a specific bond amount may be separated from the original area and bonded separately with the approval of the Administrator.

(B) Such areas shall be of sufficient size and configuration and not constitute a scattered, intermittent, or checkerboard pattern to provide for efficient reclamation operations should reclamation by the Administrator become necessary pursuant to Section 2(b) of this Chapter.

(C) Access to the isolated areas for remedial work may be included in the area under extended liability if deemed necessary by the Administrator.

(e) A permittee may request reduction of the amount of either the area or incremental bond upon submission of evidence to the Administrator proving that the permittee's method of operation or other circumstances will reduce the estimated cost to the State for reclamation. This reduction of bond shall be deemed a bond adjustment if the reduction is based on a change in method of operation or a decrease in the number of acres projected to be disturbed. If the reduction is due to a decrease in the number of acres that have already been disturbed to account for areas partially reclaimed, then the request for reduction will be considered a request for partial bond release in accordance with the procedures of Chapter 15.

(f) A corporate surety shall not be considered good and sufficient for purposes of W.S. § 35-11-417(b) unless:

(i) It is licensed to do business in the State;

(ii) The estimated bond amount does not exceed the limit of risk as provided for in W.S. § 26-5-110, nor raise the total of all bonds held by the applicant under that surety above three times the limit of risk;

(iii) The surety agrees:

(A) Not to cancel bond, except as provided for in W.S. § 35-11-419 or where the Administrator approves a good and sufficient replacement surety with transfer of the liability that has accrued against the permittee on the permit area;

(B) To be jointly and severally liable with the permittee; and

(C) To provide notice to the Administrator and operator once it becomes unable or may become unable due to any action filed against it to fulfill its obligations under the bond.

(g) The provisions applicable to cancellation of the surety's license in W.S. § 35-11-420 shall also apply if for any other reason the surety becomes unable to fulfill its obligations under the bond. Upon such occurrence the operator shall provide the required notice. Failure to comply with this provision shall result in suspension of the permit.

(h) The Administrator shall not accept an individual certificate of deposit in an amount in excess of \$100,000 or the maximum insurable amount as determined by the FDIC or the Federal Savings and Loan Insurance Corporation. Such certificates of deposit shall be made payable to the Department both in writing and upon the records of the bank issuing these certificates. The Administrator shall require the banks issuing these certificates to waive all rights of setoff or liens against the certificates. The bond amount may be calculated to include any amount which would be deducted as a penalty for payment before maturity.

(i) Minimum insurance coverages for the public liability insurance policy required in W.S. § 35-11-406(a)(xiii) shall be \$300,000 for each occurrence of bodily injury or property damage, and \$500,000 aggregate.

(j) The public insurance liability policy shall include a rider requiring that the insurer notify the Administrator whenever substantive changes are made in the policy, including any termination or failure to renew. The policy shall be maintained in full force during the life of the permit or any renewal thereof, including the liability period necessary to complete all reclamation operations.

DEPARTMENT OF ENVIRONMENTAL QUALITY

LAND QUALITY DIVISION

CHAPTER 16

INSPECTIONS, ENFORCEMENT AND PENALTIES FOR

SURFACE COAL MINING OPERATIONS

Section 1. **Inspections.**

(a) Frequency and extent of inspection: The Director's designated authorized representative shall inspect:

(i) On an irregular basis active surface coal mining and reclamation operations and any other areas outside the permit area which are or may be affected by the surface coal mining and reclamation operation every month, averaging at least one quarterly review of the operator's compliance with all conditions and requirements of the permit, Article IV, and these regulations within the entire affected land. Inspections of coal exploration operations and inactive surface coal mining operations shall occur periodically so as to determine compliance or noncompliance with the permit conditions, Article IV and these regulations; provided that a complete inspection shall occur each calendar quarter for inactive coal mines. All inspections shall occur without prior notice, except as the representative deems necessary, to the person being inspected. The representative shall promptly submit all inspection records, reports or other materials to the head of the district office and the Director for public inspection and enforcement action purposes.

(ii) Immediately to enforce the Act, the regulations, or any condition of a permit or an exploration approval when he has reason to believe that enforcement action under W.S. § 35-11-437(a) or (b) is required.

(b) Aerial inspections may satisfy the monthly/partial inspection requirement if:

(i) It is conducted in a manner which reasonably ensures the identification and documentation of conditions at the coal mining and reclamation site inspected, and

(ii) Any potential violation observed is investigated on site within three days, and any potential condition, practice or violation constituting cause for a cessation order is investigated on site immediately.

(c) Inactive surface coal mining operations are ones for which the Administrator has received a request for temporary cessation under Chapter 4, Section 2(l)(ii) and (u), or ones which have completed the reclamation requirements of Chapter 15, Section 5(a)(ii) and

the liability of the permittee has been reduced in accordance with Chapter 15.

(d) Any person who is or may be adversely affected by a surface coal mining or coal exploration operation may notify the Administrator in writing, alleging sufficient information to create a reasonable belief that the Division has failed to comply with the requirements of (a) above. Within 15 days of the receipt of such notification the Administrator shall determine whether there has been compliance and, if not, order an inspection to correct the noncompliance. The Administrator shall furnish a written statement explaining his determination and actions, if any, to the complainant. The identity of the person providing the information shall be held confidential, if requested by that person unless disclosure is required under the Freedom of Information Act.

(e) If an inspection results from a person's written complaint, only the person who submitted the written complaint or, in case of hardship, his designee, has a right of entry to, upon and through the exploration or surface coal mining operation about which he supplied the information, and only if he is in the presence of and is under the control, direction and supervision of the designated authorized representative while on the permit area. In the event that a group submitted the written complaint, only a designated representative of that group may accompany the inspector. The right of entry does not include a right to enter buildings without a search warrant or the consent of the person in control of the building. All persons supplying the complaint shall promptly receive from the Division copies of any inspection report and a description of any enforcement action taken, or reasons why an inspection was not conducted or enforcement action was not taken. The Division shall also inform the person of his right to informal review of the action on the complaint by the Director. If requested, the Director shall review and inform the complainant of the results of the review within 30 days of the request. The Director's decision is final action for purposes of any appeal to the Council.

Section 2. **Enforcement.**

(a) All violations or minor violations that are observed must be identified in the inspection report, including comments on the abatement of all previously noted minor violations or violations. The enforcement options available to the Department range from the least severe, notation in an inspection report, to the most severe, criminal sanctions.

(b) Formal notices of violation for abatement shall direct the correction of a cited violation. Formal notices of violation will be routinely issued where site conditions constitute an existing or potential danger to the health and safety of the public, or cause or can be expected to cause environmental degradation. Formal notices of violation will be issued where minor violations previously identified in an inspection report are not satisfactorily resolved within the time frame specified in the inspection report as long as the failure to resolve the minor violation is not due to lack of diligence. If the reason is lack of diligence, a failure to abate cessation order will be issued. The total abatement time where a minor violation has been modified to a formal notice of violation shall not exceed 90 days

unless allowed by Section 2(j) of this Chapter.

(c) Violations noted only in inspection reports shall be limited only to minor violations as noted in (f)(i) through (f)(ix). A formal notice of violation will be issued to all other violations. The required abatement measures and a reasonable abatement time not to exceed 35 days shall be included in the inspection report. Minor violations will not be tracked for withholding permit approvals, and other permit actions. A handwritten description of the minor violation will be given to the operator on site and will contain the information listed under item (g) of this Section. The operator has the right to appeal any minor violation as outlined in W.S. § 35-11-901.

(d) Civil penalties will not be issued to minor violations. They will, however, be reviewed to determine if a civil penalty would be appropriate. If it is found a civil penalty is appropriate, the minor violation will be upgraded to a formal notice of violation and a formal assessment issued.

(e) Failure to abate a minor violation will result in the issuance of a formal notice of violation and assessment of a civil penalty. Operators who consistently receive minor violations for similar infractions (more than two in a 12 month period) will be issued a formal notice of violation for subsequent similar violations for the remainder of the period. Once an operator receives two similar minor violations within a 12 month period, any subsequent similar violations will be counted toward a pattern of violations.

(f) Examples of minor violations which will be identified in the inspection report but may or may not be subject to a formal notice of violation are the following:

(i) Failure to provide or maintain signs or perimeter markers;

(ii) Reclamation deficiencies such as inadequate topsoil replacement depth, incorrect seeding practices, or improper sampling technique where there is no immediate potential for adverse environmental impact;

(iii) Failure to perform necessary routine maintenance of surface water diversions or erosion control facilities where there is no immediate potential for adverse environmental impact;

(iv) Failure to perform necessary routine maintenance on treatment facilities provided that the matter is referred to the Water Quality Division (WQD) and the WQD finds that effluent limits are being met and there is no immediate potential for adverse water quality impacts;

(v) Required record keeping is unsatisfactory, except where there is a deliberate falsification of records or results;

(vi) Minor construction deficiencies where there is no threat of structural failure or serious harm;

(vii) Noted necessary corrections to maps, plans or other permit materials;

(viii) Failure to comply with other laws applicable to the mine through permit conditions, where the agency with primary jurisdiction has instituted action to obtain compliance pursuant to its laws and regulations; and

(ix) Rills on reclaimed lands or partially blocked culverts which are the result of a recent storm or runoff event.

(g) Any cessation order, notice for abatement or order to show cause issued under the Act shall be signed by the Director or authorized representative and shall contain:

(i) The nature of the violation;

(ii) All affirmative obligations necessary to completely abate the violation or imminent danger or harm in the most expeditious manner possible;

(iii) The time established for abatement, if appropriate; and

(iv) A reasonable description of that portion of the operation to which it applies.

(h) All cessation orders remain in effect and, unless otherwise ordered, do not affect continuing reclamation operations, until the condition, practice or violation has been abated, or until vacated, modified or terminated in writing by the designated representative, Administrator, Director, or Council.

(i) Any notice or order shall be terminated by written notice to the person to whom it was issued, when it is determined that all violations or conditions listed in the notice or order have been abated. This determination may be made by conducting an investigation to confirm the abatement, by accepting the information obtained from a government agency or by accepting a signed statement from a permittee that the violation in a notice of violation has been abated. The Division reserves the right to confirm the information included in a signed statement. Termination shall not affect the right to assess civil penalties.

(j) The specified time for abatement of the violation may be extended up to 90 days from issuance of the notice, if the failure to meet the time previously set was not caused by lack of diligence on the part of the person to whom it was issued (W.S. § 35-11-409(c)).

(i) The total time for abatement shall not exceed 90 days from the date of issuance, except upon establishing by clear and convincing proof that the permittee cannot

feasibly abate the violation within 90 days due to one or more of the following:

(A) The permittee of an ongoing permitted operation has timely applied for and diligently pursued a permit renewal or other necessary approval of designs or plans but such permit or approval has not been or will not be issued within 90 days after his valid permit expires or is required, for reasons not within the control of the permittee;

(B) There is a valid judicial order precluding abatement within 90 days as to which the permittee has diligently pursued all rights of appeal and as to which he or she has no other effective legal remedy;

(C) The permittee cannot abate within 90 days due to a labor strike;

(D) Climatic conditions preclude abatement within 90 days, or where due to climatic conditions abatement within 90 days clearly would cause more environmental harm than it would prevent; or

(E) Abatement would require the operator to violate a requirement or regulation established under the Mine Safety and Health Act of 1977.

(ii) Whenever an abatement time in excess of 90 days is permitted, interim abatement measures shall be imposed to the extent necessary to minimize harm to the public or the environment.

(iii) An extension beyond 90 days may not be authorized without the concurrence of the Administrator or person acting in this capacity, and the abatement period granted shall not exceed the shortest possible time necessary to abate the violation. The authorized representative shall promptly and fully document in the file the reasons for granting or denying the request. The Administrator or designee shall review that document before concurring in or disapproving the extended abatement period and shall promptly and fully document the reasons for concurrence or disapproval in the file. An extended abatement date shall not be granted when the permittee's failure to abate within 90 days has been caused by a lack of diligence or intentional delay.

(iv) No extension granted under this provision may exceed 90 days in length. Where the condition or circumstance which prevented abatement within 90 days exists at the expiration of any such extension, the permittee may request a further extension in accordance with the procedures of this subsection.

(k) Order to show cause for the suspension or revocation of a permit pursuant to W.S. § 35-11-409(c):

(i) For the purpose of this subsection:

(A) Willful violation means an act or omission which violates this Act or any regulation, and which is committed or omitted with knowledge or reason to know of its unlawfulness.

(B) Unwarranted failure to comply means the failure to prevent or abate the occurrence of any violation due to indifference, lack of diligence, or lack of reasonable care.

(C) Pattern of violations means the occurrence of similar violations not appearing to be isolated departures from lawful conduct as determined during two or more inspections of the permit area within any 12 month period, unless exceptional factors present in the particular case otherwise account for such violations.

(ii) The Director shall make a written explanation for declining to issue an order to show cause or vacating an outstanding order, once he determines that there were violations of the same or related requirements of the Act, regulations, or the permit during three or more inspections within any 12 month period. The explanation shall include that, after taking into account exceptional factors present in the particular case, it would be demonstrably unjust to issue or fail to vacate the show cause order. This shall be included and documented in the records of the case.

(iii) Notice, hearing and any decision by the Council on whether to suspend or revoke the permit shall be the equivalent of that required for permit applications. If the Council suspends or revokes the permit, the operator shall cease operations, continue reclamation, and complete all affirmative obligations as specified in the order.

(l) All cessation orders, notices for abatement and orders to show cause shall be served on the operator either by tendering a copy at the operation or sending it by certified mail or by hand to the operator. All orders to show cause shall issue forthwith upon a determination that the factors exist which justify its issuance.

(m) Pending completion of the investigation and hearing on any enforcement action taken by the Department, the operator may file with the Council a request for temporary relief. The Council shall expeditiously issue an order or decision granting or denying such relief, which shall be within five days from any request for relief from a cessation order. The Council may grant such relief, under such conditions as it may prescribe, if:

(i) A hearing has been held in the locality of the permit area on the request for temporary relief in which all parties were given an opportunity to be heard;

(ii) The operator shows that there is a substantial likelihood that the findings of the Council will be favorable to him; and

(iii) Such relief will not adversely affect the health or safety of the public or cause significant, imminent environmental harm to land, air, or water resources.

(n) Inability to comply shall not be a proper factor for consideration in any decision to vacate, or terminate any notice or order under this subsection or to determine whether a pattern of violation exists. It may only be a factor for the duration of the suspension of a permit and in mitigation of the amount of civil penalty, when not caused by lack of diligence.

(o) Surface coal mining operations conducted by any person without a valid permit constitute a condition or practice which causes or can reasonably be expected to cause significant, imminent environmental harm to land, air or water resources. For those operations which are an integral, uninterrupted extension of previously permitted operations, and where the person conducting such operations has filed a timely and complete application for a permit to conduct such operations, the cessation order shall be limited to the unpermitted operation.

Section 3. **Civil Penalties.**

(a) Amount - In determining the amount of the penalty, if any, to be assessed, consideration shall be given to:

(i) The operator's history of previous violations at the particular surface coal mining operation, regardless of whether any led to a civil penalty assessment. Special consideration shall be given to violations contained in or leading to a cessation order. However, a violation shall not be considered if the notice or order containing the violation:

(A) Is or may become the subject of pending administrative or judicial review; or

(B) Has been vacated.

(ii) The seriousness of the violation based on the likelihood and extent of the potential or actual impact on the public or environment, both within and outside the permit or exploration area.

(iii) The degree of fault of the operator in causing or failing to correct the violation, either through act or omission. Such degree shall range from inadvertent action causing an event which was unavoidable by the exercise of reasonable care to reckless, knowing or intentional conduct.

(iv) The operator's demonstrated good faith, by considering whether he took extraordinary measures to abate the violation in the shortest possible time, or merely abated the violation within the time given for abatement. Consideration shall also be given

to whether the operator gained any economic benefit as a result of a failure to comply.

(v) Inability to comply, unless caused by lack of diligence.

(vi) Any information submitted to the Director by the operator within 15 days of the service of the notice or order relating to the facts surrounding the violation or the amount of penalty.

(b) In determining the amount of the penalty, consideration shall not be given to whether a reduction in the amount of a penalty could be used to abate violations of the Act or regulations.

(c) The procedure for any requested assessment conference, as provided for in W.S. § 35-11-902(d) shall be the equivalent of the informal conference procedure described by the Act and regulations applicable to permit applications excepting that the Director, not the Administrator, shall conduct the conference.

(d) If the operator requests and receives the review proceeding provided for by W.S. § 35-11-437(c), the fact of the violation may not be further contested under this Section.

(e) If any party requests judicial review of a final order of the Council on the penalty, the proposed penalty shall continue to be held in bond or escrow until completion of the review. If any review results in an order increasing the penalty, the person to whom the notice or order was issued shall pay the difference within 15 days after notification.

(f) The civil penalty prescribed by W.S. § 35-11-902(n) shall be assessed for a maximum of 30 days, except that, if the person to whom the notice or order was issued initiated review proceedings with respect to the violation, the abatement period shall be extended as follows:

(i) If suspension of the abatement requirements of the notice or order is ordered in a temporary relief proceeding, the period permitted for abatement shall not end until the date on which the Council issues a final order with respect to the violation in question; and

(ii) If the persons to whom the notice or order was issued initiate judicial review proceedings with respect to the violation, in which the obligations to abate are stayed by the court pending full review, the daily assessment of a penalty shall not be made for any period before entry of a final order by the court.

Section 4. Individual Civil Penalties

(a) For purposes of this section:

(i) “Knowingly” means that a person who authorized, ordered, or carried out an act or omission knew or had reason to know that the act or omission would result in either a violation or a failure to abate or correct a violation;

(ii) “Violation, failure or refusal” means:

(A) A violation of a condition of a permit issued pursuant to the State program or Federal lands program; or

(B) A failure or refusal to comply with any order issued under Section 2 of this Chapter, or any order incorporated in a final decision issued by the Director under the Act, except for failure to pay a civil penalty.

(iii) “Willfully” means that an individual acted:

(A) Intentionally, voluntarily or consciously; and

(B) With intentional disregard or plain indifference to legal requirements.

(b) An individual civil penalty may be assessed when:

(i) The Director may assess an individual civil penalty as outlined in W.S. §35-11-902(b), except as provided in subsection (ii) below.

(ii) The Director shall not assess an individual civil penalty in situations resulting from a permit violation by a corporate permittee until a cessation order has been issued by the Department to the corporate permittee for the violation, and the cessation order has remained unabated for thirty (30) days and the procedures for assessment in subsection (d) below have been complied with.

(c) Amount of Civil Penalty.

(i) In determining the amount of an individual civil penalty assessed under this Section, The Director shall consider the criteria specified in Section 3 of this Chapter, including:

(A) The individual’s history of authorizing, ordering or carrying out previous violations, failures or refusals at the particular surface mining operation;

(B) The seriousness of the violation, failure or refusal (as indicated by the extent of damage and/or the cost of reclamation), including any irreparable harm to the environment and any hazard to the health or safety of the public; and

(C) The demonstrated good faith of the individual charged in attempting to achieve rapid compliance after notice of the violation, failure or refusal.

(ii) The penalty shall not exceed the limits prescribed in W.S. 35-11-902(b) for each day during which a violation, failure or refusal continues, or, for multiple violations, a penalty not to exceed the limits prescribed in W.S. 35-11-902(b) for each violation for each day during which a violation, failure or refusal continues from the date of service of the underlying notice of violation, cessation order or other order incorporated into a final decision issued by the Director, until abatement or compliance is achieved.

(d) Procedure for assessment of individual civil penalty.

(i) Notice. The Director shall serve on each individual to be assessed an individual civil penalty a notice of proposed individual civil penalty assessment, including a narrative explanation of the reasons for the penalty, the amount to be assessed and a copy of any underlying notice of violation and cessation order.

(ii) Final order and opportunity for review. The notice of proposed individual civil penalty assessment shall become a final order of the Director thirty (30) days after service upon the individual unless:

(A) The individual files within 15 days of service of the notice of proposed individual civil penalty assessment a petition for review with the Environmental Quality Council, or

(B) The Department and the individual or responsible corporate permittee agree, within thirty (30) days of service of the notice of proposed individual civil penalty assessment, to a schedule or plan for the abatement or correction of the violation, failure or refusal.

(iii) Service. For purposes of this Section, service shall be performed on the individual to be assessed an individual civil penalty, by certified mail, or by any alternative means consistent with the rules governing service of a summons and complaint under Rule 4 of the Wyoming Rules of Civil Procedure. Service shall be complete upon tender of the notice of proposed assessment and any attached information or of the certified mail and shall not be deemed incomplete because of refusal to accept.

(e) Payment of Penalty

(i) No abatement or appeal. If a notice of proposed individual civil penalty assessment becomes a final order in the absence of a petition for review or abatement agreement, the penalty shall be due upon issuance of the final order.

(ii) Appeal. If an individual named in a notice of proposed individual civil penalty assessment files a petition for review in accordance with the Environmental Quality Council, the penalty shall be due upon issuance of a final administrative order affirming, increasing or decreasing the proposed penalty.

(iii) Abatement agreement. Where the Department and the corporate permittee or individual have agreed in writing on a plan for the abatement of or compliance with the unabated order, an individual named in a notice of proposed individual civil penalty assessment may postpone payment until receiving either a final order from the Department stating that the penalty is due on the date of such final order, or written notice that abatement or compliance is satisfactory and the penalty has been withdrawn.

DEPARTMENT OF ENVIRONMENTAL QUALITY

LAND QUALITY DIVISION

CHAPTER 1

AUTHORITIES AND DEFINITIONS FOR COAL MINING OPERATIONS

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 35-11-1104, Wyoming Statutes, 1977, as amended. These rules and regulations are effective upon filing with the Secretary of State. They become an official part of Wyoming's coal regulatory program when approved by the U.S. Secretary of the Interior or his designee.

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) "Amendment" means the addition of new lands to a previously approved permit area, as allowed by W. S. § 35-11-406(a)(xii).

(f) "Annual" means a plant which completes its life cycle in 12 months or fewer.

(g) "Applicant" means any "person" seeking a permit, permit revision, renewal, 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).

(h) “Approximate original contour” means that surface configuration achieved by backfilling and grading of the mined areas so that the reclaimed land surface closely resembles the general surface configuration of the land prior to mining and blends into and complements the drainage pattern of the surrounding terrain.

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

(j) “Augmented seeding” means reseeding in response to the unsuccessful germination, establishment or permanence of revegetation efforts. Augmented seeding resets the applicable liability period. A synonym is reseeding.

(k) “Barren” means any land unit devoid of vegetation, or practically so.

(l) “Baseline vegetation inventory” means a vegetation sampling program executed prior to any significant surface disturbance cause by proposed mining activities. The inventory will quantitatively and qualitatively classify the different plant communities to the specification of Wyoming State Law.

(m) “Belt transect” means a rectangular sampling plot used for the estimation of shrub density (premining and postmining) and postmining species diversity and species composition, each belt transect shall be at least 100 square meters and a minimum of 50 meters in length.

(n) “Best practicable Technology” means a technology based on methods and processes that are both practicable and reasonably economic and is justifiable in terms of existing performance and achievability in relation to the establishment of shrubs in the required density, aerial extent and species.

(o) “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.

(p) “Biennial” means a plant that lives for two years, producing vegetative growth the first year and usually blooming and fruiting and senescing in the second year and then dying.

(q) “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 the following, which the operator has deposited with the Department of Environmental Quality in lieu of a Surety Bond or Self-Bond Instrument:

(i) Federal insured certificates of deposit;

(ii) Cash;

(iii) Government securities;

(iv) Irrevocable letters of credit;

(v) An alternative method of financial assurance that is acceptable to the Administrator and provides for a comparable level of assurance for performance of reclamation obligations. The alternative method of financial assurance must first be approved by the Office of Surface Mining; or

(vi) A combination of any of these bonding methods.

(r) “Bond responsibility period” means the minimum 10 year period during which the bond, in part or wholly, remains in effect.

(s) “Cactus” means any member of the Cactaceae plant family. Members of the Cactaceae plant family are in the lifeform category of succulent.

(t) “Coal exploration” means either:

(i) The field gathering of surface or subsurface geologic, physical, or chemical data by mapping, trenching, drilling, geophysical or other techniques necessary to determine the quality and quantity of overburden and coal of an area. If this activity results in the extraction of coal, the coal shall not be offered for commercial sale (except for test burns); or

(ii) The gathering of environmental data to establish the conditions of an area before beginning coal mining and reclamation operations.

(u) “Coal mine waste” means coal-processing waste and underground development waste.

(v) “Coal preparation plant” means a facility where coal is subjected to chemical or physical processing or cleaning, concentrating, or other processing or preparation. It includes facilities associated with coal preparation activities, including, but not limited to the following: loading facilities; storage and stockpile facilities; sheds, shops, and other buildings; water treatment and water storage facilities; settling basins and impoundments; and coal-processing and other waste disposal areas.

(w) “Coal-processing waste” means earthen materials which are wasted or otherwise separated from product coal during cleaning, concentrating or other processing or preparation of coal.

(x) “Combustible material” means organic material that is capable of burning.

(y) “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.

(z) “Cool season” means a plant which generally makes the major portion of its growth during late fall, winter, and early spring. Cool season species generally exhibit the C3 photosynthetic pathway.

(aa) “Cover” means the percent of the ground surface which is covered by the vertical projection of objects on or above that ground surface. The objects may include standing plant material and cryptogams, litter or rock. “Absolute cover” means the percent cover of a given category independent of other categories. The following cover categories or descriptions used are:

(i) “Absolute cover of litter” means the percent of the ground surface which is overlain by litter;

(ii) “Absolute cover of rock” means the percent of the ground surface which is covered by rock;

(iii) “Absolute cover of vegetation” means the percent of the ground surface which is covered by the vertical projections of all live vascular plants;

(iv) “Absolute cover of vegetation by species” means the percent of the ground surface covered by individual live vascular plants;

(v) “Absolute cover of cryptogams” means the percent of the ground surface which is covered by cryptogams.

(vi) “Absolute cover of total ground cover” means the sum of vegetation, cryptogams, litter and rock cover.

(vii) “Absolute cover of bare ground” means the percent of the ground surface which is not covered by the vertical projection of vascular plants and cryptogams, litter or rock.

(viii) “Relative cover” means the expression of any number of cover categories in relation to each other such that the sum of the chosen relative cover values total 100 percent.

(ab) “Cover crop” means a preparatory crop of one or more species seeded and grown prior to the seeding of the permanent seed mixture, for the chief purpose of protecting the soil from erosion and also for improving the soil fertility and structure. The term is synonymous with stubble crop and is considered a type of mulch.

(ac) “Critical habitat” means those areas essential to the survival and recovery of species listed by the Secretary of the Interior as threatened or endangered under the authority of 50 CFR, Part 17.

(ad) “Crucial habitat” means those areas, designated as such by the Wyoming Game and Fish Department, which determine a population's ability to maintain and reproduce itself at a certain level over the long term.

(ae) “Cryptogam” means a plant (vascular or non-vascular) that reproduces by spores rather than seeds. A plant in any of these groups: Lichens, Bryophytes (mosses, liverworts, hornworts), Pteridophytes (ferns, moonworts, horsetail, club mosses, spike mosses, quillworts, pepperwort) will be considered cryptogams.

(af) “Density means the number of individuals per unit area.

(ag) “Designated authorized representative” means, for the purposes of issuing a cessation order, either the Administrator, the district engineer, or other qualified inspector designated by the Director.

(ah) “Developmental drilling” means drilling down to and including the lowest coal seam to be mined which occurs in or within 500 feet of an active mine pit.

(ai) “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.

(aj) “Diversion” means a channel, embankment, device, or other man-made 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.

(ak) “Dominant” means for the purpose of calculating Chapter 4 shrub restoration performance standard, the full shrub or subshrub species with the greatest relative density.

(al) “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, and areas disturbed by mud pits, and any land over which drilling mud mixtures overflow or may disturb.

(am) “Eligible land” means all land to be affected by a mining operation after August 6, 1996 which carries the grazingland land use designation and all affected pastureland land use units which have a full shrub density greater than one full shrub per square meter. Pastureland is eligible only if the surface owner requests that the pastureland be eligible and only if the land units are included in a new permit or permit amendment application which is submitted to the Administrator after approval of this rule by the Office of Surface Mining.

(an) “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.

(ao) “Endangered species” means any species which is in danger of extinction throughout all or a significant portion of its range and which has been listed under the federal Endangered Species Act.

(ap) “Enhancement wetland” means a reclaimed postmining wetland which exceeds the minimum required mitigation wetlands acreage required by the Army Corps of Engineers under Section 404 of the Federal Clean Water Act.

(aq) “Ephemeral stream” means a stream which flows only in direct response to precipitation in the immediate watershed or in response to snow melt, and which has a channel bottom that is always above the prevailing water table.

(ar) “Essential hydrologic functions” means with respect to alluvial valley floors, those conditions of surface and groundwater hydrology that make water of a suitable quality and quantity usefully available for subirrigation or flood irrigation agricultural activities. These conditions may include, but are not limited to, the erosional state of the stream, the surface water balance, the groundwater balance, the physical and chemical properties of the soils, water and substrata, and topographic configuration.

(as) “Establishment practices” means practices used to facilitate actual establishment of targeted plants and are not intended to continue throughout the bond

responsibility period. These practices are acceptable practices, but delay the start of the bond responsibility period until they are discontinued.

(at) “Excess spoil” means spoil material disposed in a location other than the mined-out area, except that spoil material used to achieve the approximate original contour or to blend the mined-out area with the surrounding terrain.

(au) “Existing structure” means a structure or facility used in connection with or to facilitate coal mining and reclamation operations for which construction begins prior to the approval of a State program pursuant to Section 503 of P.L. 95-87.

(av) “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.

(aw) “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.

(ax) “Farm” means, with respect to alluvial valley floors, one or more land units on which agricultural activities are conducted. A farm is generally considered to be the combination of land units with acreage and boundaries in existence prior to August 3, 1977, or, if established after August 3, 1977, with those boundaries based on enhancement of the farm's agricultural productivity and not related to surface coal mining operations.

(ay) “Flood irrigation” means, with respect to alluvial valley floors, supplying water to plants by natural overflow or the diversion of flows, so that the irrigated surface is largely covered by a sheet of water.

(az) “Forb” means any herbaceous plant species other than the members of the grass (Poaceae [Gramineae]), sedge (Cyperaceae) or rush (Juncaceae) plant families.

(ba) “Full shrub” means a perennial woody plant which differs from a tree by normally being shorter in height and by often having several stems arising near the base.

(bb) “Gel strength” means the minimum shear stress which results in permanent deformation of a gel.

(bc) “General area” means, with respect to hydrology, the topographic and groundwater basin surrounding a permit area which is of sufficient size, including areal extent and depth, to allow assessment of the impacts resulting from the mining operation

on the quality and quantity of surface water and groundwater systems in the basins, including consideration of the interaction of the impacts with adjacent mines.

(bd) “Graminoid” means a plant species of the grass (Poaceae [Gramineae]), sedge (Cyperaceae) or rush (Juncaceae) plant families.

(be) “Grass” means a plant species of the Poaceae (Gramineae) plant family.

(bf) “Grass-like” means a plant species of the sedge (Cyperaceae) or rush (Juncaceae) plant families that vegetatively resemble members of the grass family Poaceae (Gramineae).

(bg) “Grazing exclosure” means a land unit surrounded and/or covered by fencing or other materials which prevents livestock grazing in order to more accurately estimate the current year’s herbaceous production on the land unit.

(bh) “Groundwater” means subsurface water that fills available openings in rock or soil materials such that they may be considered water-saturated.

(bi) “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.

(bj) “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.

(bk) “Highwall” means the face of exposed overburden or coal in an open cut of a surface mine or entry to an underground mine.

(bl) “History of intensive agricultural use” means those lands which, if nonirrigated, have had a cultivated crop, small grains or hay crops harvested for five out of any ten year period, or if irrigated has water of sufficient quantity to sustain production of cultivated crops, small grain, or hay crops for eight out of ten years and have had a cultivated crop, small grain, or hay crop harvested for any one year.

(bm) “Husbandry practice” means, when preceded by the word “normal”, those management practices that may be used to achieve revegetation success without restarting the bond responsibility period. Normal husbandry practices are sound management techniques which are commonly practiced on native lands in the area of the mine and, if discontinued after the area is bond released, shall not reduce the probability of permanent vegetation success.

(bn) “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.

(bo) “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.

(bp) “Imminent danger to the public” means the existence of any condition or practice, or any violation of a permit or other requirements of the Act in a coal mining and reclamation operation, which could reasonably be expected to cause substantial physical harm to persons outside the permit area before the condition, practice, or violation can be abated. A reasonable expectation of death or serious injury before abatement exists if a rational person, subjected to the same condition or practice giving rise to the peril, would avoid exposure to the danger during the time necessary for abatement.

(bq) “Important habitat” means that habitat which, in limited availability, supports or encourages a maximum diversity of wildlife species or fulfills one or more living requirements of a wildlife species. 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.

(br) “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.

(bs) “Inclusion” means, with respect to vegetation, an area no more than two acres in size, which is distinctly different from the surrounding vegetation community due to substantial, visible differences in species composition, cover, or production.

(bt) “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.

(bu) “Interseed” means a secondary seeding into established vegetation in order to improve composition, diversity or seasonality. Interseeding is done to enhance revegetation rather than to augment the revegetation that is unsuccessful in terms of germination, establishment, or permanence.

(bv) “Introduced” means a plant species that is not a component of the original flora of North America.

(bw) “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.

(bx) “Joint agency approval” means, for coal mining operations, the approval of mining or reclamation plans that would adversely affect any publicly owned park or any place included in the National Register of Historic Places by the federal, state, or local agency with jurisdiction over the park or place.

(by) “Land use” means for coal mining operations, specific uses or management-related activities, rather than the vegetation or cover of the land. Land uses may be identified in combination when joint or seasonal uses occur. Changes of land use or uses from one of the following categories to another shall be considered as a change to an alternative land use which is subject to approval by the Administrator. Land used for mine facilities in support of the operations which are adjacent to or an integral part of these operations are also included. Support facilities include, but are not limited to, parking, storage or shipping facilities.

(i) “Cropland” means land used for the production of adapted crops for harvest, alone or in a rotation with grasses and legumes, and includes row crops, small-grain crops, hay crops, nursery crops, orchard crops, and other similar specialty crops.

(ii) “Pastureland” means land used primarily for the long-term production of adapted, domesticated forage plants to be grazed by livestock or occasionally cut and cured for livestock feed. In addition, for the purpose of determining premining land use, the relative cover of introduced perennial forage species must be greater than 40% of the relative cover of total vegetation in order for the land to be pastureland. If the full shrub density is greater than one shrub per square meter on those lands and the surface owner requests the lands to be eligible, the land use is still pastureland but the land is also “eligible land” in terms of shrub reclamation.

(iii) “Grazingland” means rangelands and forest lands where the indigenous native vegetation is actively managed for grazing, browsing, and occasional hay production, and occasional use by wildlife.

(iv) “Forestry” means land used or managed for the long-term production of wood, wood fiber, or wood-derived products.

(v) “Residential” means land used for single and multiple-family housing, mobile-home parks, and other residential lodgings.

(vi) “Industrial commercial” means land used for:

(A) Extraction or transformation of materials for fabrication of

products, wholesaling of products or for long-term storage of products. This includes all heavy and light manufacturing facilities and such short-term uses as petroleum refining and oil and gas production.

(B) Retail or trade of goods or services, including hotels, motels, stores, restaurants, and other commercial establishments.

(vii) “Recreational” means land used for public or private leisure activities, including developed recreation facilities such as parks, camps, and amusement areas, as well as areas for less intensive uses such as hiking, canoeing, and other undeveloped recreational uses.

(viii) “Fish and wildlife habitat” means land dedicated wholly or partially to the production, protection or management of species of fish or wildlife.

(ix) “Developed water resources” means land used for storing water for beneficial uses such as stockponds, irrigation, fire protection, flood control, and water supply.

(x) “Undeveloped land of no current use or land management” means land that is undeveloped or, if previously developed, land that has been allowed to return naturally to an undeveloped state or has been allowed to return to forest through natural succession.

(xi) “Treated grazingland” means grazingland which has been altered to reduce or eliminate shrubs provided such treatment was applied at least five years prior to submission of the state program permit application. However, grazingland altered more than five years prior to submission of the state program permit application on which full shrubs have reestablished to a density of at least one per nine square meters does not qualify as treated grazingland.

(bz) “Lichen” means those organisms formed by the symbiotic relationship between fungal and algal species. For the purpose of estimating ground cover lichens are cryptogams.

(ca) “Life form” means the structure, form, habit, life history and physiology of an organism that display an obvious relationship to important environmental factors in its native or current habitat. For data presentation the preferred life form categories are: annual/biennial forb, annual grass, cryptogam, grass-like, native cool season perennial grass, native warm season perennial grass, introduced perennial grass, perennial forb, shrub, subshrub, succulent and tree.

(cb) “Litter” means, for the purposes of estimating ground cover, the uppermost layer of organic debris, usually considered to be the standing dead, freshly fallen or slightly decomposed vegetal material on the soil surface. Decomposing plant

material which has lost its structural integrity or which is no longer recognizable as plant tissue is not litter.

(cc) “Major species” means a plant species whose relative cover value equals or exceeds two percent as estimated by a quantitative sampling program.

(cd) “Material damage to the hydrologic balance” means a significant long-term or permanent adverse change to the hydrologic regime.

(ce) “Materially damage the quantity or quality of water” means, with respect to alluvial valley floors, changes in the quality or quantity of the water supply to any portion of an alluvial valley floor where such changes are caused by coal mining and reclamation operations and result in changes that significantly decrease the capability of the alluvial valley floor to support subirrigation or flood irrigation agricultural activities.

(cf) “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, and utility corridors.

(cg) “Mitigation wetland” means a type of reclaimed, postmining wetland authorized and approved by the Army Corps of Engineers as replacement for jurisdictional wetlands whose disturbance was authorized by the Army Corps of Engineers under Section 404 of the Federal Clean Water Act.

(ch) “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.

(ci) “Monitoring” means the collection of environmental and hydrological data by either continuous or periodic sampling methods.

(cj) “Moss” means a member of the Bryophyte plant group, including liverworts and hornworts, which have a comparatively small, simple growth form and which lack true xylem and phloem tissue. For the purposes of estimating ground cover, mosses are cryptogams.

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

(cl) “Native” means a plant species which is a component of the original flora of North America.

(cm) “Noxious weed” means an undesirable, troublesome, aggressive or difficult to control plant species whose seeds are severely limited in or totally excluded

from commercial seed sales. The Wyoming Department of Agriculture exclusively makes the noxious weed designation, which includes both “designated” and “prohibited” noxious weeds, under the Wyoming Weed and Pest Control Act. This definition does not include “declared weeds” published by individual Wyoming counties.

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

(co) “Perennial” means a plant which takes at least three years to complete its life cycle and usually persists after flowering and producing seed.

(cp) “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.

(cq) “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.

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

(cs) “Plant species inventory” means a list of plant species, organized by life form and scientific binomial, obtained by conducting a field reconnaissance of a specific land unit.

(ct) “Plotless Sampling” means estimation of vegetation without the use of two-dimensional areal reference units.

(cu) “Point intercept” means a cover estimation method based upon the vertical projection of a point through the vegetation. The point may be an ocular sighting device, a sharpened rod or a series of sharpened rods on a point frame or a handheld sharpened rod. The ocular sighting devices may be either crosshairs or a laser source and shall be mounted on a frame which ensures that each estimation point is projected from above the canopy (maximum of one meter) to the ground surface without bias. Each pin shall be a rod with a sufficiently small or sharpened point which ensures unbiased visual determination of each object intercepted by the pin’s vertical movement from above the canopy to the ground surface. Under the point intercept method, absolute cover at each sample point is determined as follows:

$$\% \text{ absolute cover of } A = \frac{\text{number of hits on } A}{\text{total number of hits}} \times 100$$

(cv) “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.

(cw) “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.

(cx) “Primary shrub species” means, in relation to the shrub standard Option IV, each full shrub and each subshrub species which has a relative density equal to or greater than 0.1 (10 percent). Furthermore, under Option IV, the relative density of fringed sagewort (*Artemisia frigida*) must be equal to or exceed 0.2 (20 percent) of the relative density to qualify as a primary shrub species. Under shrub stand Options I, II, and III, a primary shrub species means each full shrub species which has a relative density equal to or greater than 0.1 (10 percent).

(cy) “Principal shareholder” means any person who is the owner of record of ten percent or more of any class of voting stock.

(cz) “Probable hydrologic consequences” means the projected impacts or changes to the hydrologic regime caused by the proposed coal mining and reclamation operation including the effects of adjacent mining operations.

(da) “Production” means an estimate of the total quantity of herbaceous matter produced within a growing season. The estimate includes all plant parts which remain attached to the current growing season plant and includes only above ground herbaceous material.

(db) “Property to be mined” means, for coal mining operations, both the surface estates and mineral estates within the area covered under the term of the permit and the area covered by underground workings.

(dc) “Public building” means any structure that is owned or leased, and principally used by a governmental agency for business or meetings.

(dd) “Public Parks” means an area designated by a federal, state or local agency for public recreational use.

(de) “Public road” means a road:

(i) Which has been designated as a public road pursuant to the laws of the jurisdiction in which it is located;

(ii) Which is maintained with public funds in a manner similar to other public roads of the same classification within the jurisdiction;

(iii) For which there is substantial (more than incidental) public use;

and

(iv) Which meets road construction standards for other public roads of the same classification in the local jurisdiction.

(df) “Quadrat” means a two-dimensional, rectangular, square or circular unit which is superimposed on the ground surface for the purpose of estimating cover or production. The quadrat shall be sized appropriately for the sampled vegetation community and shall be at least one half square meter but no larger than one square meter.

(dg) “Qualitative” means, in the context of a vegetation sampling program and/or evaluation of sampling data, that the program and/or evaluation process are conducted using non-numerical information derived from defined sources and/or defined field reconnaissance regimes.

(dh) “Quantitative” means, in the context of a vegetation sampling program and/or evaluation of sampling data, that the program and/or evaluation processes are conducted using statistical analyses of numerical data derived from defined sampling regimes.

(di) “Random” means every point or location in an area has an equal chance of being chosen for sampling as any other point in that area.

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

(dk) “Reclaimed land surface” means affected land which has been backfilled, graded, contoured, and revegetated in accordance with an approved reclamation plan.

(dl) “Reference area” means a land unit established to evaluate revegetation success. A “Reference area” is representative of a vegetation community or communities that will be affected by mining activities, in terms of physiography, soils, vegetation and land use history. The “Reference area” and its corresponding postmine vegetation community (or communities) must be approved by LQD and shall be defined in the approved Reclamation Plan. All “Reference areas” shall be managed to not cause significant changes in the vegetation parameters which will be used to evaluate Chapter 4 revegetation success performance standards. A “Reference area” can be a “Comparison area”, “Control area”, “Extended reference area”, or “Limited reference area”, depending on how it is established and used, in accordance with the following provisions:

(i) “Comparison area” means a type of “Reference area” that is established after a vegetation community has been affected. A qualitative determination shall be used to evaluate if the proposed “Comparison area” adequately represents the affected vegetation community. A “Comparison area” may be used when other types of

“Reference areas” are not available for measuring revegetation success or when other types of “Reference areas” will not be representative of revegetation success. “Comparison areas” shall be approved by the Administrator prior to their establishment. When evaluating Chapter 4 revegetation success performance standards, data from the “Comparison areas” are directly compared by statistical procedures to data from the reclaimed area.

(ii) “Control area” means a type of “Reference area” that is established during baseline sampling. Quantitative comparisons of vegetation cover, total ground cover, and production between the proposed “Control area” and the vegetation community to be affected are used to demonstrate the representative nature of the “Control area”. When evaluating revegetation success, baseline data are climatically adjusted using equations. These adjusted data are directly compared by statistical procedures to vegetation data from the reclaimed area. The Administrator may determine to make a direct comparison without the climatic adjustment between the “Control area” and the reclaimed area. Each “Control area” shall be at least two acres.

(iii) “Extended reference area” means a type of a “Reference area” that includes a major portion of one or more premine vegetation communities within the permit area. During baseline sampling, the “Extended reference area” includes areas proposed to be affected and areas that will be unaffected. Postmine, the unaffected areas constitute the “Reference area” for revegetation success evaluation. “Extended reference areas” should be established during baseline sampling, but in some circumstances, may be established after mining begins. The representative nature of the vegetation community within the “Extended reference area” is demonstrated by vegetation community mapping procedures, sampling data, soil data, physiography and land use history. To evaluate revegetation success, data from the “Extended reference area” are directly compared by the statistical procedures to data from the reclaimed area. Each “Extended reference area” will be as large as possible.

(iv) “Limited reference area” is one type of a “Reference area” that is established during baseline sampling to represent one vegetation community to be reestablished. The representative nature of the “Limited reference area” is determined by quantitative comparisons of vegetation cover, and production between the “Limited reference area” and proposed affected areas at the 90 percent confidence level. To evaluate revegetation success, data from the “Limited reference area” are directly compared by statistical procedures to data from the reclaimed area. Each “Limited reference area” shall be at least five acres.

(dm) “Regulatory categories” means the following time frames that encompass the major regulatory periods from which the different performance standards and reclamation standards for specified lands within the permit area are established:

(i) “Category 1” means those lands which were affected to conduct and/or support mining operations and were completed or substantially completed prior to

May 24, 1969 (the implementation date of the Open Cut Land Reclamation Act).

(ii) “Category 2” means those lands which were affected on or after May 24, 1969 (the implementation date of the Open Cut Land Reclamation Act) in order to conduct and/or support mining operations and were completed or substantially completed prior to or on June 30, 1973 (day prior to the effective date of the Wyoming Environmental Quality Act).

(iii) “Category 3” means those affected lands and support facilities if those lands supported operations which were not completed or substantially completed prior to July 1, 1973 (the effective date of the Wyoming Environmental Quality Act) and any affected lands or support facilities taken out of use on or after July 1, 1973 and before May 25, 1975 (the effective date of the Division’s 1975 Rules and Regulations).

(iv) “Category 4” means those affected lands if coal was removed from those land prior to May 3, 1978 and which do not qualify for any of the previous categories. It also means those affected lands and support facilities if they were taken out of use on or after May 25, 1975 (the effective date of the Division’s 1975 Rules and Regulations) and before May 3, 1978 (the effective date of the Office of Surface Mining’s (OSM) Initial Regulatory Program).

(v) “Category 5” means those affected lands and support facilities if coal was not removed from those lands prior to May 3, 1978 (the effective date of OSM’s Initial Regulatory Program) or those lands were used on or after May 3, 1978 to facilitate mining (including support facilities and associated lands constructed before May 3, 1978 but still in use on or after May 3, 1978.)

(dn) “Revised mining or reclamation operations” means 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.

(do) “Road(s)” means a surface corridor of affected land associated with travel by land vehicles used in coal mining and reclamation operations or coal exploration. A road consists of the roadbed, shoulders, parking and side areas, approaches, structures, ditches, and surface. The term includes access and haulroads constructed, used, reconstructed, improved, or maintained for use in coal mining and reclamation operations or coal exploration, including use by coal hauling vehicles to and from transfer, processing, or storage areas. The term does not include ramps and routes of travel within the immediate mining area or within spoil or coal mine waste disposal areas. Immediate mining area refers to areas subject to frequent surface changes. This includes areas where topsoil and overburden are being moved and areas undergoing active reclamation.

(dp) “Rock” means, for the purposes of estimating ground cover, mineral or rock fragments which are one square centimeter in size or larger and occur on or in the

soil. A synonym is coarse fragments.

(dq) “Rough Backfilling” means replacement of sufficient material in the pit or pits including special disposal practices for toxic and acid-forming materials, special handling and placement of materials for stream reconstruction or alluvial valley floors, and compaction as required so as to render the affected area in a condition whereby the reclaimed land surface generally resembles the approved postmining contours.

(dr) “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.

(ds) “Sample unit” means for the purposes of verifying certain Chapter 4 performance standards and applying for Chapter 15 incremental bond release, a permanently reclaimed land unit established by mutual agreement between the permittee and the Administrator. The unit constitutes the fundamental unit for revegetation success verification. The unit may contain portions of one or more vegetation communities.

(dt) “Seasonal variety” means the characteristic or normal season of growth of a plant species where season of growth is described as cool-season or warm-season.

(du) “Sedimentation pond” means a sediment control structure designed, constructed, and maintained to slow down or impound precipitation runoff to reduce sediment concentrations in a point source discharge, including dams or excavated depressions. The term does not include straw dikes, riprap, check dams, mulches, collection ditches, toe ditches, vegetative buffers, gabions, contour furrows and other traditional soil conservation techniques and non-point source runoff controls.

(dv) “Self-renewing” means a plant species which has a demonstrated capacity to germinate, establish, grow, flower and produce viable seed and/or mature and produce vegetative reproductive structures under the climatic regime which prevails on the reclaimed lands.

(dw) “Semi-quantitative” means, in the context of a vegetation sampling program and/or evaluation of sampling data that the program and/or evaluation process is/are conducted using a non-statistical assessment of numerical data derived from a defined field reconnaissance regime.

(dx) “Shrub” means a perennial plant with persistent, woody stems and which produces several basal shoots instead of a single main stem. Shrubs have a relatively low growth form and differ from trees by their low stature and lack of arborescent form. A synonym is full shrub.

(dy) “Shrub mosaic” means a pattern of shrub patches. The boundary of a mosaic unit encompasses the areal extent of the individual shrub patches and the

reclaimed community occupying the land among the shrub patches.

(dz) “Shrub patch” means a mapable concentration of postmining shrubs which is at least 0.05 acres in extent and which intends to fulfill the shrub density and shrub composition required by Chapter 4 shrub restoration performance standard.

(ea) “Significant, imminent environmental harm to land, air or water resources” means:

(i) An environmental harm is an adverse impact on land, air, or water resources which resources include, but are not limited to, plant and animal life.

(ii) An environmental harm is imminent, if a condition, practice, or violation exists which:

(A) Is causing such harm; or

(B) May reasonably be expected to cause such harm at any time before the end of the reasonable abatement time.

(iii) An environmental harm is significant if the harm is appreciable, not contemplated in the approved permit application, and not immediately repairable.

(eb) “Soil Horizons” means contrasting layers of soil material approximately parallel to the land surface and differing from adjacent layers in physical, chemical and biological properties or characteristics.

(i) “A Horizon” means the uppermost mineral or organic layer, often referred to as the surface soil. It is the part of the soil in which organic matter is most abundant and leaching of soluble or suspended particles is typically the greatest.

(ii) “E Horizon” means the layer commonly near the surface below the A Horizon and above the B Horizon. An E Horizon is the most commonly differentiated from an overlying A Horizon by lighter color and generally, has measurably less organic matter, and from the underlying B Horizon in the same sequum by color of higher value or lower chroma, by coarser texture, or by a combination of these properties.

(iii) “B Horizon” means the layer that typically is immediately beneath the E Horizon and often called the subsoil. This middle layer commonly contains more clay, iron, and aluminum than the A, E or C Horizons.

(iv) “C Horizon” means the deepest layer of soil profile. It consists of loose material or weathered rock that is relatively unaffected by biological activity, and is often called the subsoil.

(ec) “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.

(ed) “Species composition” means number, kinds and amount of species.

(ee) “Species diversity” means number of species per unit area.

(ef) “Species lacking creditable value” means the cover and production of these species will be estimated but will not be credited or counted towards meeting the revegetation success standards for cover, production or species diversity and composition. Species lacking creditable value include noxious weeds listed under the Wyoming Weed and Pest Control Act, *Bromus japonicus*, *Bromus tectorum*, *Taeniatherum caput-medusae*, *Halogeton glomeratus*, *Kochia scoparia* and *Salsola tragus* and all synonyms for these species as listed in the Natural Resources Conservation Service’s Plants Database.

(eg) “Species of Special Concern” means those plant species required to be surveyed by the U.S. Fish and Wildlife Service, U.S. Forest Service, and Bureau of Land Management.

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

(ei) “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.

(ej) “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.

(ek) “Steep slope” means any slope of more than 20 degrees or such lesser slope as may be designated by the Administrator after consideration of soil, climate, and other characteristics of the area.

(el) “Study area” means the land surface area which was mapped and quantitatively sampled during the baseline vegetation inventory. The study area generally coincides with the permit area (or amendment area) but may exceed those boundaries with prior approval from the Administrator.

(em) “Subirrigation” means, with respect to alluvial valley floors, the supplying of water to plants from underneath or from a semi-saturated or saturated subsurface zone where water is available for use by vegetation.

(en) “Subirrigation or flood irrigation agricultural activities” means the past and present use of any tract of land for the successful production of animal or vegetable life, based on regional agricultural practices, where the use is enhanced or facilitated by subirrigation or flood irrigation. These uses include, but are not limited to, the pasturing, grazing, and the cropping, cultivation, or harvesting of agriculturally useful plants whose production is enhanced or facilitated by the availability of water from subirrigation or flood irrigation. These uses do not include agricultural practices which do not benefit from the availability of water from subirrigation or flood irrigation.

(eo) “Subshrub” means a perennial plant with a persistent, woody base and which produces several basal shoots or stems. The upper stems die back at the end of each growing season. Half-shrub is a synonym.

(ep) “Subsidence” means the measurable lowering of a portion of the earth's surface or substrata.

(eq) “Subsoil” means the B and C Horizons excluding consolidated bedrock material.

(er) “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.

(es) “Substantially complete” means, for the purposes of determining the appropriate regulatory category of affected lands, the overburden was removed above the coal and some recoverable tons were removed from those lands.

(et) “Substantially disturb” means, for purposes of coal exploration, to significantly impact land or water resources by blasting; by destruction of the vegetative cover or removal of topsoil, subsoil or overburden; by drilling coal exploratory holes; by digging pits; by construction of roads or other access routes; by placement of excavated earthen or waste material on the natural land surface or by other such activities; or to remove more than 250 tons of coal.

(eu) “Succulent” means a plant species with one or more of its morphological parts exhibiting fleshy or juicy characteristics.

(ev) “Surface water” means water, either flowing or standing, on the surface of the earth.

(ew) “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 Environmental Protection Agency's regulations for waste water analyses (40 CFR 136).

(ex) “Systematic sampling” means a sampling design where sample locations are selected using uniform spatial pattern, such as a grid, that covers the entire sample population area, and where all locations are sampled. The first sample point is randomly selected, and the locations of all other sample points are determined by the initial location. Calculations for systematic sampling may be done by assuming the sample is random.

(ey) “Technical revegetation success standard” means a set of quantitative data which are representative of the absolute cover of total vegetation and annual herbaceous production of one or more premining vegetation communities affected by the mining operation. Each technical standard shall be assembled from quantitative data collected from vegetation communities within a permit area and/or from adjacent lands and shall be based upon a minimum of five independent sampling programs executed over a minimum of five years. The Administrator shall approve the specific data sets and the quantitative treatment of the data sets used to establish each technical standard.

(ez) “Threatened species” means any species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range and which has been listed under the Federal Endangered Species Act.

(fa) “Topsoil” means the A and E Horizons or any combination thereof.

(fb) “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.

(fc) “Toxic mine drainage” means water that is discharged from active or abandoned mines and other areas affected by coal mining operations and which contains a substance which through chemical action or physical effects is likely to kill, injure, or impair biota commonly present in the area that might be exposed to it.

(fd) “Trade secret” means, for purposes of coal mining or exploration operations:

(i) Information pertaining to the analyses of the chemical and physical properties of the coal (excepting information regarding such mineral or elemental content which is potentially toxic in the environment) may be kept confidential in accordance with W.S. § 35-11-1101(a);

(ii) Information pertaining to the coal seam itself, except as to any person who demonstrates to the satisfaction of the Director an interest which is or may be adversely affected by the decision to hold such information confidential; and

(iii) Information relating to coal exploration operations which concerns privileged commercial or financial information relating to the competitive rights of the person intending to conduct the coal exploration operations.

(fe) “Transect” means a sampling method which involves the establishment of a long, continuous line or strip. The starting point and orientation of the line should be randomly established.

(ff) “Tree” means a woody, perennial plant which usually has a single trunk or stem and a defined crown shape and which has the potential to reach a mature height of at least four meters in optimal conditions.

(fg) “Unconsolidated streamlaid deposits” means earthen material transported and deposited within a body of water flowing downslope along a definite path. Flood plains and terraces located in the lower portions of topographic valleys are generally composed of unconsolidated streamlaid deposits.

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

(fi) “Underground mining activities” means a combination of:

(i) Underground operations necessary for the extraction of solid minerals by man-made excavations underneath the surface of the earth; and

(ii) For the extraction of coal, surface operations incident to the underground operation such as construction, use, maintenance, and reclamation of roads, surface repair shops, storage areas, etc., and areas on which materials incident to underground operations are placed.

(fj) “Undeveloped rangeland” means unimproved land, the use of which is generally limited to grazing of livestock. Undeveloped rangeland does not include areas within the alluvial valley floor where cultivated crops, small grains, and hay crops have been successfully grown, the land has been improved by the introduction of certain vegetation for enhanced agricultural utility, or native vegetation on the alluvial valley floor contributes substantially to the carrying capacity of a specifically controlled or managed grazing unit.

(fk) “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.

(fl) "Valid existing rights (VER)" means a set of circumstances under which a person may, subject to regulatory authority approval, conduct surface coal mining operations on lands where Section 522(e) of P.L. 95-87 (2009) (<http://www.gpoaccess.gov/uscode/>) and 30 C.F.R. §761.11 (2009) (<http://www.gpoaccess.gov/cfr/retrieve.html>) would otherwise prohibit or limit such operations. A person seeking to exercise VER shall comply with all other applicable requirements of the Act and rules and regulations promulgated thereunder and meet the standards below.

(i) Except as provided in subsection (iii) below, a person claiming VER shall demonstrate that a legally binding conveyance, lease, deed, contract, or other document vests that person, or a predecessor in interest, with the right to conduct the type of surface coal mining operations intended and that this right existed at the time the land came under protection of Section 522(e) of P.L. 95-87 (2009) or 30 C.F.R. §761.11 (2009).

(ii) Except as provided in subsection (iii) below, a person claiming VER shall also demonstrate compliance with one of the following standards. Procedures and requirements related to the demonstration are detailed in Chapter 12 of the Division's Coal Rules and Regulations.

(A) "Good faith/all permits standard" means all permits and other authorizations required to conduct surface coal mining operations had been obtained, or a good faith effort to obtain all necessary permits and authorizations had been made, before the land came under the protection of Section 522(e) of P.L. 95-87 (2009) or 30 C.F.R. §761.11 (2009). At a minimum, a permit application was submitted as required in Chapter 2 of these regulations.

(B) "Needed for and adjacent standard" means the land is needed for and immediately adjacent to a surface coal mining operation for which all permits and other authorizations required to conduct surface coal mining operations had been obtained or a good faith attempt to obtain all permits and authorizations has been made, before the land came under the protection of Section 522(e) of P.L. 95-87 (2009) or 30 C.F.R. §761.11 (2009). To meet this standard a person shall demonstrate that prohibiting expansion of the operation onto that land would unfairly impact the viability of the operation as originally planned before the land came under the protection of 522(e) of P.L. 95-87 (2009) or 30 C.F.R. §761.11(2009). Except for operations in existence before August 3, 1977, or for which a good faith effort to obtain all necessary permits had been made before August 3, 1977, this standard does not apply to lands already under the protection of 522(e) of P.L. 95-87 (2009) or 30 C.F.R. §761.11 (2009) when the Department approved the permit for the original operation or when the good faith effort to obtain all necessary permits for the original operation was made. In evaluating whether a person meets this standard, the agency making the determination may consider factors such as:

(I) The extent to which coal supply contracts or other legal and business commitments that predate the time the land came under the protection of 522(e) of P.L. 95-87 (2009) or 30 C.F.R. §761.11 (2009) depend upon the use of that land for surface coal mining operations;

(II) The extent to which plans used to obtain financing for the operation before the land came under the protection of 522(e) of P.L. 95-87 (2009) or 30 C.F.R. §761.11 (2009) rely upon use of that land for surface coal mining operations;

(III) The extent to which investments in the operation before the land came under the protection of 522(e) of P.L. 95-87 (2009) or 30 C.F.R. §761.11 (2009) rely upon use of that land for surface coal mining operations; and

(IV) Whether the land lies within the area identified on the life-of-mine map submitted before the land came under the protection of 30 C.F.R. §761.11 (2009).

(iii) Roads. A person who claims valid existing rights to use or construct a road across the surface of lands protected by 522(e) of P.L. 95-87 (2009) or 30 C.F.R. §761.11 (2009) must demonstrate that one or more of the following circumstances exist if the road is included within a surface mining operation:

(A) The road existed when the land upon which it is located came under the protection of 522(e) of P.L. 95-87 (2009) or 30 C.F.R. §761.11 (2009) and the person has a legal right to use the road for surface coal mining operations;

(B) A properly recorded right of way or easement for a road in that location existed when the land came under the protection of 522(e) of P.L. 95-87 (2009) or 30 C.F.R. §761.11 (2009) and under the document creating the right of way or easement, and under subsequent conveyances, the person has a legal right to use or construct a road across the right of way or easement for surface coal mining operations;

(C) A valid permit for use or construction of a road in that location for surface coal mining operations existed when the land came under the protection of 522(e) of P.L. 95-87 (2009) or 30 C.F.R. §761.11 (2009); or

(D) VER exist under subsections (i) and (ii) above.

(iv) The prohibitions and limitations of Chapter 12, Section 1(a)(v) do not apply to surface coal mining operations for which a valid permit issued by the Department exists when the land comes under the protection of 30 C.F.R. §761.11 (2009). This exception applies only to lands within the permit area as it exists when the land comes under the protection of 30 C.F.R. §761.11 (2009).

(v) Interpretation of the terms of the document relied upon to establish valid existing rights shall be based either upon applicable Wyoming case law concerning interpretation of documents conveying mineral rights or, where no applicable case law exists, upon the usage and custom at the time and place where it came into existence.

(fm) “Vegetation community” means a recognizable group of species growing together.

(fn) “Warm season” means a plant, which makes most or all its growth during the spring, summer, or fall and is usually dormant during the winter. Warm season plants usually exhibit the C-4 photosynthetic pathway.

(fo) “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) W.S. § 35-11-401(g), (h) and (j) shall not apply to coal mining operations.

(ii) In order to qualify for the exemption provided for in W.S. § 35-11-401(e)(ii), approval must be obtained from the Administrator for the extraction of any coal after a finding that:

(A) The extraction is necessary to enable the construction to be accomplished and occurs within the right-of-way or boundary of the area directly affected by the construction;

(B) The construction is funded 50 percent or more by funds appropriated or obtained from a government financing agency's budget or general revenue bonds; and

(C) The person agrees to possess on-site documents which show a description of the project, its exact location, and information showing the source, kind and amount of public financing, including the percentage of the entire construction costs represented by the government financing.

(c) If any provision of these regulations or the applicability thereof to any

person or circumstances related to coal mining operations is held invalid, the provision or its applicability to other mining operations or circumstances shall not be affected thereby.

DEPARTMENT OF ENVIRONMENTAL QUALITY

LAND QUALITY DIVISION

CHAPTER 2

PERMIT APPLICATION REQUIREMENTS

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, for coal mining operations, all the applicable information required under Sections 2 through 5 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. 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. The maps shall distinguish among the following phases of the operation:

- (i) Prior to August 3, 1977;
- (ii) After August 3, 1977 and prior to May 3, 1978;
- (iii) After May 3, 1978 and prior to approval of the State Program;
- (iv) After the estimated date of issuance of the permit; and
- (v) The five regulatory periods as defined in Chapter 1, Section 2(dm).

(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.

Section 2. **Adjudication Requirements.**

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

(i) A complete identification of interests, which shall include:

(A) All owners of record of the property to be mined including legal and equitable owners, holders of record of any leasehold interest, and any purchaser of record under a real estate contract for the property to be mined;

(B) The names, addresses and telephone numbers of any operators, if different from the applicant. If the applicant is a business entity other than a single proprietorship, then the names, addresses and telephone numbers of all limited and general partners, or if a corporation then the names, addresses and telephone numbers of principal shareholder, officers and director or other person performing a function similar to a director, and resident agent(s) of the applicant. This shall also include the names under which the applicant, partner or principal shareholder operates or previously operated a coal mining operation in the United States within the five years preceding the date of application;

(C) A statement and identification of any pending, current or previous coal mining permit in the United States held by the applicant, partner or principal shareholder during the five years preceding the date of the application. This shall also identify the regulatory authority with jurisdiction over the operation;

(D) A statement of all lands, interests in lands, options, or pending bids on interests held or made by the applicant for lands which are contiguous to the proposed permit area; and

(E) 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) A complete statement of compliance which shall include:

(A) A brief statement, including identification and current status of the interest, identification of the regulatory authority, and description of any proceedings and their current status, of whether the applicant or entities controlled by or under common control with the applicant has:

(I) Had any Federal or State coal mining permit

suspended or revoked in the five years preceding the date of application; or

(II) Forfeited a Federal or State coal mining performance bond or similar security deposited in lieu of bond.

(B) The listing of notices of violation required by W. S. § 35-11-406(a)(xiv) shall describe or identify the violation, when it occurred, any abatement action taken, the issuing regulatory authority, and any proceedings initiated concerning the violation. This listing shall include only notices issued to the applicant and any subsidiaries, affiliates, or persons controlled by or under common control with the applicant.

(iii) The right of entry statements and documents required by W.S. § 35-11-406(a)(ii) and (b)(xi) shall clearly explain and support the legal rights claimed by the applicant and shall also include whether that right is the subject of pending litigation;

(iv) A statement on whether the proposed area to be mined during the term of the permit is within an area designated unsuitable for coal mining operations pursuant to W.S. § 35-11-425, under study for any designation, or within an area where mining is prohibited pursuant to Chapter 12, Section 1(a)(v), Land Quality Rules and Regulations. This shall also include the basis on which the applicant claims any available exemption so as to obtain the permit to mine;

(v) A list identifying the Mine Safety and Health Administration identification number for all mine facilities that require MSHA approval and licenses, permits or approvals needed by the applicant to conduct the proposed operation, whether and when they have been issued, the issuing authority, and the steps to be taken to comply with the requirements. To the extent possible, the Administrator and Director shall advise, consult and cooperate with the identified authorities so as to provide for the coordination of review and issuance of these licenses, permits or approvals with the permit to mine. This list shall contain:

(A) Copies or identifying numbers of all permits obtained from the State Engineer or from any other division of the Department, including the Solid and Hazardous Waste Management Division, together with the following:

(I) Water Quality Information. The information from the application for the approved Water Quality permit which affirmatively demonstrates:

(1.) There is a detailed plan, with appropriate maps and cross-sections, for the construction and operation of any mine facility capable of causing or contributing to pollution of surface and groundwater. The plan shall be in accordance with Chapters III and XI, and as applicable Chapter X, of the Water Quality Division Rules and Regulations. As applicable, any plans shall include a copy of the NPDES permit granted by the Water Quality Division and quantitative limits on

pollutants in discharges of water from all point sources.

(2.) There is a plan for the collection, recording, and reporting of groundwater quality and surface water quality according to Chapter II, Section 12, Water Quality Rules and Regulations. This plan shall, at a minimum, be adequate to measure accurately and record water quantity and quality of the discharges from the permit area in order to plan for modification of mining activities, if necessary, to minimize adverse effects on the water of the State.

(II) Solid Waste Information. The information from the application for the approved permit(s) for any Solid Waste Management Facility(ies) located within the proposed permit area. Note that a Solid Waste Management Facility, as defined by W.S. § 35-11-103(d)(ii), is a facility that receives solid waste which is generated outside the proposed permit area by any activity other than a mine mouth power plant or mine mouth coal drier. Solid Waste Management Facilities are subject to the permitting, bonding and performance standards of Article 5 of the Environmental Quality Act in addition to the performance standards in Chapter 4, Section 2(c)(xiii)(C) of these rules.

(III) State Engineer Information. The information from the application for the approved permit to construct a reservoir to store or impound water which affirmatively demonstrates that the reservoirs will be constructed and maintained in accordance with the requirements set out in Chapter V, Section 8, State Engineer Rules and Regulations. In addition, if the application includes a proposed transfer of a well for use as a water well, the application shall contain information from the approved application for a permit to appropriate groundwater which affirmatively demonstrates a plan for construction, completion and removal of wells in accordance with requirements which are at least as stringent as those governing wells drilled in conjunction with coal mining or exploration operations.

(B) For any permits or approvals which have not been obtained, the information required by (A) above which has been or will be submitted to the agencies involved, including a description of the steps to be taken to comply with the relevant requirements.

Section 3 Vegetation Baseline Requirements.

(a) The plan for a baseline vegetation study to establish baseline conditions shall be submitted to the Administrator prior to the field sampling season for review and approval, prior to implementation, unless otherwise approved by the Administrator.

(b) If baseline information was previously collected in the area for a different permit or project, then the Administrator may require resampling. The Administrator's determination as to whether resampling is required, and to what extent, will be based

upon:

- (i) Differences in scope between the permits or project;
 - (ii) Differences in existing and historic conditions;
 - (iii) Improvements in sample collection techniques;
 - (iv) The elapsed time since the last evaluation of the presence of threatened and endangered species; or
 - (v) Concerns with sampling methodology.
- (c) The applicant shall map the vegetation communities within the permit area and adjacent area and shall sample and describe the characteristics of vegetation communities within the permit area, to include:
- (i) The map shall show the vegetation communities in the permit and adjacent lands. Communities that are 2 acres and larger shall be mapped. Inclusions within larger communities do not need to be mapped as separate vegetation communities. The applicant may use the terminology used by the NRCS in naming vegetation communities;
 - (ii) The map shall be of a scale approved by the Administrator and use an aerial mosaic or USGS topographic, or equivalent, map as a base;
 - (iii) The vegetation community map shall identify:
 - (A) Sample locations for cover and shrub density;
 - (B) Reference Areas unless a technical success standard is proposed for evaluation of revegetation;
 - (C) Areas to be affected by mining and associated activities;
 - (D) The locations and orientations of all photographs provided with the descriptions of the vegetation communities and Reference Areas, as required in Chapter 2, Section 3(j);
 - (E) The general location of trees;
 - (F) The location and extent of designated and/or prohibited noxious weeds per Chapter 2, Section 3(1); and
 - (G) Extent of existing disturbance.

(iv) The vegetation communities in the study area may be mapped any time the ground is clear of snow, but must be field checked and verified prior to the sampling.

(d) Percent cover, by vegetation community, shall be estimated using either:

(i) Quantitative methods, as approved by the Administrator, when the applicant intends to develop a technical standard or when the Administrator determines the study area is in a location that baseline vegetation has not been adequately described.

(ii) With approval of the Administrator, semi-quantitative methods as outlined below shall be used when the applicant does not intend to use a technical standard or those areas where the Administrator determines there is sufficient quantitative vegetation baseline in the general areas.

(A) The quadrat or point intercept method shall be used except there is not a sample adequacy requirement. The number of samples per vegetation community and reference area shall be:

<u>Vegetation Community size</u>	<u>No. of samples</u>
0 to 5 acres	3
>5 to 50 acres	5
>50 acres	10

(e) If the applicant intends to propose a technical success standard, annual herbaceous production, by community, shall be estimated using quantitative methods. Annual herbaceous production shall also be quantitatively estimated when the Administrator determines that previously collected baseline vegetation data inadequately describes the proposed permit area. If semi-quantitative methods are approved for baseline, no production for baseline is necessary.

(f) A "Reference area", as defined in Chapter 1, Section 2(dl), shall be established for each vegetation community which will be disturbed unless a technical success standard is proposed for evaluation of revegetation.

(g) Shrub density sampling shall use the quantitative methods as approved by the Administrator unless the applicant commits to the maximum shrub reestablishment performance standard of one full shrub per square meter within shrub patches distributed over 20 percent of the eligible land for Option II. If the applicant accepts this maximum shrub reestablishment performance standard, the applicant shall use the following provisions to complete the calculations in Appendix 4A, Tables 1 and 2.

(i) For Option II, the full shrub with the highest baseline relative cover value across all premining vegetation communities shall be listed as the dominant

premine full shrub species and the target postmine species. No calculations for Appendix 4A, Table 1 or Table 2, shall be performed. In Table 2, the Density of the Dominant Postmining (Full) Shrub shall be 0.5 per square meter, and the Density of Residual (Full) Shrubs shall be 0.25 per square meter and the Density of Approved Subshrubs shall be 0.25 per square meter.

(h) If trees are present within the proposed permit area, then the description shall include the number, general distribution, and species.

(i) The applicant shall compile an inventory, by vegetation community, of all plants species observed within the study area and corresponding Reference Areas, in accordance with the following requirements:

(i) The plant species shall be listed:

(A) By life forms as described in Chapter 1, Section 2(ca).

(B) By scientific binomial (with reference to the botanic key used);

(C) By common name; and

(D) Identified as a native (native to North America) or introduced species.

(ii) The plant inventory shall be field checked and updated at least three times from April through September during the baseline sampling year to capture the phenological expression of species that do not express themselves every month. The plant inventory shall not be compared to any qualitative, semi-quantitative or quantitative criteria.

(iii) The plant inventory shall note the names and field locations of:

(A) Any herbarium samples collected;

(B) Any Designated Noxious Weeds or Prohibited Noxious Weeds defined by the State of Wyoming;

(C) Any plant species or habitat of special concern at the time of sampling; and

(D) Any species not previously recorded in Wyoming or outside its known range.

(j) Each baseline vegetation study shall present descriptions of the vegetation

communities and, unless a technical success standard is proposed for evaluation of revegetation, present descriptions of the Reference Areas/Unit. The descriptions shall include:

- (i) The general vegetation composition;
 - (ii) The major species in each life form;
 - (iii) The characteristic topography, including overall slope and aspect;
 - (iv) The characteristic soil types;
 - (v) The number, sizes, and types of inclusions;
 - (vi) The degree of interspersion between communities;
 - (vii) A summary of the quantitative, semi-quantitative, and qualitative vegetation information for each community;
 - (viii) The presence of Designated Noxious Weeds or Prohibited Noxious Weeds identified in Chapter 2, Section 3(k), the description shall include information on the present and historical weed treatment; and
- (iv) A three-inch by five-inch (or larger) color photograph, color copy or digital photograph panorama, showing the general features of each “Vegetation community” and “Reference area”.
- (k) Each baseline vegetation study shall include documentation of the presence or absence of Designated Noxious Weeds or Prohibited Noxious Weeds as defined by the State of Wyoming, Department of Agriculture.
- (i) If any Designated Noxious Weeds or Prohibited Noxious Weeds are present within the proposed permit area, the description shall include a list of their names, either common or scientific, and a visual estimate of their relative cover.
 - (ii) If any Designated Noxious Weeds or Prohibited Noxious Weeds are estimated to comprise more than 25% of the relative vegetation cover on two or more contiguous acres, that acreage shall be identified on the vegetation community map.
 - (l) 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 and in adjacent areas.
 - (m) Cropland, either as a vegetation community and/or a land use category, is

exempt from Chapter 2, Sections 3 (d) through (g), (i) and (j).

Section 4 **Other Baseline Requirements.**

(a) 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 description of:

(i) 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. The present land uses shall be listed using the definitions of Chapter 1, and the vegetation communities which comprise each land use shall be presented.

(ii) The capability of the land prior to mining to support a variety of uses, giving consideration to soil and foundation characteristics, topography, vegetative cover, and the land's history of previous mining, if any, and the uses of the land preceding mining; as well as the land use classification under local law, if any, of the proposed permit area and adjacent areas.

(iii) 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.

(iv) 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.

(v) Prime farmland information, which shall include, after a preapplication investigation of the proposed permit area, either:

(A) A request for a determination that the land not be considered prime farmland on the basis that either the land has not had a history of intensive agricultural use; or there are no soil map units that have been designated prime farmland by the Natural Resource Conservation Service in accordance with 7 CFR 657 (Federal Register Vol. 43, No. 21) and the Memorandum of Understanding between the Conservation Districts and the Soil Conservation Service, or

(B) Where prime farmland occurs on proposed affected land, an application which shall be submitted in accordance with Chapter 3.

(vi) Studies of fish, wildlife, and their habitats, in the level of detail and for those areas as determined by the Administrator, after consultation with the Wyoming Game and Fish Department in accordance with the Memorandum of Understanding between the two agencies; and Federal agencies having responsibilities for the management or conservation of such environmental values, including:

(A) A list of indigenous vertebrate wildlife species within and adjacent to the permit area by common and scientific names. The area of survey for the possible presence of threatened or endangered species shall be on or within one mile of the permit area.

(B) If critical habitat disruption is likely, the U.S. Fish and Wildlife Service and Wyoming Game and Fish Department shall be contacted by the Administrator. If crucial or important habitat or migration route disruption is likely, the Wyoming Game and Fish Department shall be contacted by the Administrator. Contacting the appropriate agency(ies) is required in order to determine the types and numbers of wildlife likely to be disturbed or displaced.

(vii) A detailed description, prepared or certified by a licensed professional geologist, or other qualified professional (as required by W.S. § 33-41-101 through 121), of the geology within the proposed permit area down to and including any aquifer to be adversely affected by mining below the lowest coal seam to be mined. The description shall include the aerial and structural geology of the permit area and, by extrapolation, adjacent areas, including geologic parameters which influence the required reclamation, and the occurrence, availability, movement, quantity, and quality of potentially affected surface and groundwaters.

(viii) For the proposed permit area and, by extrapolation, adjacent areas, characterization of the geologic strata down to and including the deeper of either the stratum immediately below the lowest coal seam to be mined, or any aquifer below the lowest coal seam to be mined which may be adversely impacted by mining. This information shall include a statement of the results of test borings or core samples which have been collected and analyzed to show:

(A) Location of any groundwater;

(B) Lithologic characteristics and thickness of each stratum and each coal seam;

(C) Physical and chemical properties including the toxic and acid-forming properties of each stratum within the overburden; and

(D) Chemical analyses for acid or toxic-forming substances of the coal seam, including the total sulphur and pyritic sulphur content. The Administrator may waive in whole or in part the requirements of these paragraphs if he makes a written finding that the testing is unnecessary because other equivalent information is available to him in a satisfactory form.

(ix) Maps and cross-sections of the area, certified by a registered professional engineer, licensed professional geologist, or other qualified professional (as required by W.S. § 33-29-139 and 33-41-101 through 121), showing:

(A) Nature, depth and thickness of any coal seams to be mined or above those to be mined, each stratum of the overburden, and the stratum below the lowest coal seam to be mined;

(B) All coal crop lines and the strike and dip of the coal to be mined within the proposed permit area;

(C) Location and extent of existing or previously surface mined or underground mined areas within the proposed permit area and adjacent areas;

(D) Sufficient slope measurements of the proposed permit area measured and recorded at such distances as the Administrator determines to be representative of the premining configuration and reflect geomorphic differences of the land to be mined;

(E) The location of water supply intakes for current users of surface water flowing into, out of and within a hydrologic area defined by the Administrator, and those surface waters which will receive discharges from affected areas in the proposed permit area;

(F) The location of areas on which mining is limited or prohibited within or adjacent to the permit area, pursuant to Chapter 12, Section 1(a)(v), Land Quality Rules and Regulations;

(G) Elevations and locations of test borings and core samplings;

(H) Elevations and locations of monitoring stations used to gather data for water quality and quantity, fish and wildlife, and air quality in preparation of the application; and

(I) Other relevant information required by the Administrator.

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

(A) 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.

(B) Topsoil and subsoil information including a soil survey of the affected lands conducted in accordance with the standards of the National Cooperative Soil Survey of the U.S. Department of Agriculture. If alternative materials are proposed to be used as a supplement to or substitute for topsoil, their suitability shall be demonstrated in accordance with Chapter 4, Section 2(c)(ix).

(I) 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.

(II) 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.

(C) 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.

(xi) Complete information on surface water for the permit area and adjacent areas. This shall include the following:

(A) 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;

(B) 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;

(C) Baseline monitoring information of surface water quantity within the permit area which is representative of the surface hydrologic system. Water quantity descriptions shall include, at a minimum, baseline information on seasonal flow rates, and identification of drainage area acreage; and

(D) Water quality data sufficient to identify seasonal variation. All surface water-quality sampling and analyses performed to meet the requirements of this Section shall be conducted according to the methodology in the 20th edition of "Standard Methods for the Examination of Water and Wastewater," or the methodology in 40 CFR Part 136 - "Guidelines Establishing Test Procedures for the Analysis of Pollutants," as amended on January 16, 2001. Contact the Land Quality Division for information on how to obtain a copy of either reference materials. The data shall include at a minimum:

- (I) Total dissolved solids (mg/l);
- (II) Total suspended solids (mg/l);
- (III) pH (standards units);
- (IV) Total and dissolved iron (mg/l); and
- (V) Total manganese (mg/l).

(E) Baseline alkalinity and acidity information shall be provided if there is a potential for acid drainage from the proposed mining operation.

(xii) Complete information on groundwater which may be affected in the permit area and adjacent areas. This shall include the following:

(A) 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;

(B) The lithology and thickness of all known aquifers;

(C) All water-quality sampling and analyses performed to meet the requirements of this Section shall be conducted according to the methodology in the 20th edition of "Standard Methods for the Examination of Water and Wastewater" or the methodology in 40 CFR Part 136 - "Guidelines Establishing Test Procedures for the Analysis of Pollutants," as amended on January 16, 2001. Contact the Land Quality Division for information on how to obtain a copy of either reference materials. The data shall include at a minimum:

- (I) Total dissolved solids (mg/l);

(II) Total and dissolved iron (mg/l);

(III) Total manganese (mg/l); and

(IV) pH (standard units).

(D) According to the parameters and in the detail required by the Administrator, the recharge, storage, and discharge characteristics of the groundwater.

(xiii) Water rights.

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

(B) 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.

(xiv) A description of the surface water and groundwater and related geology in the permit area and general area sufficient to assess the probable hydrologic consequences (PHC). If the determination of the PHC required by Chapter 19, Section 2(a)(i) indicates that adverse impacts on or off the proposed permit area may occur to the hydrologic balance, or that acid-forming or toxic material is present that may result in the contamination of groundwater or surface water supplies, then information supplemental to that required under (a)(xi) and (a)(xii) of this Section shall be provided to evaluate such PHC and to plan remedial and reclamation activities. Such supplemental information may be based upon drilling, aquifer tests, hydrogeologic analysis of the water-bearing strata, flood flows, or analysis of other water-quality or quantity characteristics.

(xv) Information concerning the presence or absence of an alluvial valley floor within the permit area or on adjacent areas in accordance with Chapter 3.

(xvi) The location of existing man-made features to include roads, railroads, reservoirs, public or private rights-of-way and easements, utility lines, pipelines, oil wells, gas wells, and water wells.

(xvii) Boundaries and descriptions of all cultural, historic and archaeological resources listed on, or eligible for listing on, the National Register of Historic Places. In compliance with the Archaeological Resources Protection Act of 1979 (P.L. 96-95), this information shall not be placed on display at the county clerk's office (as required by W.S. § 35-11-406(d)) where such resources occur on lands owned by the United States. This information shall be clearly labeled as "Confidential" and submitted separately from the remainder of the application materials. Requests to

disclose confidential information shall be administered under the Department of Environmental Quality, Rules of Practice and Procedure, the Wyoming Public Records Act (W.S. §§ 16-4-2001 thru 16-4-2005 (2007)) and the Wyoming Environmental Quality Act (2007).

(xviii) 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.

Section 5 **Mine Plan.**

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

(i) A complete operations plan 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.

(C) The size, sequence and timing of the areas for which it is anticipated that renewed permits for mining will be requested over the estimated total life of the proposed operation.

(D) Cross-sections, and/or maps and plans of the area to be mined during the term of the permit, unless required for the permit area by the Administrator or as specified below, certified by a registered professional engineer or professional geologist, showing:

(I) Location of proposed water treatment control and monitoring facilities;

(II) Location of each proposed explosive storage and handling facility;

(III) Location and construction of each proposed waste disposal facility relating to coal processing or pollution control;

(IV) Location of and typical design for surface water and

groundwater hydrologic control methods including proposed temporary impoundments, sedimentation ponds, diversions, stream channels, erosion control methods, and water treatment, water storage, water collection and discharge facilities. The location and typical design of permanent impoundments and general location of the above described hydrologic control methods shall be provided for the permit area;

(V) The location, construction and maintenance of coal stockpiles, temporary and excess spoil piles shall be provided for the permit area;

(VI) Location of permanently fixed signs and markers in accordance with and meeting the requirements of Chapter 4, Section 2(o); and

(VII) Location and description of any undisturbed natural barrier which is proposed to be provided to prevent slides and erosion, in accordance with the requirements of Chapter 4, Section 2(s).

(ii) A narrative and a map of the permit area identifying the location of existing structures, a description of their use and maintenance, and an explanation of whether they meet the requirements of Chapter 4 or the plan for removal, if required, or modification to comply with those standards in a manner which protects the environment and public health and safety.

(iii) A description of the measures to be used to maximize the use and conservation of the coal resource as required in Chapter 4, Section 2(v).

(iv) A description of the contingency plans which have been developed to preclude sustained combustion of any materials constituting a fire hazard.

(v) A description, plans, and drawings for each mine facility to be constructed, used, or maintained within the proposed permit area. The plans and drawings shall include a map, appropriate cross-sections, design drawings, and specifications sufficient to demonstrate compliance with section 2(n) of Chapter 4 for each facility.

(vi) A map of the permit area which clearly shows that a railroad spur(s) which provides exclusive service to that particular permit is being included within the permit boundary from the point that it provides such service. This spur(s) shall be covered by a reclamation bond.

(vii) A blasting plan for the area to be mined during the term of the permit, which shall include:

(A) Proposed compliance with limitations on ground vibration and airblast, the basis for those limitations, and methods to be applied in controlling the adverse effects of blasting operations. The applicant should also include:

(I) A blasting plan which depicts the worst-case scenario (i.e., the maximum probable amount of explosives to be detonated in any eight millisecond period).

(II) The identification, direction and distance, in feet to the nearest dwelling, public building, school, church, and community or institutional building from any blasting area during the term of the permit. This paragraph shall not apply if the building is owned by the operator and not leased to another or, if leased, the lessee signs a waiver relieving the operator from meeting the limitations in Chapter 6.

(B) If blasting operations will be conducted within 1,000 feet of any building used as a dwelling, public building, school, church, and community or institutional building outside the permit area, or within 500 feet of an active or abandoned underground mine, an anticipated blast design, prepared and signed by a certified blaster. The design shall contain sketches of the drill patterns, delay periods, and decking and shall indicate the type and amount of explosives to be used, critical dimensions, and the location and general description of structures to be protected, as well as a discussion of design factors to be used which protect the public and meet the applicable airblast, flyrock and ground vibration standards in Chapter 6. This paragraph shall not apply if the building is owned by the operator and not leased to another or, if leased, the lessee signs a waiver relieving the operator from meeting the limitations in Chapter 6.

(C) Description and location of blasting monitoring, warning and site access control equipment and procedures proposed to be used pursuant to Chapter 6, Section 4.

(D) Description of procedures and plans for recording and retaining information required by Chapter 6, Section 5.

(E) A sample copy of the public notices required by Chapter 6, Section 3.

(F) Other information requested by the Administrator which he determines necessary to ensure compliance with Chapter 6.

(viii) A plan for minimizing adverse impacts to fish, wildlife and related environmental values within and adjacent to the permit area during the operation, including:

(A) Whether such resources will be enhanced through successful revegetation in accordance with Chapter 4, Section 2(r);

(B) A statement of how the applicant will utilize monitoring methods as specified in Appendix B of these rules and regulations, and impact control

measures and management techniques to protect or enhance the following, if they are likely to be affected by the proposed operation:

(I) Threatened or endangered species of plants or animals listed by the Secretary under the Endangered Species Act of 1973, as amended (16 U.S.C. Section 1531 et seq.) and their critical habitats;

(II) Species identified through the consultation process described in Section 2(a)(vi)(G); and

(III) Important habitats for fish and wildlife, such as wetlands, riparian areas, rimrocks, areas offering special shelter or protection, reproduction and nursery areas, and wintering areas.

(C) Upon request, the Administrator shall provide the resource information required under paragraph (B) of this Section and that required by Section 2(a)(vi)(G) of this Chapter to the U.S. Department of the Interior, Fish and Wildlife Service regional or field office for their review. This information shall be provided within 10 days of receipt of the request from the Service.

(ix) A plan to ensure the protection of the quantity and quality of, and rights to, surface water and groundwater both within and adjacent to the permit area, which shall include:

(A) A plan and timetable for control and treatment of surface water and groundwater in accordance with Chapter 4, Section 2(e)-(h);

(B) A plan for sediment removal and disposal;

(C) A plan to restore the approximate recharge capacity of the permit area in accordance with Chapter 4, Section 2(h);

(D) A plan to collect, record and report water quantity and quality data according to Chapter 4, Section 2(i); and

(I) Surface water monitoring plan.

(1.) The application shall include a monitoring plan based upon the PHC determination required under subsection 2(b)(xii) of this Chapter and the analysis of all baseline hydrologic, geologic, and other information in the permit application. The plan shall provide for the monitoring of parameters that relate to the suitability of the surface water for current and approved postmining land uses and to the objectives for protection of the hydrologic balance as set forth in subsection 2(b)(xi) of this Chapter.

(2.) The plan shall identify the surface water quantity and quality parameters to be monitored, sampling frequency, and site locations. At a minimum, the parameters specified in Section 2(a)(vi)(L)(III) and (IV) of this Chapter shall be measured. Results of monitoring shall be available for inspection at the mine and available to the Director's designated authorized representative, and shall be reasonably current. Surface water monitoring shall be conducted quarterly unless an alternate frequency, appropriate to the monitored site, is approved by the Administrator. Results of monitoring shall be submitted in the annual report for each monitoring location.

(3.) The plan shall describe how the data may be used to determine the impacts of the operation upon the hydrologic balance.

(II) Groundwater monitoring plan.

(1.) The application shall include a groundwater monitoring plan based upon the PHC determination required under subsection 2(b)(xii) of this Chapter and the analysis of all baseline hydrologic, geologic, and other information in the permit application. The plan shall provide for the monitoring of parameters that relate to the suitability of the groundwater for current and approved postmining land uses and to the objectives for protection of the hydrologic balance set forth in subsection 2(b)(xi) of this Chapter.

(2.) The plan shall identify the quantity and quality parameters to be monitored, sampling frequency, and site locations. It shall describe how the data may be used to determine the impacts of the operation upon the hydrologic balance. At a minimum, the parameters specified in Section 2(a)(vi)(M)(III) of this Chapter and water levels shall be measured. Groundwater monitoring shall be conducted quarterly unless an alternate frequency, appropriate to the monitored site, is approved by the Administrator. Results of monitoring shall be available for inspection at the mine and available to the Director's designated authorized representative, and shall be reasonably current. Results of monitoring shall be submitted in the annual report for each monitoring location.

(E) A plan to provide alternative sources of water in accordance with W.S. § 35-11-415(b)(xii), where the protection of quantity or quality cannot be ensured as determined under the requirements of (x) below.

(x) Probable hydrologic consequences determination (PHC). A determination of the PHC of the proposed operation on the hydrologic regime and the quantity and quality of surface water and groundwater systems within the permit area and the general area consistent with the information required in Chapter 19, Section 2 of these regulations. The PHC determination shall be based on baseline hydrologic, geologic and other information collected for the permit application and may include data statistically representative of the site. This determination shall specifically address potential adverse

hydrologic consequences and describe preventive and remedial measures.

(xi) An evaluation of the impact of the proposed mining activities that may result in contamination, diminution, or interruption of the quality and quantity of groundwater or surface water within the proposed mine permit area or adjacent areas that are used for domestic, agricultural, industrial, or other legitimate purposes. If contamination, diminution, or interruption may result, then the application shall identify the alternative sources of water supply that could be developed to replace the existing sources in accordance with State law.

(xii) A general plan for each coal-processing waste bank. It shall contain a description, map, and cross-section of the structure and its location, preliminary hydrologic information required to assess the hydrologic impact of the bank, and any additional information the Administrator may deem necessary to show compliance with Chapter 4, Section 2(c). Where the applicant proposes to return coal-processing waste to abandoned underground workings, the application shall:

(A) Describe the design, operation and maintenance of any proposed coal-processing waste disposal facility, including flow diagrams and any other necessary drawings and maps, for the approval of the Administrator and the Mine Safety and Health Administration;

(B) Describe the sources and quality of waste to be stowed, area to be backfilled, percent of the mine void to be filled, method of constructing underground retaining walls, influence of the backfilling operation on active underground mine operations, surface area to be supported by the backfill and the anticipated occurrence of surface effects following backfilling;

(C) Describe the source of the hydraulic transport mediums, method of dewatering the placed backfill, retainment of water underground, treatment of water if released to surface streams, and the effect on the hydrologic regime;

(D) Describe each permanent monitoring well to be located in the backfilled area, the stratum underlying the mined coal, and gradient from the backfilled area except where pneumatic backfilling operations are exempted from hydrologic monitoring; and

(E) Be approved by MSHA as well as the Administrator prior to implementation.

(xiii) For surface mining activities to be conducted within 500 feet of an underground mine, measures to be used to comply with Chapter 4, Section 2(t).

(xiv) Plans describing the measures to be taken to obtain permit approval regarding areas where mining would be otherwise limited or prohibited pursuant

to Chapter 12, Section 1(a)(v).

(xv) Descriptions, including appropriate maps and cross-sections of any proposed excess spoil disposal site and design of the spoil piles in accordance with the requirements of Chapter 4, Section 2(c). This shall contain the results of a geotechnical investigation of the proposed excess spoil disposal site, including the following:

(A) The character of bedrock and any adverse geologic conditions in the disposal area;

(B) A survey identifying all springs, seepage, and groundwater flow observed or anticipated during wet periods in the area of the disposal site;

(C) Where applicable, an evaluation of the potential effects of subsidence of the subsurface strata due to past and future mining operations;

(D) A stability analysis including, but not limited to, strength parameters, pore pressures and long-term seepage conditions. These data shall be accompanied by a description of all engineering design assumptions and calculations and the alternatives considered in selecting the specific design specifications and methods; and

(E) If, under Chapter 4, Section 2(c)(xi)(F), special structural provisions are required for spoil disposal on overall slopes greater than 20 degrees, information on:

(I) The number, location and depth of borings or test pits which shall be determined with respect to the size of the spoil disposal structure and subsurface conditions; and

(II) The engineering designs, design rationale and design calculations for the special structural provisions, which are based on the information required in paragraph (D) above.

(xvi) Road Systems.

(A) Each applicant shall submit plans and drawings for each road as defined in Chapter 1 to be constructed, used, or maintained within the proposed permit area. The plans and drawings shall:

(I) Include a map, appropriate cross-sections, design drawings and specifications for road widths, gradients, surfacing materials, cuts, fill embankments, culverts, bridges, drainage ditches, drainage structures and low-water crossings;

(II) Contain the drawings and specifications of each proposed road that is located in the channel of an ephemeral stream that has the potential for sufficient flow to cause substantial environmental harm unless a downstream sediment control structure exists within the permit boundaries, any intermittent or any perennial stream, as necessary for approval of the road by the Administrator in accordance with Chapter 4, Section 2(j)(iv)(A);

(III) Contain the drawings and specifications for each proposed ford of intermittent or perennial streams that is used as a temporary route, as necessary for approval of the ford by the Administrator in accordance with Chapter 4, Section 2(j)(vii)(C)(II);

(IV) Contain a description of measures to be taken to obtain approval from the Administrator for alteration or relocation of a natural stream channel under Chapter 4 Section 2(j)(vii)(D)(IV);

(V) Contain the drawings and specifications for each low-water crossing of an ephemeral stream channel that has the potential for sufficient flow to cause substantial environmental harm unless a downstream sediment control structure exists within the permit boundaries, any intermittent stream channel or any perennial stream channel so that the Administrator can maximize the protection of the stream in accordance with Chapter 4, Section 2(j)(vii)(D)(VI); and

(VI) Describe the plans to remove and reclaim each road that would not be retained under an approved postmining land use, and the schedule for this removal and reclamation.

(B) The plans and drawings for each primary road (as defined in Chapter 4, Section 2(j)(i)(B)) shall be prepared by, or under the direction of, and certified by a qualified registered professional engineer as meeting the requirements of this Chapter and current, prudent engineering practices.

(xvii) Plans for compliance with the temporary and permanent cessation of operations requirements contained in Chapter 4, Section 2(k) and (u).

(xviii) Plans of mine facilities (including overstrip areas) that are to be shared by two or more separately permitted mining operations may be included in one permit application and referenced in the other application(s). Each permittee shall bond the mine facilities unless the permittees sharing it agree to another arrangement for assuming their respective responsibilities. If such agreement is reached, the application shall include a copy of the agreement between or among the parties setting forth the respective bonding responsibilities of each party for the mine facilities. The agreement shall demonstrate to the satisfaction of the Administrator that all responsibilities under the Act and regulations for the mine facilities will be met.

(xix) A Cultural Resources Management Plan which:

(A) Describes the measures to be used to prevent impacts to public parks or places listed on the National Register of Historic Places or, in cases of valid existing rights or where joint agency approval has been obtained, to minimize impacts to such parks or places;

(B) Provides for the mitigation of adverse effects to historic or archaeological properties eligible for listing on the National Register of Historic Places; and

(C) Ensures that the appropriate treatment measures or mitigation will be undertaken prior to the commencement of any specific mining operation that would affect such parks, places or properties.

(xx) A plan for the management and disposal of noncoal mine waste, including any noncoal wastes generated by a mine mouth electric power plant, coal drier or coal preparation plant within the proposed permit area in accordance with Chapter 4, Section 2(c)(xiii)(C).

Section 6 Reclamation Plan.

(a) The reclamation plan shall include 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 4, Section 2(k) and the orderly development of the mining property.

(b) The reclamation plan shall also describe how the operator will reclaim the affected lands to the proposed postmining land use in accordance with Chapter 4, Section 2(a) which shall include:

(i) 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 4, 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.

(ii) A plan for backfilling, grading and contouring of all affected lands in accordance with Chapter 4, Section 2(b). The plan shall include:

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

(B) 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.

(C) 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 4, Section 2(g)(ii).

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

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

(iii) A plan to assure revegetation of all affected land in accordance with Chapter 4, Section 2(d). The plan shall include:

(A) The method and schedule of revegetation, including but not limited to species of plants, seeding rates, seeding techniques, mulching requirements and other erosion control techniques, and seeding times to be used in a given area for reclamation purposes.

(B) For crucial habitat and critical habitat, consultation with and approval obtained from the Wyoming Game and Fish Department for tree and shrub species composition and ground cover for minimum stocking and planting arrangements of trees and shrubs. Crucial habitat must be declared as such prior to the submittal of a permit application or any subsequent amendment.

(C) For important habitat, consultation with and recommendations obtained from the Wyoming Game and Fish Department for tree and shrub species composition and ground cover for minimum stocking and planting arrangements.

(D) The tree species, the number per species, and the location of tree plantings.

(E) A separate seed mix(es) shall be developed for each approved postmining land use, considering the dominant postmining topographic features and landowner desires.

(I) The species 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.

(II) The species and varieties shall depend upon the climatic and soil conditions prevailing in the permit area and the proposed postmining landuses.

(III) The species shall be self-renewing;

(IV) Seeding rates shall depend upon seed types, climatic conditions and the techniques to be used in seeding;

(V) The seed mix shall contain introduced species only if:

or

(1.) Additional herbaceous species are needed;

(2.) Suitable, native species are unavailable; or

(3.) For cropland or pastureland or;

(4.) Needed to achieve a quick, temporary, stabilizing cover to control erosion; or

(5.) Conducive to achieve a postmining land use approved by the Administrator.

(VI) The operator shall document, unless otherwise authorized by the Administrator, the suitability of introduced species using data from published literature, from experimental test plots, from on-site experience, or from other information sources.

(VII) For grazingland, the seed mix shall contain full shrub and/or subshrub species when these species will support the postmining land uses. To increase postmining species diversity and establish shrub mosaics, shrub mixtures shall be developed and seeded separately from the herbaceous mixtures.

(VIII) For federally owned surface, the federal land managing agency shall be consulted for mulching requirements and seeding requirements for cover crops, temporary and permanent reclamation.

(IX) The proposed postmining location of each seed mix

shall be illustrated on a post mining contour map.

(F) Locations and/or conditions where the operator specifically requests approval not to use mulch.

(G) A weed control plan for State of Wyoming Designated Noxious and Designated Prohibited Weeds and, on federal surface, any additional weeds listed by the federal land managing agency.

(H) An explanation of any plans for irrigation.

(I) An explanation of pest and disease control measures, if appropriate;

(J) A plan for monitoring permanent revegetation on reclaimed areas, specifically including quantitative sampling, as required by Chapter 4, Section 2(d)(i)(J).

(iv) A plan for measurement of revegetation success to include:

(A) How a “Reference area” shall be used for cover and production, unless technical standards for cover and production have been approved for a projected postmine community. A “Reference area” is defined in Chapter 1, Section 2(dl).

(B) The methods to be used for measuring the shrub density standard as approved by the Administrator.

(C) The methods to be used for evaluating the shrub density goal as approved by the Administrator, where applicable.

(D) The procedures to be used for measuring species diversity and composition as approved by the Administrator.

(E) If proposed, a technical success standard for a specified vegetation parameter. The technical success standard:

(I) Is derived from a sufficient number of years of baseline data so the standard value can be considered representative over a range of climatic conditions or a relationship between the parameter and climatic variables can be determined. For technical standards for cover and production, a minimum of five years of baseline data is necessary; and

(II) May be extended to an amendment area if the baseline information indicates the standard is applicable in that area.

(F) The procedures to be used as approved by the Administrator for the evaluation of restored postmining vegetation communities which carry the Cropland or Pastureland land use designation.

(G) 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.

(v) Descriptions, including maps and cross-sections, of the surface water diversion systems which meet the requirements of Chapter 4, Section 2(e). 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.

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

(A) Written consent from the surface landowner if different than the mineral owner.

(B) A description of the proposed use of the impoundment.

(C) 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.

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

(E) A description of the construction of the impoundment so as to meet the requirements of Chapter 4, Section 2(g)(ii).

(vii) A plan to assure proper construction and reclamation of any

tailings impoundments in accordance with the Act and these regulations.

(viii) A plan for the disposal of mine facilities, erected, used or modified by the applicant in accordance with the requirements of Chapter 4, Section 2(m).

(ix) A description of the measures to be used to seal or manage mine openings in accordance with Chapter 4, Section 2(p), and to cap, plug and seal all exploration holes, bore holes, wells and other openings, excepting developmental drill holes which will be mined through within one year, within the area to be mined during the term of the permit in accordance with Chapter 14. For developmental drilling the application shall contain general descriptions relating to spacing, data collection, and techniques which will be employed, including those which may be needed to comply with the plugging and sealing requirements of W.S. § 35-11-404.

(x) A postmining land use plan, including:

(A) The necessary support and maintenance activities that may be needed to achieve the proposed land use.

(B) Where a land use is proposed different from the premining land use:

(I) A discussion of the utility and capacity of the reclaimed land to support a variety of uses and the relationship of the proposed use to existing land use policies and plans; and

(II) A comparison of the premining and postmining land uses. The premining uses of land to which the postmining land use is compared shall be those uses which the land previously supported, if the land has not been previously mined and has been properly managed.

(1.) The postmining land use for land that has been mined and not reclaimed shall be judged on the basis of the highest and best use that can be achieved and is compatible with surrounding areas without requiring unreasonable disturbance of areas previously unaffected by mining.

(2.) The postmining land use for land that has received improper management shall be judged on the basis of the premining use of surrounding lands that have received proper management.

(3.) If the premining use of the land was changed within five years of the beginning of the mining, the comparison of postmining use to premining use shall include a comparison with the historic use of the land as well as its use immediately preceding mining.

(C) Approval of alternative land uses shall require a demonstration that:

(I) The alternative land use is equal to or greater than the highest previous use;

(II) There is reasonable likelihood for achievement of the use;

(III) The use does not present any actual or probable hazard to public health or safety, or threat of water diminution or pollution; and

(IV) The use will not:

(1.) Be impractical or unreasonable;

(2.) Be inconsistent with applicable land use policies or plans;

(3.) Involve unreasonable delay in implementation; or

(4.) Cause or contribute to violation of Federal, State, or local law.

DEPARTMENT OF ENVIRONMENTAL QUALITY

LAND QUALITY DIVISION

CHAPTER 4

ENVIRONMENTAL PROTECTION PERFORMANCE STANDARDS

FOR COAL MINING OPERATIONS

Section 1. **General.**

This Chapter sets forth the environmental protection performance standards applicable to all coal 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) Rough backfilling and grading shall follow coal removal as contemporaneously as possible based upon the mining conditions. The operator shall include within the application for a permit to mine a proposed schedule for backfilling and grading with supporting analysis.

(ii) Backfilled materials shall be replaced in a manner which

minimizes water pollution on and off the site and supports the approved postmining land use. Preparation of final graded surfaces shall be conducted in a manner that minimizes erosion and provides a surface for replacement of topsoil that will minimize slippage.

(iii) All affected lands shall be returned to their approximate original contour, except as authorized by a variance or exemption under Chapter 5, Sections 6 and 7, or Chapter 8, or Chapter 9.

(iv) All spoil shall be transported, backfilled, compacted (where necessary to insure stability or to prevent leaching) and graded to eliminate all highwalls, spoil piles, and depressions, except that:

(A) Soil conservation techniques and or small depressions may be employed to retain moisture, minimize erosion, create and enhance wildlife habitat or assist revegetation.

(B) Incomplete elimination of highwalls may be authorized in accordance with Chapter 5, Section 7.

(C) Retention of selected portions of a highwall or other steep feature created during the mining operation may be approved by the Administrator to remain as replacement for natural features that were mined out or are planned to be mined out under the current Mine Plan if the operator demonstrates that the retained highwall will:

(I) Have a static safety factor of 1.3 or greater and be of similar erosive resistance;

(II) Not pose a hazard to people using the area;

(III) Be backfilled to cover the uppermost mineable coal seam to a minimum depth of 4 feet;

(IV) Not exceed the length and height of the premine feature it is replacing;

(V) Be contoured into the surrounding terrain; and

(VI) Enhance or restore important wildlife habitat or hydrologic conditions.

(D) Spoil may be placed on an area outside the mined-out area to restore the approximate original contour by blending the spoil into the surrounding terrain if the following requirements are met.

(I) All vegetative and organic material shall be

removed from the area.

(II) The topsoil on the area shall be handled in accordance with Section 2(c) of this Chapter.

(III) The spoil shall be backfilled and graded on the area in accordance with the requirements of this subsection 2(b).

(v) Postmining slopes shall not exceed a slope necessary to achieve a minimum long-term static safety factor of 1.3, to prevent slides and restore stable drainages and hillslopes.

(vi) Thin overburden. Where surface coal mining operations are proposed to be carried out continuously in the same limited pit area for more than one year from the day coal removal operations begin and where the volume of all available spoil and suitable waste materials over the life of the mine is demonstrated to be insufficient to achieve the approximate original contour considering bulking factor and coal removal, surface mining activities shall be conducted to use all available spoil and suitable waste materials to attain the lowest practicable stable grade, but not more than the angle of repose, and to meet the requirements of paragraphs (ii) and (iv) above.

(vii) Thick overburden. Where the volume of spoil over the life of the mine is demonstrated to be more than sufficient to achieve the approximate original contours considering bulking factor, coal removal and subsidence of backfilled material, excess spoil may be placed outside the pit area in accordance with the requirements of subsection (c).

(viii) Permanent Impoundments: Where permanent impoundments are authorized in accordance with Chapter 2, Section 6(b)(vi), spoil that may result from the impoundment will be handled in accordance with the requirements of this subsection.

(c) Topsoil, subsoil, overburden, spoil, excess spoil, refuse, coal mine waste, acid-forming materials, toxic materials and other wastes.

(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 such as signs, power poles, light traffic, fence lines, monitoring stations or drilling provided that the minor disturbance will not destroy the protective vegetative cover and will not increase erosion.

(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) 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.

(F) 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) The topsoil (A and E horizons) shall be segregated from the subsoil (B and C horizons) where the Administrator determines that this practice is necessary to achieve the revegetation requirements of these regulations.

(iv) Before redistribution of topsoil or subsoil the regraded land shall be treated, if necessary, to reduce potential for slippage and encourage root penetration.

(v) Topsoil, subsoil, and/or an approved topsoil substitute shall be redistributed in a manner that:

(A) Achieves an approximate uniform, stable thickness consistent with the approved permit and the approved postmining land uses, contours and surface water drainage system;

(B) Prevents compaction which would inhibit water infiltration and plant growth;

(C) Protects the topsoil from wind and water erosion before and after it is seeded until vegetation has become adequately established; and

(D) Conserves soil moisture and promotes revegetation.

(vi) All rills and gullies which either preclude achievement of the approved postmining land use or the reestablishment of the vegetative cover, or cause or contribute to a violation of water quality standards for the receiving stream, shall be regraded or otherwise stabilized. Topsoil shall be replaced and the areas shall be reseeded or replanted.

(vii) Nutrients and soil amendments in the amounts determined necessary by soil test or field trials shall be applied to the replaced topsoil, subsoil or substitute material so that adequate nutrient levels are available to establish the vegetative cover. Fertilizer shall be applied at appropriate seasons and in amounts that will minimize pollution of surface waters or groundwaters.

(viii) The Administrator may not require topsoil or subsoil replacement on structures or within impoundments where replacement of this material is inconsistent with the intended use and the structures are otherwise stable.

(ix) If a sufficient volume of suitable topsoil or subsoil is not available for salvage or redistribution, then selected spoil material may be used as a topsoil or subsoil substitute or supplement. The operator shall demonstrate that the resulting plant growth medium is equal to, or more suitable for sustaining vegetation than the existing topsoil or subsoil and that it is the best available in the permit area to support revegetation. A demonstration of the suitability of the substitutes or supplements shall be based upon analysis of the texture, percent coarse fragments and pH. The Administrator

may require other chemical and physical analyses, field site trials, or greenhouse tests if determined to be necessary or desirable to demonstrate the suitability of the topsoil or subsoil substitutes or supplements.

(x) Topsoil and subsoil substitutes.

(A) 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.

(B) 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.

(xi) Overburden, spoil, excess 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 flood plains 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.

(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.

(F) All temporary overburden and spoil piles shall be located, designed and constructed using prudent engineering practices. Slopes shall be stable and temporary piles shall not be located or placed on slopes that exceed 20 degrees unless the Administrator authorizes such placement based upon demonstrations that the pile will have a safety factor of 1.5 or better, and/or other precautionary design factors are provided to mitigate the steepness of the slope.

(G) Excess Spoil. In addition to the requirements provided in subsections (xi)(A) through (xi)(D) above (with the exception of (xi)(B)(I)), excess spoil piles shall be located, designed, constructed and inspected as prescribed below.

(I) Location Requirements:

(1.) All excess spoil shall be placed in approved excess spoil disposal sites located within the permit area. They shall be:

a. Located on moderately sloping and naturally stable areas where placement provides for stability and prevents mass movement.

b. Located in areas which do not contain springs, seeps, natural or man-made drainages (excluding rills and gullies), croplands, or important wildlife habitat.

(2.) Excess spoil may be returned to underground mine workings in accordance with the plan approved by the Administrator and by MSHA.

(II) Design Standards:

(1.) All excess spoil shall be:

a. Designed, graded and contoured so as to blend in with the topography of the surrounding terrain. Excess spoil pile sites shall not be located on an overall slope that exceeds 20 degrees unless keyway cuts (excavations to stable bedrock), rock toe buttresses or other special structural provisions are constructed to ensure fill stability. The operator must demonstrate to the satisfaction of the Administrator that this material will be stable and can be revegetated as required by this Section.

b. Designed so that all slopes 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. Designed using current, prudent professional standards and certified by a qualified registered professional engineer. All piles shall be designed and constructed in accordance with the standards of this subsection. Special structural provisions shall be designed using prudent current engineering practices, in accordance with Chapter 2, Section 5(b)(xv)

(2.) The foundation and abutments of the fill shall be stable under all conditions of construction. Sufficient foundation investigation and any necessary laboratory testing of foundation materials shall be performed in order to determine the design requirements for foundation stability. Analyses of foundation conditions shall include the effect of underground mine workings, if any, upon the stability of the structure.

(3.) The Administrator may specify additional design criteria on a case-by-case basis as necessary to meet the general requirements of this subsection.

(III) Construction Standards:

(1.) Excess spoil shall be placed in a controlled manner to:

a. Prevent pollution from leachate and surface runoff from the fill on surface water or groundwater of the State.

b. Ensure mass stability and prevent mass movement during and after construction and provide for stable drainages and hillslopes.

c. Ensure that the land mass designated as the disposal site is suitable for reclamation and revegetation compatible with the natural surroundings and approved postmining land use.

(2.) The spoil pile shall be transported and placed in horizontal lifts in a controlled manner, concurrently compacted as necessary to ensure mass stability and prevent mass movement, covered, and graded to allow surface and subsurface drainage to be compatible with the natural surroundings and ensure a minimum long-term static safety factor of 1.5. The Administrator may limit the horizontal lifts to four feet or less as necessary to ensure the stability of the fill or to meet other applicable requirements.

(3.) No water impoundments or large depressions shall be constructed on the fill. Soil conservation techniques may be approved if they are needed to minimize erosion, enhance wildlife habitat or assist

revegetation, as long as they are not incompatible with the stability of the fill.

(4.) Slope protection shall be provided to minimize surface erosion at the site. Diversion of surface water runoff shall conform with the requirements of subsection (e) of this Section. All disturbed areas, including diversion ditches that are not ripped, shall be vegetated upon completion of construction.

(5.) Terraces may be constructed on the outslope of the fill if required for stability, control of erosion, to conserve soil moisture, or to facilitate the approved postmining land use. The grade of the outslope between terrace benches shall not be steeper than 2h:lv (50 percent).

(6.) Excess spoil that is toxic, acid-forming or combustible shall be adequately covered with suitable material or treated to prevent pollution of surface and groundwater, to prevent sustained combustion, and to minimize adverse affects on plant growth and the approved postmining land use.

(IV) Inspection of excess spoil piles.

(1.) The fill shall be inspected for stability by a qualified registered professional engineer or other qualified professional specialist under the direction of a professional engineer experienced in the construction of earth and rockfill embankments at least quarterly throughout construction and during the following critical construction periods:

- a. foundation preparation, including the removal of all organic material and topsoil;
- b. placement of diversion systems;
- c. installation of final surface drainage systems; and
- d. final grading and revegetation.

(2.) Regular inspections by the engineer or specialist shall be conducted during placement and compaction of the fill materials. The registered professional engineer shall promptly provide certified reports to the Administrator which demonstrate that the fill has been maintained and constructed as specified in the design contained in the approved mining and reclamation plan. The report shall discuss appearances of instability, structural weakness, and other hazardous conditions. A copy of all inspection reports shall be retained at the mine site.

(xii) Coal mine waste.

(A) Coal mine waste shall be disposed only in existing or, if new, in an approved disposal site within a permit area. Coal mine wastes shall not be used in the construction of dams, embankments, or diversion structures. The disposal area shall be designed, constructed and maintained:

(I) In accordance with the excess spoil disposal requirements of (xi)(F)-(I), and (K)-(O) above; and

(II) To prevent combustion and not create a public health hazard.

(B) Disposal of coal mine waste in excess spoil piles may be approved if such waste is:

(I) Placed in accordance with the excess spoil requirements of (xi) above;

(II) Demonstrated to be nontoxic and nonacid-forming (or properly treated); and

(III) Demonstrated to be consistent with the design stability of the fill.

(C) In addition to (A) above, coal mine waste piles shall meet the following requirements:

(I) The disposal facility shall be designed to attain a minimum static safety factor of 1.5. The foundation and abutments must be stable under all conditions of construction.

(II) Following final grading of the waste pile, the site shall be covered with a minimum of four feet of the best available, nontoxic, nonacid-forming and noncombustible material, in a manner that directs runoff away from the waste pile. The site shall be revegetated in accordance with this Chapter. The Administrator may allow less than four feet of cover material based on physical and chemical analyses which show that the revegetation requirements will be met.

(III) Surface drainage from above the pile and from the crest and face of the pile shall be permanently diverted around the waste in accordance with subsection (e) of this Section.

(IV) All coal mine waste piles shall be inspected in accordance with the excess spoil requirements of (xi) above. More frequent inspections shall be conducted if a danger or harm exists to the public health and safety or the

environment. Inspections shall continue until the waste pile has been finally graded and revegetated or until later time as required by the Administrator. If any inspection discloses that a potential hazard exists, the Administrator shall be notified immediately, including notification of any emergency protection and remedial procedures which will be implemented. If adequate procedures cannot be formulated or implemented, the Administrator shall inform the appropriate emergency agencies of the hazard to protect the public from the area.

(V) All coal mine waste piles shall meet the requirements of 30 CFR §§ 77.214 and 77.215.

(D) Dams and embankments constructed to impound coal mine waste shall comply with the following:

(I) Each impounding structure shall be designed, constructed and maintained in accordance with the requirements applicable to temporary impoundments. Such structures may not be retained permanently as part of the approved postmining land use. Approval by the State Engineer's Office is not required.

(II) If the impounding structure meets the criteria of 30 CFR § 77.216(a), the combination of principal and emergency spillways shall be able to safely pass or control runoff from the probable maximum precipitation of a 6-hour precipitation event or a storm duration having a greater peak flow, as may be required by the Administrator.

(III) Spillways and outlet structures shall be designed to provide adequate protection against erosion and corrosion. Inlets shall be protected against blockage.

(IV) Be designed so that 90 percent or more of the water stored during the design precipitation event can be removed within ten days and at least 90 percent of the water stored during the design precipitation event shall be removed within the ten day period following the design precipitation event.

(V) Runoff from areas above the disposal facility or runoff from the surface of the facility that may cause instability or erosion of the impounding structure shall be diverted into stabilized diversion channels designed to meet the requirements for diversions, and designed to safely pass the runoff from a 100-year, 6-hour design precipitation event or a storm duration having a greater peak flow.

(E) The Administrator may specify additional design criteria for waste piles or impounding structures on a case-by-case basis as necessary to meet the general performance standards of this subsection.

(F) Coal mine waste fires shall be extinguished by the operator

in accordance with a plan approved by the Administrator and the Mine Safety and Health Administration. The plan shall contain, at a minimum, provisions to ensure that only those persons authorized by the operator, and who have an understanding of the procedures to be used, shall be involved in the extinguishing operations. No burning or burned coal mine waste may be removed from a permitted disposal area without a removal plan approved by the Administrator. Consideration shall be given to persons working or living in the vicinity of the structure.

(G) Coal preparation plants shall be included within a permit area. Refer to Chapter 3, Section 6 for requirements applicable to coal preparation plants.

(xiii) Acid-forming and toxic materials, other waste and noncoal mine waste.

(A) All exposed coal seams remaining after mining and any acid-forming, toxic, and combustible materials, or any waste materials that are exposed, used or produced during mining shall be adequately covered, within 30 days of its exposure with nontoxic, nonacid-forming and noncombustible material, or treated. Compaction followed by burial or treatment shall be provided to prevent pollution of surface and groundwater quality, prevent sustained combustion and to minimize adverse effects on plant growth and postmining land uses. Such materials may be stored in a controlled manner until final burial and/or treatment first becomes feasible as long as storage will not result in any risk of water pollution or other environmental or public health and safety damage. Storage, final burial and treatment shall be done in accordance with all local, State and Federal requirements.

(B) Acid-forming or toxic material, or any other waste material capable of polluting water, shall not be buried or stored in the proximity of a drainage channel or its flood plain so as to cause or pose a threat of water pollution.

(C) Disposal of noncoal mine wastes.

(I) Temporary storage of noncoal mine wastes. Noncoal mine wastes including, but not limited to grease, lubricants, paints, flammable liquids, garbage, abandoned mining machinery, lumber and other combustible materials generated during mining activities shall be placed and stored in a controlled manner in a designated portion of the permit area. Placement and storage shall ensure that leachate and surface runoff do not degrade surface or groundwater, that fires are prevented, and that the area remains stable and suitable for reclamation and revegetation compatible with the natural surroundings.

(II) Final disposal of noncoal mine wastes. Final disposal of noncoal mine wastes, including any solid wastes generated by a mine mouth power plant, coal drier or coal processing facility shall be in a designated disposal site in the permit area or a State-approved solid waste disposal area. Disposal sites in the permit

area shall be designed and constructed to ensure that leachate and drainage from the noncoal mine waste does not degrade surface or underground water. Wastes shall be routinely compacted and covered to prevent combustion and wind-borne waste. When the disposal is completed, a minimum of four (4) feet of suitable cover material shall be placed over the site, slopes stabilized and revegetation accomplished in accordance with Section 2(d) of this Chapter. Operation of the disposal site shall be conducted in accordance with all local, State and Federal requirements.

(III) At no time shall any noncoal mine waste be deposited in a refuse pile or impounding structure, nor shall an excavation for a noncoal mine waste disposal site be located within eight (8) feet of any coal outcrop or coal storage area.

(d) Revegetation.

(i) General Revegetation Performance Standards

(A) The operator shall establish on all affected lands a diverse, permanent vegetative cover of the same seasonal variety native to the area or a mixture of species that will support the approved postmining land use in a manner consistent with the approved reclamation plan. This cover shall be self-renewing, and capable of stabilizing the soil.

(B) Land which did not support vegetation prior to becoming affected because of natural soil conditions need not be revegetated unless subsoil 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 the subsection.

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

(D) Mulch or other equivalent procedures which will control erosion and enhance soil moisture conditions shall be used on all retopsoiled areas.

(E) Any tillage and/or drill seeding 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.

(F) Any rills or gullies that would preclude successful

establishment of vegetation or achievement of postmining land use shall be removed or stabilized.

(G) The bond for revegetation shall be retained for not less than ten years after the operator has completed seeding, fertilizing, irrigation, or other work to ensure revegetation. The bond responsibility period shall not be affected where normal husbandry practices are being followed as described in Chapter 4, Section 2(d)(i)(M). The success of revegetation shall be determined in accordance with Chapter 4, Section 2(d)(ii).

(H) 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.

(I) Trees shall be returned to a number equal to the premining number. On affected lands, the total number of postmining trees shall be at least equal to the premining total number on those lands. The Reclamation Plan shall specify the tree species, the number per species and the location of tree plantings. The operator may also receive credit for tree species which invade the reclaimed lands if those tree species support the postmining land use and are approved by the Administrator. Planted trees counted to meet the approved stocking rate shall be healthy, and at least 80 percent shall have been planted for at least eight years. All planted trees must have been in place at least two growing seasons. Invaded trees that are counted to meet the approved stocking rate shall be healthy and may be of any age.

(J) Monitoring of permanent revegetation on reclaimed areas before and after grazing shall be conducted at intervals throughout the bond responsibility period in accordance with the plan required by Chapter 2, Section 6(b)(iv). Monitoring results shall be presented in the annual report.

(K) 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, operator, and the landowner or land managing agency shall determine when the revegetated area is ready for livestock grazing.

(L) The operator must control and minimize the introduction and/or spread of noxious weeds on all affected lands in accordance with Federal and State requirements throughout the entire bond responsibility period.

(M) The following is a list of normal husbandry practices which, if conducted in a prudent manner, will not restart the minimum ten-year bond responsibility period for re-establishing vegetation.

(I) The operator may interseed species contained in the approved seed mix over established revegetation, but not within 6 years before the end of the bond responsibility period. The operator may add mulch to an interseeded area to facilitate plant establishment. Augmented seeding (reseeding) is not considered normal husbandry practice.

(II) Using approved species, the operator may transplant tree and shrub stock and/or plant containerized or bare root tree or shrub stock into reclamation provided the performance standards of Chapter 4 Section 2(d)(i)(H) for trees, and Chapter 4 Section 2(d)(ii)(A)(II)(2) for shrubs are not compromised.

(III) Grazing of reclamation is a normal husbandry practice.

(IV) For trees and shrubs planted in an approved shelterbelt, the practices of fertilization, irrigation and rototilling may be used as normal husbandry/nursery practices in accordance with standard practices.

(V) Beyond establishment, fertilization is a normal husbandry practice for cropland and pastureland throughout the bond responsibility period. Irrigation is a normal husbandry practice beyond establishment for cropland and pastureland, provided the approved postmine land use is irrigated cropland or irrigated pastureland.

(VI) Mechanical husbandry practices such as selective cutting, mowing, combining, aerating, land imprinting, raking, or harrowing to stimulate permanent vegetation establishment, increase decomposition of organic matter, control weeds, harvest hay, and/or reduce standing dead vegetation and litter are considered normal husbandry practices. Other mechanical practices may be used if approved by the Administrator prior to their application.

(VII) Tillage and replanting are considered normal husbandry practices for croplands.

(VIII) Acceptable weed and pest control techniques representing normal husbandry practices include manual or mechanical removal, controlled burning, biological controls, and herbicide/pesticide applications. The operator may reseed treated areas of less than five acres per year as a component of this husbandry practice without restarting the bond responsibility period.

(IX) Controlled burning may be used to reduce the buildup of litter, weed seeds, and to control undesirable species. The operator may interseed any portion of the treated area, or reseed up to five acres, as a component of this husbandry practice without restarting the bond responsibility period.

(X) Subsidence, settling, and erosional features, such as rills, gullies, or headcuts less than five acres in size may be repaired as a normal husbandry practice. Repairs considered to be normal husbandry practices include hand work, mechanical manipulation, installation of erosion-control matting, silt fences, straw bales, or other similar work. The operator may reseed treated areas of less than five acres as a component of this husbandry practice without restarting the bond responsibility period.

(XI) Removal of pipelines, small culverts, and small sediment control measures, such as traps, riprap, rock or straw bale check dams, small sediment ponds, and silt fences are considered normal husbandry practices. The operator may reseed treated areas of less than five acres as a component of this husbandry practice without restarting the bond responsibility period, provided the structures are reclaimed at least two years prior to the end of the bond responsibility period.

(N) The following actions have been administratively identified as those which qualify as routine land management activities; implementing these actions will not restart the bonding liability period:

(I) Installation and/or removal of power lines and substations;

(II) Installation and/or removal of fences;

(III) Installation and/or removal of any monitoring equipment or features;

(IV) Establishment and/or reclamation of two-track trails; and

(V) Emplacement and/or removal of above-ground pipelines.

(ii) Revegetation Success Standards

(A) Success standards vary by land use. Where standards for cover, production, and shrub density apply, they are quantitative and must be demonstrated to equal or exceed the success standards using methods and statistical analyses approved and published by the Administrator as required by OSM rules (CFR §816.116 (a)(1), August 30, 2006). Statistical analyses must use a 90-percent statistical confidence interval.

(B) Grazingland and Pastureland

(I) Revegetation shall be deemed to be complete when:
(1) the vegetation cover of the affected land is shown to be capable of renewing itself

under natural conditions prevailing at the site, and the absolute total vegetative cover is at least equal to the cover on the reference area or technical standard, (2) the annual herbaceous production is at least equal to the annual herbaceous production on the reference area or technical standard, (3) the species diversity and composition are suitable for the approved postmining land use, and (4) the requirements in (1), (2) and (3) are all met during the same two out of four years beginning no sooner than year seven of the bond responsibility period. Species diversity and composition suitable to the postmine land use must be demonstrated using methods approved by the Administrator. The following reference area type options are available:

(1.) The operator may choose to use control areas for lands where control areas were originally selected for revegetation success evaluation. Control areas will not be approved for new amendments or permits, after (date of rule approval

(2.) The operator shall choose one type of “Reference area” as defined in Chapter 1, Section 2(dl). The “Reference area” shall be approved by the Administrator.

(3.) The Administrator may set or approve quantitative technical success standards for cover and/or production based on data collected from undisturbed portions of the permit area or adjacent areas during a minimum of five independent sampling programs over a minimum of five years. The technical success standards may be approved for a single mine or a group of mines in the same geographical area.

(II) The shrub standard for grazingland shall include the postmining density, composition, and distribution of shrubs, and shall be based upon site-specific evaluation of premining vegetation and wildlife use. Shrub reclamation procedures shall be conducted through the application of best technology currently available as approved in the permit.

(1.) For lands affected between May 3, 1978 and August 6, 1996, a goal of a minimum of one shrub (full shrubs plus subshrubs) per square meter within a mosaic of shrub patches shall be restored using the best practicable technology. These shrub patches shall: cover a minimum of 10 percent of the postmining (affected area) landscape; be no smaller than 0.05 acres; and be arranged in a mosaic that will optimize interspersions and edge effect.

a. Acreage from permit-wide shrub goal mosaics that is in excess of the required acreage may be banked for credit toward shrub standard lands provided (1) the shrub goal requirement for all shrub goal lands is met, and (2) the methods used to evaluate the shrub goal lands meet the methods and statistical analyses required to achieve the shrub standard.

(2.) Except where a lesser density is justified from premining conditions in accordance with Appendix 4A of Chapter 4, at least 20 percent of the eligible lands shall be restored to shrub patches supporting an average density of one shrub per square meter. Patches shall be no less than 0.05 acres each and shall be arranged in a mosaic that will optimize habitat interspersion and edge effect. Criteria and procedures for establishing the standard are specified in Appendix 4A of Chapter 4. This standard shall apply to all lands affected after August 6, 1996. For bond release purposes, the average postmine total density and species specific density(ies) shall be at least 90 percent of the calculated criteria for the applicable standard.

a. The shrub density standard requires a statistical test using a 90% confidence interval to demonstrate achievement of the standard. The standard must be demonstrated for one year, the last year of the bond responsibility period. At least 80% of the shrubs shall have been planted for at least 60% of the ten-year bond responsibility period, and all planted shrubs shall have been in place for at least two years.

b. Approved shrub species and seeding techniques shall be applied to all remaining grazingland.

c. Shrub mosaic patches must pass the standard for shrub density, based on the shrub option chosen from Appendix 4A of Chapter 4. Shrub patches must also be included in the Sample Unit for evaluation of the standards for total absolute vegetative cover and species diversity and composition. Shrub patches are exempt from the production standard. The operator may change the selected shrub option during the bond responsibility period, if baseline data support the new shrub option, and subject to Administrator approval.

d. For areas designated as crucial or critical habitat, consultation and approval by the Wyoming Game and Fish Department shall be required for minimum stocking rates and planting arrangements of shrubs, including species composition. The approved shrub success standards shall be specified in the Reclamation Plan. Habitat shall be designated as crucial prior to the submittal of a permit application or any subsequent amendment. For areas determined to be important habitat, the Wyoming Game and Fish Department shall be consulted for recommended minimum stocking and planting arrangements of shrubs, including species composition, that may exceed the programmatic standard discussed above. Approval of shrub stocking plans by the Wyoming Game and Fish Department is not required for areas designated as important habitat.

(C) Cropland

(I) When the approved postmining land use is cropland, the reclaimed area shall be stabilized and revegetated to control erosion unless cropping shall immediately occur. The bond responsibility period shall begin the first

season a crop is planted.

(II) Reclamation shall be deemed complete when productive capability is equivalent to an approved reference area (Chapter 1 Section 2(dI)) or published county production data collected the same years the crops are harvested. This standard shall be demonstrated for the two out of four years of the bond responsibility period, starting no sooner than year seven.

(1.) When using a reference area comparison, the operator may choose a reference area under operator control or on a nearby property. The comparison may be made using production quadrats or total field harvest. Appropriate statistical tests will be used for quantitative production quadrat comparisons. Total field harvest comparisons do not require a statistical test. The Administrator shall approve the reference area.

(2.) When using county production data, the total field harvest will be used for a comparison. No statistical test will be required for this comparison.

(D) Fish and Wildlife Habitat. The operator shall gain approval from the Administrator and Wyoming Game and Fish for development of permit-specific performance standards for fish and/or wildlife habitat. These standards shall be stated in the reclamation plan. Specific information shall include:

(I) Which vegetation parameters are used in the standard (e.g. cover, shrubstocking, species diversity and composition);

(II) If shrub stocking is required, then the standards Section 2(d)(ii)(A)(II)(2.) (a.) of this chapter apply; and

(III) Indicate if the standards require a statistical test, a numerical comparison with no statistical test, or a qualitative comparison.

(E) Postmining Wetlands

(I) Reclamation plans for postmining mitigation wetlands shall be reviewed and approved by the Army Corps of Engineers and the Administrator and incorporated into the Land Quality Division permit. Wetland mitigation shall be considered successful when the Army Corps of Engineers determines that mitigation was successful.

(1.) The operator may create and receive success credit for up to 25 percent additional acreage over the Army Corps of Engineers' required mitigation acreage for each mitigation wetland type.

(2.) The minimum bond responsibility period for areas containing mitigation wetlands is ten years and no request for Phase 3 Incremental Bond release shall be made earlier than the last year of the bond responsibility period. A statement of successful mitigation from the Army Corps of Engineers shall be submitted by the operator to the Administrator as demonstration of successful mitigation. If successful mitigation is approved by the Army Corps of Engineers prior to the last year of the bond responsibility period, then the wetland will be evaluated as part of the surrounding area using the standards applied to that area.

(II) Reclamation plans and success standards for postmining enhancement wetlands shall be reviewed and approved by the Administrator and the Game and Fish Department as a type of wildlife habitat and incorporated into the Land Quality Division permit. The reclamation plan and success standards shall be determined by the postmining land use, and fish and wildlife habitat standards in Section 2(d)(ii)(C) of this chapter apply. The minimum bond liability period for enhancement wetlands is ten years and no demonstration of successful reclamation shall be made earlier than the last year of the bond responsibility period.

(F) Industrial, Commercial, and Residential. When the approved postmining land use is residential or industrial/commercial, the reclaimed area shall be stabilized and revegetated to control erosion unless development shall immediately occur.

(I) Industrial, commercial and residential areas may be released from area and all incremental bond costs as soon as the area is reclaimed to a condition that is ready for the approved land use. The exact criteria will vary with the postmine land use, and shall be specified in the approved Reclamation Plan.

(G) Developed water resource. For lands within the high water line of a developed water resource there are no revegetation reclamation standards.

(H) Recreational. The operator shall gain approval from the Administrator and the appropriate agency for development of permit-specific performance standards. The standards and the reclamation plan shall be included in the permit. If the reclamation plan includes stocking of trees or shrubs approved by Wyoming Game and Fish, then successful tree/shrub establishment must be demonstrated for one year, the last year of the bond responsibility period. At least 80% of the trees/shrubs shall have been planted for at least 60% of the last ten years of the bond responsibility period, and all planted trees/shrubs shall have been in place for at least two years.

(I) Forestry. Standards for the success of reforestation for commercial harvest shall be established in consultation with and approval from forest management agencies, prior to approval of any mining and reclamation plan that proposes reforestation. The quality and quantity of trees, and the cover of the understory

vegetation community shall be not less than that required to achieve the postmining landuse and shall be determined in accordance with scientifically acceptable sampling procedures approved by the Administrator. Successful tree establishment must be demonstrated for one year, the last year of the bond responsibility period. At least 80% of the trees shall have been planted for at least 60% of the last ten years of the bond responsibility period, and all planted trees shall have been in place for at least two years.

(J) Special Success Standards.

(I) For areas previously disturbed by mining and not reclaimed to the requirements of these regulations, the areas shall, at a minimum, be revegetated to a ground cover and productivity level existing before redisturbance and shall be adequate to control erosion.

(II) For lands and facilities that were affected prior to May 3, 1978, and continuously used by the mining operation since that date, the areas shall be reclaimed to the performance standards that were in effect in Rule and Regulation at the time of initial disturbance. At a minimum, the area must be revegetated to a ground cover adequate to control erosion.

(e) Diversion systems and drainage control.

(i) Diversion of streams.

(A) All diversions shall be designed to assure public safety, prevent material damage outside the permit area, and minimize adverse impacts to the hydrologic balance.

(B) All diversions and associated structures shall be designed, constructed, maintained and used to ensure stability, prevent, to the extent possible using best technology currently available, additional contribution of suspended solids to streamflow outside the permit area, and comply with all applicable local, State and Federal rules.

(C) Permanent diversions of intermittent and perennial streams shall be designed and constructed so as to be erosionally and geomorphically compatible with the natural drainage system.

(D) The design and construction of all diversions for perennial or intermittent streams shall be certified by a qualified registered professional engineer as meeting the diversion standards of these regulations and the approved permit.

(E) When permanent diversions are constructed or stream channels restored after temporary diversions, the operator shall:

(I) Restore, enhance where practicable, or maintain natural riparian vegetation on the banks and flood plain of the stream;

(II) Establish or restore the stream characteristics, including aquatic habitats to approximate premining stream channel characteristics; and

(III) Establish and restore erosionally stable stream channels and flood plains.

(F) The operator shall renovate all permanent diversions in accordance with the approved reclamation plan prior to abandonment of the permit area.

(G) When no longer needed to achieve the purpose for which they were authorized, all temporary diversions shall be removed and the affected land regraded and revegetated, in accordance with this Chapter. Before diversions are removed, downstream water treatment facilities previously protected by the diversion shall be modified or removed, as necessary, to prevent overtopping or failure of the facilities. This requirement shall not relieve the operator from maintaining water treatment facilities as otherwise required.

(ii) Control of discharge or drainage.

(A) Discharge from sedimentation ponds, permanent and temporary impoundments, coal-processing waste dams and embankments, and diversions shall be controlled, by energy dissipators, riprap channels, and other devices, where necessary, to reduce erosion, to prevent deepening or enlargement of stream channels, and to minimize disturbance of the hydrologic balance. Discharge structures shall be designed according to standard engineering design procedures.

(B) Drainage from acid-forming and toxic-forming material into ground and surface water shall be avoided by:

(I) Identifying, burying, and treating where necessary, material which, in the judgment of the Administrator may adversely affect water quality if not treated or buried;

(II) Preventing water from coming into contact with acid-forming and toxic-forming material and other measures as required by the Administrator; and

(III) Complying with the requirements of subsection (c)(xiii) of this Section and such other measures deemed necessary by the Administrator to protect surface water and groundwater.

(C) Surface water shall not be diverted or otherwise discharged

into underground mine workings unless specifically authorized by the Administrator per the requirements of Chapter 19, Section 2(a) of these regulations.

(iii) In addition to meeting the standards of this Section, all diversions of groundwater discharge flows shall meet the standards of Section 2(e).

(iv) Diversion systems - Unchannelized surface water and ephemeral streams.

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

(I) To control water pollution.

(II) To control unnecessary erosion.

(III) To protect the on-going operation.

(IV) To protect the water rights of downstream users.

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

(I) In soils or other unconsolidated material, the sides of diversion ditches shall be no steeper than 1½:1.

(II) In rock, the sides of diversion ditches shall not overhang.

(III) 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.

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

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

(VI) 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.

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

(D) 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.

(v) Diversion of intermittent and perennial streams.

(A) 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.

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

(C) 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.

(D) 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.

(E) Mining on the flood plain 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.

(F) 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.

(G) If temporary, the channel and flood plain shall be designed to pass, in a nonerosive manner, the 10-year, 6-hour precipitation event, or the capacity of the unmodified stream channel immediately above and below the diversion, whichever capacity is greater, 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.

(H) If permanent, the channel and flood plain shall be designed to pass, in a nonerosive manner, the 100-year, 6-hour precipitation event, 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.

(f) Sedimentation ponds.

(i) All surface drainage from affected lands excluding sedimentation ponds, diversion ditches, and road disturbances, shall pass through a sedimentation pond(s) before leaving the permit area. Sedimentation control devices shall be constructed prior to disturbance. The Administrator may grant exemptions to the use of sedimentation ponds where, by the use of alternative sediment control measures, the drainage will meet effluent limitation standards or will not degrade receiving waters.

(ii) Where the sedimentation pond(s) results in the mixing of drainage from affected lands with the drainage from undisturbed areas, the permittee shall comply with the applicable effluent limitation standards for all of the mixed drainage where it leaves the permit area.

(iii) Sedimentation ponds shall be designed and constructed to comply with the applicable requirements of subsection (g)(iv-vii) of this Chapter. They shall be located as near as possible to the affected lands and out of intermittent or perennial streams; unless approved by the Administrator.

(iv) Sedimentation ponds shall be operated and maintained to comply with the requirements of the Water Quality Division and the State Engineer's Office and satisfy the following requirements:

(A) Chemicals that will harm fish, wildlife, and related environmental values shall not be used for flocculation or other water treatments or if used these ponds will be protected.

(B) Sedimentation ponds shall be designed and maintained to contain adequate sediment storage as determined by acceptable empirical methods.

(C) Sluicing of collected sediments shall be prevented for the design precipitation event.

(D) All areas disturbed by the construction of the sedimentation pond shall be revegetated as soon as practicable to reduce erosion.

(v) The design, construction, and maintenance of a sedimentation pond or other sediment control measures in accordance with this subsection shall not relieve the operator from compliance with applicable effluent limitation standards of the Water Quality Division.

(vi) Sediment ponds shall be maintained until removal is authorized by the Division and the affected lands have been stabilized and initial vegetation established in accordance with the approved reclamation plan and the requirements of this Chapter. In no case shall sediment ponds treating reclaimed lands be removed sooner than two

years after the last augmented seeding.

(vii) Sediment control measures for affected lands. Appropriate sediment control measures shall be designed, constructed, and maintained using the best technology currently available to prevent additional contributions of sediment to streamflow or to runoff outside the affected land. Such measures may consist of limiting the extent of disturbed land and stabilizing, diverting, treating or otherwise controlling runoff.

(g) Permanent and temporary water impoundments.

(i) Permanent water impoundments are prohibited unless authorized by the Administrator on the basis that:

(A) The impoundment and its water quality and quantity will support or constitute a postmining use equal to or greater than the highest previous use of the land.

(B) Discharge of water, if any, from the impoundment shall not degrade the quality of receiving waters.

(C) The surface landowner, if different from the mineral owner, has consented to the impoundment.

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

(A) 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.

(B) 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.

(C) 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.

(D) 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.

(iii) The phrase "major impoundment" shall mean any structure

impounding water, sediment or slurry:

(A) To an elevation of 20 feet or more above the upstream toe to the crest of the emergency spillway; or

(B) To an elevation of five feet above the upstream toe of the structure and has a storage volume of 20 acre-feet or more; or

(C) Which will be retained as part of the postmining land use, and:

(I) Has an embankment height greater than 20 feet as measured from the downstream toe of the embankment to the top of the embankment; or

(II) Has an impounding capacity of 20 acre-feet or greater.

(iv) The design, construction and maintenance of permanent and temporary impoundments shall be approved by the State Engineer's Office. In addition, the following design and construction requirements shall be applicable:

(A) The design of impoundments shall be certified by a qualified registered professional engineer as designed to meet the requirements of this part and the applicable requirements of the State Engineer, using current, prudent engineering practices. For major impoundments, the certification also shall be filed with the State Engineer.

(B) The vertical portion of any remaining highwall shall be located far enough below the low water line along the full extent of highwall to provide adequate safety and access for the proposed water users.

(C) Faces of embankments and surrounding areas shall be vegetated, except that faces where water is impounded may be riprapped or otherwise stabilized in accordance with accepted design practices, or where appropriate, Water Quality Division rules and regulations.

(D) The embankment, foundation, and abutments for all impoundments shall be designed and constructed to be stable. For any major impoundment or any impoundment which may present a danger to life, property or the environment, the Administrator shall require sufficient foundation investigations and laboratory testing to demonstrate foundation stability, and shall require a minimum static safety factor of 1.5 for the normal pool with steady seepage saturation conditions, and a seismic safety factor of at least 1.2.

(E) All vegetative and organic materials shall be removed and

foundations excavated and prepared to resist failure. Cutoff trenches shall be installed if necessary to ensure stability.

(F) All impoundments shall be inspected regularly during construction and immediately after construction by a qualified registered professional engineer or qualified professional specialist under the direction of a qualified professional engineer. These individuals shall be experienced in impoundment construction. Immediately following each inspection a report shall be prepared and certified by the engineer describing the construction work observed and its conformance with the approved designs. All inspection reports shall be retained at the mine site and submitted in the annual report to the Administrator.

(G) After completion of construction and until final bond release or removal, all impoundments shall be inspected annually by a qualified registered professional engineer, or by a qualified professional specialist under the direction of the qualified professional engineer. These individuals shall be experienced in impoundment construction. Immediately following each inspection a report shall be prepared and certified by the engineer describing:

(I) Existing and required monitoring procedures and instrumentation;

(II) Depth and elevation of any impounded water;

(III) Existing storage capacity;

(IV) Aspects of the dam that may affect its stability or present any other hazardous condition; and

(V) If the impoundment is being maintained in accordance with the approved design and this Chapter. All annual inspection reports shall be retained at the mine site and annually submitted to the Administrator.

(H) In addition to the post-construction annual inspection requirements contained in paragraph (G) immediately above, all impoundments must be inspected during each of the intervening calendar quarters by a qualified individual designated by the operator. These inspections shall look for appearances of structural weakness and other hazardous conditions.

(I) Those impoundments subject to 30 CFR § 77.216 shall also be inspected in accordance with 30 CFR § 77.216-3.

(J) If any examination of inspection discloses that a potential hazard exists, the operator shall promptly inform the Administrator of the finding and of the emergency procedures formulated for public protection and remedial action. If

adequate procedures cannot be formulated or implemented the Administrator shall be notified immediately. The Administrator shall then notify the appropriate agencies that other emergency procedures are required to protect the public.

(K) Impoundments meeting the criteria of 30 CFR § 77.216(a) shall comply with the requirements of 30 CFR § 77.216. The plan required to be submitted to the District Manager of MSHA under 30 CFR § 77.216 shall also be submitted to the Administrator as part of the permit application.

(L) Impoundments shall include either a combination of principal and emergency spillways or a single open channel spillway designed to pass the design precipitation events discussed in subsection (v) below at non-erosive velocities.

(M) In lieu of meeting the requirements in section (L) above, the Administrator may approve a temporary impoundment that relies primarily on storage to control the runoff from the design precipitation event when it is demonstrated by the operator and certified by a qualified registered professional engineer or qualified registered professional land surveyor that the impoundment will safely control the design precipitation event, the water from which could be safely removed in accordance with current, prudent, engineering practices. Such an impoundment shall be located where failure would not be expected to cause loss of life or serious property damage.

(v) The design precipitation event for the spillways for temporary water impoundments shall be a 25-year, 6-hour precipitation event, or a storm duration having a greater peak flow, as may be required by the Administrator or as specified below:

(A) The design precipitation event for spillways on temporary impoundments which meet the criteria of 30 CFR § 77.216(a) shall be a 100-year, 6-hour precipitation event, or a storm duration having a greater peak flow, as may be required by the Administrator; and

(B) Temporary impoundments which meet the criteria of 30 CFR § 77.216(a) and that are intended to impound coal mine waste shall have sufficient spillway and/or storage capacity to safely pass or control runoff from the probable maximum precipitation of a 6-hour precipitation event, or a storm duration having a greater flow, as may be required by the Administrator.

(vi) The design precipitation event for the spillways for a permanent impoundment shall be a 100-year, 6-hour precipitation event, or a storm duration having a greater peak flow, as may be required by the Administrator.

(vii) Before abandoning an area or seeking bond release, the operator shall ensure that all temporary structures are removed and reclaimed, and that all permanent structures are renovated, if necessary to meet the requirements of this

subsection and to conform to the approved reclamation plan.

(viii) Tailings impoundments.

(A) Impoundments to contain mill tailings or slurry tailings shall be constructed in accordance with established engineering principles and shall be approved by the Wyoming State Engineer's Office. A copy of the State Engineer's approval shall be attached to the application.

(B) Reclamation of tailings impoundments shall be accomplished by removal and storage of all topsoil present within the tailings basin. After termination of operations, 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.

(h) Protection of Groundwater Recharge Capacity - The recharge capacity of the reclaimed lands shall be restored to a condition which:

(i) Supports the approved postmining land use;

(ii) Minimizes disturbances to the prevailing hydrologic balance in the permit area and in adjacent areas; and

(iii) Provides a rate of recharge that approximates the premining recharge rate.

(i) Surface water and groundwater quality and quantity shall be monitored until final bond release to determine the extent of the disturbance to the hydrologic balance. Monitoring shall be adequate to plan for modification of surface mining activities, if necessary, to minimize adverse affects on the water of the State. The operator is responsible for properly installing, operating, maintaining and removing all necessary monitoring equipment. In addition, the operator is responsible for conducting monitoring in accordance with the requirements of Chapter 2, Section 5(a)(xv) and the approved monitoring plan. Noncompliance results for NPDES discharges shall be promptly reported by the operator to the Water Quality Division Administrator. The operator shall promptly report all other noncompliance results to the Land Quality Division Administrator and shall, after consultation with the Administrator, implement appropriate and prompt mitigative measures for those noncompliance situations determined to be mining caused. The monitoring system shall be based on the results of the probable hydrologic consequences assessment and shall include:

(i) A groundwater monitoring program to determine:

(A) Infiltration rates, subsurface flows, and storage

characteristics of the reclaimed land and adjacent areas; and

(B) The effects of reclamation on the recharge capacity of the reclaimed lands.

(ii) A surface water monitoring program which includes monitoring of surface water flow and quality from affected lands including those that have been graded and stabilized. Results of the monitoring will be used to demonstrate that the quality and quantity of runoff from affected lands with or without treatment will minimize disturbance to the hydrologic balance. Water quality monitoring results for discharges other than those authorized by Water Quality Division shall be reported whenever results indicate noncompliance with effluent limitation standards or degradation of the quality of receiving water shall be reported immediately. Monitoring results shall be available for inspection at the mine site.

(j) Roads.

(i) Road classification system.

(A) Each road, as defined in Chapter 1, shall be classified as either a primary road or an ancillary road.

(B) A primary road is any road which is:

(I) Used for transporting mineral or spoil;

(II) Frequently used for access or other purposes for a period in excess of six months; or

(III) To be retained for an approved postmining land use.

(C) An ancillary road is any road not classified as a primary road.

(ii) General performance standards. Each road shall be located, designed, constructed, reconstructed, used, maintained and reclaimed so as to:

(A) Control or prevent erosion, siltation, and the air pollution attendant to erosion, including road dust as well as dust occurring on other exposed surfaces, by measures such as vegetating, watering, using chemical or other dust suppressants, or otherwise stabilizing all exposed surfaces in accordance with current, prudent engineering practices;

(B) Control or prevent damage to fish, wildlife, or their habitat and related environmental values;

(C) Control or prevent additional contributions of suspended solids to stream flow or runoff outside the permit area;

(D) Neither cause nor contribute to, directly or indirectly, the violation of State or Federal water quality standards applicable to receiving waters;

(E) The normal flow of water in streambeds and drainage channels shall not be seriously altered;

(F) Prevent or control damage to public or private property, including the prevention or mitigation of adverse effects on lands listed in Chapter 12, Section 1(a)(v)(A); and

(G) Use nonacid- and nontoxic-forming substances in road surfacing.

(iii) Design and construction limits and establishment of design criteria. To ensure environmental protection appropriate for their planned duration and use, including consideration of the type and size of equipment used, the design and construction or reconstruction of roads shall incorporate appropriate limits for grade, width, surface materials, surface drainage control, culvert placement, and culvert size, in accordance with current, prudent engineering practices.

(iv) Location.

(A) No part of any road shall be located in the channel of an ephemeral stream that has the potential for sufficient flow to cause substantial environmental harm unless a downstream sediment control structure exists within the permit boundaries, any intermittent stream channel or any perennial stream channel unless specifically approved by the Administrator in accordance with subsections 2(c), 2(e), 2(f), 2(h), 2(i), 2(r)(ii) and 2(w) of this Chapter and Section 2(a)(i) of Chapter 19.

(B) Roads shall be located to minimize downstream sedimentation and flooding.

(v) Maintenance.

(A) A road shall be maintained to meet the performance standards of this Chapter.

(B) A road damaged by a catastrophic event, such as a flood or earthquake, shall be repaired as soon as is practicable after the damage has occurred.

(vi) Reclamation. A road not to be retained under an approved

postmining land use shall be reclaimed in accordance with the approved reclamation plan as soon as practicable after it is no longer needed for mining and reclamation operations. This reclamation shall include:

- (A) Closing the road to traffic;
- (B) Removing all bridges unless approved as part of the postmining land use and removing all culverts unless approved as part of the postmining land use or approved for burial in place;
- (C) Removing or otherwise disposing of road-surfacing materials that are incompatible with the postmining land use and revegetation requirements;
- (D) Reshaping cut-and-fill slopes as necessary to be compatible with the postmining land use and to complement the natural drainage pattern of the surrounding terrain;
- (E) Protecting the natural drainage patterns by installing dikes or cross drains as necessary to control surface runoff and erosion; and
- (F) Scarifying or ripping the roadbed, replacing topsoil, subsoil or substitute material and revegetating disturbed surfaces in accordance with subsections 2(c)(i) through 2(c)(x) and 2(d) of this Chapter.

(vii) Primary roads.

(A) Certification. The construction or reconstruction of primary roads shall be certified in a report to the Administrator by a registered professional engineer. The report shall indicate that the primary road has been constructed or reconstructed as designed and in accordance with the approved plan. The report shall be available for review at the mine site within 30 days following the completion of construction of each primary road.

(B) Each primary road embankment shall have a minimum static safety factor of 1.3 or meet the requirements established under Chapter 2, Section 5(a)(xvi)(B).

(C) Location.

(I) To minimize erosion, a primary road shall be located, insofar as is practicable, on the most stable available surface.

(II) Fords of intermittent or perennial streams by primary roads are prohibited unless they are specifically approved by the Administrator

as temporary routes during periods of road construction.

(D) Drainage control. In accordance with the approved plan:

(I) Each primary road shall be constructed or reconstructed and maintained to have adequate drainage control, using structures such as, but not limited to, bridges, ditches, cross drains, and ditch relief drains. The drainage control system shall be designed to safely pass the peak runoff from a 10-year, 6-hour precipitation event, or greater event as specified by the Administrator;

(II) Drainage pipes and culverts shall be installed as designed, and maintained in a free and operating condition and to prevent or control erosion at inlets and outlets;

(III) Drainage ditches shall be constructed and maintained to prevent uncontrolled drainage over the road surface and embankment;

(IV) Culverts shall be installed, and maintained to sustain the vertical soil pressure, passive resistance of the foundation, and the weight of vehicles using the road;

(V) Natural stream channels shall not be altered or relocated without the prior approval of the Administrator in accordance with applicable Sections 2(c), 2(e), 2(f), 2(h), 2(i), 2(r)(ii) and 2(w) of this Chapter and Section 2(a)(i) of Chapter 19; and

(VI) Except as provided in (vii)(C)(II) of this section, structures for channel crossings of ephemeral streams that have the potential for sufficient flow to cause substantial environmental harm unless a downstream sediment control structure exists within the permit boundaries, any intermittent stream or any perennial stream shall be made using bridges, culverts, low-water crossings or other structures designed, constructed, and maintained using current, prudent engineering practices. The Administrator shall ensure that low-water crossings are designed, constructed and maintained to prevent erosion of the structure or streambed and additional contributions of suspended solids to streamflow.

(E) Surfacing: Primary roads shall be surfaced with material approved by the Administrator as being sufficiently durable for the anticipated volume of traffic and weight and speed of vehicles using the road.

(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.

(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 reseeding;

(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.

(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.

(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.

(m) Disposal of mine facilities.

(i) All mine facilities constructed, used or improved by the operator must be removed or dismantled and shall be reclaimed in accordance with the requirements of this Chapter when no longer needed for the operation 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 mine facilities, the operator must obtain the written consent of the surface landowner to leave the mine facilities intact. The operator must make a request in writing, providing written proof of the above to the Land Quality Division, that the mine facilities be permitted to remain intact.

(n) Mine Facilities.

(i) Mine facilities shall be operated in accordance with the permit issued for the mine or coal preparation operation to which it is incident or from which its operation results.

(ii) In addition to the other provisions of this Chapter, mine facilities shall be located, maintained, and used in a manner that:

(A) Prevents or controls erosion and siltation, water pollution, and damage to public or private property;

(B) To the extent possible using the best technology currently available;

(1.) Minimizes damage to fish, wildlife, and related environmental values; and

(2.) Minimizes additional contributions of suspended solids to streamflow or runoff outside the permit area. Any such contributions shall not be in excess of limitations of State or Federal law.

(o) Signs and markers. Uniform and durable signs and markers of an adequate size shall be posted by the operator at those points applicable to the areas or activities to which they pertain. Such signs and markers shall include mine and permit identification signs, perimeter markers, buffer zone markers, blasting signs and soil markers. The operator shall place and maintain all signs and markers prior to commencement and until the completion of the activities to which they pertain, which, for mine and permit identification signs, shall be at the time the bond is released.

(p) Drilled holes and other exposed underground openings: Plugging, sealing and capping of all drilled holes except those used solely for blasting or developmental drill holes which will be mined through within one year shall meet the requirements of Chapter 14. Developmental drilling shall meet the plugging and sealing requirements of W.S. § 35-11-404, where necessary. Temporary sealing and use of protective devices may be approved by the Administrator if the hole will be used for returning coal-processing waste or water to underground workings or monitoring groundwater conditions, and shall be used, at a minimum, for developmental drilling. Other exposed underground openings shall be properly managed as required by the Administrator to prevent access to mine workings and to keep acid or other toxic drainage from entering ground or surface water.

(i) With the prior approval of the Administrator and the State Engineer, wells may be transferred to another party for further use. The permittee shall remain responsible for the proper management of the well until final bond release.

(q) Air resources protection. All exposed surface areas shall be protected and stabilized to effectively control erosion and air pollution attendant to erosion.

(r) Fish and wildlife performance standards.

(i) An operator shall, to the extent possible using the best technology currently available and consistent with the approved postmining land use, minimize disturbance and adverse impacts on fish, wildlife, and related environmental values, and achieve enhancement of such resources where practicable, which activities shall include:

(A) Properly construct, locate and operate roads and powerlines, including proper design of powerlines to avoid electrocution of raptors.

(B) Prevent access to areas such as roadways or ponds with hazardous materials, to avoid damage to wildlife without limiting access to known important routes.

(C) Afford protection, restore and enhance where practicable important habitats to fish and wildlife. This shall include, but is not limited to, wetlands and riparian vegetation along rivers and streams and bordering ponds and lakes.

(D) Select plant species with shrubs well represented, which will enhance the nutritional and cover aspects of fish and wildlife habitat, where such habitat is identified as part of the postmining use, and distribute the reestablished habitat in a manner which includes a diversity and interspersion of habitats, optimizes edge effect, cover and other benefits for fish and wildlife, and is consistent with Section 2(d)(x)(E).

(E) Promptly report to the regulatory authority any species or critical habitat of such species listed as threatened or endangered, or any golden or bald eagle nest in or adjacent to the permit area, which was not reported or investigated in the permit application. Upon notification the Administrator shall consult with the Wyoming Game and Fish Department and the U.S. Fish and Wildlife Service and, after consultation, shall identify whether and under what conditions the operator may proceed.

(F) Where the postmining land use is for cropland, to the extent not inconsistent with this intended use, operators shall restore habitat types to break up large blocks of monocultures.

(ii) Stream buffer zone.

(A) No land within 100 feet of a perennial or intermittent stream shall be affected unless the Administrator specifically authorizes such activities closer to or through such a stream upon a finding that:

(I) Surface mining activities will not cause or contribute to the violation of applicable state or federal water quality standards, and will

not adversely affect the water quantity and quality or other environmental resources of the stream; and

(II) If there will be a temporary or permanent stream-channel diversion, it will comply with all stream diversion requirements.

(B) The area not to be affected shall be designated a buffer zone, marked in the field and on the mine plan map.

(iii) No surface mining activity shall be conducted which is likely to jeopardize the continued existence of endangered or threatened species listed by the State or the Secretary of the Interior or which will result in the destruction or adverse modification of designated critical habitats of such species in violation of the Endangered Species Act (16 U.S.C. 1531 et seq.). No surface mining activity shall be conducted in a manner which would result in the unlawful taking of a bald or golden eagle, its nest, or any of its eggs. The Administrator shall consult with the State and Federal Fish and Wildlife Agencies to identify whether and under what conditions the operation may continue under this provision.

(iv) The operator shall perform periodic surveys, in the level of detail and for those areas as determined by the Administrator, in accordance with Appendix B of these rules and regulations.

(s) Slides and other damage. Where instability may exist in backfill materials, an undisturbed natural barrier shall be provided to prevent slides and erosion, beginning at the elevation of the lowest coal seam to be mined and extending from the outslope for such distance as may be determined by the Administrator.

(t) Only those operations designed to protect disturbed surface areas and which result in improved resource recovery, abatement of water pollution, or elimination of hazards to the public shall be conducted within 500 feet of an active or abandoned underground mine. Approval for such operation shall be obtained from MSHA for operations proposed to be conducted within 500 feet of an active underground mine. The Administrator shall specifically approve operations proposed to be conducted within 500 feet of an abandoned underground mine.

(u) Cessation of operations. When it is known that a temporary cessation of operations will extend beyond 30 days, the operator shall submit to the Administrator that information required in an annual report.

(v) The operator shall conduct operations so as to maximize the utilization and conservation of the solid fuel resource being recovered so that re-affecting the land in the future can be minimized.

(w) The operator shall conduct all operations in such a manner as to minimize

disturbance of the hydrologic balance within the permit and adjacent areas, to prevent material damage to the hydrologic balance outside the permit area, to assure the protection or replacement of water rights, and to support approved postmining land uses in accordance with the terms and conditions of the approved permit and the performance standards of this Chapter. The Administrator may require additional preventative, remedial, or monitoring measures to assure that material damage to the hydrologic balance outside the permit area is prevented. Mining and reclamation practices that minimize water pollution and changes in flow shall be used in preference to water treatment.

(x) Utility installations which are not part of the surface coal mining operation. All operations shall be conducted in a manner which minimizes damage, destruction, or disruption of services provided by oil, gas, and water wells; oil, gas, and coal-slurry pipelines; railroads; electric and telephone lines; and water and sewage lines which pass over, under or through the permit area, unless otherwise approved by the Administrator or owner of the utility installation.

DEPARTMENT OF ENVIRONMENTAL QUALITY

LAND QUALITY DIVISION

CHAPTER 7

UNDERGROUND COAL MINING

Section 1. Underground Coal 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, Section 1, applications for a permit for underground coal mining operations shall contain all information required by Chapter 2, except Section 5(a)(ix)(C), (E) and (xi), and as limited below:

(i) Information required on soils, vegetation, archaeology, fish and wildlife resources, topography, geology, and mineral deposits shall be limited to those areas affected by surface operations or subsidence. Information required on surface water shall be limited to the immediate drainage area of those lands affected by surface operations or subsidence. Information required for the geological description pursuant to Chapter 2, Section 4(a)(viii) shall be as follows:

(A) For areas where surface operations and facilities will cause removal of overburden down to the level of the coal seam (this does not include test boring and core sampling areas), all information outline in Chapter 2, Section 4(a)(viii);

(B) For all other areas, all information outlined in Chapter 2, Section 4(a)(viii), except that the information called for in paragraph (C) is restricted to the strata immediately overlying and underlying the coal seam(s) to be mined; and

(C) For areas where room-and-pillar operations are proposed, information on the thickness and engineering properties of clays or soft rock, if any, in the mined coal overlying and underlying strata.

(ii) The pre-application investigation to determine whether lands may be prime farmland shall be limited to the area proposed to be affected by surface operations or subsidence.

(iii) A narrative description of the construction, modification, use, maintenance, and removal of mine development waste.

(iv) A detailed description, with appropriate drawings of permanent entry seals and downslope barriers designed to ensure stability under anticipated hydraulic heads

within the mine workings, or measures to prevent or control gravity discharges of water.

(v) Information and evaluations on the potential for and the extent of subsidence, and the effect it may have on structures, the continued use of the surface land and aquifers or recharge areas. Such information shall include a map of all underground workings showing areas of planned and potential subsidence. If the Administrator determines that subsidence may cause material damage to the reasonably foreseeable use of structures, the land surface or groundwater, a subsidence control plan shall be developed and shall include:

(A) A description of the mining methods;

(B) Extent and effect of any planned and controlled subsidence;

(C) Except for areas where planned subsidence is projected to be used, measures to be taken in the mine to prevent or minimize subsidence, including backfilling of voids and leaving areas in which no coal is removed; and

(D) Measures to be taken to prevent, lessen, or mitigate material damage or loss of value to property, including reinforcement, relocation, restoration, or replacement of structures and features; monitoring; and purchase of property or insurance. The manner of determining the degree of material damage or loss of value of property shall be described.

(vi) A description including detailed maps and cross-sections for the location, design and construction of surface entries and access to underground workings including ventilation shafts.

(vii) A detailed reclamation plan which shall demonstrate that reclamation shall be accomplished in accordance with Section 2 of this Chapter.

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 4, 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 4 shall apply to underground mining operations.

(b) Performance standards applicable to underground coal mining operations:

(i) Underground development waste and excess spoil shall be disposed of in accordance with Chapter 4, Section 2(c).

(ii) Surface entries and accesses to underground workings, including adits and slopes, shall be located, designed, constructed, and utilized to prevent or control gravity discharge of water from the mine in excess of State or Federal water quality standards.

(iii) Underground mining activities shall be planned and conducted so as to prevent subsidence from causing material damage to structures, the land surface, and groundwater resources.

(iv) Underground mining shall not be conducted beneath or adjacent to any park, cemetery, public building, facility (churches, schools, hospitals, etc.), or body of water with a volume of 20 acre-feet or more, unless the Administrator approves otherwise on the basis of detailed subsurface information demonstrating that subsidence will not cause material damage or reduce the reasonably foreseeable use of the feature or facility.

(v) Underground mining activities beneath any aquifer that serves as a source of water for public drinking, domestic, industrial or agricultural use should be conducted so as to avoid disruption of the aquifer and consequent exchange of groundwater between the aquifer and other strata. The Administrator may prohibit mining in the vicinity of the aquifer or may limit extraction to protect the aquifer and water supply.

(vi) The Administrator shall suspend underground mining under urbanized areas, cities, towns and communities, and adjacent to industrial or commercial buildings, major impoundments or permanent streams, if imminent danger is found to inhabitants of the urbanized areas, cities, towns, or communities or material damage is threatened to the urbanized areas, cities, towns or communities.

(vii) All applicable regulations contained in the Act and Chapter 4, Section 2 shall apply to underground coal mining operations. The approximate original contour requirements of Section 2(b) may be waived in situations where settled surface disturbances have become stabilized and revegetated.

(viii) The performance standards contained in the Act and Chapter 5 shall apply to underground mining operations, excluding Section 1 for areas that will be actively used over extended periods and which affect a minimal amount of land.

(ix) Noncoal mine waste shall be managed in accordance with Chapter 4, Section 2(c).

(c) The operator of an underground coal mining operation shall submit a plan of underground workings pursuant to a schedule approved by the Administrator. The plan shall include maps and descriptions of significant features of the underground mine, extraction ratios, measures taken to prevent or minimize subsidence and related damage, areas of full extraction and other information, as required by the Administrator.

Section 3. **Public Notice.**

(a) The public notice required pursuant to W.S. § 35-11-406(j) shall include the following additional information for proposed underground coal mining operations:

(i) Dates when the underground mining activities could cause subsidence and affect specific structures; and

(ii) Any proposed measures which may be taken to prevent or control adverse surface effects.

(b) The applicant shall send a notice to owners and occupants of surface property or structures within the area covered under the term of the permit.

(c) The information required by (a) may be submitted at a later date if approved by the Administrator. Any late submittal shall occur at least six months prior to mining.

Section 4. **Surface Owner Protection.**

(a) Each operator who conducts underground coal mining activities shall:

(i) Correct any material damage resulting from subsidence caused to surface lands by restoring the land to a condition capable of maintaining the value and reasonably foreseeable uses which it was capable of supporting before subsidence; and

(ii) Either correct material damage resulting from subsidence caused to any structures or facilities by repairing the damage or compensate the owner of such structures or facilities in the full amount of the reduction in value resulting from the

subsidence. Repair of damage includes rehabilitation, restoration, or replacement of damaged structures or facilities.

DEPARTMENT OF ENVIRONMENTAL QUALITY

LAND QUALITY DIVISION

CHAPTER 10

COAL EXPLORATION

Section 1. General Requirements: Exploration of 250 Tons or Less

(a) Any person who intends to conduct coal exploration outside a permit area during which 250 tons or less of coal will be removed in the area to be explored shall, before conducting the exploration, file with the Administrator a notice of intent to explore.

(b) The notice shall include:

(i) The person's name, address, and telephone number.

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

(iii) A narrative describing the proposed exploration area and a map at a scale of 1:24,000, or greater, showing the proposed area of exploration and the general location of drill holes and trenches, existing and proposed roads, occupied dwellings, topographic features, bodies of surface water, and pipelines. This description shall clearly describe the areas to be disturbed as well as the natural and man-made features in and immediately around the exploration area.

(iv) A statement of the period of the proposed exploration.

(v) A description of the method of exploration to be used and the practices proposed to protect the environment and reclaim the area, including those necessary to comply with Section 4 of this Chapter.

Section 2. General Requirements: Exploration of More than 250 Tons or in an Area Designated as Unsuitable.

(a) Any person who intends to conduct coal exploration outside a permit area during which more than 250 tons of coal will be removed in the area to be explored or which will take place on lands designated as unsuitable for surface mining under Chapter 17 and those protected under Chapter 12, Section 1(a)(v) shall, before conducting the exploration, file with the Administrator and obtain approval for an application for a coal mine exploration license.

- (b) The application shall include at a minimum, the following information:
- (i) The applicant's name, address, and telephone number.
 - (ii) The name, address and telephone number of the applicant's representative who will be present at, and responsible for, conducting the exploration activities.
 - (iii) A narrative describing the proposed exploration area.
 - (iv) A narrative description of the methods and equipment to be used to conduct the exploration and reclamation.
 - (v) An estimated timetable for conducting and completing each phase of the exploration and reclamation.
 - (vi) The estimated amount of coal to be removed, a description of the methods to be used to determine the amount, and a statement of why extraction of more than 250 tons of coal is necessary for exploration.
 - (vii) A description of historic or cultural features or resources listed or known to be eligible for listing on the National Register of Historic Places. This shall include a detailed description of all archeological and historic resources located within the areas to be directly affected by the proposed exploration activities. This shall also include any other information which the Administrator may require regarding known or possible historic or archeological resources.
 - (viii) A description of any endangered or threatened species listed pursuant to the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq.) identified within the proposed exploration area.
 - (ix) A description of the measures to be used to comply with Section 4 of this Chapter.
 - (x) The name and address of the owner of record of the surface land and of the subsurface mineral estate of the area to be explored.
 - (xi) A map(s) at a scale of 1:24,000 or larger, showing the areas of land to be disturbed by the proposed exploration and reclamation. The map shall specifically show existing roads, occupied dwellings, topographic and drainage features, bodies of surface water, and pipelines; proposed locations of trenches, roads, and other access routes and structures to be constructed; the location of proposed land excavations; the location of exploration holes or other drill holes or underground openings; the location of excavated earth or waste material disposal areas; and the location of critical habitats of any endangered

or threatened species listed pursuant to the Endangered Species Act.

(xii) If the surface is owned by a person other than the applicant, a description of the basis upon which the applicant claims the right to enter the area for the purpose of conducting the exploration and reclamation.

(xiii) For any lands listed under Chapter 12, Section 1(a)(v) of the Division's Coal Rules and Regulations, a demonstration that to the extent technologically and economically feasible, the proposed exploration activities have been designed to minimize interference with the values for which those lands were designated as unsuitable for surface coal mining operations. The application shall include documentation of consultation with the owner of the feature causing the land to come under the protection of Chapter 12, Section 1(a)(v), and, when applicable, with the agency with primary jurisdiction over the feature with respect to the values that caused the land to come under the protection of Chapter 12, Section 1(a)(v).

(c) Within 30 days after submittal of an application for a license to explore under this Section, the Administrator will notify the applicant whether the application is complete. Upon a determination that the application is administratively complete, the Administrator shall require the applicant to publish a notice of filing in a newspaper of general circulation in the county of the proposed exploration area. The notice shall state the name and address of the person seeking approval, the filing date of the application, the address where written comments on the application may be submitted, the closing date of the comment period, and a description of the area of exploration. Any person having an interest which is or may be adversely affected shall have the right to file written comments on the application within 30 days from the date of publication.

Section 3. Approval of Applications for Exploration of More than 250 Tons or in an Area Designated as Unsuitable for Surface Coal Mining Operations.

(a) No later than 40 days after newspaper publication, the Administrator shall notify the applicant, any appropriate government agencies and other commenters, in writing of his intention to approve the application, or if he has denied it. If the application is denied, the notice shall include a statement of the reasons for denial. A copy of the notice shall also be posted at the district office covering the area for the proposed exploration.

(b) Any person having an interest which is or may be adversely affected by the decision of the Administrator shall have the right to file written objections to the application within 30 days after the notification. Such persons shall have the opportunity for administrative and judicial review as outlined in W.S. § 35-11-406(k). The final decision, to issue or deny the license, shall be done in accordance with W.S. § 35-11-406(p). If there are no objections, the Administrator shall promptly approve and issue the license in accordance with (c) immediately below.

(c) The Administrator shall approve a complete application and issue the license only if he finds in writing that the exploration and reclamation:

(i) Will be conducted in accordance with Section 4 of this Chapter;

(ii) Will not jeopardize the continued existence of an endangered or threatened species list pursuant to Section 4 of the Endangered Species Act of 1973 (16 U.S.C. 1533) or result in the destruction or adverse modification of critical habitat of those species; and

(iii) Will not adversely affect any cultural or historical resources listed on the National Register of Historic Places, pursuant to the National Historic Preservation Act, as amended, unless the proposed exploration has been approved by the Administrator and the agency with jurisdiction over such matters.

(iv) With respect to exploration activities on any lands protected under Chapter 12, Section 1(a)(v) of the Division's Coal Rules and Regulations, minimize interference, to the extent technologically or economically feasible, with the values for which those lands were designated as unsuitable for surface coal mining operations. Before making this finding, the Administrator shall provide reasonable opportunity to the owner of the feature causing the land to come under the protection of Chapter 12, Section 1(a)(v), and, when applicable, to the agency with primary jurisdiction over the feature with respect to the values that caused the land to come under the protection of Chapter 12, Section 1(a)(v), to comment on whether the finding is appropriate.

Section 4. Exploration and Reclamation Performance Standards.

(a) Any person who conducts coal exploration operations which substantially disturb the natural land surface shall minimize environmental damage to the area by complying with the requirements of this Section.

(b) Backfilling, regrading and recontouring shall be conducted as is necessary to promptly return the affected land to its approximate original contour.

(c) Topsoil removal, storage and redistribution practices shall be used, including those measures designed to assure successful revegetation.

(d) Revegetation shall be conducted by seeding or planting to the same seasonal variety native to the areas disturbed, so as to encourage stabilization of the affected land and prompt recovery of a diverse, effective and permanent vegetative cover.

(e) Critical habitats of threatened or endangered species identified pursuant to the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq.) shall not be disturbed during coal exploration. Crucial or important habitat for wildlife shall not be disturbed during coal

exploration unless written evidence of consultation with the Wyoming Game and Fish Department and any resulting recommendations are submitted to the Administrator as part of either a coal exploration license or notice of intent to explore application.

- (f) Diversions shall be made in accordance with Chapter 4, Section 2.
- (g) All drill holes shall meet the requirements of Section 3, Chapter 14, Land Quality Rules and Regulations.
- (h) Vehicular travel and road construction, maintenance and reclamation shall meet the requirements of Section 2, Chapter 4, Land Quality Rules and Regulations.
- (i) Toxic or acid-forming materials shall be handled and disposed of in accordance with Section 2(c), Chapter 4, Land Quality Rules and Regulations.
- (j) Activities shall be conducted to minimize disturbance to the prevailing hydrologic balance, including, at a minimum, sediment control measures or sedimentation ponds, which comply with Chapter 4, Section 2(e)(ii)(A) and Chapter 4, Section 2(f).
- (k) Facility removal shall be conducted in accordance with Chapter 4, Section 2(m).

Section 5. Additional Requirements.

Where the proposed coal exploration activity falls within that activity described as exploration by dozing or exploration by drilling, any requirements imposed by the Act or the regulations which may be additional to the above described requirements, including the bonding requirement, may be applicable to the proposed operation. The Administrator shall make a determination, on a case-by-case basis, as to whether any additional requirements shall be imposed.

Section 6. Public Availability of Information.

- (a) Except for trade secrets, as defined in Chapter 1, Section 2, Land Quality Rules and Regulations, all information submitted under this Chapter shall be made available for public inspection and copying at the Land Quality Division of the Department of Environmental Quality. For confidentiality, the person submitting the information must request in writing that it be kept confidential and that it meets the requirements for "trade secrets."
- (b) Information requested to be held confidential shall not be made publicly available until after notice and opportunity to be heard is afforded persons both seeking and opposing disclosure of the information.

Section 7. Existing Operations.

The exploration and reclamation performance standards contained in Section 5 shall apply to all coal exploration operations which substantially disturb the natural land surface two months after final approval of a State program pursuant to Section 503 of P.L. 95-87.

Section 8. Commercial Use or Sale of Coal Extracted under a Coal Exploration License.

(a) Except as provided under subparagraph (b) below, any person who intends to commercially use or sell coal extracted during coal exploration operations under an exploration license, shall first obtain a permit to conduct surface coal mining operations for those operations.

(b) With the prior written approval of the Administrator, no permit to conduct surface coal mining operations is required for the sale or commercial use of coal extracted during exploration operations if such sale or commercial use is for coal testing purposes only. The person conducting the exploration shall file an application for such approval with the Administrator. The application shall demonstrate that the coal testing is necessary for the development of a surface coal mining and reclamation operation for which a surface coal mining operations permit application is to be submitted in the near future, and that the proposed commercial use or sale of coal extracted during exploration operations is solely for the purpose of testing the coal. The application shall contain the following:

(i) The name of the testing firm and the locations at which the coal will be tested.

(ii) If the coal will be sold directly to, or commercially used directly by, the intended end user, a statement from the intended end user, or if the coal is sold indirectly to the intended end user through an agent or broker, a statement from the agent or broker. The statement shall include:

(A) The specific reason for the test, including why the coal may be so different from the intended user's other coal supplies as to require testing;

(B) The amount of coal necessary for the test and why a lesser amount is not sufficient; and

(C) A description of the specific tests that will be conducted.

(iii) Evidence that sufficient reserves of coal are available to the person conducting exploration or its principals for future commercial use or sale to the intended end user, or agent or broker of such user identified above, to demonstrate that the amount of coal to be removed is not the total reserve, but is a sampling of a larger reserve.

(iv) An explanation as to why other means of exploration, such as core drilling, are not adequate to determine the quality of the coal and/or the feasibility of developing a surface coal mining operation.

DEPARTMENT OF ENVIRONMENTAL QUALITY

LAND QUALITY DIVISION

CHAPTER 12

PROCEDURES APPLICABLE TO SURFACE COAL MINING OPERATIONS

Section 1. **Permitting Procedures.**

(a) In addition to the permitting procedures described in the Act, the following shall be applicable to applications for a permit for a surface coal mine operation:

(i) For the purposes of alluvial valley floors, prior to determining that an application is suitable for publication in accordance with W.S. § 35-11-406(j) and upon the basis of sufficient information, the Administrator shall make a determination in writing as to the existence and extent of an alluvial valley floor within the permit area or on adjacent areas where the mining operation may affect surface water or groundwater that supply an alluvial valley floor unless the preapplication determination in Chapter 3, Section 2(a) has already been made. Any preapplication determination and all information submitted for this determination shall be included in the permit application and shall be available for public notice, opportunity for comment and any conference or hearing. The Administrator shall determine that an alluvial valley floor exists when, in accordance with W.S. § 35-11-103(e)(xviii), it is found that:

(A) Unconsolidated streamlaid deposits holding streams are present; and

(B) There is sufficient water to support subirrigation or flood irrigation agricultural activities.

(ii) The public notice required by W.S. § 35-11-406(j) shall:

(A) Contain detailed information which identifies a USGS map(s) and appropriate landmarks locating and allowing local residents to readily identify the proposed permit area.

(B) Be sent by the Administrator to Federal, State, and local governmental agencies, including planning agencies, with jurisdiction over or an interest in the proposed operation or permit area, and local sewage and water treatment authorities. At a minimum this shall include the U.S. Department of Agriculture Soil Conservation Service District office, the local U.S. Army Corps of Engineers District Engineer, the National Park Service if NPS lands are adjacent, State and Federal fish and wildlife agencies, and the State Historic Preservation Officer. Such entities and any person who filed a comment or objection

shall also receive the final decision on the application. In addition, the Administrator will publish a summary of his decision in a newspaper of general circulation in the general area of the proposed operation.

(iii) Any subsequent revision of the application, or objections or comments to the application, shall be filed in the offices of the county clerks of the counties in which the proposed permit area is located. Copies of comments and objections shall also be transmitted to the applicant.

(iv) In addition to the specific findings required by W.S. § 35-11-406(n), no permit shall be approved unless the Administrator also finds in writing that:

(A) The proposed operation will not be inconsistent with other surface coal mining and reclamation operations proposed or contemplated in pending or approved mining permits;

(B) The effect of the proposed operation on properties listed on and properties eligible for listing on the National Register of Historic Places has been taken into account; and

(I) Mining has been prohibited within 100 feet of any such properties by permit condition; or

(II) The applicant has provided for the protection of such properties in the approved mining and reclamation plan; or

(III) The Administrator has determined, in consultation with the State Historic Preservation Officer, that no additional protection measures are necessary.

(v) The criteria contained in W.S. § 35-11-406(n)(iv) regarding Section 522(e) of P.L. 95-87 shall mean that, prior to approval of any complete application for a surface coal mining permit, the applicant must demonstrate and the Administrator determine, utilizing the assistance of the appropriate Federal, State or local government agency, if necessary, that the application does not propose a surface coal mining operation on those lands where such operation is prohibited or limited by Section 522(e) of P.L. 95-87; or if one is so proposed, that the applicant either has valid existing rights or was conducting a surface coal mining operation on those lands on August 3, 1977. Subject to the above stated limitations, surface coal mining operations are prohibited or limited:

(A) On any lands within the boundaries of the National Park System, the National Wildlife Refuge System, the National System of Trails, the National Wilderness Preservation System, the Wild and Scenic Rivers System, including study rivers designated under Section 5(a) of the Wild and Scenic Rivers Act or study rivers or study river corridors as established in any guidelines pursuant to that Act and National Recreation

Areas designated by Act of Congress;

(B) On any federal lands within the boundaries of any national forest unless the applicant demonstrates compliance with 30 CFR §761.11(b) and submits a finding by the Secretary in his favor using the procedures at 30 C.F.R. §761.13 (2009) (<http://www.gpoaccess.gov/cfr/retrieve.html>);

(C) On any lands where mining will adversely affect any publicly owned park or any properties listed on and any properties eligible for listing on the National Register of Historic Places, unless jointly approved by the Administrator and the Federal, State or local agency with jurisdiction over the park or place;

(D) Within 100 feet, measured horizontally, of the outside right-of-way line of any public road, except where mine primary roads join such right-of-way line. Provided, however, the Administrator may specifically authorize operations where the road is to be relocated, closed, or where the area affected lies within 100 feet of a public road. Such specific authorization shall follow notice and an opportunity for public hearing in the locality of the proposed operation together with a written finding on whether the interests of the public and the affected landowners will be protected from the proposed operation. If a hearing is requested, a public notice shall be published at least two weeks prior to the hearing in a local newspaper of general circulation. If a hearing is held, the authority shall make this finding within 30 days after the hearing or if a hearing is not held the authority must make this finding within 30 days after the end of the public comment period. The Administrator may rely upon findings of the public road authority with jurisdiction over the road in specifically authorizing road relocations or closures;

(E) Within 300 feet from any occupied dwelling except when the owner has provided a written waiver consenting to operations within a closer distance, clarifying that the owner and signator had the legal right to deny mining and knowingly waived that right. Such a waiver shall remain effective, regardless of when it was obtained, against subsequent purchasers who had actual or constructive knowledge of the existing waiver at the time of purchase. Subsequent purchasers shall be deemed to have constructive knowledge if the waiver has been properly filed in the public property records or if the mining has proceeded to within the 300-foot limit prior to the date of purchase;

(F) Within 300 feet, measured horizontally, of any public building, school, church, community, or institutional building, or public park; or

(G) Within 100 feet, measured horizontally, of a cemetery.

(vi) For Federal lands described in subsections (v)(A) and (v)(B) above the Office of Surface Mining Reclamation and Enforcement shall be the responsible agency for making valid existing rights (VER) determinations. For Non-Federal lands described in

subsection (v)(A) above the Division is the responsible agency for making VER determinations and shall make evaluations using the Federal VER definition.

(vii) VER submission requirements and procedures.

(A) A request for a VER determination shall be submitted to the appropriate agency identified in subsection (vi) above. Requests may be submitted prior to submitting an application for a permit or boundary revision for the land.

(I) Property rights demonstrations that rely on the good faith/all permits standard or the needed for and adjacent standard shall include the following:

(1.) A legal description of the land to which the request pertains;

(2.) Complete documentation of the character and extent of the current interests in the surface and mineral estates of the land to which the request pertains;

(3.) A complete chain of title for the surface and mineral estates of the land to which the request pertains;

(4.) A description of the nature and effect of each title instrument that forms the basis of the request, including any provision pertaining to the type or method of mining or mining related surface disturbances and facilities;

(5.) A description of the type and extent of surface coal mining operations that the requestor claims the right to conduct, including the method of mining, any mining related surface activities and facilities, and an explanation of how those operations would be consistent with State property law;

(6.) Complete documentation of the nature and ownership, as of the date that the land came under the protection of 522(e) of P.L. 95-87 (2009), (<http://www.gpoaccess.gov/uscode/>) or 30 C.F.R. §761.11 (2009), (<http://www.gpoaccess.gov/cfr/retrieve.html>), of all property rights for the surface and mineral estates of the land to which the request pertains;

(7.) Names and addresses of the current owners of the surface and mineral estates of the land to which the request pertains;

(8.) If the coal interests have been severed from other property interests, documentation that the requestor has notified and provided reasonable opportunity for the owner of other property interests in the land to which the request pertains to comment on the validity of the property rights claims made; and

(9.) Any comments that are received in response to the notification discussed in (8.) above.

(II) If the VER determination request relies on the good faith/all permits standard, the request shall include the documentation discussed in (I) above, and:

(1.) Approval and issuance dates and identification numbers for any permits, licenses and authorizations that the person seeking the request or a predecessor in interest obtained before the land came under the protection of 522(e) of P.L. 95-87 (2009) or 30 C.F.R. §761.11 (2009);

(2.) Application dates and identification numbers for any permits, licenses and authorizations that the person seeking the request or a predecessor in interest submitted an application before the land came under the protection of 522(e) of P.L. 95-87 (2009) or 30 C.F.R. §761.11 (2009); and

(3.) An explanation of any other good faith effort that was made by the person seeking the request or a predecessor in interest made to obtain the necessary permits, licenses and authorizations as of the date that the land came under the protection of 522(e) of P.L. 95-87 (2009) or 30 C.F.R. §761.11 (2009).

(III) If the request relies on the needed for and adjacent standard, the request shall include the documentation discussed in (I) above and shall also explain how and why the land is needed for and immediately adjacent to the operation on which the request is based including a demonstration that prohibiting expansion of the operation onto that land would unfairly impact the viability of the operation as originally planned before the land came under the protection of 522(e) of P.L. 95-87 (2009) or 30 C.F.R. §761.11 (2009).

(III) If the request relies on the needed for and adjacent standard, the request shall include the documentation discussed in (I) above and shall also explain how and why the land is needed for and immediately adjacent to the operation on which the request is based including a demonstration that prohibiting expansion of the operation onto that land would unfairly impact the viability of the operation as originally planned before the land came under the protection of 522(e) of P.L. 95-87 (2009) or 30 C.F.R. §761.11 (2009).

(IV) If the request relies on one of the standards for roads the request shall include documentation that:

(1.) The road existed when the land on which it is located came under the protection of 522(e) of P.L. 95-87 (2009) or 30 C.F.R. §761.11 (2009) and that the person making the request has a legal right to use the road for surface

coal mining operations;

(2.) A properly recorded right of way or easement for a road in that location existed when the land came under the protection of 522(e) of P.L. 95-87 (2009) or 30 C.F.R. §761.11 (2009) and under the document creating the right of way or easement, and under any subsequent conveyances the person making the request has a legal right to use or construct a road across the right of way or easement to conduct surface coal mining operations; or

(3.) A valid permit for use or construction of a road in that location for surface coal mining operations existed when the land came under the protection of 522(e) of P.L. 95-87 (2009) or 30 C.F.R. §761.11 (2009).

(B) Initial review of request.

(I) The responsible agency shall conduct an initial review to determine whether the request includes all applicable components of the submission requirements discussed in subsection (A) above. This review examines completeness only.

(II) If the request does not include all applicable components of the submission requirements, the responsible agency shall notify the requestor and establish a reasonable time for submitting the missing components.

(III) When the request contains all applicable submission requirements the responsible agency shall implement the notice and comment requirements discussed in subsection (C) below.

(IV) If the information requested in (II) above is not submitted within the time specified or amended the responsible agency shall issue a determination that the VER has not been demonstrated as discussed below.

(C) Notice and comment requirements and procedures.

(I) When the VER request satisfies the completeness requirements of (B) above, the VER applicant must publish a notice in a newspaper of general circulation in the county in which the land is located. This notice must invite comment on the merits of the request. The applicant must provide the Division with a proof of publication. Each notice shall include:

(1.) Location of land to which the VER request pertains;

(2.) A description of the type of surface coal mining operations planned;

(3.) A reference to and brief description of the applicable standards for which the VER request will be determined;

a. If the request relies upon the good faith/all permits standard or the needed for and adjacent standard, the notice shall also contain a description of the property rights claimed and the basis for the claim.

b. If the request relies upon the standard in subsection (IV)(1.) above, the notice shall also include a description of the basis for the claim that the road existed when the land came under the protection of 522(e) of P.L. 95-87 (2009) or 30 C.F.R. §761.11 (2009). In addition the notice shall include a description of the basis for your claim that the VER requestor has a legal right to use that road for surface coal mining operations.

c. If the request relies upon the standard in subsection (IV)(2.) above, the notice shall also include a description of the basis for the claim that a properly recorded right-of-way or easement for a road in that location existed when the land came under the protection of 522(e) of P.L. 95-87 (2009) or 30 C.F.R. §761.11 (2009). In addition the notice shall include a description of the basis for the claim that, under the document creation the right of way or easement, and under any subsequent conveyances, the VER requestor has a legal right to use or construct a road across the right of way or easement to conduct surface coal mining operations.

d. If the request relies upon one or more of the standards in Chapter 1, VER definition, a statement that the Division will not make a decision on the merits of the request if, by the close of the comment period under this notice or the notice required below, a person with a legal interest in the land initiates appropriate legal action in the proper venue to resolve any differences concerning the validity or interpretation of the deed, lease, easement or other documents that form the basis of the VER claim.

e. A description of the procedures that the agency will follow to process a VER request.

f. The closing date of the comment period, which must be a minimum of 30 days after the publication date of the notice.

g. A statement that interested persons may obtain a 30-day extension of the comment period on request.

h. The name and address of the agency office where a copy of the request is available for a public inspection and to which comments and requests for extension of the comment period should be sent.

(II) The Division shall promptly provide a copy of the notice required under this Section to:

(1.) All reasonably locatable owners of surface and mineral estates in the land included in the VER request.

(2.) The owner of the feature causing the land to come under the protection of 522(e) of P.L. 95-87 (2009) or 30 C.F.R. §761.11 (2009) and, where applicable, the agency with primary jurisdiction over the feature with respect to the values causing the land to come under the protection of 522(e) of P.L. 95-87 (2009) or 30 C.F.R. §761.11 (2009).

(III) The letter transmitting the notice required under subsection (II) above shall provide a 30-day comment period, starting from the date of service of the letter, and specify that another 30 days is available upon request.

(D) How a VER decision will be made.

(I) The Land Quality Division shall review the materials submitted, any comments received and any other relevant reasonably available information to determine whether the record is sufficiently complete and adequate to support a decision on the merits of the request. If not, the Division shall notify the requestor in writing, explaining the inadequacy of the record and requesting submittal, within a specified reasonable time, of any additional information that the agency deems necessary to remedy the inadequacy.

(II) Once the record is complete and adequate, the Division shall determine whether the requestor has demonstrated VER. The decision document shall explain how the requestor has or has not satisfied all the applicable elements, shall contain findings of fact and conclusions and shall specify the reasons for the conclusions.

(III) Impact of property rights disagreements. This subsection only applies when the request relies upon on or more of the standards in the Chapter 1, VER definition.

(1.) The Division shall issue a determination that the requestor has not demonstrated VER if the property rights claims are the subject of pending litigation in a court or administrative body with jurisdiction over the property rights in question. A requestor may refile the request once the property rights dispute is finally adjudicated. This subsection only applies if the legal action has been initiated as of the closing date of the comment periods discussed above.

(2.) If the record indicates disagreement as to the accuracy of the requestor's property rights claims, but the disagreement is not the subject of

pending litigation in a court or administrative agency of competent jurisdiction, the responsible agency shall evaluate the merits of the information in the record and determine whether the requestor has demonstrated that the requisite property rights exist under the VER definition in Chapter 1 of these Rules and Regulations, as appropriate. The responsible agency shall then proceed to subsection (C)(II) above.

(IV) The Division must issue a determination that the requestor has not demonstrated VER if the requestor has not submitted the information requested under subsections (B)(II) and (D)(I) above within the time specified or as subsequently extended. A requestor may submit a revised request at any time after that determination has been made.

(V) After making a VER determination, the Division shall:

(1.) Provide a copy of the determination, together with an explanation of appeal rights and procedures to the VER requestor, the owner or owners of the land to which the determination applies, the owner of the feature causing the land to come under the protection of 522(e) of P.L. 95-87 (2009) or 30 C.F.R. §761.11(2009) and when applicable, to the agency with primary jurisdiction over the feature with respect to the values that caused the land to come under the protection of 522(e) of P.L. 95-87 (2009) or 30 C.F.R. §761.11 (2009).

(2.) Require the VER requestor to publish notice of the determination in a newspaper of general circulation in the county in which the land is located and provide the Division with proof of publication. If the initial VER request contained Federal lands with an area listed in subsections (v)(A) and (B) above, the OSM will publish the determination, together with an explanation of appeal rights and procedure in the Federal Register.

(E) Administrative and judicial review. A determination that the VER requestor does or does not have VER is subject to administrative and judicial review.

(F) When the Division is the agency responsible for processing a request subject to notice and comment under subsection (C) above shall make a copy of that request and related materials available to the public in the same manner as public availability of permit applications under these Rules and Regulations.

(G) Procedures for joint approval of surface coal mining operations that will adversely affect publicly owned parks or historic places.

(I) If the regulatory authority determines that the proposed surface coal mining operation will adversely affect any publicly owned park or any place included in the National Register of Historic Places, the regulatory authority must request that the Federal, State, or local agency with jurisdiction over the park or place either approve

or object to the proposed operation. The request shall:

(1.) Include a copy of applicable parts of the permit application.

(2.) Provide the agency with 30 days after receipt to respond, with a notice that another 30 days is available upon request.

(3.) State that failure to interpose an objection within the time specified under subsection (2.) above will constitute approval of the proposed operation.

(II) The regulatory authority may not issue a permit for a proposed operation subject to subsection (I) above unless all affected agencies jointly approve.

(III) Subsections (I) and (II) above do not apply to:

(1.) Lands for which a person has VER, as determined under Section 1(a)(vi) and (vii) of this Chapter;

(2.) Lands within the scope of the exception for existing operations contained in the Chapter 1, "valid existing rights" definition.

(viii) If the Administrator is unable to determine whether or not the proposed operation is on lands where surface coal mining operations are prohibited, lands described in (v) immediately above, then a copy of relevant portions of the application shall be sent to appropriate State, Federal and local government agencies with an interest or jurisdiction in the lands in question. Along with the copy a notice shall be sent asking for clarification or determination of relevant boundaries or distances, and stating that the agency has 60 days from receipt of the notice to respond. If no response is received, the Administrator may make a determination based on the information available.

(ix) The criteria for permit approval where prime farmland will be affected by the mining operation shall be that, upon the basis of the complete application:

(A) The postmining land use of the prime farmland will be capable of supporting crop yields equivalent to the surrounding nonmined prime farmland under equivalent levels of management.

(B) Adequate consideration has been given to any soil reconstruction revisions recommended by the local conservation district and Soil Conservation Service.

(C) The applicant has the technological capability to restore the prime farmland.

(x) In addition to the specific findings required by W.S. § 35-11-406(n), no permit authorizing a delay in the contemporaneous reclamation requirements for a proposed combined surface and underground mining operation shall be approved unless the Administrator finds that:

(A) The proposed underground mining activities will assure maximum practical recovery of the resource and avoid multiple future disturbances of surface land or waters.

(B) The permit for the surface mining activities contains specific conditions:

(I) Delineating the particular surface area for which a delay in reclamation is authorized; and

(II) Identifying the alternative reclamation standards in lieu of those otherwise applicable, together with a detailed schedule for timely compliance.

(xi) In granting surface coal mining permits, the Director shall impose the following conditions on the operation:

(A) All operations shall be conducted in accordance with the approved mining and reclamation plan and any conditions of the permit or license;

(B) The rights of entry shall be provided as described by the Act and any regulations promulgated pursuant thereto;

(C) The operation shall be conducted in a manner which prevents violation of any other applicable State or Federal law;

(D) All possible steps shall be taken to minimize any adverse impact to the environment or public health and safety resulting from noncompliance with the approved mining and reclamation plan and other terms and conditions of any permit or license, including monitoring to define the nature of the noncompliance and warning of any potentially dangerous condition; and

(E) All reclamation fees shall be paid as required by Title IV, P.L. 95-87, for coal produced under the permit for sale, transfer or use.

(b) All procedural requirements of the Act and the regulations relating to review, public participation, and approval or disapproval of permit applications, and permit term and

conditions shall, unless otherwise provided, apply to permit revisions, amendments, renewals and transfers. In addition, the following requirements are applicable.

(i) All requirements imposed by W.S. § 35-11-405(e) for permit renewals. The application shall be filed at least 120 days before the expiration of the permit term and shall include at a minimum:

(A) A statement of the name and address of the permittee, the term of the renewal requested, the permit number, a description of any changes to the matters set forth in the original application for a permit or prior permit renewal;

(B) A copy of the public notice and proof of publication;

(C) Evidence that the bond and a liability insurance policy will be provided; and

(D) Additional revised or updated information required by the Administrator.

(E) If an application for renewal includes any proposed revisions to the mine or reclamation plan, such revisions shall be identified and subject to the requirements of Chapter 13.

(ii) All requirements imposed by W.S. § 35-11-408 and this provision for permit transfers. These requirements shall be met, as evidenced by the written approval of the statement of qualifications by the Administrator and Director, prior to any permit transfer. Permit transfers shall not be subject to the requirements of W.S. § 35-11-406(g).

(A) The potential transferee shall obtain a renewal bond by either transfer of the permit holder's bond, written agreement with the permit holder, or providing other sufficient bond or equivalent guarantee.

(B) The statement of qualifications shall contain all information which would be required if the potential transferee were the original applicant for the permit and, in addition, the name of the existing permit holder.

Section 2. **Bonding and Insurance Procedures.**

(a) For surface coal mining operations, the following two types of bond calculations shall be required for setting a single bond amount:

(i) **Area Bond:** This bond calculation shall be no less than the estimated cost of completing the maximum amount of rough backfilling during the annual bonding period set forth in W.S. §§ 35-11-411 and 35-11-417(c), in order to meet the applicable

rough backfilling standards in Chapter 4 of these regulations and any other rough backfilling requirements of the approved permit.

(ii) Incremental Bond: This bond calculation shall be no less than the estimated cost of performing all reclamation requirements other than those covered by (a)(i) above, during the annual bonding period in order to meet the standards of the Act, the regulations, and the provisions of the permit.

(b) For purposes of determining bond amounts, the estimated cost shall include all costs necessary, expedient or incidental to achieve required rough backfilling and reclamation. This shall reflect the probable difficulty of reclaiming the affected lands, giving consideration, as applicable, to such factors as topography, geology of the site, hydrology and revegetation potential. The estimated cost shall be based on the operator's cost estimate submitted with the permit, plus the Administrator's estimate of the additional cost to the State of bringing in personnel and equipment should the operation fail or the site be abandoned, plus an additional amount covering reclamation cost for any land which may reasonably be expected to be affected, as determined by the Administrator's assessment of the applicant's mine plan, prior to filing the renewal bond. All bonds shall be calculated on, and never fall below, the amount necessary to assure that the operator shall faithfully perform all requirements of the Act and comply with all rules and regulations and any provisions of the approved permit.

(c) Upon receipt of the annual report required by W.S. § 35-11-411, the Administrator shall publish a notice in a newspaper of general circulation in the locality of the mining operation, notifying all interested persons that the annual report is available for review, and that the renewal area and incremental bond calculations will be determined. Interested persons may submit information relating to the bond amounts within 30 days of the notice. This information, together with information submitted by the operator and developed by the Division, shall be considered by the Administrator and Director in setting bond amounts.

(d) Liability.

(i) Liability under the bond(s) shall be for the entire permit area.

(ii) Liability under the area bond shall be for a duration sufficient to assure that all rough backfilling has been achieved pursuant to the applicable standards of Chapter 4, Section 2.(b) and the approved permit.

(iii) Liability under the incremental bond shall be for the entire duration of the operation and for the ten-year period of revegetation responsibility described in Chapter 4, Section 2(d). The liability period and area for an incremental bond may be limited if it is posted and approved to guarantee only specific increments of reclamation within the permit. Actions of third persons to implement an approved alternative postmining land use, which

are beyond the control of the permittee or operator need not be covered by the bond.

(iv) Isolated increments of bonded land.

(A) Isolated and clearly defined portions of the permit area requiring extended liability or limited areas or increments being assessed a specific bond amount may be separated from the original area and bonded separately with the approval of the Administrator.

(B) Such areas shall be of sufficient size and configuration and not constitute a scattered, intermittent, or checkerboard pattern to provide for efficient reclamation operations should reclamation by the Administrator become necessary pursuant to Section 2(b) of this Chapter.

(C) Access to the isolated areas for remedial work may be included in the area under extended liability if deemed necessary by the Administrator.

(e) A permittee may request reduction of the amount of either the area or incremental bond upon submission of evidence to the Administrator proving that the permittee's method of operation or other circumstances will reduce the estimated cost to the State for reclamation. This reduction of bond shall be deemed a bond adjustment if the reduction is based on a change in method of operation or a decrease in the number of acres projected to be disturbed. If the reduction is due to a decrease in the number of acres that have already been disturbed to account for areas partially reclaimed, then the request for reduction will be considered a request for partial bond release in accordance with the procedures of Chapter 15.

(f) A corporate surety shall not be considered good and sufficient for purposes of W.S. § 35-11-417(b) unless:

(i) It is licensed to do business in the State;

(ii) The estimated bond amount does not exceed the limit of risk as provided for in W.S. § 26-5-110, nor raise the total of all bonds held by the applicant under that surety above three times the limit of risk;

(iii) The surety agrees:

(A) Not to cancel bond, except as provided for in W.S. § 35-11-419 or where the Administrator approves a good and sufficient replacement surety with transfer of the liability that has accrued against the permittee on the permit area;

(B) To be jointly and severally liable with the permittee; and

(C) To provide notice to the Administrator and operator once it becomes unable or may become unable due to any action filed against it to fulfill its obligations under the bond.

(g) The provisions applicable to cancellation of the surety's license in W.S. § 35-11-420 shall also apply if for any other reason the surety becomes unable to fulfill its obligations under the bond. Upon such occurrence the operator shall provide the required notice. Failure to comply with this provision shall result in suspension of the permit.

(h) The Administrator shall not accept an individual certificate of deposit in an amount in excess of \$100,000 or the maximum insurable amount as determined by the FDIC or the Federal Savings and Loan Insurance Corporation. Such certificates of deposit shall be made payable to the Department both in writing and upon the records of the bank issuing these certificates. The Administrator shall require the banks issuing these certificates to waive all rights of setoff or liens against the certificates. The bond amount may be calculated to include any amount which would be deducted as a penalty for payment before maturity.

(i) Minimum insurance coverages for the public liability insurance policy required in W.S. § 35-11-406(a)(xiii) shall be \$300,000 for each occurrence of bodily injury or property damage, and \$500,000 aggregate.

(j) The public insurance liability policy shall include a rider requiring that the insurer notify the Administrator whenever substantive changes are made in the policy, including any termination or failure to renew. The policy shall be maintained in full force during the life of the permit or any renewal thereof, including the liability period necessary to complete all reclamation operations.

DEPARTMENT OF ENVIRONMENTAL QUALITY

LAND QUALITY DIVISION

CHAPTER 16

INSPECTIONS, ENFORCEMENT AND PENALTIES FOR

SURFACE COAL MINING OPERATIONS

Section 1. **Inspections.**

(a) Frequency and extent of inspection: The Director's designated authorized representative shall inspect:

(i) On an irregular basis active surface coal mining and reclamation operations and any other areas outside the permit area which are or may be affected by the surface coal mining and reclamation operation every month, averaging at least one quarterly review of the operator's compliance with all conditions and requirements of the permit, Article IV, and these regulations within the entire affected land. Inspections of coal exploration operations and inactive surface coal mining operations shall occur periodically so as to determine compliance or noncompliance with the permit conditions, Article IV and these regulations; provided that a complete inspection shall occur each calendar quarter for inactive coal mines. All inspections shall occur without prior notice, except as the representative deems necessary, to the person being inspected. The representative shall promptly submit all inspection records, reports or other materials to the head of the district office and the Director for public inspection and enforcement action purposes.

(ii) Immediately to enforce the Act, the regulations, or any condition of a permit or an exploration approval when he has reason to believe that enforcement action under W.S. § 35-11-437(a) or (b) is required.

(b) Aerial inspections may satisfy the monthly/partial inspection requirement if:

(i) It is conducted in a manner which reasonably ensures the identification and documentation of conditions at the coal mining and reclamation site inspected, and

(ii) Any potential violation observed is investigated on site within three days, and any potential condition, practice or violation constituting cause for a cessation order is investigated on site immediately.

(c) Inactive surface coal mining operations are ones for which the Administrator has received a request for temporary cessation under Chapter 4, Section 2(l)(ii) and (u), or ones which have completed the reclamation requirements of Chapter 15, Section 5(a)(ii) and

the liability of the permittee has been reduced in accordance with Chapter 15.

(d) Any person who is or may be adversely affected by a surface coal mining or coal exploration operation may notify the Administrator in writing, alleging sufficient information to create a reasonable belief that the Division has failed to comply with the requirements of (a) above. Within 15 days of the receipt of such notification the Administrator shall determine whether there has been compliance and, if not, order an inspection to correct the noncompliance. The Administrator shall furnish a written statement explaining his determination and actions, if any, to the complainant. The identity of the person providing the information shall be held confidential, if requested by that person unless disclosure is required under the Freedom of Information Act.

(e) If an inspection results from a person's written complaint, only the person who submitted the written complaint or, in case of hardship, his designee, has a right of entry to, upon and through the exploration or surface coal mining operation about which he supplied the information, and only if he is in the presence of and is under the control, direction and supervision of the designated authorized representative while on the permit area. In the event that a group submitted the written complaint, only a designated representative of that group may accompany the inspector. The right of entry does not include a right to enter buildings without a search warrant or the consent of the person in control of the building. All persons supplying the complaint shall promptly receive from the Division copies of any inspection report and a description of any enforcement action taken, or reasons why an inspection was not conducted or enforcement action was not taken. The Division shall also inform the person of his right to informal review of the action on the complaint by the Director. If requested, the Director shall review and inform the complainant of the results of the review within 30 days of the request. The Director's decision is final action for purposes of any appeal to the Council.

Section 2. **Enforcement.**

(a) All violations or minor violations that are observed must be identified in the inspection report, including comments on the abatement of all previously noted minor violations or violations. The enforcement options available to the Department range from the least severe, notation in an inspection report, to the most severe, criminal sanctions.

(b) Formal notices of violation for abatement shall direct the correction of a cited violation. Formal notices of violation will be routinely issued where site conditions constitute an existing or potential danger to the health and safety of the public, or cause or can be expected to cause environmental degradation. Formal notices of violation will be issued where minor violations previously identified in an inspection report are not satisfactorily resolved within the time frame specified in the inspection report as long as the failure to resolve the minor violation is not due to lack of diligence. If the reason is lack of diligence, a failure to abate cessation order will be issued. The total abatement time where a minor violation has been modified to a formal notice of violation shall not exceed 90 days

unless allowed by Section 2(j) of this Chapter.

(c) Violations noted only in inspection reports shall be limited only to minor violations as noted in (f)(i) through (f)(ix). A formal notice of violation will be issued to all other violations. The required abatement measures and a reasonable abatement time not to exceed 35 days shall be included in the inspection report. Minor violations will not be tracked for withholding permit approvals, and other permit actions. A handwritten description of the minor violation will be given to the operator on site and will contain the information listed under item (g) of this Section. The operator has the right to appeal any minor violation as outlined in W.S. § 35-11-901.

(d) Civil penalties will not be issued to minor violations. They will, however, be reviewed to determine if a civil penalty would be appropriate. If it is found a civil penalty is appropriate, the minor violation will be upgraded to a formal notice of violation and a formal assessment issued.

(e) Failure to abate a minor violation will result in the issuance of a formal notice of violation and assessment of a civil penalty. Operators who consistently receive minor violations for similar infractions (more than two in a 12 month period) will be issued a formal notice of violation for subsequent similar violations for the remainder of the period. Once an operator receives two similar minor violations within a 12 month period, any subsequent similar violations will be counted toward a pattern of violations.

(f) Examples of minor violations which will be identified in the inspection report but may or may not be subject to a formal notice of violation are the following:

(i) Failure to provide or maintain signs or perimeter markers;

(ii) Reclamation deficiencies such as inadequate topsoil replacement depth, incorrect seeding practices, or improper sampling technique where there is no immediate potential for adverse environmental impact;

(iii) Failure to perform necessary routine maintenance of surface water diversions or erosion control facilities where there is no immediate potential for adverse environmental impact;

(iv) Failure to perform necessary routine maintenance on treatment facilities provided that the matter is referred to the Water Quality Division (WQD) and the WQD finds that effluent limits are being met and there is no immediate potential for adverse water quality impacts;

(v) Required record keeping is unsatisfactory, except where there is a deliberate falsification of records or results;

(vi) Minor construction deficiencies where there is no threat of structural failure or serious harm;

(vii) Noted necessary corrections to maps, plans or other permit materials;

(viii) Failure to comply with other laws applicable to the mine through permit conditions, where the agency with primary jurisdiction has instituted action to obtain compliance pursuant to its laws and regulations; and

(ix) Rills on reclaimed lands or partially blocked culverts which are the result of a recent storm or runoff event.

(g) Any cessation order, notice for abatement or order to show cause issued under the Act shall be signed by the Director or authorized representative and shall contain:

(i) The nature of the violation;

(ii) All affirmative obligations necessary to completely abate the violation or imminent danger or harm in the most expeditious manner possible;

(iii) The time established for abatement, if appropriate; and

(iv) A reasonable description of that portion of the operation to which it applies.

(h) All cessation orders remain in effect and, unless otherwise ordered, do not affect continuing reclamation operations, until the condition, practice or violation has been abated, or until vacated, modified or terminated in writing by the designated representative, Administrator, Director, or Council.

(i) Any notice or order shall be terminated by written notice to the person to whom it was issued, when it is determined that all violations or conditions listed in the notice or order have been abated. This determination may be made by conducting an investigation to confirm the abatement, by accepting the information obtained from a government agency or by accepting a signed statement from a permittee that the violation in a notice of violation has been abated. The Division reserves the right to confirm the information included in a signed statement. Termination shall not affect the right to assess civil penalties.

(j) The specified time for abatement of the violation may be extended up to 90 days from issuance of the notice, if the failure to meet the time previously set was not caused by lack of diligence on the part of the person to whom it was issued (W.S. § 35-11-409(c)).

(i) The total time for abatement shall not exceed 90 days from the date of issuance, except upon establishing by clear and convincing proof that the permittee cannot

feasibly abate the violation within 90 days due to one or more of the following:

(A) The permittee of an ongoing permitted operation has timely applied for and diligently pursued a permit renewal or other necessary approval of designs or plans but such permit or approval has not been or will not be issued within 90 days after his valid permit expires or is required, for reasons not within the control of the permittee;

(B) There is a valid judicial order precluding abatement within 90 days as to which the permittee has diligently pursued all rights of appeal and as to which he or she has no other effective legal remedy;

(C) The permittee cannot abate within 90 days due to a labor strike;

(D) Climatic conditions preclude abatement within 90 days, or where due to climatic conditions abatement within 90 days clearly would cause more environmental harm than it would prevent; or

(E) Abatement would require the operator to violate a requirement or regulation established under the Mine Safety and Health Act of 1977.

(ii) Whenever an abatement time in excess of 90 days is permitted, interim abatement measures shall be imposed to the extent necessary to minimize harm to the public or the environment.

(iii) An extension beyond 90 days may not be authorized without the concurrence of the Administrator or person acting in this capacity, and the abatement period granted shall not exceed the shortest possible time necessary to abate the violation. The authorized representative shall promptly and fully document in the file the reasons for granting or denying the request. The Administrator or designee shall review that document before concurring in or disapproving the extended abatement period and shall promptly and fully document the reasons for concurrence or disapproval in the file. An extended abatement date shall not be granted when the permittee's failure to abate within 90 days has been caused by a lack of diligence or intentional delay.

(iv) No extension granted under this provision may exceed 90 days in length. Where the condition or circumstance which prevented abatement within 90 days exists at the expiration of any such extension, the permittee may request a further extension in accordance with the procedures of this subsection.

(k) Order to show cause for the suspension or revocation of a permit pursuant to W.S. § 35-11-409(c):

(i) For the purpose of this subsection:

(A) Willful violation means an act or omission which violates this Act or any regulation, and which is committed or omitted with knowledge or reason to know of its unlawfulness.

(B) Unwarranted failure to comply means the failure to prevent or abate the occurrence of any violation due to indifference, lack of diligence, or lack of reasonable care.

(C) Pattern of violations means the occurrence of similar violations not appearing to be isolated departures from lawful conduct as determined during two or more inspections of the permit area within any 12 month period, unless exceptional factors present in the particular case otherwise account for such violations.

(ii) The Director shall make a written explanation for declining to issue an order to show cause or vacating an outstanding order, once he determines that there were violations of the same or related requirements of the Act, regulations, or the permit during three or more inspections within any 12 month period. The explanation shall include that, after taking into account exceptional factors present in the particular case, it would be demonstrably unjust to issue or fail to vacate the show cause order. This shall be included and documented in the records of the case.

(iii) Notice, hearing and any decision by the Council on whether to suspend or revoke the permit shall be the equivalent of that required for permit applications. If the Council suspends or revokes the permit, the operator shall cease operations, continue reclamation, and complete all affirmative obligations as specified in the order.

(l) All cessation orders, notices for abatement and orders to show cause shall be served on the operator either by tendering a copy at the operation or sending it by certified mail or by hand to the operator. All orders to show cause shall issue forthwith upon a determination that the factors exist which justify its issuance.

(m) Pending completion of the investigation and hearing on any enforcement action taken by the Department, the operator may file with the Council a request for temporary relief. The Council shall expeditiously issue an order or decision granting or denying such relief, which shall be within five days from any request for relief from a cessation order. The Council may grant such relief, under such conditions as it may prescribe, if:

(i) A hearing has been held in the locality of the permit area on the request for temporary relief in which all parties were given an opportunity to be heard;

(ii) The operator shows that there is a substantial likelihood that the findings of the Council will be favorable to him; and

(iii) Such relief will not adversely affect the health or safety of the public or cause significant, imminent environmental harm to land, air, or water resources.

(n) Inability to comply shall not be a proper factor for consideration in any decision to vacate, or terminate any notice or order under this subsection or to determine whether a pattern of violation exists. It may only be a factor for the duration of the suspension of a permit and in mitigation of the amount of civil penalty, when not caused by lack of diligence.

(o) Surface coal mining operations conducted by any person without a valid permit constitute a condition or practice which causes or can reasonably be expected to cause significant, imminent environmental harm to land, air or water resources. For those operations which are an integral, uninterrupted extension of previously permitted operations, and where the person conducting such operations has filed a timely and complete application for a permit to conduct such operations, the cessation order shall be limited to the unpermitted operation.

Section 3. **Civil Penalties.**

(a) Amount - In determining the amount of the penalty, if any, to be assessed, consideration shall be given to:

(i) The operator's history of previous violations at the particular surface coal mining operation, regardless of whether any led to a civil penalty assessment. Special consideration shall be given to violations contained in or leading to a cessation order. However, a violation shall not be considered if the notice or order containing the violation:

(A) Is or may become the subject of pending administrative or judicial review; or

(B) Has been vacated.

(ii) The seriousness of the violation based on the likelihood and extent of the potential or actual impact on the public or environment, both within and outside the permit or exploration area.

(iii) The degree of fault of the operator in causing or failing to correct the violation, either through act or omission. Such degree shall range from inadvertent action causing an event which was unavoidable by the exercise of reasonable care to reckless, knowing or intentional conduct.

(iv) The operator's demonstrated good faith, by considering whether he took extraordinary measures to abate the violation in the shortest possible time, or merely abated the violation within the time given for abatement. Consideration shall also be given

to whether the operator gained any economic benefit as a result of a failure to comply.

(v) Inability to comply, unless caused by lack of diligence.

(vi) Any information submitted to the Director by the operator within 15 days of the service of the notice or order relating to the facts surrounding the violation or the amount of penalty.

(b) In determining the amount of the penalty, consideration shall not be given to whether a reduction in the amount of a penalty could be used to abate violations of the Act or regulations.

(c) The procedure for any requested assessment conference, as provided for in W.S. § 35-11-902(d) shall be the equivalent of the informal conference procedure described by the Act and regulations applicable to permit applications excepting that the Director, not the Administrator, shall conduct the conference.

(d) If the operator requests and receives the review proceeding provided for by W.S. § 35-11-437(c), the fact of the violation may not be further contested under this Section.

(e) If any party requests judicial review of a final order of the Council on the penalty, the proposed penalty shall continue to be held in bond or escrow until completion of the review. If any review results in an order increasing the penalty, the person to whom the notice or order was issued shall pay the difference within 15 days after notification.

(f) The civil penalty prescribed by W.S. § 35-11-902(n) shall be assessed for a maximum of 30 days, except that, if the person to whom the notice or order was issued initiated review proceedings with respect to the violation, the abatement period shall be extended as follows:

(i) If suspension of the abatement requirements of the notice or order is ordered in a temporary relief proceeding, the period permitted for abatement shall not end until the date on which the Council issues a final order with respect to the violation in question; and

(ii) If the persons to whom the notice or order was issued initiate judicial review proceedings with respect to the violation, in which the obligations to abate are stayed by the court pending full review, the daily assessment of a penalty shall not be made for any period before entry of a final order by the court.

Section 4. **Individual Civil Penalties**

(a) For purposes of this section:

(i) “Knowingly” means that a person who authorized, ordered, or carried out an act or omission knew or had reason to know that the act or omission would result in either a violation or a failure to abate or correct a violation;

(ii) “Violation, failure or refusal” means:

(A) A violation of a condition of a permit issued pursuant to the State program or Federal lands program; or

(B) A failure or refusal to comply with any order issued under Section 2 of this Chapter, or any order incorporated in a final decision issued by the Director under the Act, except for failure to pay a civil penalty.

(iii) “Willfully” means that an individual acted:

(A) Intentionally, voluntarily or consciously; and

(B) With intentional disregard or plain indifference to legal requirements.

(b) An individual civil penalty may be assessed when:

(i) The Director may assess an individual civil penalty as outlined in W.S. §35-11-902(b), except as provided in subsection (ii) below.

(ii) The Director shall not assess an individual civil penalty in situations resulting from a permit violation by a corporate permittee until a cessation order has been issued by the Department to the corporate permittee for the violation, and the cessation order has remained unabated for thirty (30) days and the procedures for assessment in subsection (d) below have been complied with.

(c) Amount of Civil Penalty.

(i) In determining the amount of an individual civil penalty assessed under this Section, The Director shall consider the criteria specified in Section 3 of this Chapter, including:

(A) The individual’s history of authorizing, ordering or carrying out previous violations, failures or refusals at the particular surface mining operation;

(B) The seriousness of the violation, failure or refusal (as indicated by the extent of damage and/or the cost of reclamation), including any irreparable harm to the environment and any hazard to the health or safety of the public; and

(C) The demonstrated good faith of the individual charged in attempting to achieve rapid compliance after notice of the violation, failure or refusal.

(ii) The penalty shall not exceed the limits prescribed in W.S. 35-11-902(b) for each day during which a violation, failure or refusal continues, or, for multiple violations, a penalty not to exceed the limits prescribed in W.S. 35-11-902(b) for each violation for each day during which a violation, failure or refusal continues from the date of service of the underlying notice of violation, cessation order or other order incorporated into a final decision issued by the Director, until abatement or compliance is achieved.

(d) Procedure for assessment of individual civil penalty.

(i) Notice. The Director shall serve on each individual to be assessed an individual civil penalty a notice of proposed individual civil penalty assessment, including a narrative explanation of the reasons for the penalty, the amount to be assessed and a copy of any underlying notice of violation and cessation order.

(ii) Final order and opportunity for review. The notice of proposed individual civil penalty assessment shall become a final order of the Director thirty (30) days after service upon the individual unless:

(A) The individual files within 15 days of service of the notice of proposed individual civil penalty assessment a petition for review with the Environmental Quality Council, or

(B) The Department and the individual or responsible corporate permittee agree, within thirty (30) days of service of the notice of proposed individual civil penalty assessment, to a schedule or plan for the abatement or correction of the violation, failure or refusal.

(iii) Service. For purposes of this Section, service shall be performed on the individual to be assessed an individual civil penalty, by certified mail, or by any alternative means consistent with the rules governing service of a summons and complaint under Rule 4 of the Wyoming Rules of Civil Procedure. Service shall be complete upon tender of the notice of proposed assessment and any attached information or of the certified mail and shall not be deemed incomplete because of refusal to accept.

(e) Payment of Penalty

(i) No abatement or appeal. If a notice of proposed individual civil penalty assessment becomes a final order in the absence of a petition for review or abatement agreement, the penalty shall be due upon issuance of the final order.

(ii) Appeal. If an individual named in a notice of proposed individual civil penalty assessment files a petition for review in accordance with the Environmental Quality Council, the penalty shall be due upon issuance of a final administrative order affirming, increasing or decreasing the proposed penalty.

(iii) Abatement agreement. Where the Department and the corporate permittee or individual have agreed in writing on a plan for the abatement of or compliance with the unabated order, an individual named in a notice of proposed individual civil penalty assessment may postpone payment until receiving either a final order from the Department stating that the penalty is due on the date of such final order, or written notice that abatement or compliance is satisfactory and the penalty has been withdrawn.