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OIL, GAS AND MINING

August 28, 2000

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VIA FIRST CLASS MAIL

Mr. Ron Daniels
Project Coordinator
Division of Oil, Gas & Mining
1594 West North Temple, Suite 1210
P.O. Box 145801
Salt Lake City, Utah 84114-5801

Re: Adjacent Area, Affected Area, Disturbed Area and Permit Area

Dear Ron:

As we discussed at Friday's meeting of the Environmental Subcommittee of the Coal Operators Committee, I am enclosing for your use a photocopy of Part R645 of the Utah Administrative Code. This copy has been printed off of Westlaw. In preparing this copy, we asked the computer to search the terms "adjacent area," "affected area," "disturbed area" and "permit area." Therefore, throughout the document, these terms have been bolded and should be relatively easy to identify.

As I mentioned in our meeting, since we searched the term "permit area" and not just "permit," there are a number of occasions when two of the terms are used together and therefore typically the word "permit" when it stands alone is not bolded. Simply as an example, compare on page 112, four lines into subsection 525.130, the identification of both the term "permit area" and the term "adjacent area." In comparison, at page 135, under 624.300, when the combined "permit and adjacent areas" is used, the computer has not highlighted the word "permit" although in context it is clear that the term "permit area" is intended. Another example is found at page 142, under subsection 731.224.1. As I have reviewed the regulations, there are numerous other examples where the combination of two of the defined terms results in one of the terms not being highlighted. However, I do believe that the computer did not miss any of the terms because of this inasmuch as one of the terms will be highlighted and you need only read the context to identify if one of the other terms is also utilized.

After you have had an opportunity to review these materials, I would be happy to discuss them with you. I do intend in the near future to design and prepare a matrix that will readily identify the use of the respective terms throughout the regulations.

Very truly yours,

John S. Kirkham

JSK/js
Encl.

ANALYSIS OF R645, UTAH ADMINISTRATIVE CODE

	ADJACENT AREA	AFFECTED AREA	DISTURBED AREA	PERMIT AREA
R645-100-200 Definition: "Adjacent Area"	X			X
R645-100-200 Definition: "Affected Area"		X	X	
R645-100-200 Definition: "Best Technology Currently Available"				X
R645-100-200 Definition: "Cumulative Impact Area"				X
R645-100-200 Definition: "Disturbed Area"			X	
R645-100-200 Definition: "Highwall Remnant"				X
R645-100-200 Definition: "Historically Used for Cropland"				X
R645-100-200 Definition: "Imminent Danger to the Health and Safety of the Public"				X
R645-100-200 Definition: "Mining"				X

	ADJACENT AREA	AFFECTED AREA	DISTURBED AREA	PERMIT AREA
R645-100-200 Definition: "Other Treatment Facilities"				X
R645-100-200 Definition: "Permit Area"			X	X
R645-100-200 Definition: "Property to be Mined"				X
R645-100-200 Definition: "Reasonably Available Soil"				X
R645-100-200 Definition: "Reference Area"				X
R645-100-200 Definition: "Sedimentation Pond"				X
R645-100-200 Definition: "Significant Recreational, Timber, Economic or Other Values Incompatible With Coal Mining and Reclamation Operations"		X		
R645-300-121.120 Filing and Public Notice - advertisement in newspaper requires map of proposed permit area				X

	ADJACENT AREA	AFFECTED AREA	DISTURBED AREA	PERMIT AREA
R645-300-123.230 Informal Conferences - re permit application procedure allows for access to proposed permit and adjacent areas	X			X
R645-300-133.200 Definition of proposed permit area				X
R645-300-133.400 Definition of proposed permit area - Division has determined that proposed operation has been designed to prevent material damage to hydrologic balance outside permit area				X
R645-300-141 Permit Conditions - allow permittee to conduct operations only on lands designated "permit area"				X
R645-300-154 Right of Renewal - permit application approval will only apply to lands specifically designated as the "permit area"				X
R645-300-112.600 Identification of Interests - application will contain name of owner of record of all property contiguous to proposed "permit area"				X

	ADJACENT AREA	AFFECTED AREA	DISTURBED AREA	PERMIT AREA
R645-300-114.100 Right of Entry Information - application will contain description of documents applicant used to base their legal right to enter and begin operations in permit area				X
R645-300-115.100 Status of Unsuitability Claims - application will contain information to indicate whether proposed permit area is within unsuitable area				X
R645-300-141 Maps and Plans - identifies requirements for plans and maps submitted with permit application	X			X
R645-300-221 Prime Farmland Investigation - permit applications require results of a reconnaissance inspection				X
R645-300-222 Soil Survey - applicant must provide adequate soil survey information				X
R645-300-233.100 Topsoil Substitutes and Supplements - general requirements				X

	ADJACENT AREA	AFFECTED AREA	DISTURBED AREA	PERMIT AREA
R645-300-233.340 Results of physical and chemical analyses of overburden and topsoil				X
R645-300-234.210 Topsoil Storage - must be selectively placed on a stable site				X
R645-300-234.300 Topsoil Storage - the Division may approve temporary distribution of soil materials			X	X
R645-301-311 Biology - permit application must include descriptions of vegetative, fish and wildlife resources	X			X
R645-301-321.100 Vegetation Information - permit application requires description of plant communities				X
R645-301-321.200 Vegetation Information - permit application requires description of productivity of land before mining				X
R645-301-322 Fish and Wildlife Information - permit application requires fish and wildlife resource information	X			X

	ADJACENT AREA	AFFECTED AREA	DISTURBED AREA	PERMIT AREA
R645-301-322.200 Fish and Wildlife Information - permit application requires site specific resource information	X			X
R645-301-323 Maps and Aerial Photographs - requirements for same	X			X
R645-301-323.400 Maps and Aerial Photographs - must delineate each vegetative type and plant community	X			
R645-301-331 Operation Plan - plan will provide for description of measures taken to disturb smallest practicable area			X	
R645-301-353 Revegetation - General Requirements			X	
R645-301-354 Revegatation: Timing - reflects planting period			X	
R645-301-356.300 Revegetation, Standards for Success - siltation structures will be maintained until removal is authorized by Division			X	
R645-301-357.301 Husbandry Practices, General Information			X	

	ADJACENT AREA	AFFECTED AREA	DISTURBED AREA	PERMIT AREA
R645-301-357.340 Natural Disasters and Illegal Activities Occurring After Phase II Bond Release			X	
R645-301-357.360 Highly Erodible Area and Rill and Gully Repair		X	X	
R645-301-357.361 Highly Erodible Area and Rill and Gully Repair			X	
R645-301-357.362 Highly Erodible Area and Rill and Gully Repair - extent of affected area will be determined by Division		X		
R645-301-357.363 Highly Erodible Area and Rill and Gully Repair - definition of affected area		X		
R645-301-358.100 Protection of Fish, Wildlife and Related Environmental Values - operator to report endangered or threatened species				X
R645-301-358.200 Protection of Fish, Wildlife and Related Environmental Values - operator to report golden or bald eagle nests				X

	ADJACENT AREA	AFFECTED AREA	DISTURBED AREA	PERMIT AREA
R645-301-358.510 Protection of Fish, Wildlife and Related Environmental Values - electric powerlines and other transmission facilities must minimize electrocution hazards to raptors				X
R645-301-411.100 Premining Land-Use Information				X
R645-301-411.130 Premining Land-Use Information - application must describe existing land uses	X			X
R645-301-411.140 Cultural and Historic Resources Information	X			X
R645-301-411.141.1 Cultural and Historic Resources Maps - boundaries of public parks and locations of cultural or historical resources must be shown	X			X
R645-301-411.141.2 Cultural and Historic Resources Maps - must show cemeteries within 100 feet of proposed permit area				X

	ADJACENT AREA	AFFECTED AREA	DISTURBED AREA	PERMIT AREA
R645-301-411.141.3 Cultural and Historic Resources Maps - must show boundaries of units of National System of Trails or the Wild and Scenic River System				X
R645-301-411.200 Previous Mining Activity				X
R645-301-412.100 Postmining Land-Use Plan				X
R645-301-412.200 Land Owner or Surface Manager Comments				X
R645-301-413.100 Postmining Land-Use Plan - areas to be restored in a timely manner			X	
R645-301-515.321 Notice of intention to cease or abandon operations must include statement of number of surface areas and extent of subsurface strata affected in permit area prior to temporary cessation				X
R645-301-515.322 Notice of intention to cease or abandon operations must include statement of exact number of acres affected in permit area prior to temporary cessation				X

	ADJACENT AREA	AFFECTED AREA	DISTURBED AREA	PERMIT AREA
R645-301-521.111 Previously Mined Areas - maps must show active or abandoned underground mines	X			X
R645-301-521.112 Previously Mined Areas - maps must show existing or previously surface-mined areas				X
R645-301-521.121 Existing Surface and Subsurface Facilities and Features - maps must show location of all buildings within 1000 feet of proposed permit area				X
R645-301-521.122 Existing Surface and Subsurface Facilities and Features - maps must show location of surface and subsurface man-made features				X
R645-301-521.123 Existing Surface and Subsurface Facilities and Features - maps must show each public road within 100 feet of proposed permit area				X

	ADJACENT AREA	AFFECTED AREA	DISTURBED AREA	PERMIT AREA
R645-301-521.124 Existing Surface and Subsurface Facilities and Features - maps must show location and size of existing areas of spoil, etc.				X
R645-301-521.131 Landowners and Right of Entry and Public Interest - maps must show boundaries of lands and present owners of record				X
R645-301-521.132 Landowners and Right of Entry and Public Interest - maps must show boundaries of lands upon which applicant has legal right to enter				X
R645-301-521.140 Mine Maps and Permit Area Maps				X
R645-301-521.150 Land Surface Configuration Maps				X
R645-301-521.160 Maps and Cross Sections of the Proposed Features for the Proposed Permit Area				X
R645-301-521.162 Maps and Cross Sections of the Proposed Features for the Proposed Permit Area - must show area of land to be affected				X

	ADJACENT AREA	AFFECTED AREA	DISTURBED AREA	PERMIT AREA
R645-301-521.170 Transportation Facilities Maps				X
R645-301-521.180 Support facilities - each permit applicant must submit a description, plans and drawings for each support facility				X
R645-301-521.241 Mine and Permit Identification Signs - must be displayed at each point of access from public roads to areas of surface operations and facilities				X
R645-301-521.242 Mine and Permit Identification Signs - must be displayed at each point of access to permit area from public roads				X
R645-301-521.244 Mine and Permit Identification Signs - must be retained and maintained until after release of all bonds				X
R645-301-521.252 Perimeter Markers - perimeter of permit area must be clearly marked before surface mining activities begin				X
R645-301-523 Mining Method(s)				X

	ADJACENT AREA	AFFECTED AREA	DISTURBED AREA	PERMIT AREA
R645-301-523.100 Mining Method(s) - activities within permit area within 500 feet of underground mine must be described to indicate compliance with rules				X
R645-301-524 Blasting and Explosives - permit application must include a blasting plan				X
R645-301-524.120 Blasting and Explosives - certificates of blaster certification must be carried by blasters or on file at permit area				X
R645-301-524.211 Blasting and Explosives - anticipated blast design must be submitted if blasting is to occur within 1,000 feet of any building outside permit area				X
R645-301-524.310 Blasting and Explosives - written notification must be made to residents within 1/2 mile of permit area at least 30 days before initiation of blast advising how to request a preblasting survey				X

	ADJACENT AREA	AFFECTED AREA	DISTURBED AREA	PERMIT AREA
R645-301-524.320 Blasting and Explosives - resident or owner of dwelling within 1/2 mile of permit area may request a preblasting survey				X
R645-301-524.512 Blasting Signs - must be placed at all entrances to permit area from public roads or highways				X
R645-301-524.520 Warnings of blast must be given				X
R645-301-524.610 General Requirements for blasting				X
R645-301-524.621 Airblast Limits				X
R645-301-524.642 Maximum Peak-Particle Velocity				X
R645-301-524.720 Records of Blasting Operations - must identify distance from nearest blast hole to nearest building outside permit area				X
R645-301-525.110 Pre-subsidence survey - must include map of permit and adjacent areas	X			X

	ADJACENT AREA	AFFECTED AREA	DISTURBED AREA	PERMIT AREA
R645-301-525.130 Pre-subsidence survey - must include survey of all State appropriated water supplies that could be contaminated, etc. by subsidence	X			X
R645-301-526.210 Utility Installation and Support Facilities				X
R645-301-526.220 Utility Installation and Support Facilities - requirements for plans and drawings				X
R645-301-526.222 Utility Installation and Support Facilities - must minimize damage to fish, wildlife and related environmental values				X
R645-301-527.200 Transportation Facilities - plan must include description of each road, conveyor and rail system to be used				X
R645-301-528.310 Excess Spoil - must be placed in designated areas				X
R645-301-528.320 Coal Mine Waste - must be placed in new or existing disposal areas				X

	ADJACENT AREA	AFFECTED AREA	DISTURBED AREA	PERMIT AREA
R645-301-528.331 Noncoal Mine Waste - must be placed and stored in a controlled manner in designated area				X
R645-301-528.332 Noncoal Mine Waste - final disposal of noncoal mine waste must be in a designated disposal area				X
R645-301-529 Management of Mine Openings				X
R645-301-529.100 Management of Mine Openings - exposed underground openings will be cased, lined or otherwise managed as approved by the Division				X
R645-301-531 Operational Design Criteria and Plans, General Requirements				X
R645-301-532 Sediment Control	X (not defined term)		X	
R645-301-535.100 Disposal of Excess Spoil				X
R645-301-536 Coal Mine Waste				X

	ADJACENT AREA	AFFECTED AREA	DISTURBED AREA	PERMIT AREA
R645-301-536.510 Disposal of Coal Mine Waste in Special Areas - coal mine waste materials from activities outside permit area may be disposed of in permit area if approved by Division				X
R645-301-541.100 Reclamation Plan - persons who cease coal mining will close or backfill all affected areas		X		
R645-301-541.400 Reclamation Plan - each application will include a plan for reclamation				X
R645-301-542 Narratives, Maps and Plans - requirements for reclamation plan permit area				X
R645-301-542.200 Narratives, Maps and Plans - plan for backfilling, soil stabilization, compacting and grading is required				X
R645-301-542.310 Narratives, Maps and Plans - the anticipated final surface configuration to be achieved for affected areas is required		X		

	ADJACENT AREA	AFFECTED AREA	DISTURBED AREA	PERMIT AREA
R645-301-542.320 Narratives, Maps and Plans - location of each facility that will remain as permanent feature is required				X
R645-301-542.400 Narratives, Maps and Plans - before abandoning or seeking bond release, a description ensuring all temporary structures are removed and replaced is required				X
R645-301-542.710 Final Abandonment of Mine Openings and Disposal Areas				X
R645-301-542.720 Disposal of Excess Spoil - excess spoil to be placed in designated areas				X
R645-301-542.741 Disposal of Noncoal Mine Wastes - must be stored in a controlled manner in a designated portion of the permit area				X
R645-301-542.742 Disposal of Noncoal Mine Wastes - final disposal of noncoal mine wastes will be in a designated disposal site in the permit area				X

	ADJACENT AREA	AFFECTED AREA	DISTURBED AREA	PERMIT AREA
R645-301-553.100 Disturbed Areas - will be backfilled and graded			X	
R645-301-553.612 Previously Mined Areas and Continuously Mined Areas - reasonably available spoil in the immediate vicinity of the remaining operation or CMA will be included in the permit area				X
R645-301-553.700 Backfilling and Grading: Thin Overburden - thin overburden means that sufficient spoil and other waste materials to restore the disturbed area to its approximate original contour			X	X
R645-301-553.800 Backfilling and Grading: Thick Overburden - thick overburden means that more than sufficient spoil and other waste materials to restore the disturbed area to its approximate original contour			X	X
R645-301-611.100 Geology - general requirements	X (not defined term)			X
R645-301-621 Environmental Description - general requirements	X			X

	ADJACENT AREA	AFFECTED AREA	DISTURBED AREA	PERMIT AREA
R645-301-724.100 Ground Water Information requirements	X			X
R645-301-724.200 Surface water information requirements	X			X
R645-301-724.310 Geologic Information - application must include information to determine probable hydrologic consequences of the operation upon the quality and quantity of surface and ground water	X			X
R645-301-724.320 Geologic Information - application must include information to determine whether reclamation can be accomplished				X
R645-301-724.410 Climatological Information				X
R645-301-724.500 Supplemental Information re hydrology				X
R645-301-724.700 Permit application that proposes to conduct coal mining and reclamation operations within a valley holding a stream must meet certain requirements	X			X

	ADJACENT AREA	AFFECTED AREA	DISTURBED AREA	PERMIT AREA
R645-301-727 Alternative Water Source Information	X			X
R645-301-728.100 Probable Hydrologic Consequences Determination - permit application must contain determination of PHC	X			X
R645-301-728.331 Probable Hydrologic Consequences Determination - must include findings on sediment yield			X	
R645-301-728.340 Probable Hydrologic Consequences Determination - must include whether proposed surface coal mining and reclamation activity will result in contamination, etc. of underground or surface source of water	X			X
R645-301-728.350 Probable Hydrologic Consequences Determination - must include whether proposed surface coal mining and reclamation activity conducted after 10/24/92 may result in contamination, etc.	X			X

	ADJACENT AREA	AFFECTED AREA	DISTURBED AREA	PERMIT AREA
R645-301-729.100 Cumulative Hydrologic Impact Assessment				X
R645-301-731 Operation Plan - general requirements	X			X
R645-301-731.121 Surface Water Protection			X	X
R645-301-731.213 Ground Water Monitoring - demonstration of water-bearing stratum which does not serve as an acquifer may cause monitoring of stratum to be waived by Division	X			X
R645-301-731.214.1 Ground Water Monitoring - minimized disturbance to prevailing hydrologic balance	X			X
R645-301-731.224.1 Surface Water Monitoring - minimized disturbance to hydrologic balance	X			X
R645-301-731.511.1 Discharges - minimize disturbance to hydrologic balance				X
R645-301-731.700 Cross Section and Maps - re stream buffer zones				X

	ADJACENT AREA	AFFECTED AREA	DISTURBED AREA	PERMIT AREA
R645-301-731.710 Cross Section and Maps - must show locations of water supply intakes for current users of surface water flowing into, out of and within hydrologic area		X		X
R645-301-731.760 Cross Section and Maps - must show other relevant cross sections and maps required by the Division				X
R645-301-732.210 Sedimentation Ponds - any sedimentation pond or earthen structure to remain on proposed permit area as permanent water impoundment will be constructed and maintained to comply with certain requirements				X
R645-301-733.100 Impoundments - general plans				X
R645-301-742.111 Sediment Control Measures - must be designed to prevent additional contributions of sediment to stream flow or to runoff outside permit area				X

	ADJACENT AREA	AFFECTED AREA	DISTURBED AREA	PERMIT AREA
R645-301-742.120 Sediment Control Measures - must include practices carried out within and adjacent to disturbed area	X (not defined term)		X	
R645-301-742.121 Sediment Control Measures - must retain sediment within disturbed areas			X	
R645-301-742.122 Sediment Control Measures - must divert runoff away from disturbed areas			X	
R645-301-742.123 Sediment Control Measures - must divert runoff using protected channels or pipes through disturbed areas			X	
R645-301-742.211 Siltation Structures - additional contributions of suspended solids and sediment to streamflow or runoff outside permit area will be prevented				X
R645-301-742.214 Siltation Structures - any point-source discharge of water from underground workings to surface waters which does not meet effluent limitations will be passed through a siltation structure				X

	ADJACENT AREA	AFFECTED AREA	DISTURBED AREA	PERMIT AREA
R645-301-742.221.2 Sedimentation Ponds - will be located as near as possible to disturbed area			X	
R645-301-742.240 Exemptions re siltation structures			X	
R645-301-742.311 Diversions - general requirements	X		X	X
R645-301-742.312.3 Diversions - must prevent additional contributions of suspended solids to streamflow				X
R645-301-742.321 Diversion of Perennial and Intermittent Streams				X
R645-301-742.331 Diversion of Miscellaneous Flows			X	
R645-301-745.110 Disposal of Excess Spoil - excess spoil will be placed in designated disposal areas				X
R645-301-746.110 Coal Mine Waste - will be placed in a new or existing disposal area approved by the Division				X

	ADJACENT AREA	AFFECTED AREA	DISTURBED AREA	PERMIT AREA
R645-301-746.221 Surface Area Stabilization - slope protection will be provided to minimize surface erosion			X	
R645-301-747.100 Disposal of Noncoal Mine Waste - will be placed and stored in a controlled manner in a designated portion of the permit area				X
R645-301-747.200 Disposal of Noncoal Mine Waste - placement and storage of noncoal mine waste will ensure that leachate and surface runoff do not degrade surface or underground water				X
R645-301-747.300 Disposal of Noncoal Mine Waste - final disposal of noncoal mine waste will ensure that leachate and drainage does not degrade surface or underground water				X
R645-301-748 Casing and Sealing of Wells	X			X

	ADJACENT AREA	AFFECTED AREA	DISTURBED AREA	PERMIT AREA
R645-301-750 Performance Standards - all coal mining and reclamation operations will be conducted to minimize disturbance to the hydrologic balance	X			X
R645-301-752.220 Road Drainage - roads must be located, etc. to control or prevent additional contributions of suspended solids to stream flow or runoff outside permit area				X
R645-301-761 Reclamation - general requirements				X
R645-301-763.100 Siltation Structures - will be maintained until removal is authorized by the Division and the disturbed area has been stabilized and revegetated			X	
R645-301-812.300 Division Responsibilities - Bonding: the Division will determine the amount of the bond and adjust the amount as acreage in the permit area is revised				X

	ADJACENT AREA	AFFECTED AREA	DISTURBED AREA	PERMIT AREA
R645-301-820.111 Areas to be covered by the Performance Bond - will include the entire permit area				X
R645-301-820.112 Areas to be covered by the Performance Bond - permittee will file additional bonds on succeeding increments				X
R645-301-820.130 Areas to be covered by the Performance Bond - applicant will file a bond under a certain scheme to cover the bond amounts				X
R645-301-820.131 Areas to be covered by the Performance Bond - for the entire permit area				X
R645-301-820.320 Form of the Performance Bond - bond may be posted and approved to guarantee specific phases of reclamation				X
R645-301-820.330 Form of the Performance Bond - isolated and clearly defined portions of the permit area requiring extended liability may be separated from the original area and bonded separately with approval of the Division				X

	ADJACENT AREA	AFFECTED AREA	DISTURBED AREA	PERMIT AREA
R645-301-860.233 Collateral Bonds - land pledged as collateral for a bond will not be disturbed under any permit while it is serving as security				X
R645-301-880.210 Inspection by the Division				X
R645-301-880.300 Division may release all or part of the bond for the entire permit area if they are satisfied that all reclamation covered by the bond has been accomplished				X
R645-301-880.320 Release of bond after revegetation has been established				X
R645-301-880.910 Forfeiture of Bond				X
R645-301-880.922 Forfeiture of Bond - if such is required, the Division will use funds collected from bond forfeiture to complete the reclamation project				X
R645-301-880.930 Forfeiture of Bond - upon default, the Division may cause the forfeiture of any bonds deposited to complete reclamation				X

	ADJACENT AREA	AFFECTED AREA	DISTURBED AREA	PERMIT AREA
R645-303-222 Permit Changes				X
R645-303-224.100 Application for Permit Change - required if there is an increase in size of the surface or subsurface disturbed area			X	
R645-303-233.130 Approval Process - Division will approve a complete application unless it finds the requested renewal substantially jeopardizes the operator's continuing ability to comply with the State Program				X
R645-400-332.100 Pattern of Violation - Director may determine that a pattern of violation exists based upon two or more Division inspections within a 12-month period				X
R645-400-332.300 Pattern of Violation - the Director will promptly review the history of violations				X

	ADJACENT AREA	AFFECTED AREA	DISTURBED AREA	PERMIT AREA
R645-400-335.200 Hearing Procedures - within 60 days after the hearing, the Board or the Officer will prepare a written determination as to whether or not a pattern of violation exists				X

UTAH ADMINISTRATIVE CODE
NATURAL RESOURCES
R645. OIL, GAS AND MINING; COAL.
Current through February 1, 2000

R645-100. Administrative: Introduction.

R645-100-100. Scope.

110. General Overview. The rules presented herein establish the procedures through which the Utah State Division of Oil, Gas and Mining will implement those provisions of the Coal Mining Reclamation Act of 1979, (the Act) pertaining to the effects of coal mining and reclamation operations and pertaining to coal exploration.

120. R645 Rules Organization. The R645 Rules have been subdivided into the four major functional aspects of the Division's coal mining and exploration State Program.

121. The heading entitled ADMINISTRATIVE encompasses general introductory material, definitions applicable throughout the R645 Rules, procedures for the exemption of certain coal extraction activities, designating areas unsuitable for coal mining, protection of employees, and requirements for blaster certification.

122. The heading entitled COAL EXPLORATION establishes the minimum requirements for acquiring approval and identifies performance standards for coal exploration.

123. The heading entitled COAL MINE PERMITTING describes certain procedural requirements and options attendant to the coal mine permitting process. Moreover, the minimum requirements for acquiring a permit for a coal mining and reclamation operation are identified.

124. The heading entitled INSPECTION AND ENFORCEMENT delineates the authority, administrative procedures, civil penalties, and employee protection attendant to the Division's inspection and enforcement program.

130. Effective Date. The provisions of R645-100 through and including R645- 402 will become effective and enforceable upon final approval by the Office of Surface Mining, U.S. Department of the Interior. Existing coal regulatory program rules, R645 Chapters I and II, will be in effect until approval of R645-100 through R645-402 by the Office of Surface Mining and will be considered repealed upon approval of R645-100 through R645-402.

R645-100-200. Definitions.

As used in the R645 Rules, the following terms have the specified meanings:

"Abandoned site" means, for the purpose of R645-400, a coal mining and reclamation operation for which the Division has found in writing that,

(a) All coal mining and reclamation operations at the site have ceased;

(b) The Division has issued at least one notice of violation or the initial program equivalent, and either:

(i) Is unable to serve the notice despite diligent efforts to do so; or

(ii) The notice was served and has progressed to a failure-to-abate cessation order or the initial program equivalent;

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Westlaw.

(c) The Division:

(i) Is taking action to ensure that the permittee and operator, and owners and controllers of the permittee and operator, will be precluded from receiving future permits while violations continue at the site; and

(ii) Is taking action pursuant to section 40-10-20(5), 40-10-20(6), 40-10- 22(1)(d), or 40-10-22(2)(a) of the Act to ensure that abatement occurs or that there will not be a recurrence of the failure-to-abate, except where after evaluating the circumstances it concludes that further enforcement offers little or no likelihood of successfully compelling abatement or recovering any reclamation costs; and

(d) Where the site is, or was, permitted and bonded:

(i) The permit has either expired or been revoked; and

(ii) The Division has initiated and is diligently pursuing forfeiture of, or has forfeited any available performance bond.

(e) In lieu of the inspection frequency established in R645-400-130, the Division shall inspect each abandoned site on a set frequency commensurate with the public health and safety and environmental considerations present at each specific site, but in no case shall the inspection frequency be set at less than one complete inspection per calendar year.

(1) In selecting an alternate inspection frequency authorized under part (e) of this definition, the Division shall first conduct a complete inspection of the abandoned site and provide public notice under paragraph (2) below. Following the inspection and public notice, the Division shall prepare and maintain for public review a written finding justifying the alternative inspection frequency selected. This written finding shall justify the new inspection frequency by affirmatively addressing in detail all of the following criteria:

(i) How the site meets each of the criteria under the definition of an abandoned site and thereby qualifies for a reduction in inspection frequency;

(ii) Whether, and to what extent, there exist on the site impoundments, earthen structures or other conditions that pose, or may reasonably be expected to change into, imminent dangers to the health or safety of the public or significant environmental harms to land, air or water resources;

(iii) The extent to which existing impoundments or earthen structures were constructed and certified in accordance with prudent engineering designs approved in the permit;

(iv) The degree to which erosion and sediment control is present and functioning;

(v) The extent to which the site is located near or above urbanized areas, communities, occupied dwellings, schools and other public or commercial buildings and facilities;

(vi) The extent of reclamation completed prior to abandonment and the degree of stability of unreclaimed areas, taking into consideration the physical characteristics of the land mined and the extent of settlement or revegetation that has occurred naturally with time; and

(vii) Based on a review of the complete and partial inspection report record for the site during at least the last two consecutive years, the rate at which adverse environmental or public health and safety conditions have and can be expected to progressively deteriorate.

(2) The public notice and opportunity to comment required under part (e)(1) of this definition shall be provided as follows:

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(i) The Division shall place a notice in the newspaper with the broadest circulation in the locality of the abandoned site providing the public with a 30-day period in which to submit written comments.

(ii) The public notice shall contain the permittee's name, the permit number, the precise location of the land affected, the inspection frequency proposed, the general reasons for reducing the inspection frequency, the bond status of the permit, the telephone number and address of the office where written comments on the reduced inspection frequency may be submitted, and the closing date of the comment period.

"Account" means the Abandoned Mine Reclamation Account established pursuant to Section 40-10-25 of the Act.

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

"Acid-Forming Materials" means earth materials that contain sulfide minerals or other materials which, if exposed to air, water, or weathering processes, form acids that may create acid drainage.

"Act" means Utah Code Annotated Section 40-10-1 et seq.

"**Adjacent Area**" means the area outside the **permit area** where a resource or resources, determined according to the context in which **adjacent area** is used, are or reasonably could be expected to be adversely impacted by proposed coal mining and reclamation operations, including probable impacts from underground workings.

"Administratively Complete Application" means an application for permit approval or approval for coal exploration, where required, which the Division determines to contain information addressing each application requirement of the State Program and to contain all information necessary to initiate processing and public review.

"**Affected Area**" means any land or water surface area which is used to facilitate, or is physically altered by, coal mining and reclamation operations. The **affected area** includes the **disturbed area**; any area upon which coal mining and reclamation operations are conducted; any adjacent lands the use of which is incidental to coal mining and reclamation operations; all areas covered by new or existing roads used to gain access to, or for hauling coal to or from coal mining and reclamation operations, except as provided in this definition; any area covered by surface excavations, workings, impoundments, dams, ventilation shafts, entryways, refuse banks, dumps, stockpiles, overburden piles, spoil banks, culm banks, tailings, holes or depressions, repair areas, storage areas, shipping areas; any areas upon which are sited structures, facilities, or other property material on the surface resulting from, or incident to, coal mining and reclamation operations; and the area located above underground workings. The **affected area** shall include every road used for purposes of access to, or for hauling coal to or from, coal mining and reclamation operations, unless the road (a) was designated as a public road pursuant to the laws of the jurisdiction in which it is located; (b) is maintained with public funds, and constructed, in a manner similar to other public roads of the same classification within the jurisdiction; and (c) there is substantial (more than incidental) public use. Editorial Note: The definition of "**Affected area**", insofar, as it excludes roads which are included in the definition of "Surface coal mining operations", was suspended at 51 FR 41960, Nov. 20, 1986. Accordingly, Utah suspends the definition of **Affected Area** insofar as it excludes roads which are included in the definition of "coal mining and reclamation operations."

"Agricultural Use" means the use of any tract of land for the production of animal or vegetable life. The uses include, but are not limited to, the pasturing, grazing, and watering of livestock, and the cropping, cultivation, and harvesting of plants.

"Alluvial Valley Floors" means the unconsolidated stream-laid deposits holding streams with water availability sufficient for subirrigation or flood irrigation agricultural activities, but does not include upland areas which are generally overlain by a thin veneer of colluvial deposits composed chiefly of debris from sheet erosion, deposits

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formed by unconcentrated runoff or slope wash, together with talus, or other mass-movement accumulations, and windblown deposits.

"Applicant" means any person seeking a permit, permit change, and permit renewal, transfer, assignment, or sale of permit rights from the Division to conduct coal mining and reclamation operations or, where required, seeking approval for coal exploration.

"Application" means the documents and other information filed with the Division under the R645 Rules for the issuance of permits; permit changes; permit renewals; and transfer, assignment, or sale of permit rights for coal mining and reclamation operations or, where required, for coal exploration.

"Approximate Original Contour" means that surface configuration achieved by backfilling and grading of the mined areas so that the reclaimed area, including any terracing or access roads, closely resembles the general surface configuration of the land prior to mining and blends into and complements the drainage pattern of the surrounding terrain with all highwalls, spoil piles, and coal refuse piles having a design approved under the R645 Rules and prepared for abandonment. Permanent water impoundments may be permitted where the Division has determined that they comply with R645-301-413.100 through R645-301-413.334, R645-301-512.240, R645-301-514.300, R645-301-515.200, R645- 301-533.100 through R645-301-533.600, R645-301-542.400, R645-301-733.220 through R645-301-733.224, R645-301-743, R645-302-270 through R645-302-271.400, R645-302-271.600, R645-302-271.800, and R645-302-271.900.

"Aquifer" means a zone, stratum, or group of strata that can store and transmit water in sufficient quantities for a specific use.

"Arid and Semiarid Area" means, in the context of ALLUVIAL VALLEY FLOORS, an area where water use by native vegetation equals or exceeds that supplied by precipitation. All coalfields in Utah are in arid and semiarid areas.

"Auger Mining" means a method of mining coal at a cliff or highwall by drilling holes into an exposed coal seam from the highwall and transporting the coal along an auger bit to the surface.

"Best Technology Currently Available" means equipment, devices, systems, methods, or techniques which will (a) prevent, to the extent possible, additional contributions of suspended solids to stream flow or runoff outside the **permit area**, but in no event result in contributions of suspended solids in excess of requirements set by applicable state or federal laws; and (b) minimize, to the extent possible, disturbances and adverse impacts on fish, wildlife, and related environmental values, and achieve enhancement of those resources where practicable. The term includes equipment, devices, systems, methods, or techniques which are currently available anywhere as determined by the Director, even if they are not in routine use. The term includes, but is not limited to, construction practices, siting requirements, vegetation selection and planting requirements, animal stocking requirements, scheduling of activities, and design of sedimentation ponds in accordance with R645-301 and R645-302. Within the constraints of the State Program, the Division will have the discretion to determine the best technology currently available on a case-by-case basis, considering among other things the economic feasibility of the equipment, devices, systems, methods or techniques, as authorized by the Act and the R645 Rules.

"Blaster" means a person who is directly responsible for the use of explosives in connection with surface blasting operations incidental to UNDERGROUND COAL MINING AND RECLAMATION ACTIVITIES or SURFACE COAL MINING AND RECLAMATION ACTIVITIES, and who holds a valid certificate issued by the Division in accordance with the statutes and regulations administered by the Division governing training, examination, and certification of persons responsible for the use of explosives in connection with surface blasting operations incident to coal mining and reclamation operations.

"Board" means the Board of Oil, Gas and Mining for the state of Utah, or the Board's delegated representative.

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"Cemetery" means any area of land where human bodies are interred.

"Coal" means combustible carbonaceous rock, classified as anthracite, bituminous, subbituminous, or lignite by ASTM Standard D388-95.

"Coal Exploration" means the field gathering of: (a) 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; or (b) the gathering of environmental data to establish the conditions of an area before beginning coal mining and reclamation operations under the requirements of the R645 Rules.

"Coal Mine Waste" means coal processing waste and underground development waste.

"Coal Mining and Reclamation Operations" means (a) activities conducted on the surface of lands in connection with a surface coal mine or, subject to the requirements of Section 40-10-18 of the Act, surface coal mining and reclamation operations and surface impacts incident to an underground coal mine, the products of which enter commerce or the operations of which directly or indirectly affect interstate commerce. Such activities include all activities necessary and incidental to the reclamation of the operations, excavation for the purpose of obtaining coal, including such common methods as contour, strip, auger, mountaintop removal, box cut, open pit, and area mining; the use of explosives and blasting; in-situ distillation; or retorting, leaching, or other chemical or physical processing; and the cleaning, concentrating, or other processing or preparation of coal. Such activities also include the loading of coal for interstate commerce at or near the mine site. Provided, these activities do not include the extraction of coal incidental to the extraction of other minerals, where coal does not exceed 16-2/3 percent of the tonnage of minerals removed for purposes of commercial use or sale, or coal exploration subject to Section 40-10-8 of the Act; and, provided further, that excavation for the purpose of obtaining coal includes extraction of coal from coal refuse piles; and (b) the areas upon which the activities described under part (a) of this definition occur or where such activities disturb the natural land surface. These areas will also include any adjacent land the use of which is incidental to any such activities, all lands affected by the construction of new roads or the improvement or use of existing roads to gain access to the site of those activities and for haulage and excavation, workings, impoundments, dams, ventilation shafts, entryways, refuse banks, dumps, stockpiles, overburden piles, spoil banks, culm banks, tailings, holes or depressions, repair areas, storage areas, processing areas, shipping areas, and other areas upon which are sited structures, facilities, or other property or material on the surface, resulting from or incident to those activities.

"Coal Mining and Reclamation Operations Which Exist on the Date of Enactment" means all coal mining and reclamation operations which were being conducted on August 3, 1977.

"Coal Preparation or Coal Processing" means the chemical and physical processing and the cleaning, concentrating, or other processing or preparation of coal.

"Coal Processing Plant" means a facility where coal is subjected to chemical or physical processing or the cleaning, concentrating, or other processing or preparation. Coal processing plant includes facilities associated with coal processing activities, such as, 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.

"Coal Processing Waste" means earth materials which are separated from the product coal during cleaning, concentrating, or the processing or preparation of coal.

"Collateral Bond" means an indemnity agreement in a sum certain executed by the permittee as principal which is supported by the deposit with the Division of: (a) a cash account, which will be the deposit of cash in one or more federally-insured or equivalently protected accounts, payable only to the Division upon demand, or the deposit of cash directly with the Division; (b) negotiable bonds of the United States, a State, or a municipality, endorsed to the order of, and placed in the possession of, the Division; (c) negotiable certificates of deposit, made

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payable or assigned to the Division and placed in its possession, or held by a federally insured bank; (d) an irrevocable letter of credit of any bank organized or authorized to transact business in the United States payable only to the Division upon presentation; (e) a perfected, first lien security interest in real property in favor of the Division; or (f) other investment grade rated securities having a rating of AAA or AA or A, or an equivalent rating issued by a nationally recognized securities rating service, endorsed to the order of, and placed in the possession of, the Division.

"Combustible Material" means organic material that is capable of burning, either by fire or through oxidation, accompanied by the evolution of heat and a significant temperature rise.

"Community or Institutional Building" means any structure, other than a public building or an occupied dwelling, which is used primarily for meetings, gatherings or functions of local civic organizations or other community groups; functions including, but not limited to educational, cultural, historic, religious, scientific, correctional, mental-health or physical- health care facility; or is used for public services, including, but not limited to, water supply, power generation, or sewage treatment.

"Compaction" means increasing the density of a material by reducing the voids between the particles, and is generally accomplished by controlled placement and mechanical effort such as from repeated application of wheel, track, or roller loads from heavy equipment.

"Complete and Accurate Application" means an application for permit approval or approval for coal exploration, where required, which the Division determines to contain all information required under the Act, the R645 Rules, and the State Program that is necessary to make a decision on permit issuance.

"Continuously Mined Areas" means land which was mined for coal by underground mining operations prior to August 3, 1977, the effective date of the Federal Act, and where mining continued after that date.

"Cooperative Agreement" means the agreement between the Governor of the State of Utah and the Secretary of the Department of the Interior as published at 30 CFR 944.30.

"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.

"Cumulative Impact Area" means the area, including the **permit area**, within which impacts resulting from the proposed operation may interact with the impacts of all anticipated mining on surface and groundwater systems. Anticipated mining will include, at a minimum, the entire projected lives through bond releases of: (a) the proposed operation, (b) all existing operations, (c) any operation for which a permit application has been submitted to the Division, and (d) all operations required to meet diligent development requirements for leased federal coal for which there is actual mine development information available.

"Cumulative measurement period" means, for the purpose of R645-106, the period of time over which both cumulative production and cumulative revenue are measured.

(a) For purposes of determining the beginning of the cumulative measurement period, subject to Division approval, the operator must select and consistently use one of the following:

(i) For mining areas where coal or other minerals were extracted prior to August 3, 1977, the date extraction of coal or other minerals commenced at that mining area or August 3, 1977, or

(ii) For mining areas where extraction of coal or other minerals commenced on or after August 3, 1977, the date extraction of coal or other minerals commenced at that mining area, whichever is earlier.

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(b) For annual reporting purposes pursuant to R645-106-900, the end of the period for which cumulative production and revenue is calculated is either

(i) For mining areas where coal or other minerals were extracted prior to July 1, 1992, June 30, 1992, and every June 30 thereafter; or

(ii) For mining areas where extraction of coal or other minerals commenced on or after July 1, 1992, the last day of the calendar quarter during which coal extraction commenced, and each anniversary of that day thereafter.

"Cumulative production" means, for the purpose of R645-106, the total tonnage of coal or other minerals extracted from a mining area during the cumulative measurement period. The inclusion of stockpiled coal and other mineral tonnages in this total is governed by R645-106-700.

"Cumulative revenue" means, for the purpose of R645-106, the total revenue derived from the sale of coal or other minerals and the fair market value of coal or other minerals transferred or used, but not sold, during the cumulative measurement period.

"Current Assets" means cash or other assets or resources which are reasonably expected to be converted to cash or sold or consumed within one year or within the normal operating cycle of the business.

"Current Liabilities" means obligations which are reasonably expected to be paid or liquidated within one year or within the normal operating cycle of the business.

"Direct Financial Interest" means ownership or part ownership by an employee of lands, stocks, bonds, debentures, warrants, partnership shares, or other holdings, and also means any other arrangement where the employee may benefit from his or her holding in or salary from coal mining and reclamation operations. Direct financial interests include employment, pensions, creditor, real property, and other financial relationships.

"Director" means the Director, Utah State Division of Oil, Gas and Mining, or the Director's representative.

"Director of the Office" means the Director of the Office of Surface Mining, Reclamation and Enforcement, U.S. Department of the Interior.

"**Disturbed Area**" means an area where vegetation, topsoil, or overburden is removed or upon which topsoil, spoil, coal processing waste, underground development waste, or noncoal waste is placed by coal mining and reclamation operations. Those areas are classified as disturbed until reclamation is complete and the performance bond or other assurance of performance required by R645-301-800 is released. For the purposes of R645-301-356.300, R645-301- 356.400, R645-301-513.200, R645-301-742.200 through R645-301-742.240, and R645-301-763, **disturbed area** will not include those areas (a) in which the only coal mining and reclamation operations include diversion ditches, siltation structures, or roads that are designed, constructed and maintained in accordance with R645-301 and R645-302; and (b) for which the upstream area is not otherwise disturbed by the operator.

"Diversion" means a channel, embankment, or other man-made structure constructed to divert water from one area to another.

"Division" means Utah State Division of Oil, Gas and Mining, the designated state regulatory authority.

"Downslope" means the land surface between the projected outcrop of the lowest coalbed being mined along each highwall and a valley floor.

"Edge Effect" means the positive effect created by the juxtaposition of two diverse habitats.

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"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 for other similar purposes.

"Employee" means any person employed by the Division who performs any function or duty under the Act, and does not mean the Board of Oil, Gas and Mining which is excluded from this definition.

"Ephemeral Stream" means a stream which flows only in direct response to precipitation in the immediate watershed, or in response to the melting of a cover of snow and ice, and which has a channel bottom that is always above the local water table.

"Essential Hydrologic Functions" means the role of an ALLUVIAL VALLEY FLOOR in collecting, storing, regulating, and making the natural flow of surface or ground water, or both, usefully available for agricultural activities by reason of the valley floor's topographic position, the landscape, and the physical properties of its underlying materials. A combination of these functions provides a water supply during extended periods of low precipitation.

"Excess Spoil" means spoil material disposed of in a location other than the mined-out area, provided that the spoil material used to achieve the approximate original contour or to blend the mined-out area with the surrounding terrain in accordance with R645-301-553.220 in nonsteep slope areas will not be considered excess spoil.

"Existing Structure" means a structure or facility used in connection with or to facilitate coal mining and reclamation operations for which construction began prior to January 21, 1981.

"Extraction of Coal as an Incidental Part" means the extraction of coal which is necessary to enable government-financed construction to be accomplished. For purposes of R645-102, only that coal extracted from within the right-of- way in the case of a road, railroad, utility line, or other such construction, or within the boundaries of the area directly affected by other types of government-financed construction, may be considered incidental to that construction. Extraction of coal outside the right-of-way or boundary of the area directly affected by the construction will be subject to the requirements of the Act and the R645 Rules.

"Federal Act" means the Surface Mining Control and Reclamation Act of 1977 (P.L. 95-87).

"Federal Lands" means any land, including mineral interests, owned by the United States without regard to how the United States acquired ownership of the lands or which agency manages the lands. It does not include Indian lands.

"Fixed Assets" means plants and equipment, but does not include land or coal in place.

"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.

"Fragile Lands" means, for the purposes of R645-103-300, geographic areas containing natural, ecologic, scientific, or aesthetic resources that could be significantly damaged or be destroyed by coal mining and reclamation operations. Examples of fragile lands include valuable habitats for fish or wildlife, critical habitats for endangered or threatened species of animals or plants, uncommon geologic formations, paleontological sites, National Natural Landmark sites, areas where mining may result in flooding, environmental corridors containing a concentration of ecologic and aesthetic features, areas of recreational value due to high environmental quality.

"Fugitive Dust" means that particulate matter not emitted from a duct or stack which becomes airborne due to the forces of wind or coal mining and reclamation operations, or both. During coal mining and reclamation operations, it may include emissions from haul roads; wind erosion of exposed surfaces, storage piles, and spoil piles; reclamation operations; and other activities in which material is either removed, stored, transported, or

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"Fund" means the Abandoned Mine Reclamation Account established pursuant to 40-10-25 of the Act.

"Government-Financed Construction" means, for the purposes of R645-102, construction funded 50 percent or more by funds appropriated from a government-financing agency's budget or obtained from general revenue bonds, but will not mean government-financing agency guarantees, insurance, loans, funds obtained through industrial revenue bonds or their equivalent, or in- kind payments.

"Government Financing Agency" means, for the purposes of R645-102 a federal, state, county, municipal, or local unit of government, or a department, bureau, agency or office of the unit which, directly or through another unit of government, finances construction.

"Gravity Discharge" means, with respect to UNDERGROUND MINING AND RECLAMATION ACTIVITIES, mine drainage that flows freely in an open channel downgradient. Mine drainage that occurs as a result of flooding a mine, to the level of the discharge, is not gravity discharge.

"Ground Cover" means the area of ground covered by the combined aerial parts of vegetation and the litter that is produced naturally on-site, expressed as a percentage of the total area of measurement.

"Ground Water" means subsurface water that fills available openings in rock or soil materials to the extent that they are considered water saturated.

"Habitats of Unusually High Value for Fish and Wildlife" means an area defined by the state as crucial-critical use areas for wildlife.

"Half-Shrub" means a perennial plant with a woody base whose annually produced stems die back each year.

"Head-of-Hollow Fill" means a fill structure consisting of any material, other than organic material, placed in the uppermost reaches of a hollow where side slopes of the existing hollow, measured at the steepest point, are greater than 20 degrees, or the average slope of the profile of the hollow from the toe of the fill to the top of the fill, is greater than ten degrees. In head-of-hollow fills, the top surface of the fill, when completed, is at approximately the same elevation as the adjacent ridge line, and no significant area of natural drainage occurs above the fill draining into the fill area.

"Higher or Better Uses" means postmining land uses that have a higher economic value or nonmonetary benefit to the landowner, or the community, than the premining land uses.

"Highwall" means the face of exposed overburden and coal in an open cut of surface coal mining and reclamation activities or for entry to underground mining activities.

"Highwall Remnant" means that portion of highwall that remains after backfilling and grading of a REMINING **permit area**.

"Historic Lands" means, for the purposes of R645-103-300, areas containing historic, cultural, and scientific resources. Examples of historic lands include archeological sites, properties listed on or eligible for listing on a Utah or National Register of Historic Places, National Historic Landmarks, properties having religious or cultural significance to native Americans or religious groups, and properties for which historic designation is pending.

"Historically Used for Cropland" means (a) lands that have been used for cropland for any five years or more out of the ten years immediately preceding the acquisition, including purchase, lease, or option, of the land for the purpose of conducting or allowing through resale, lease, or option the conducting of coal mining and reclamation operations; (b) lands that the Division determines, on the basis of additional cropland history of the

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surrounding lands and the lands under consideration, that the **permit area** is clearly cropland but falls outside the specific five-years-in-ten criterion, in which case the regulations for prime farmland may be applied to include more years of cropland history only to increase the prime farmland acreage to be preserved; or (c) lands that would likely have been used as cropland for any five out of the last ten years, immediately preceding such acquisition but for the same fact of ownership or control of the land unrelated to the productivity of the land.

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

"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, falls as precipitation, moves along or into the ground surface and returns to the atmosphere as vapor by means of evaporation and transpiration.

"Imminent Danger to the Health and Safety of 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.

"Impounding Structure" means a dam, embankment, or other structure used to impound water, slurry, or other liquid or semiliquid material.

"Impoundments" means all water, sediment, slurry, or other liquid or semiliquid holding structures, either naturally formed or artificially built.

"Indian Lands" means all lands, including mineral interests, within the exterior boundaries of any federal Indian reservation, notwithstanding the issuance of any patent, and including rights-of-way, and all lands including mineral interests held in trust for or supervised by an Indian tribe.

"Indirect Financial Interest" means the same financial relationships as for direct ownership, but where the employee reaps the benefits of such interests, including interests held by his or her spouse, minor child(ren) and other relatives, including in-laws, residing in the employee's home. The employee will not be deemed to have an indirect financial interest if there is no relationship between the employee's functions or duties and the coal mining and reclamation operations in which the spouse, minor child(ren), or other resident relatives hold a financial interest.

"In-Situ Processes" means activities conducted on the surface or underground in connection with in-place distillation, retorting, leaching, or other chemical or physical processing of coal. The term includes, but is not limited to, in-situ gasification, in-situ leaching, slurry mining, solution mining, borehole mining, and fluid-recovery mining.

"Intermittent Stream" means (a) a stream, or reach of a stream, that drains a watershed of at least one square mile, or (b) a stream, or reach of a stream, that is below the local water table for at least some part of the year and obtains its flow from both surface runoff and groundwater discharge.

"Irreparable Damage to the Environment" means any damage to the environment in violation of the Act, the State Program, or the R645 Rules that cannot be corrected by actions of the applicant.

"Knowingly" means for the purposes of R645-402, that an individual knew or had reason to know in

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authorizing, ordering, or carrying out an act or omission on the part of a corporate permittee that such act or omission constituted a violation, failure, or refusal.

"Land Use" means 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 and may include land used for support facilities that are an integral part of the use. Changes of land use from one of the following categories to another will be considered as a change to an alternative land use which is subject to approval by the Division.

CROPLAND--Land used for the production of adapted crops for harvest, alone or in rotation with grasses and legumes, that include row crops, small grain crops, hay crops, nursery crops, orchard crops, and other similar crops.

DEVELOPED WATER RESOURCES--Land used for storing water for beneficial uses such as stock ponds, irrigation, fire protection, flood control, and water supply.

FISH AND WILDLIFE HABITAT--Land dedicated wholly or partially to the production, protection, or management of species of fish or wildlife.

FORESTRY--Land used or managed for the long-term production of wood, wood fiber, or wood-derived products.

GRAZING LAND--Land used for grasslands and forest lands where the indigenous vegetation is actively managed for grazing, browsing, or occasional hay production.

INDUSTRIAL/COMMERCIAL--Land used for (a) extraction or transformation of materials for fabrication of products, wholesaling of products, or long-term storage of products; this includes all heavy and light manufacturing facilities, or (b) retail or trade of goods or services, including hotels, motels, stores, restaurants, and other commercial establishments.

PASTURE LAND OR LAND OCCASIONALLY CUT FOR HAY--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.

RECREATION--Land used for public or private leisure-time 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.

RESIDENTIAL--Land used for single and multiple-family housing, mobile home parks, or other residential lodgings.

UNDEVELOPED LAND OR NO CURRENT USE OR LAND MANAGEMENT--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.

"Liabilities" means obligations to transfer assets or provide services to other entities in the future as a result of past transactions.

"Material Damage" for the purposes of R645-301-525, means:

(a) Any functional impairment of surface lands, features, structures or facilities;

(b) Any physical change that has a significant adverse impact on the affected land's capability to support any current or reasonably foreseeable uses or causes significant loss in production or income; or

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(c) Any significant change in the condition, appearance or utility of any structure or facility from its pre-subsidence condition.

"Materially Damage the Quantity or Quality of Water" means, with respect to ALLUVIAL VALLEY FLOORS, to degrade or reduce, by coal mining and reclamation operations, the water quantity or quality supplied to the alluvial valley floor to the extent that resulting changes would significantly decrease the capability of the alluvial valley floor to support agricultural activities.

"Mining" means, for the purposes of R645-400-351, (a) extracting coal from the earth or coal waste piles and transporting it within or from the **permit area**; and (b) the processing, cleaning, concentrating, preparing or loading of coal where such operations occur at a place other than a mine site.

"Mining area" means, for the purpose of R645-106, an individual excavation site or pit from which coal, other minerals and overburden are removed.

"Moist Bulk Density" means the weight of soil (oven dry)per unit volume. Volume is measured when the soil is at field moisture capacity (1/3 bar moisture tension). Weight is determined after drying the soil at 105 degrees Celsius.

"NRCS" means Natural Resources Conservation Service, U.S. Department of Agriculture.

"MSHA" means the Mine Safety and Health Administration, U.S. Department of Labor.

"Mulch" means vegetation residues or other suitable materials that aid in soil stabilization and soil moisture conservation, thus providing microclimatic conditions suitable for germination and growth.

"Natural Hazard Lands" means, for the purposes of R645-103-300, geographic areas in which natural conditions exist which pose or, as a result of coal mining and reclamation operations, may pose a threat to the health, safety, or welfare of people, property or the environment, including areas subject to landslides, cave-ins, large or encroaching sand dunes, severe wind or soil erosion, frequent flooding, avalanches, and areas of unstable geology.

"Net Worth" means total assets minus total liabilities and is equivalent to owners' equity.

"Non-commercial Building" means any building, other than an occupied residential dwelling, that, at the time the subsidence occurs, is used on a regular or temporary basis as a public building or community or institutional building as those terms are defined at R645-100-200. Any building used only for commercial agricultural, industrial, retail or other commercial enterprises is excluded.

"Noxious Plants" means species that have been included on the official Utah list of noxious plants.

"Occupied Dwelling" means any building that is currently being used on a regular or temporary basis for human habitation.

"Occupied Residential Dwelling and Structures Related Thereto" means, for purposes of R645-301, any building or other structure that, at the time the subsidence occurs, is used either temporarily, occasionally, seasonally, or permanently for human habitation. This term also includes any building, structure or facility installed on, above or below, or a combination thereof, the land surface if that building, structure or facility is adjunct to or used in connection with an occupied residential dwelling. Examples of such structures include, but are not limited to, garages; storage sheds and barns; greenhouses and related buildings; utilities and cables; fences and other enclosures; retaining walls; paved or improved patios, walks and driveways; septic sewage treatment facilities; and lot drainage and lawn and garden irrigation systems. Any structure used only for commercial agricultural, industrial, retail or other commercial purposes is excluded.

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"Office" means Office of Surface Mining Reclamation and Enforcement, U.S. Department of the Interior.

"Operator" means any person engaged in coal mining who removes, or intends to remove, more than 250 tons of coal from the earth or from coal refuse piles by mining within 12 consecutive calendar months in any one location.

"Other minerals" means, for the purpose of R645-106, any commercially valuable substance mined for its mineral value, excluding coal, topsoil, waste and fill material.

"Other Treatment Facilities" means, for the purposes of R645-301-356.300, R645-301-356.400, R645-301-513.200, R645-301-742.200 through R645-301-742.240, and R645-301-763, any chemical treatments, such as flocculation or neutralization, or mechanical structures, such as clarifiers or precipitators, that have a point source discharge and that are utilized to prevent additional contribution of dissolved or suspended solids to stream flow or runoff outside the **permit area** or to comply with all applicable State and Federal water quality laws and regulations.

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

"Overburden" means material of any nature, consolidated or unconsolidated, that overlies a coal deposit, excluding topsoil.

"Owned or controlled" and "owns or controls" means any one or a combination of the relationships specified in paragraphs (a) and (b) of this definition:

(a)(1) Being a permittee of a coal mining and reclamation operation;

(2) Based on the instrument of ownership or voting securities, owning of record in excess of 50 percent of an entity; or

(3) Having any other relationship which gives one person authority directly or indirectly to determine the manner in which an applicant, an operator, or other entity conducts coal mining and reclamation operations.

(b) The following relationships are presumed to constitute ownership or control unless a person can demonstrate that the person subject to the presumption does not in fact have the authority directly or indirectly to determine the manner in which the relevant coal mining and reclamation operation is conducted:

(1) Being an officer or director of an entity;

(2) Being the operator of a coal mining and reclamation operation;

(3) Having the ability to commit the financial or real property assets or working resources of an entity;

(4) Being a general partner in a partnership;

(5) Based on the instruments of ownership or the voting securities of a corporate entity, owning of record 10 through 50 percent of the entity; or

(6) Owning or controlling coal to be mined by another person under a lease, sublease, or other contract and having the right to receive such coal after mining or having authority to determine the manner in which that person or another person conducts coal mining and reclamation operation.

"Parent Corporation" means corporation which owns or controls the applicant.

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"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. The term does not include intermittent stream or ephemeral stream.

"Performance Bond" means a surety bond, collateral bond, or self-bond, or a combination thereof, by which a permittee assures faithful performance of all the requirements of the Act, the R645 Rules, the State Program, and the requirements of the permit and reclamation plan.

"Performing Any Function or Duty Under This Act" means those decisions or actions, which if performed or not performed by a board member or employee, affect the State Program under the Act.

"Permanent Diversion" means a diversion remaining after coal mining and reclamation operations are completed which has been approved for retention by the Division and other appropriate state and federal agencies.

"Permanent Impoundment" means an impoundment which is approved by the Division and, if required, by other state and federal agencies for retention as part of the postmining land use.

"Permit" means a permit to conduct coal mining and reclamation operations issued by the Division pursuant to the State Program. For purposes of the federal lands program, permit means a permit issued by the Division pursuant to the cooperative agreement with the Secretary.

"**Permit Area**" means the area of land, indicated on the approved map submitted by the operator with his or her application, required to be covered by the operator's performance bond under R645-301-800, and which will include the area of land upon which the operator proposes to conduct coal mining and reclamation operations under the permit, including all **disturbed areas**, provided that areas adequately bonded under another valid permit may be excluded from the **permit area**.

"Permit Change" means any coal mining and reclamation operations not previously approved by the Division in the Permit or in any previously- approved permit change under R645-303-220.

"Permittee" means a person holding, or required by the Act or the R645 Rules to hold, a permit to conduct coal mining and reclamation operations issued by the Division pursuant to the State Program or, under the cooperative agreement pursuant to Section 523 of P.L. 95-87, by the Director of the Office and the Division.

"Person" means an individual, Indian tribe when conducting coal mining and reclamation operations on non-Indian lands, partnership, association, society, joint venture, joint-stock company, firm, company, corporation, cooperative or other business organization, and any agency, unit, or instrumentality of federal, state, or local government including any publicly owned utility or publicly owned corporation of federal, state, or local governments.

"Person Having an Interest Which Is or May Be Adversely Affected or Person With a Valid Legal Interest" means any person (a) who uses any resource of economic, recreational, aesthetic, or environmental value that may be adversely affected by coal exploration or coal mining and reclamation operations or any related action of the Division, or the Board, or (b) whose property is or may be adversely affected by coal exploration or coal mining and reclamation operations or any related action of the Division or the Board.

"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. As used in the R645 Rules, precipitation event also includes that quantity of water emanating from snow cover as snowmelt in a limited period of time.

"Previously Mined Area" means land affected by coal mining and reclamation operations prior to August 3, 1977, that has not been reclaimed to the standards of Ut. Admin. R645 or 30 CFR chapter VII.

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"Prime Farmland" means those lands which are defined by the Secretary of Agriculture in 7 CFR 657 (Federal Register Vol. 4 No. 21) and which have historically been used for cropland as that phrase is defined herein.

"Principal Shareholder" means any person who is the record or beneficial owner of ten percent or more of any class of voting stock.

"Prohibited Financial Interest" means any direct or indirect financial interest in any coal mining and reclamation operation.

"Property to be Mined" means both the surface estates and mineral estates within the **permit area** and the area covered by underground workings.

"Public Building" means any structure that is owned or leased and principally used by a government agency for public business or meetings.

"Public Office" means a facility under the direction and control of a governmental entity which is open to public access on a regular basis during reasonable business hours.

"Public Park" means an area or portion of an area dedicated or designated by any federal, state, or local agency primarily for public recreational use, whether or not such use is limited to certain times or days, including any land leased, reserved, or held open to the public because of that use.

"Public Road", for the purpose of part R645-103-200, R645-301-521.123, and R645-301-521.133 means a road (a) which has been designated as a public road pursuant to the laws of the jurisdiction in which it is located; (b) which is maintained with public funds in a manner similar to other public roads of the same classification within the jurisdiction; (c) for which there is substantial (more than incidental) public use; and (d) which meets road construction standards for other public roads of the same classification in the local jurisdiction.

"Publicly Owned Park" means a public park that is owned by a federal, state, or local governmental entity.

"Qualified Laboratory" means, for the purposes of R645-302-290, a designated public agency, private firm, institution, or analytical laboratory which can prepare the required determination of probable hydrologic consequences, statement of results of test borings or core samplings under SOAP, or other services as specified at R645-302-299 and which meet the standards of R645- 302-295.100.

"Rangeland" means land on which the natural potential (climax) plant cover is principally native grasses, forbs, and shrubs valuable for forage. This land includes natural grasslands and savannahs, such as prairies, and juniper savannahs, such as brushlands. Except for brush control, management is primarily achieved by regulating the intensity of grazing and season of use.

"Reasonably Available Spoil" means spoil and suitable coal mine waste material generated by the remining activity or other spoil or suitable coal mine waste material located in the **permit area** that is accessible and available for use, and that when rehandled will not cause a hazard to public safety or significant damage to the environment.

"Recharge Capacity" means the ability of the soils and underlying materials to allow precipitation and runoff to infiltrate and reach the zone of saturation.

"Reclamation" means those actions taken to restore mined land as required by the R645 Rules to a postmining land use approved by the Division.

"Recurrence Interval" means the interval of time in which a precipitation event is expected to occur once, on the average. For example, the 10-year 24- hour precipitation event would be that 24-hour precipitation event expected

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to occur on the average once in ten years.

"Reference Area" means a land unit maintained under appropriate management for the purpose of measuring vegetation ground cover, productivity, and plant species diversity that are produced naturally or by crop production methods approved by the Division. Reference areas must be representative of geology, soil, slope, and vegetation in the **permit area**.

"Refuse Pile" means a surface deposit of coal mine waste that does not impound water, slurry, or other liquid or semiliquid material.

"Remining" means conducting coal mining and reclamation operations which affect previously mined areas.

"Renewable Resource Lands" means aquifers and areas for the recharge of aquifers and other underground waters, areas for agricultural or silvicultural production of food and fiber, and grazing lands. For the purposes of R645-103, RENEWABLE RESOURCE LANDS means geographic areas which contribute significantly to the long-range productivity of water supply or of food or fiber products, such lands to include aquifers and aquifer recharge areas.

"Renewal of a Permit" means, for the purposes of R645-302-300, a decision by the Division to extend the time by which the permittee may complete mining within the boundaries of the original permit.

"Replacement of Water Supply" means, with respect to State-appropriated water supplies contaminated, diminished, or interrupted by coal mining and reclamation operations, provision of water supply on both a temporary and permanent basis equivalent to premining quantity and quality. Replacement includes provision of an equivalent water delivery system and payment of operation and maintenance costs in excess of customary and reasonable delivery costs for premining water supplies.

(a) Upon agreement by the permittee and the water supply owner, the obligation to pay such operation and maintenance costs may be satisfied by a one-time payment in an amount which covers the present worth of the increased annual operation and maintenance costs for a period agreed to by the permittee and the water supply owner.

(b) If the affected water supply was not needed for the land use in existence at the time of loss, contamination, or diminution, and if the supply is not needed to achieve the postmining land use, replacement requirements may be satisfied by demonstrating that a suitable alternative water source is available and could feasibly be developed. If the latter approach is selected, written concurrence must be obtained from the water supply owner.

"Road" means a surface right-of-way for purposes of travel by land vehicles used in coal mining and reclamation operations or coal exploration. A road consists of the entire area within the right-of-way, including the roadbed, shoulders, parking and side areas, approaches, structures, ditches, and surface. The term includes access and haul roads 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.

"Safety Factor" means the ratio of the available shear strength to the developed shear stress, or the ratio of the sum of the resisting forces to the sum of the loading or driving forces, as determined by accepted engineering practices.

"Secretary" means the Secretary of the Department of Interior or his or her representative.

"Sedimentation Pond" means an impoundment used to remove solids from water in order to meet water quality standards or effluent limitations before the water leaves the **permit area**.

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"Self Bond" means an indemnity agreement in a sum certain executed by the applicant or by the applicant and any corporate guarantor, and made payable to the Division with or without separate surety.

"Significant Forest Cover" means an existing plant community consisting predominantly of trees and other woody vegetation. The Secretary of Agriculture will decide on a case-by-case basis whether the forest cover is significant within those national forests in Utah.

"Significant, Imminent Environmental Harm to Land, Air, or Water Resources" means (a) the environmental harm has an adverse impact on land, air, or water resources which resources include, but are not limited to, plant and animal life; (b) an environmental harm is imminent, if a condition, practice, or violation exists which (i) is causing such harm, or (ii) may reasonably be expected to cause such harm at any time before the end of the reasonable abatement time that would be set under 40-10-22 of the Act, and (c) an environmental harm is significant if that harm is appreciable and not immediately repairable.

"Significant Recreational, Timber, Economic, or Other Values Incompatible With Coal Mining and Reclamation Operations" means those values to be evaluated for their significance which could be damaged by, and are not capable of existing together with, coal mining and reclamation operations because of the undesirable effects mining would have on those values, either on the area included in the permit application or on other **affected areas**. Those values to be evaluated for their importance include (a) recreation, including hiking, boating, camping, skiing, or other related outdoor activities, (b) timber management and silviculture, (c) agriculture, aquaculture, or production of other natural, processed, or manufactured products which enter commerce, and (d) scenic, historic, archaeologic, aesthetic, fish, wildlife, plants, or cultural interests.

"Siltation Structure" means, for the purposes of R645-301-356.300, R645-301- 356.400, R645-301-513.200, R645-301-742.200 through R645-301-742.240, and R645-301-763, a sedimentation pond, a series of sedimentation ponds or other treatment facilities.

"Slope" means average inclination of a surface, measured from the horizontal, generally expressed as the ratio of a unit of vertical distance to a given number of units of horizontal distance (e.g., 1v:5h). It may also be expressed as a percent or in degrees.

"SOAP" means Small Operator Assistance Program.

"Soil Horizons" means contrasting layers of soil parallel or nearly parallel to the land surface. Soil horizons are differentiated on the basis of field characteristics and laboratory data. The four major soil horizons are"

A HORIZON--The uppermost mineral layer, often called 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.

E HORIZON--The layer commonly near the surface below an A horizon and above a B horizon. An E horizon is most commonly differentiated from an overlying A horizon by lighter color and generally has measurably less organic matter than the A horizon. An E horizon is most commonly differentiated from an 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.

B HORIZON--The layer that typically is immediately beneath the E horizon and often called the subsoil. This middle layer commonly contains more clay, iron, or aluminum than the A, E, or C horizons.

C HORIZON--The deepest layer of soil profile. It consists of loose material or weathered rock that is relatively unaffected by biologic activity.

"Soil Survey" means a field and other investigations resulting in a map showing the geographic distribution of different kinds of soils and an accompanying report that describes, classifies, and interprets such soils for use.

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Soil surveys must meet the standards of the National Cooperative Soil Survey as incorporated by reference in R645-302-314.100.

"Spoil" means overburden that has been removed during coal mining and reclamation operations.

"Stabilize" means to control movement of soil, spoil piles, or areas of disturbed earth by modifying the geometry of the mass, or by otherwise modifying physical or chemical properties, such as by providing a protective surface coating.

"State Appropriated Water Supply" means State-created water rights which are recognized under the provisions of the Utah Code.

"State Program" means the program established by the state of Utah and approved by the Secretary of the Department of the Interior pursuant to the Federal Act and the Act to regulate coal mining and reclamation operations on non-Indian and non-federal lands within Utah, according to the Federal Act, the Act and the R645 Rules. Pursuant to the cooperative agreement between the state of Utah and the Office, the State Program applies to federal lands in accordance with the terms of the cooperative agreement.

"Steep Slope" means any slope of more than 20 degrees or such lesser slope as may be designated by the Division after consideration of soil, climate, and other characteristics of a region or Utah.

"Subirrigation" means, with respect to ALLUVIAL VALLEY FLOORS, the supplying of water to plants from underneath or from a semisaturated or saturated subsurface zone where water is available for use by vegetation.

"Substantial Legal and Financial Commitments in a Coal Mining and Reclamation Operation" means, for the purposes of R645-103-300, significant investments that have been made on the basis of a long-term coal contract in power plants, railroads, coal-handling, preparation, extraction or storage facilities, and other capital-intensive activities. An example would be an existing mine not actually producing coal, but in a substantial stage of development prior to production. Costs of acquiring the coal in place or the right to mine it without an existing mine, as described in the above example, alone are not sufficient to constitute substantial legal and financial commitments.

"Substantially Disturb" means, for purposes of COAL EXPLORATION, to significantly impact land or water resources by blasting; by removal of vegetation, topsoil, or overburden; by construction of roads or other access routes; by placement of excavated earth or waste material on the natural land surface or by other such activities; or to remove more than 250 tons of coal.

"Successor in Interest" means any person who succeeds to rights granted under a permit, by transfer, assignment, or sale of those rights.

"Surety Bond" means an indemnity agreement in a sum certain payable to the Division, executed by the permittee as principal and which is supported by the performance guarantee of a corporation licensed to do business as a surety in Utah.

"Surface Operations and Impacts Incident to an Underground Coal Mine" means all operations involved in or related to UNDERGROUND COAL MINING AND RECLAMATION ACTIVITIES which are either conducted on the surface of the land, produce changes in the land surface or disturb the surface, air, or water resources of the area including all activities listed in 40-10-3(18) of the Act and the definition of underground mining activities appearing herein.

"SURFACE COAL MINING AND RECLAMATION ACTIVITIES" means those coal mining and reclamation operations incident to the extraction of coal from the earth by removing the materials over a coal seam, before recovering the coal, by auger coal mining, or by recovery of coal from a deposit that is not in its original geologic

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location.

"Suspended Solids or Nonfilterable Residue, Expressed as Milligrams Per Liter" means organic or inorganic materials carried or held in suspension in water which are retained by a standard glass fiber filter in the procedure outlined by the Environmental Protection Agency's regulation for waste water and analyses (40 CFR Part 136).

"Tangible Net Worth" means net worth minus intangibles such as goodwill and rights to patents or royalties.

"Temporary Diversion" means a diversion of a stream, or overland flow, which is used during coal exploration or coal mining and reclamation operations and not approved by the Division to remain after reclamation as part of the approved postmining land use.

"Temporary Impoundment" means an impoundment used during coal mining and reclamation operations, but not approved by the Division to remain as part of the approved postmining land use.

"Ton" means 2,000 pounds avoirdupois (.90718 metric ton).

"Topsoil" means the A and E soil horizon layers of the four major soil horizons.

"Toxic-Forming Materials" means earth materials or wastes which, if acted upon by air, water, weathering, or microbiological processes are likely to produce chemical or physical conditions in soils or water that are detrimental to biota or uses of water.

"Toxic Mine Drainage" means water that is discharged from active or abandoned mines or other areas affected by coal exploration or coal mining and reclamation operations which contains a substance that 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.

"Transfer, Assignment, or Sale of Permit Rights" means a change in ownership or other effective control over the right to conduct coal mining and reclamation operations under a permit issued by the Division.

"UNDERGROUND COAL MINING AND RECLAMATION ACTIVITIES" means coal mining and reclamation operations incident to the extraction of coal by underground methods including a combination of (a) underground extraction of coal or in situ processing, construction use, maintenance, and reclamation of roads, above-ground repair areas, storage areas, processing areas, shipping areas, areas upon which are sited support facilities including hoist and ventilating ducts, areas utilized for the disposal and storage of waste, and areas on which materials incident to underground mining operations are placed; and (b) underground operations such as underground construction, operation, and reclamation of shafts, adits, underground support facilities, in situ processing, and underground mining, hauling, storage, and blasting.

"Underground Development Waste" means waste-rock mixtures of coal, shale, claystone, siltstone, sandstone, limestone, or related materials that are excavated, moved, and disposed of from underground workings in connection with UNDERGROUND COAL MINING AND RECLAMATION ACTIVITIES.

"Undeveloped Rangeland" means, for purposes of ALLUVIAL VALLEY FLOORS, lands where the use is not specifically controlled and managed.

"Unwarranted Failure to Comply" means the failure of the permittee to prevent the occurrence of any violation of the State Program or any permit condition due to indifference, lack of diligence, or lack of reasonable care, or the failure to abate any violation of such permit of the Act due to indifference, lack of diligence, or lack of reasonable care.

"Upland Areas" means, with respect to ALLUVIAL VALLEY FLOORS, those geomorphic features located

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outside the floodplain and terrace complex such as 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.

"Valid Existing Rights" means (a) for haul roads" (i) a recorded right of way, recorded easement, or a permit for a coal haul road recorded as of August 3, 1977, or (ii) any other road in existence as of August 3, 1977; (b) a person possesses valid existing rights if the person proposing to conduct coal mining and reclamation operations can demonstrate that property rights to the coal had been acquired prior to August 3, 1977 and that the coal is both needed for, and immediately adjacent to, an ongoing coal mining and reclamation operation which existed on August 3, 1977. A determination that coal is "needed for" will be based upon a finding that the extension of mining is essential to make the coal mining and reclamation operation as a whole economically viable; (c) where an area comes under the protection of 40-10-24 of the Act after August 3, 1977, valid existing rights will be found if on the date the protection comes into existence, a validly authorized coal mining and reclamation operation exists on that area; and (d) interpretation of the terms of the document relied upon to establish the rights to which the standard of portions (a) and (c) of this definition applies will be based either upon applicable Utah statutory or case law concerning interpretation of documents conveying mineral rights or, where no applicable Utah law exists, upon the usage and custom at the time and place it came into existence.

"Valley Fill" means a fill structure consisting of any material, other than organic material, that is placed in a valley where side slopes of the existing valley, measured at the steepest point, are greater than 20 degrees, or where the average slope of the profile of the valley from the toe of the fill to the top of the fill is greater than ten degrees.

"Violation, Failure, or Refusal" means for the purposes of R645-402, (1) A violation of a condition of a permit issued under the State Program, or (2) A failure or refusal to comply with any order issued under UCA 40-10-22, or any order incorporated in a final decision issued under UCA 40-10-20(2) or R645-104-500.

"Violation Notice" means any written notification from a governmental entity of a violation of law, whether by letter, memorandum, legal or administrative pleading, or other written communication.

"Water Table" means the upper surface of a zone of saturation where the body of ground water is not confined by an overlying impermeable zone.

"Willfully" means for the purposes of R645-402, that an individual acted (1) either intentionally, voluntarily, or consciously, and (2) with intentional disregard or plain indifference to legal requirements in authorizing, ordering, or carrying out a corporate permittee's action or omission that constituted a violation, failure, or refusal.

"Willful Violation" means an act or omission which violates the State Program or any permit condition, committed by a person who intends the result which actually occurs.

R645-100-300. Responsibility.

310. The Division is responsible for the regulation of coal mining and reclamation operations and coal exploration under the approved State Program on non-federal and non-Indian lands in accordance with the procedures in the R645 Rules.

320. The Division, through a cooperative agreement, exercises certain authority relating to the regulation of coal mining and reclamation operations on federal lands in accordance with 30 CFR Part 745.

R645-100-400. Applicability.

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410. Except as provided under R645-100-420, the R645 Rules apply to all coal exploration and coal mining and reclamation operations, except:

411. The extraction of coal by a landowner for his or her own noncommercial use from land owned or leased by him or her. Noncommercial use does not include the extraction of coal by one unit of an integrated company or other business or nonprofit entity which uses the coal in its own manufacturing or power plants;

412. The extraction of 250 tons of coal or less by a person conducting coal mining and reclamation operations. A person who intends to remove more than 250 tons is not exempted;

413. The extraction of coal as an incidental part of federal, state or local government-financed highway or other construction in accordance with R645-102.

414. The extraction of coal incidental to the extraction of other minerals where coal does not exceed 16-2/3 percent of the mineral tonnage removed for commercial use or sale in accordance with R645-106; or

415. Coal exploration on lands subject to the requirements of 43 CFR Parts 3480-3487.

420. Existing Structure Exemption. Each structure used in connection with or to facilitate coal exploration or coal mining and reclamation operations will comply with the performance standards and design requirements of R645-301 and R645-302, except that:

421. An existing structure which meets the performance standards but does not meet the design requirements of R645-301 and R645-302 may be exempted from meeting those design requirements by the Division. The Division may grant this exemption only as part of the permit application process after obtaining the information required by R645-301-526.110 through R645-301-526.115.4 and after making the findings required by R645-300-130.

422. If the performance standard of the MC Rules (Interim Program Rules) is at least as stringent as the comparable performance standard of the R645 Rules, an existing structure which meets the performance standards of the MC Rules may be exempted by the Division from meeting the design requirements of the R645 Rules. The Division may grant this exemption only as part of the permit application process after obtaining the information required by R645- 301-526.110 through R645-301-526.115.4 and after making the findings required by R645-300-130.

423. An existing structure which meets a performance standard of the MC Rules which is less stringent than the comparable performance standard in the R645 Rules will be modified or reconstructed to meet the design standard of the R645 Rules pursuant to a compliance plan approved by the Division only as part of the permit application as required in R645-301-526.110 through R645-301- 526.115.4 and according to the findings required by R645-300-130.

424. An existing structure which does not meet the performance standards of the MC Rules and which the applicant proposes to use, in connection with or to facilitate the coal exploration or coal mining and reclamation operation, will be modified or reconstructed to meet the performance design standards of R645- 301 and R645-302 prior to issuance of the permit.

430. The exemptions provided in paragraphs R645-100-421 and R645-100-422 will not apply to:

431. The requirements for existing and new coal mine waste disposal facilities; and

432. The requirements to restore the approximate original contour of the land.

440. Regulatory Determination of Exemption. The Division may, on its own initiative, and will, within a reasonable time of a request from any person who intends to conduct coal mining and reclamation operations,

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make a written determination whether the operation is exempt under R645-100-400. The Division will give reasonable notice of the request to interested persons. Prior to the time a determination is made, any person may submit, and the Division will consider, any written information relevant to the determination. A person requesting that an activity be declared exempt will have the burden of establishing the exemption. If a written determination of exemption is reversed through subsequent administrative or judicial action, any person who, in good faith, has made a complete and accurate request for an exemption, and relied upon the determination, will not be cited for violations which occurred prior to the date of the reversal.

450. Termination of Jurisdiction.

451. The Division may terminate its jurisdiction under the regulatory program over the reclaimed site of a completed coal mining and reclamation operation, or increment thereof, when:

451.100. The Division determines in writing that under the initial program all requirements imposed under the MC rules have been successfully completed; or

451.200. The Division determines in writing that under the permanent program all requirements imposed under the applicable regulatory program have been successfully completed or, where a performance bond was required, the Division has made a final decision in accordance with the State program to release the performance bond fully.

452. Following a termination under R645-100-451, the Division will reassert jurisdiction under the regulatory program over a site if it is demonstrated that the bond release or written determination referred to under R645-100-451 was based upon fraud, collusion, or misrepresentation of a material fact.

R645-100-500. Petition to Initiate Rulemaking.

Persons other than the Division or Board may petition to initiate rulemaking pursuant to the R641 Rules and the Utah Administrative Rulemaking Act, U.C.A. 63-46a-1, et seq.

R645-100-600. Notice of Citizen Suits.

A person who intends to initiate a civil action in his or her own behalf under 40-10-21 of the Act will give notice of intent to do so in accordance with R645-100-600.

610. Notice will be given by certified mail to the Director, if a complaint involves or relates to Utah.

620. Notice will be given by certified mail to the alleged violator, if the complaint alleges a violation of the Act or any rule, order, or permit issued under the Act.

630. Service of notice under R645-100-600 is complete upon mailing to the last known address of the person being notified.

640. A person giving notice regarding an alleged violation will state, to the extent known:

641. Sufficient information to identify the provision of the Act, rule, order, or permit allegedly violated;

642. The act or omission alleged to constitute a violation;

643. The name, address, and telephone number of the person or persons responsible for the alleged violation;

644. The date, time, and location of the alleged violation;

645. The name, address, and telephone number of the person giving notice; and

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646. The name, address, and telephone number of legal counsel, if any, of the person giving notice.

650. A person giving notice of an alleged failure by the Director to perform a mandatory act or duty under the Act will state, to the extent known:

651. The provision of the Act containing the mandatory act or duty allegedly not performed;

652. Sufficient information to identify the omission alleged to constitute the failure to perform a mandatory act or duty under the Act;

653. The name, address, and telephone number of the person giving notice; and

654. The name, address, and telephone number of legal counsel, if any, of the person giving notice.

R645-100-700. Availability of Records.

710. Records required by the Act to be made available locally to the public will be retained at the Division office closest to the area involved.

720. Other nonconfidential records or documents in the possession of the Division may be requested from the Division.

730. Information received which is required to be held confidential by the terms of the Act will not be available for public inspection.

R645-100-800. Computation of Time.

810. Except as otherwise provided, computation of time under the R645 Rules is based on calendar days.

820. In computing any period of prescribed time, the day on which the designated period of time begins is not included. The last day of the period is included unless it is a Saturday, Sunday, or a legal holiday on which the Division is not open for business, in which event the period runs until the end of the next day which is not Saturday, Sunday, or a legal holiday.

830. Intermediate Saturdays, Sundays, and legal holidays are excluded from the computation when the period or prescribed time is seven days or less.

KEY: reclamation, coal mines

October 1, 1999

Notice of Continuation June 6, 1997

40-10-1 et seq.
UT ADC R645-100
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UTAH ADMINISTRATIVE CODE
NATURAL RESOURCES
R645. OIL, GAS AND MINING; COAL.
Current through February 1, 2000

R645-300. Coal Mine Permitting: Administrative Procedures.

R645-300-100. Review, Public Participation, and Approval or Disapproval of Permit Applications and Permit Terms and Conditions.

The rules in R645-300-100 present the procedures to carry out the entitled activities.

110. Introduction.

111. Objectives. The objectives of R645-300-100 are to:

111.100. Provide for broad and effective public participation in the review of applications and the issuance or denial of permits;

111.200. Ensure prompt and effective review of each permit application by the Division; and

111.300. Provide the requirements for the terms and conditions of permits issued and the criteria for approval or denial of a permit.

112. Responsibilities.

112.100. The Division has the responsibility to approve or disapprove permits under the approved State Program.

112.200. The Division and persons applying for permits under the State Program will involve the public throughout the permit process of the State Program.

112.300. The Division will assure implementation of the requirements of R645- 300 under the State Program.

112.400. All persons who engage in and carry out any coal mining and reclamation operations will first obtain a permit from the Division. The applicant will provide all information in an administratively complete application for review by the Division in accordance with R645-300 and the State Program.

112.500. Any permittee seeking to renew a permit for coal mining and reclamation operations solely for the purpose of reclamation and not for the further extraction, processing, or handling of the coal resource will follow the procedures set forth in R645-303-232.500.

113. Coordination with requirements under other laws. The Division will provide for the coordination of review and issuance of permits for coal mining and reclamation operations with applicable requirements of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.); the Fish and Wildlife Coordination Act, as amended (16 U.S.C. 661 et seq.); the Migratory Bird Treaty Act of 1918, as amended (16 U.S.C. 703 et seq.); The National Historic Preservation Act of 1966, as amended (16 U.S.C. 470 et seq.); the Bald Eagle Protection Act, as amended 16 U.S.C. 668a); and where federal and Indian lands covered by that Act are involved, the Archeological and Historic Preservation Act of 1974 (16 U.S.C. 469 et seq.); and the Archaeological Resources Protection Act of 1979 (16 U.S.C. 470aa et seq.).

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120. Public Participation in Permit Processing.

121. Filing and Public Notice.

121.100. Upon submission of an administratively complete application, an applicant for a permit, significant revision of a permit under R645-303-220 or renewal of a permit under R645-303-230 will place an advertisement in a local newspaper of general circulation in the locality of the proposed coal mining and reclamation operation at least once a week for four consecutive weeks. A copy of the advertisement as it will appear in the newspaper will be submitted to the Division. The advertisement will contain, at a minimum, the following:

121.110. The name and business address of the applicant;

121.120. A map or description which clearly shows or describes the precise location and boundaries of the proposed **permit area** and is sufficient to enable local residents to readily identify the proposed **permit area.** It may include towns, bodies of water, local landmarks, and any other information which would identify the location. If a map is used, it will indicate the north direction;

121.130. The location where a copy of the application is available for public inspection;

121.140. The name and address of the Division, where written comments, objections, or requests for informal conferences on the application may be submitted under R645-300-122 and R645-300-123;

121.150. If an applicant seeks a permit to mine within 100 feet of the outside right-of-way of a public road or to relocate or close a public road, except where public notice and hearing have previously been provided for this particular part of the road in accordance with R645-103-234; a concise statement describing the public road, the particular part to be relocated or closed, and the approximate timing and duration of the relocation or closing; and

121.160. If the application includes a request for an experimental practice under R645-302-210, a statement indicating that an experimental practice is requested and identifying the regulatory provisions for which a variance is requested.

121.200. The applicant will make an application for a permit, significant revision under R645-303-220, or renewal of a permit under R645-303-230 available for the public to inspect and copy by filing a full copy of the application with the recorder at the courthouse of the county where the coal mining and reclamation operation is proposed to occur, or an accessible public office approved by the Division. This copy of the application need not include confidential information exempt from disclosure under R645-300-124. The application required by R645-300-121 will be filed by the first date of newspaper advertisement of the application. The applicant will file any changes to the application with the public office at the same time the change is submitted to the Division.

121.300. Upon receipt of an administratively complete application for a permit, a significant revision to a permit under R645-303-220, or a renewal of a permit under R645-303-230, the Division will issue written notification indicating the applicant's intention to conduct coal mining and reclamation operations within the described tract of land, the application number or other identifier, the location where the copy of the application may be inspected, and the location where comments on the application may be submitted. The notification will be sent to:

121.310. Local governmental agencies with jurisdiction over or an interest in the area of the proposed coal mining and reclamation operation, including but not limited to planning agencies, sewage and water treatment authorities, water companies; and

121.320. All federal or state governmental agencies with authority to issue permits and licenses applicable to the proposed coal mining and reclamation operation and which are part of the permit coordinating process developed in accordance with the State Program, Section 503(a)(6) or Section 504(h) of P.L. 95-87, or 30 CFR 733.12; or those agencies with an interest in the proposed coal mining and reclamation operation, including the U.S.

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Department of Agriculture Soil Conservation Service district office, the local U.S. Army Corps of Engineers district engineer, the National Park Service, state and federal fish and wildlife agencies, and Utah State Historic Preservation Officer.

122. Comments and Objections on Permit Application.

122.100. Within 30 days of the last newspaper publication, written comments or objections to an application for a permit, significant revision to a permit under R645-303-220, or renewal of a permit under R645-303-230 may be submitted to the Division by public entities notified under R645-300-121.300 with respect to the effects of the proposed coal mining and reclamation operation on the environment within their areas of responsibility.

122.200. Written objections to an application for a permit, significant revision to a permit under R645-303-220, or renewal of a permit under R645- 303-230 may be submitted to the Division by any person having an interest which is or may be adversely affected by the decision on the application, or by an officer or head of any federal, state, or local government agency or authority, within 30 days after the last publication of the newspaper notice required by R645-300-121.

122.300. The Division will upon receipt of such written comments or objections:

122.310. Transmit a copy of the comments or objections to the applicants; and

122.320. File a copy for public inspection at the Division.

123. Informal Conferences.

123.100. Any person having an interest which is or may be adversely affected by the decision on the application, or an office or a head of a federal, state, or local government agency, may request in writing that the Division hold an informal conference on the application for a permit, significant revision to a permit under R645-303-220, or renewal of a permit under R645- 303-230. The request will:

123.110. Briefly summarize the issues to be raised by the requestor at the conference;

123.120. State whether the requestor desires to have the conference conducted in the locality of the proposed coal mining and reclamation operation; and

123.130. Be filed with the Division no later than 30 days after the last publication of the newspaper advertisement required under R645-300-121.

123.200. Except as provided in R645-300-123.300, if an informal conference is requested in accordance with R645-300-123.100, the Division will hold an informal conference within 30 days following the receipt of the request. The informal conference will be conducted as follows:

123.210. If requested under R645-300-123.120, it will be held in the locality of the proposed coal mining and reclamation operation.

123.220. The date, time, and location of the informal conference will be sent to the applicant and other parties to the conference and advertised by the Division in a newspaper of general circulation in the locality of the proposed coal mining and reclamation operation at least two weeks before the scheduled conference.

123.230. If requested in writing by a conference requestor at a reasonable time before the conference, the Division may arrange with the applicant to grant parties to the conference access to the proposed **permit area** and, to the extent that the applicant has the right to grant access to it, to the **adjacent area** prior to the established date of the conference for the purpose of gathering information relevant to the conference.

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123.240. The requirements of the Procedural Rules of the Board of Oil, Gas and Mining (R641 Rules) will apply to the conduct of the informal conference. The conference will be conducted by a representative of the Division, who may accept oral or written statements and any other relevant information from any party to the conference. An electronic or stenographic record will be made of the conference, unless waived by all the parties. The record will be maintained and will be accessible to the parties of the conference until final release of the applicant's performance bond or other equivalent guarantee pursuant to R645-301-800.

123.300. If all parties requesting the informal conference withdrew their request before the conference is held, the informal conference may be canceled.

123.400. An informal conference held in accordance with R645-300-123 may be used by the Division as the public hearing required under R645-103-234 on proposed relocation or closing of public roads.

124. Public Availability of Permit Applications.

124.100. General Availability. Except as provided in R645-300-124.200 and R645-300-124.300, all applications for permits; permit changes; permit renewals; and transfers, assignments or sales of permit rights on file with the Division will be made available, at reasonable times, for public inspection and copying.

124.200. Limited Availability. Except as provided in R645-300-124.310, information pertaining to coal seams, test borings, core samplings, or soil samples in an application will be made available to any person with an interest which is or may be adversely affected. Information subject to R645- 300-124 will be made available to the public when such information is required to be on public file pursuant to Utah law.

124.300. Confidentiality. The Division will provide procedures, including notice and opportunity to be heard for persons both seeking and opposing disclosure, to ensure confidentiality of qualified confidential information, which will be clearly identified by the applicant and submitted separately from the remainder of the application. Confidential information is limited to:

124.310. Information that pertains only to the analysis of the chemical and physical properties of the coal to be mined, except information on components of such coal which are potentially toxic in the environment.

124.320. Information required under section 40-10-10 of the Act that is authorized by that section to be held confidential and is not on public file pursuant to Utah law and that the applicant has requested in writing to be held confidential; and

124.330. Information on the nature and location of archeological resources on public land and Indian land as required under the Archeological Resources Protection Act of 1979 (P. L. 96-95, 93 Stat. 721, 16 U.S.C. 470).

130. Review of Permit Application.

131. General.

131.100. The Division will review the application for a permit, permit change, or permit renewal; written comments and objections submitted; and records of any informal conference or hearing held on the application and issue a written decision, within a reasonable time set by the Division, either granting, requiring modification of, or denying the application. If an informal conference is held under R645-300-123 the decision will be made within 60 days of the close of the conference, unless a later time is necessary to provide an opportunity for a hearing under R645-300-210.

131.110. Application review will not exceed the following time periods:

131.111. Permit change applications.

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131.111.1. Significant revision--120 days.

131.111.2. Amendments--60 days.

131.112. Permit renewal--120 days.

131.113. New underground mine applications--One year.

131.114. New surface mine applications--One year.

131.120. Time will be counted as cumulative days of Division review and will not include operator response time or time delays attributed to informal or formal conferences or Board hearings.

131.200. The applicant for a permit or permit change will have the burden of establishing that their application is in compliance with all the requirements of the State Program.

132. Review of Compliance.

132.100. The Division will review available information on state and federal failure-to-abate cessation orders, unabated federal and state imminent harm cessation orders, delinquent civil penalties issued under section 518 of the federal Act, SMCRA-derived laws of other states, and section 40-10-20 of the Act, bond forfeitures where violations on which the forfeitures are based have not been corrected, delinquent abandoned mine reclamation fees, and unabated violations of the Act, derivative laws of other states and federal air and water protection laws, rules and regulations incurred at any coal mining and reclamation operations connected with the applicant. The Division will then make a finding that neither the applicant, nor any person who owns or controls the applicant, nor any person owned or controlled by the applicant is currently in violation of any law, rule, or regulation referred to in R645- 300-132. If such a finding cannot be made, the Division will require the applicant, before issuance of the permit, to either:

132.110. Submit to the Division proof that the current violation has been or is in the process of being corrected to the satisfaction of the agency that has jurisdiction over the violation; or

132.120. Establish for the Division that the applicant or any person owned or controlled by the applicant or any person who owns or controls the applicant has filed and is presently pursuing, in good faith, a direct administrative or judicial appeal to contest the validity of the current violation. If the initial judicial review authority under R645-300-220 either denies a stay applied for in the appeal or affirms the violation, then the applicant will within 30 days submit the proof required under R645-300-132.110.

132.200. Any permit that is issued on the basis of proof submitted under R645-300-132.110 or pending the outcome of an appeal described in R645-300- 132.120 will be issued conditionally.

132.300. If the Division makes a finding that the applicant, or anyone who owns or controls the applicant, or the operator specified in the application, controls or has controlled coal mining and reclamation operations with a demonstrated pattern of willful violations of the Act of such nature and duration and with such resulting irreparable damage to the environment as to indicate an intent not to comply with the Act, the application will not be granted. Before such a finding becomes final, the applicant or operator will be afforded an opportunity for an adjudicatory hearing on the determination as provided for in R645-300-210.

133. Written Findings for Permit Application Approval. No permit application or application for a permit change will be approved unless the application affirmatively demonstrates and the Division finds, in writing, on the basis of information set forth in the application or from information otherwise available that is documented in the approval, the following:

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133.100. The application is complete and accurate and the applicant has complied with all the requirements of the State Program;

133.200. The proposed **permit area** is:

133.210. Not within an area under study or administrative proceedings under a petition, filed pursuant to R645-103-400 or 30 CFR 769, to have an area designated as unsuitable for coal mining and reclamation operations, unless the applicant demonstrates that before January 4, 1977, substantial legal and financial commitments were made in relation to the operation covered by the permit application; or

133.220. Not within an area designated as unsuitable for mining pursuant to R645-103-300 and R645-103-400 or 30 CFR 769 or subject to the prohibitions or limitations of R645-103-230;

133.300. For coal mining and reclamation operations where the private mineral estate to be mined has been severed from the private surface estate, the applicant has submitted to the Division the documentation required under R645- 301-114.200;

133.400. The Division has made an assessment of the probable cumulative impacts of all anticipated coal mining and reclamation operations on the hydrologic balance in the cumulative impact area and has determined that the proposed operation has been designed to prevent material damage to the hydrologic balance outside the **permit area**;

133.500. The operation would not affect the continued existence of endangered or threatened species or result in destruction or adverse modification of their critical habitats, as determined under the Endangered Species Act of 1973 (16 U.S.C. 1531 et.seq.);

133.600. The Division has taken into account the effect of the proposed permitting action on properties listed on and eligible for listing on the National Register of Historic Places. This finding may be supported in part by inclusion of appropriate permit conditions or changes in the operation plan protecting historic resources, or a documented decision that the Division has determined that no additional protection measures are necessary; and

133.700. The applicant has:

133.710. Demonstrated that reclamation as required by the State Program can be accomplished according to information given in the permit application.

133.720. Demonstrated that any existing structure will comply with the applicable performance standards of R645-301 and R645-302.

133.730. Paid all reclamation fees from previous and existing coal mining and reclamation operations as required by 30 CFR Part 870.

133.740. Satisfied the applicable requirements of R645-302.

133.750. If applicable, satisfied the requirements for approval of a long- term, intensive agricultural postmining land use, in accordance with the requirements of R645-301-353.400.

133.800. For a proposed remining operation where the applicant intends to reclaim in accordance with the requirements of R645-301-553.500, the site of the operation is a previously mined area as defined in R645-100-200.

134. Performance Bond Submittal. If the Division decides to approve the application, it will require that the applicant file the performance bond or provide other equivalent guarantee before the permit is issued, in

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accordance with the provisions of R645-301-800.

140. Permit Conditions. Each permit issued by the Division will be subject to the following conditions:

141. The permittee will conduct coal mining and reclamation operations only on those lands that are specifically designated as the **permit area** on the maps submitted with the application and authorized for the term of the permit and that are subject to the performance bond or other equivalent guarantee in effect pursuant to R645-301-800.

142. The permittee will conduct all coal mining and reclamation operations only as described in the approved application, except to the extent that the Division otherwise directs in the permit.

143. The permittee will comply with the terms and conditions of the permit, all applicable performance standards and requirements of the State Program.

144. Without advance notice, delay, or a search warrant, upon presentation of appropriate credentials, the permittee will allow the authorized representatives of the Division to:

144.100. Have the right of entry provided for in R645-400-110 and R645-400- 220.

144.200. Be accompanied by private persons for the purpose of conducting an inspection in accordance with R645-400-100 and R645-400-200 when the inspection is in response to an alleged violation reported to the Division by the private person.

145. The permittee will take all possible steps to minimize any adverse impact to the environment or public health and safety resulting from noncompliance with any term or condition of the permit, including, but not limited to:

145.100. Any accelerated or additional monitoring necessary to determine the nature and extent of noncompliance and the results of the noncompliance;

145.200. Immediate implementation of measures necessary to comply; and

145.300. Warning, as soon as possible after learning of such noncompliance, any person whose health and safety is in imminent danger due to the noncompliance.

146. As applicable, the permittee will comply with R645-301 and R645-302 for compliance, modification, or abandonment of existing structures.

147. The operator will pay all reclamation fees required by 30 CFR Part 870 for coal produced under the permit, for sale, transfer or use.

148. Within 30 days after a cessation order is issued under R645-400-310, except where a stay of the cessation order is granted and remains in effect, the permittee will either submit the following information current to when the order was issued or inform the Division in writing that there has been no change since the immediately preceding submittal of such information:

148.100. Any new information needed to correct or update the information previously submitted to the Division by the permittee under R645-301-112.300.

148.200. If not previously submitted, the information required from a permit applicant by R645-301-112.300.

150. Permit Issuance and Right of Renewal.

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151. Decision. If the application is approved, the permit will be issued upon submittal of a performance bond in accordance with R645-301-800. If the application is disapproved, specific reasons therefore will be set forth in the notification required by R645-300-152.

152. Notification. The Division will issue written notification of the decision to the following persons and entities:

152.100. The applicant, each person who files comments or objections to the permit application, and each party to an informal conference;

152.200. The local governmental officials in the local political subdivision in which the land to be affected is located within 10 days after the issuance of a permit, including a description of the location of the land; and

152.300. The Office.

153. Permit Term. Each permit will be issued for a fixed term of five years or less, unless the requirements of R645-301-116 are met.

154. Right of Renewal. Permit application approval will apply to those lands that are specifically designated as the **permit area** on the maps submitted with the application and for which the application is complete and accurate. Any valid permit issued in accordance with R645-300-151 will carry with it the right of successive renewal, within the approved boundaries of the existing permit, upon expiration of the term of the permit, in accordance with R645- 303-230.

155. Initiation of Operations.

155.100. A permit will terminate if the permittee has not begun the coal mining and reclamation operation covered by the permit within three years of the issuance of the permit.

155.200. The Division may grant a reasonable extension of time for commencement of these operations, upon receipt of a written statement showing that such an extension of time is necessary, if:

155.210. Litigation precludes the commencement or threatens substantial economic loss to the permittee; or

155.220. There are conditions beyond the control and without the fault or negligence of the permittee.

155.300. With respect to coal to be mined for use in a synthetic fuel facility or specified major electric generating facility, the permittee will be deemed to have commenced coal mining and reclamation operations at the time that the construction of the synthetic fuel or generating facility is initiated.

155.400. Extensions of time granted by the Division under R645-300-155 will be specifically set forth in the permit, and notice of the extension will be made public by the Division.

160. Improvidently Issued Permits: Review Procedures.

161. Permit review. When the Division has reason to believe that it improvidently issued a coal mining and reclamation permit it will review the circumstances under which the permit was issued, using the criteria in R645-300-162. Where the Division finds that the permit was improvidently issued, it shall comply with R645-300-163.

162. Review criteria. The Division will find that a coal mining and reclamation permit was improvidently issued if:

162.100. Under the violations review criteria of the regulatory program at the time the permit was issued;

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162.110. The Division should not have issued the permit because of an unabated violation or a delinquent penalty or fee; or

162.120. The permit was issued on the presumption that a notice of violation was in the process of being corrected to the satisfaction of the agency with jurisdiction over the violation, but a cessation order subsequently was issued; and

162.200. The violation, penalty or fee;

162.210. Remains unabated or delinquent; and

162.220. Is not the subject of a good faith appeal, or of an abatement plan or payment schedule with which the permittee or other person responsible is complying to the satisfaction of the responsible agency; and

162.300. Where the permittee was linked to the violation, penalty or fee through ownership or control, under the violations review criteria of the regulatory program at the time the permit was issued an ownership or control link between the permittee and the person responsible for the violation, penalty or fee still exists, or where the link was severed the permittee continues to be responsible for the violation, penalty or fee.

163. Remedial Measures.

When the Division, under R645-300-162 finds that because of an unabated violation or a delinquent penalty or fee a permit was improvidently issued it will use one or more of the following remedial measures:

163.100. Implement, with the cooperation of the permittee or other person responsible, and of the responsible agency, a plan for abatement of the violation or a schedule for payment of the penalty or fee;

163.200. Impose on the permit a condition requiring that in a reasonable period of time the permittee or other person responsible abate the violation or pay the penalty or fee;

163.300. Suspend the permit until the violation is abated or the penalty or fee is paid; or

163.400. Rescind the permit under R645-300-164.

164. Improvidently Issued Permits: Rescission procedures. When the Division under R645-300-163 elects to rescind an improvidently issued permit it will serve on the permittee a notice of proposed suspension and rescission which includes the reasons for the finding of the regulatory authority under R645- 300-162 and states that:

164.100. Automatic suspension and rescissions. After a specified period of time not to exceed 90 days the permit automatically will become suspended, and not to exceed 90 days thereafter rescinded, unless within those periods the permittee submits proof, and the regulatory authority finds, that;

164.110. The finding of the Division under R645-300-162 was erroneous;

164.120. The permittee or other person responsible has abated the violation on which the finding was based, or paid the penalty or fee, to the satisfaction of the responsible agency;

164.130. The violation, penalty or fee is the subject of a good faith appeal, or of an abatement plan or payment schedule with which the permittee or other person responsible is complying to the satisfaction of the responsible agency; or

164.140. Since the finding was made, the permittee has severed any ownership or control link with the person

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responsible for, and does not continue to be responsible for, the violation, penalty or fee;

164.200. Cessation of operations. After permit suspension or rescission, the permittee shall cease all coal mining and reclamation operations under the permit, except for violation abatement and for reclamation and other environmental protection measures as required by the Division; and

164.300. Right to appeal. The permittee may file an appeal for administrative review of the notice under R645-300-200.

170. Final Compliance Review

After an application is approved, but before the permit is issued, the Division will reconsider its decision to approve the application based on the compliance review required by rule R645-300-132.100 and in light of any new information submitted under R645-301-112.900 and R645-301-113.400.

R645-300-200. Administrative and Judicial Review of Decisions on Permits.

The rules in R645-300-200 present the procedures for performing the entitled activities.

210. Administrative Review.

211. General. Within 30 days after an applicant or permittee is notified of the decision of the Division concerning a determination made under R645-106, an application for approval of exploration required under R645-200, a permit for coal mining and reclamation operations, a permit change, a permit renewal, or a transfer, assignment, or sale of permit rights, the applicant, permittee, or any person with an interest which is or may be adversely affected may request a hearing on the reasons for the decision, in accordance with R645- 300-200.

212. Hearings.

212.100. The Board will start the administrative hearing within 30 days of such request. The hearing will be on the record and adjudicatory in nature. No person who presided at an informal conference under R645-300-123 will either preside at the hearing or participate in the decision following the hearing or administrative appeal.

212.200. The Board may, under such conditions as it prescribes, grant such temporary relief as it deems appropriate, pending final determination of the proceeding, if:

212.210. All parties to the proceeding have been notified and given an opportunity to be heard on a request for temporary relief;

212.220. The person requesting that relief shows that there is a substantial likelihood that he or she will prevail on the merits of the final determination of the proceeding;

212.230. The relief sought will not adversely affect the public health or safety, or cause significant, imminent environmental harm to land, air, or water resources; and

212.240. The relief sought is not the issuance of a permit where a permit has been denied, in whole or in part, by the Division except that continuation under an existing permit may be allowed where the operation has a valid permit issued under 40-10-11 of the Act.

212.300. The hearing will be conducted by the Board under the terms of the R641 Rules, including the requirement that there be no ex parte contact between the Board and representatives of parties appearing before the Board.

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212.400. Within 30 days after the close of the record, the Board will issue and furnish the applicant and each person who participated in the hearing with the written findings of fact, conclusions of law, and order of the Board with respect to the appeal of the decision.

220. Judicial Review.

221. General. Any applicant or any person with an interest which is or may be adversely affected and who has participated in the administrative hearings as an objector may appeal as provided in R645-300-222 or R645-300-223 if:

221.100. The applicant or person is aggrieved by the decision of the Board in the administrative hearing conducted pursuant to R645-300-200; or

221.200. The Board during administrative review under R645-300-200 fails to act within applicable time limits specified in the State Program.

222. State Program. Action of the Division or Board will be subject to judicial review by a court of competent jurisdiction, as provided for in the State Program, but the availability of such review will not be construed to limit the operation of the rights established in 40-10-21 of the Act.

223. Federal Lands Program. The action of the Division or Board is subject to judicial review by the United States District Court for the district in which the coal exploration or coal mining and reclamation operation is or would be located, in the time and manner provided for in Section 526(a)(2) and (b) of the Federal Act. The availability of such review will not be considered to limit the operations of rights established in Section 520 of the Federal Act.

KEY: reclamation, coal mines

1992

Notice of Continuation June 6, 1997

40-10-1 et seq.
UT ADC R645-300
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UTAH ADMINISTRATIVE CODE
NATURAL RESOURCES
R645. OIL, GAS AND MINING; COAL.
Current through February 1, 2000

R645-301. Coal Mine Permitting: Permit Application Requirements.

R645-301-100. General Contents.

The rules in R645-301-100 present the requirements for the entitled information which should be included in each permit application.

110. Minimum Requirements for Legal, Financial, Compliance and Related Information.

111. Introduction.

111.100. Objectives. The objectives of R645-301-100 are to insure that all relevant information on the ownership and control of persons who conduct coal mining and reclamation operations, the ownership and control of the property to be affected by the operation, the compliance status and history of those persons, and other important information is provided in the application to the Division.

111.200. Responsibility. It is the responsibility of the permit applicant to provide to the Division all of the information required by R645-301-100.

111.300. Applicability. The requirements of R645-301-100 apply to any person who applies for a permit to conduct coal mining and reclamation operations.

111.400. The applicant shall submit the information required by R645-301-112 and R645-301-113 in a format prescribed by OSM rules governing the Applicant Violator System information needs.

112. Identification of Interests. An application will contain the following:

112.100. A statement as to whether the applicant is a corporation, partnership, single proprietorship, association, or other business entity;

112.200. The name, address, telephone number and, as applicable, social security number and employer identification number of the:

112.210. Applicant;

112.220. Applicant's resident agent; and

112.230. Person who will pay the abandoned mine land reclamation fee.

112.300. For each person who owns or controls the applicant under the definition of "owned or controlled" and "owns or controls" in R645-100-200 of this chapter, as applicable:

112.310. The person's name, address, social security number and employer identification number;

112.320. The person's ownership or control relationship to the applicant, including percentage of ownership and location in organizational structure;

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112.330. The title of the person's position, date position was assumed, and when submitted under R645-300-147, date of departure from the position;

112.340. Each additional name and identifying number, including employer identification number, Federal or State permit number, and MSHA number with date of issuance, under which the person owns or controls, or previously owned or controlled, a coal mining and reclamation operation in the United States within five years preceding the date of the application; and

112.350. The application number or other identifier of, and the regulatory authority for, any other pending coal mine operation permit application filed by the person in any State in the United States.

112.400. For any coal mining and reclamation operation owned or controlled by either the applicant or by any person who owns or controls the applicant under the definition of "owned or controlled" and "owns or controls" in R645-100-200 the operation's:

112.410. Name, address, identifying numbers, including employer identification number, Federal or State permit number and MSHA number, the date of issuance of the MSHA number, and the regulatory authority; and

112.420. Ownership or control relationship to the applicant, including percentage of ownership and location in organizational structure.

112.500. The name and address of each legal or equitable owner of record of the surface and mineral property to be mined, each holder of record of any leasehold interest in the property to be mined, and any purchaser of record under a real estate contract for the property to be mined;

112.600. The name and address of each owner of record of all property (surface and subsurface) contiguous to any part of the proposed **permit area**;

112.700. The MSHA numbers for all mine-associated structures that require MSHA approval; and

112.800. A statement of all lands, interest in lands, options, or pending bids on interests held or made by the applicant for lands contiguous to the area described in the permit application. If requested by the applicant, any information required by R645-301-112.800 which is not on public file pursuant to Utah law will be held in confidence by the Division as provided under R645- 300-124.320.

112.900. After an applicant is notified that his or her application is approved, but before the permit is issued, the applicant shall, as applicable, update, correct or indicate that no change has occurred in the information previously submitted under R645-301-112.100 through R645-301-112.800.

113. Violation Information. An application will contain the following:

113.100. A statement of whether the applicant or any subsidiary, affiliate, or persons controlled by or under common control with the applicant has:

113.110. Had a federal or state permit to conduct coal mining and reclamation operations suspended or revoked in the five years preceding the date of submission of the application; or

113.120. Forfeited a performance bond or similar security deposited in lieu of bond;

113.200. A brief explanation of the facts involved if any such suspension, revocation, or forfeiture referred to under R645-301-113.110 and R645-301- 113.120 has occurred, including:

113.210. Identification number and date of issuance of the permit, and the date and amount of bond or similar

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security;

113.220. Identification of the authority that suspended or revoked the permit or forfeited the bond and the stated reasons for the action;

113.230. The current status of the permit, bond, or similar security involved;

113.240. The date, location, and type of any administrative or judicial proceedings initiated concerning the suspension, revocation, or forfeiture; and

113.250. The current status of the proceedings; and

113.300. For any violation of a provision of the Act, or of any law, rule or regulation of the United States, or of any derivative State reclamation law, rule or regulation enacted pursuant to Federal law, rule or regulation pertaining to air or water environmental protection incurred in connection with any coal mining and reclamation operation, a list of all violation notices received by the applicant during the three year period preceding the application date, and a list of all unabated cessation orders and unabated air and water quality violation notices received prior to the date of the application by any coal mining and reclamation operation owned or controlled by either the applicant or by any person who owns or controls the applicant. For each violation notice or cessation order reported, the lists shall include the following information, as applicable:

113.310. Any identifying numbers for the operation, including the Federal or State permit number and MSHA number, the dates of issuance of the violation notice and MSHA number, the name of the person to whom the violation notice was issued, and the name of the issuing regulatory authority, department or agency;

113.320. A brief description of the violation alleged in the notice;

113.330. The date, location, and type of any administrative or judicial proceedings initiated concerning the violation, including, but not limited to, proceedings initiated by any person identified in R645-301-113.300 to obtain administrative or judicial review of the violation;

113.340. The current status of the proceedings and of the violation notice; and

113.350. The actions, if any, taken by any person identified in R645-301- 113.300 to abate the violation.

113.400. After an applicant is notified that his or her application is approved, but before the permit is issued, the applicant shall, as applicable, update, correct or indicate that no change has occurred in the information previously submitted under R645-301-113.

114. Right-of-Entry Information.

114.100. An application will contain a description of the documents upon which the applicant bases their legal right to enter and begin coal mining and reclamation operations in the **permit area** and will state whether that right is the subject of pending litigation. The description will identify the documents by type and date of execution, identify the specific lands to which the document pertains, and explain the legal rights claimed by the applicant.

114.200. Where the private mineral estate to be mined has been severed from the private surface estate, an applicant will also submit:

114.210. A copy of the written consent of the surface owner for the extraction of coal by certain coal mining and reclamation operations;

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114.220. A copy of the conveyance that expressly grants or reserves the right to extract coal by certain coal mining and reclamation operations; or

114.230. If the conveyance does not expressly grant the right to extract the coal by certain coal mining and reclamation operations, documentation that under applicable Utah law, the applicant has the legal authority to extract the coal by those operations.

114.300. Nothing given under R645-301-114.100 through R645-301-114.200 will be construed to provide the Division with the authority to adjudicate property rights disputes.

115. Status of Unsuitability Claims.

115.100. An application will contain available information as to whether the proposed **permit area** is within an area designated as unsuitable for coal mining and reclamation operations or is within an area under study for designation in an administrative proceeding under R645-103-300, R645-103-400, or 30 CFR Part 769.

115.200. An application in which the applicant claims the exemption described in R645-103-333 will contain information supporting the assertion that the applicant made substantial legal and financial commitments before January 4, 1977, concerning the proposed coal mining and reclamation operations.

115.300. An application in which the applicant proposes to conduct coal mining and reclamation operations within 300 feet of an occupied dwelling or within 100 feet of a public road will contain the necessary information and meet the requirements of R645-103-230 through R645-103-238.

116. Permit Term.

116.100. Each permit application will state the anticipated or actual starting and termination date of each phase of the coal mining and reclamation operation and the anticipated number of acres of land to be affected during each phase of mining over the life of the mine.

116.200. If the applicant requires an initial permit term in excess of five years in order to obtain necessary financing for equipment and the opening of the operation, the application will:

116.210. Be complete and accurate covering the specified longer term; and

116.220. Show that the proposed longer term is reasonably needed to allow the applicant to obtain financing for equipment and for the opening of the operation with the need confirmed, in writing, by the applicant's proposed source of financing.

117. Insurance, Proof of Publication and Facilities or Structures Used in Common.

117.100. A permit application will contain either a certificate of liability insurance or evidence of self-insurance in compliance with R645-301-800.

117.200. A copy of the newspaper advertisements of the application for a permit, significant revision of a permit, or renewal of a permit, or proof of publication of the advertisements which is acceptable to the Division will be filed with the Division and will be made a part of the application not later than 4 weeks after the last date of publication as required by R645-300- 121.100.

117.300. The plans of a facility or structure that is to be shared by two or more separately permitted coal mining and reclamation operations may be included in one permit application and referenced in the other applications. In accordance with R645-301-800, each permittee will bond the facility or structure unless the permittees sharing it agree to another arrangement for assuming their respective responsibilities. If such agreement is reached, then the

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application will include a copy of the agreement between or among the parties setting forth the respective bonding responsibilities of each party for the facility or structure. The agreement will demonstrate to the satisfaction of the Division that all responsibilities under the R645 Rules for the facility or structure will be met.

118. Filing Fee. Each permit application to conduct coal mining and reclamation operations pursuant to the State Program will be accompanied by a fee of $5.00.

120. Permit Application Format and Contents.

121. The permit application will:

121.100. Contain current information, as required by R645-200, R645-300, R645-301 and R645-302.

121.200. Be clear and concise; and

121.300. Be filed in the format required by the Division.

122. If used in the permit application, referenced materials will either be provided to the Division by the applicant or be readily available to the Division. If provided, relevant portions of referenced published materials will be presented briefly and concisely in the application by photocopying or abstracting and with explicit citations.

123. Applications for permits; permit changes; permit renewals; or transfers, sales or assignments of permit rights will contain the notarized signature of a responsible official of the applicant, that the information contained in the application is true and correct to the best of the official's information and belief.

130. Reporting of Technical Data.

131. All technical data submitted in the permit application will be accompanied by the names of persons or organizations that collected and analyzed the data, dates of the collection and analysis of the data, and descriptions of the methodology used to collect and analyze the data.

132. Technical analyses will be planned by or under the direction of a professional qualified in the subject to be analyzed.

140. Maps and Plans.

141. Maps submitted with permit applications will be presented in a consolidated format, to the extent possible, and will include all the types of information that are set forth on U.S. Geological Survey of the 1:24,000 scale series. Maps of the **permit area** will be at a scale of 1:6,000 or larger. Maps of the **adjacent area** will clearly show the lands and waters within those areas and be at a scale determined by the Division, but in no event smaller than 1:24,000.

142. All maps and plans submitted with the permit application will distinguish among each of the phases during which coal mining and reclamation operations were or will be conducted at any place within the life of operations. At a minimum, distinctions will be clearly shown among those portions of the life of operations in which coal mining and reclamation operations occurred:

142.100 Prior to August 3, 1977;

142.200 After August 3, 1977, and prior to either:

142.210. May 3, 1978; or

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142.220 In the case of an applicant or operator which obtained a small operator's exemption in accordance with the Interim Program rules (MC Rules), January 1, 1979;

142.300 After May 3, 1978 (or January 1, 1979, for persons who received a small operator's exemption) and prior to the approval of the State Program; and

142.400 After the estimated date of issuance of a permit by the Division under the State Program.

150. Completeness. An application for a permit to conduct coal mining and reclamation operations will be complete and will include at a minimum information required under R645-301 and, if applicable, R645-302.

R645-301-200. Soils.

The regulations in R645-301-200 present the minimum requirements for information on soil resources which will be included in each permit application.

210. Introduction.

211. The applicant will present a description of the premining soil resources as specified under R645-301-221. Topsoil and subsoil to be saved under R645- 301-232 will be separately removed and segregated from other material.

212. After removal, topsoil will be immediately redistributed in accordance with R645-301-242, stockpiled pending redistribution under R645-301-234, or if demonstrated that an alternative procedure will provide equal or more protection for the topsoil, the Division may, on a case-by-case basis, approve an alternative.

220. Environmental Description.

221. Prime Farmland Investigation. All permit applications, whether or not Prime Farmland is present, will include the results of a reconnaissance inspection of the proposed **permit area** to indicate whether Prime Farmland exists as given under R645-302-313.

222. Soil Survey. The applicant will provide adequate soil survey information for those portions of the **permit area** to be affected by surface operations incident to UNDERGROUND COAL MINING and RECLAMATION ACTIVITIES and for the **permit area** of SURFACE COAL MINING and RECLAMATION ACTIVITIES consisting of the following:

222.100. A map delineating different soils;

222.200. Soil identification;

222.300. Soil description; and

222.400. Present and potential productivity of existing soils.

223. Soil Characterization. The survey will meet the standards of the National Cooperative Soil Survey as incorporated by reference in R645-302- 314.100.

224. Substitute Topsoil. Where the applicant proposes to use selected overburden materials as a supplement or substitute for topsoil, the application will include results of analyses, trials, and tests as described under R645-301-232.100 through R645-301-232.600, R645-301-234, R645-301-242, and R645-301-243. The Division may also require the results of field-site trials or greenhouse tests as required under R645-301-233.

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230. Operation Plan.

231. General Requirements. Each permit application will include a:

231.100. Description of the methods for removing and storing topsoil, subsoil, and other materials;

231.200. Demonstration of the suitability of topsoil substitutes or supplements;

231.300. Testing plan for evaluating the results of topsoil handling and reclamation procedures related to revegetation; and

231.400. Narrative that describes the construction, modification, use and maintenance of topsoil handling and storage areas.

232. Topsoil and Subsoil Removal.

232.100. All topsoil will be removed as a separate layer from the area to be disturbed, and segregated.

232.200. Where the topsoil is of insufficient quantity or poor quality for sustaining vegetation, the materials approved by the Division in accordance with R645-301-233.100 will be removed as a separate layer from the area to be disturbed, and segregated.

232.300. If topsoil is less than six inches thick, the operator may remove the topsoil and the unconsolidated materials immediately below the topsoil and treat the mixture as topsoil.

232.400. The Division may not require the removal of topsoil for minor disturbances which:

232.410. Occur at the site of small structures, such as power poles, signs, or fence lines; or

232.420. Will not destroy the existing vegetation and will not cause erosion.

232.500. Subsoil Segregation. The Division may require that the B horizon, C horizon, or other underlying strata, or portions thereof, be removed and segregated, stockpiled, and redistributed as subsoil in accordance with the requirements of R645-301-234 and R645-301-242 if it finds that such subsoil layers are necessary to comply with the revegetation requirements of R645-301- 353 through R645-301-357.

232.600. Timing. All material to be removed under R645-301-232 will be removed after the vegetative cover that would interfere with its salvage is cleared from the area to be disturbed, but before any drilling, blasting, mining, or other surface disturbance takes place.

232.700. Topsoil and subsoil removal under adverse conditions. An exception to the requirements of R645-301-232 to remove topsoil or subsoils in a separate layer from an area to be disturbed by surface operations may be granted by the Division where the operator can demonstrate;

232.710. The removal of soils in a separate layer from the area by the use of conventional machines would be unsafe or impractical because of the slope or other condition of the terrain or because of the rockiness or limited depth of the soils; and

232.720. That the requirements of R645-301-233 have been or will be fulfilled with regard to the use of substitute soil materials unless no available substitute material can be made suitable for achieving the revegetation standards of R645-301-356, in which event the operator will, as a condition of the permit, be required to import soil material of the quality and quantity necessary to achieve such revegetation standards.

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233. Topsoil Substitutes and Supplements.

233.100. Selected overburden materials may be substituted for, or used as a supplement to topsoil if the operator demonstrates to the Division that the resulting soil medium is equal to, or more suitable for sustaining vegetation on nonprime farmland areas than the existing topsoil, has a greater productive capacity than that which existed prior to mining for prime farmland reconstruction, and results in a soil medium that is the best available in the **permit area** to support revegetation.

233.200. The suitability of topsoil substitutes and supplements will be determined on the basis of analysis of the thickness of soil horizons, total depth, texture, percent coarse fragments, pH, and areal extent of the different kinds of soils. The Division 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 topsoil substitutes or supplements.

233.300. Results of physical and chemical analyses of overburden and topsoil to demonstrate that the resulting soil medium is equal to or more suitable for sustaining revegetation than the available topsoil, provided that field-site trials, and greenhouse tests are certified by an approved laboratory in accordance with any one or a combination of the following sources:

233.310. NRCS published data based on established soil series;

233.320. NRCS Technical Guides;

233.330. State agricultural agency, university, Tennessee Valley Authority, Bureau of Land Management of U.S. Department of Agriculture Forest Service published data based on soil series properties and behavior; or

233.340. Results of physical and chemical analyses, field-site trials, or greenhouse tests of the topsoil and overburden materials (soil series) from the **permit area**.

233.400. If the operator demonstrates through soil survey or other data that the topsoil and unconsolidated material are insufficient and substitute materials will be used, only the substitute materials must be analyzed in accordance with R645-301-233.300.

234. Topsoil Storage.

234.100. Materials removed under R645-301-232.100, R645-301-232.200, and R645-301-232.300 will be segregated and stockpiled when it is impractical to redistribute such materials promptly on regraded areas.

234.200. Stockpiled materials will:

234.210. Be selectively placed on a stable site within the **permit area**;

234.220. Be protected from contaminants and unnecessary compaction that would interfere with revegetation;

234.230. Be protected from wind and water erosion through prompt establishment and maintenance of an effective, quick growing vegetative cover or through other measures approved by the Division; and

234.240. Not be moved until required for redistribution unless approved by the Division.

234.300. Where long-term **disturbed areas** will result from facilities and preparation plants and where stockpiling of materials removed under R645-301- 232.100 would be detrimental to the quality or quantity of those materials, the Division may approve the temporary distribution of the soil materials so removed to an approved site within the **permit area** to enhance the current use of that site until needed for later reclamation, provided that:

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234.310. Such action will not permanently diminish the capability of the topsoil of the host site; and

234.320. The material will be retained in a condition more suitable for redistribution than if stockpiled.

240. Reclamation Plan.

241. General Requirements. Each permit application will include plans for redistribution of soils, use of soil nutrients and amendments and stabilization of soils.

242. Soil Redistribution.

242.100. Topsoil materials removed under R645-301-232.100, R645-301-232.200, and R645-301-232.300 and stored under R645-301-234 will be redistributed in a manner that:

242.110. Achieves an approximately uniform, stable thickness consistent with the approved postmining land use, contours, and surface-water drainage systems;

242.120. Prevents excess compaction of the materials; and

242.130. Protects the materials from wind and water erosion before and after seeding and planting.

242.200. Before redistribution of the materials removed under R645-301-232 the regraded land will be treated if necessary to reduce potential slippage of the redistributed material and to promote root penetration. If no harm will be caused to the redistributed material and reestablished vegetation, such treatment may be conducted after such material is replaced.

242.300. The Division may not require the redistribution of topsoil or topsoil substitutes on the approved postmining embankments of permanent impoundments or roads if it determines that:

242.310. Placement of topsoil or topsoil substitutes on such embankments is inconsistent with the requirement to use the best technology currently available to prevent sedimentation, and

242.320. Such embankments will be otherwise stabilized.

243. Soil Nutrients and Amendments. Nutrients and soil amendments will be applied to the initially redistributed material when necessary to establish the vegetative cover.

244. Soil Stabilization.

244.100. All exposed surface areas will be protected and stabilized to effectively control erosion and air pollution attendant to erosion.

244.200. Suitable mulch and other soil stabilizing practices will be used on all areas that have been regraded and covered by topsoil or topsoil substitutes. The Division may waive this requirement if seasonal, soil, or slope factors result in a condition where mulch and other soil stabilizing practices are not necessary to control erosion and to promptly establish an effective vegetative cover.

244.300. Rills and gullies, which form in areas that have been regraded and topsoiled and which either:

244.310. Disrupt the approved postmining land use or the reestablishment of the vegetative cover, or

244.320. Cause or contribute to a violation of water quality standards for receiving streams will be filled, regraded, or otherwise stabilized; topsoil will be replaced; and the areas will be reseeded or replanted.

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250. Performance Standards.

251. All topsoil, subsoil and topsoil substitutes or supplements will be removed, maintained and redistributed according to the plan given under R645- 301-230 and R645-301-240.

252. All stockpiled topsoil, subsoil and topsoil substitutes or supplements will be located, maintained and redistributed according to plans given under R645-301-230 and R645-301-240.

R645-301-300. Biology.

310. Introduction. Each permit application will include descriptions of the:

311. Vegetative, fish, and wildlife resources of the **permit area** and **adjacent areas** as described under R645-301-320;

312. Potential impacts to vegetative, fish and wildlife resources and methods proposed to minimize these impacts during coal mining and reclamation operations as described under R645-301-330 and R645-301-340; and

313. Proposed reclamation designed to restore or enhance vegetative, fish, and wildlife resources to a condition suitable for the designated postmining land use as described under R645-301-340.

320. Environmental Description.

321. Vegetation Information. The permit application will contain descriptions as follows:

321.100. If required by the Division, plant communities within the proposed **permit area** and any reference area for SURFACE COAL MINING AND RECLAMATION ACTIVITIES and areas affected by surface operations incident to an underground mine for UNDERGROUND COAL MINING AND RECLAMATION ACTIVITIES. This description will include information adequate to predict the potential for reestablishing vegetation; and

321.200. The productivity of the land before mining within the proposed **permit area** for SURFACE COAL MINING AND RECLAMATION ACTIVITIES and areas affected by surface operations incident to an underground mine for UNDERGROUND COAL MINING AND RECLAMATION ACTIVITIES, expressed as average yield of food, fiber, forage, or wood products from such lands obtained under high levels of management. The productivity will be determined by yield data or estimates for similar sites based on current data from the U. S. Department of Agriculture, state agricultural universities, or appropriate state natural resource or agricultural agencies.

322. Fish and Wildlife Information. Each application will include fish and wildlife resource information for the **permit area** and **adjacent areas**.

322.100. The scope and level of detail for such information will be determined by the Division in consultation with state and federal agencies with responsibilities for fish and wildlife and will be sufficient to design the protection and enhancement plan required under R645-301-333.

322.200. Site-specific resource information necessary to address the respective species or habitats will be required when the **permit area** or **adjacent area** is likely to include:

322.210. Listed or proposed endangered or threatened species of plants or animals or their critical habitats listed by the Secretary under the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.), or those species or habitats protected by similar state statutes;

322.220. Habitats of unusually high value for fish and wildlife such as important streams, wetlands, riparian

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areas, cliffs supporting raptors, areas offering special shelter or protection, migration routes, or reproduction and wintering areas; or

322.230. Other species or habitats identified through agency consultation as requiring special protection under state or federal law.

322.300. Fish and Wildlife Service review. Upon request, the Division will provide the resource information required under R645-301-322 and the protection and enhancement plan required under R645-301-333 to the U.S. Fish and Wildlife Service Regional or Field Office for their review. This information will be provided within 10 days of receipt of the request from the Service.

323. Maps and Aerial Photographs. Maps or aerial photographs of the **permit area** and **adjacent areas** will be provided which delineate:

323.100. The location and boundary of any proposed reference area for determining the success of revegetation;

323.200. Elevations and locations of monitoring stations used to gather data for fish and wildlife, and any special habitat features;

323.300. Each facility to be used to protect and enhance fish and wildlife and related environmental values; and

323.400. If required, each vegetative type and plant community, including sample locations. Sufficient **adjacent areas** will be included to allow evaluation of vegetation as important habitat for fish and wildlife for those species identified under R645-301-322.

330. Operation Plan. Each application will contain a plan for protection of vegetation, fish, and wildlife resources throughout the life of the mine. The plan will provide:

331. A description of the measures taken to disturb the smallest practicable area at any one time and through prompt establishment and maintenance of vegetation for interim stabilization of **disturbed areas** to minimize surface erosion. This may include part or all of the plan for final revegetation as described in R645-301-341.100 and R645-301-341.200;

332. For the purposes of UNDERGROUND COAL MINING AND RECLAMATION ACTIVITIES a description of the anticipated impacts of subsidence on renewable resource lands identified in R645-301-320, and how such impact will be mitigated;

333. A description of how, to the extent possible, using the best technology currently available, the operator will minimize disturbances and adverse impacts to fish and wildlife and related environmental values during coal mining and reclamation operations, including compliance with the Endangered Species Act of 1973 during coal mining and reclamation operations, including the location and operation of haul and access roads and support facilities so as to avoid or minimize impacts on important fish and wildlife species or other species protected by state or federal law; and how enhancement of these resources will be achieved, where practicable. This Description will:

333.100. Be consistent with the requirements of R645-301-358;

333.200. Apply, at a minimum, to species and habitats identified under R645- 301-322; and

333.300. Include protective measures that will be used during the active mining phase of operation. Such measures may include the establishment of buffer zones, the selective location and special design of haul roads and powerlines, and the monitoring of surface water quality and quantity.

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340. Reclamation Plan.

341. Revegetation. Each application will contain a reclamation plan for final revegetation of all lands disturbed by coal mining and reclamation operations, except water areas and the surface of roads approved as part of the postmining land use, as required in R645-301-353 through R645-301-357, showing how the applicant will comply with the biological protection performance standards of the State Program. The plan will include, at a minimum:

341.100. A detailed schedule and timetable for the completion of each major step in the revegetation plan;

341.200. Descriptions of the following:

341.210. Species and amounts per acre of seeds and/or seedlings to be used. If fish and wildlife habitat will be a postmining land use, the criteria of R645-301-342.300 apply.

341.220. Methods to be used in planting and seeding;

341.230. Mulching techniques, including type of mulch and rate of application;

341.240. Irrigation, if appropriate, and pest and disease control measures, if any; and

341.250. Measures proposed to be used to determine the success of revegetation as required in R645-301-356.

341.300. The Division may require greenhouse studies, field trials, or equivalent methods of testing proposed or potential revegetation materials and methods to demonstrate that revegetation is feasible pursuant to R645-300-133.710.

342. Fish and Wildlife. Each application will contain a fish and wildlife plan for the reclamation and postmining phase of operation consistent with R645-301-330, the performance standards of R645-301-358 and include the following:

342.100. Enhancement measures that will be used during the reclamation and postmining phase of operation to develop aquatic and terrestrial habitat. Such measures may include restoration of streams and other wetlands, retention of ponds and impoundments, establishment of vegetation for wildlife food and cover, and the replacement of perches and nest boxes. Where the plan does not include enhancement measures, a statement will be given explaining why enhancement is not practicable.

342.200. Where fish and wildlife habitat is to be a postmining land use, the plant species to be used on reclaimed areas will be selected on the basis of the following criteria:

342.210. Their proven nutritional value for fish or wildlife;

342.220. Their use as cover for fish or wildlife; and

342.230. Their ability to support and enhance fish or wildlife habitat after the release of performance bonds. The selected plants will be grouped and distributed in a manner which optimizes edge effect, cover, and other benefits to fish and wildlife.

342.300. Where cropland is to be the postmining land use, and where appropriate for wildlife-and crop-management practices, the operator will intersperse the fields with trees, hedges, or fence rows throughout the harvested area to break up large blocks of monoculture and to diversify habitat types for birds and other animals.

342.400. Where residential, public service, or industrial uses are to be the postmining land use, and where

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consistent with the approved postmining land use, the operator will intersperse reclaimed lands with greenbelts utilizing species of grass, shrubs, and trees useful as food and cover for wildlife.

350. Performance Standards.

351. General Requirements. All coal mining and reclamation operations will be carried out according to plans provided under R645-301-330 through R645-301- 340.

352. Contemporaneous Reclamation. Revegetation on all land that is disturbed by coal mining and reclamation operations, will occur as contemporaneously as practicable with mining operations, except when such mining operations are conducted in accordance with a variance for combined SURFACE and UNDERGROUND COAL MINING AND RECLAMATION ACTIVITIES issued under R645-302-280. The Division may establish schedules that define contemporaneous reclamation.

353. Revegetation: General Requirements. The permittee will establish on regraded areas and on all other **disturbed areas**, except water areas and surface areas of roads that are approved as part of the postmining land use, a vegetative cover that is in accordance with the approved permit and reclamation plan.

353.100. The vegetative cover will be:

353.110. Diverse, effective, and permanent;

353.120. Comprised of species native to the area, or of introduced species where desirable and necessary to achieve the approved postmining land use and approved by the Division;

353.130. At least equal in extent of cover to the natural vegetation of the area; and

353.140. Capable of stabilizing the soil surface from erosion.

353.200. The reestablished plant species will:

353.210. Be compatible with the approved postmining land use;

353.220. Have the same seasonal characteristics of growth as the original vegetation;

353.230. Be capable of self-regeneration and plant succession;

353.240. Be compatible with the plant and animal species of the area; and

353.250. Meet the requirements of applicable Utah and federal seed, poisonous and noxious plant; and introduced species laws or regulations.

353.300. The Division may grant exception to the requirements of R645-301- 353.220 and R645-301-353.230 when the species are necessary to achieve a quick-growing, temporary, stabilizing cover, and measures to establish permanent vegetation are included in the approved permit and reclamation plan.

353.400. When the approved postmining land use is cropland, the Division may grant exceptions to the requirements of R645-301-353.110, R645-301-353.130, R645-301-353.220 and R645-301-353.230. The requirements of R645-302-317 apply to areas identified as prime farmland.

354. Revegetation: Timing. **Disturbed areas** will be planted during the first normal period for favorable planting conditions after replacement of the plant-growth medium. The normal period for favorable planting is that planting time generally accepted locally for the type of plant materials selected.

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355. Revegetation: Mulching and Other Soil Stabilizing Practices. Suitable mulch and other soil stabilizing practices will be used on all areas that have been regraded and covered by topsoil or topsoil substitutes. The Division may waive this requirement if seasonal, soil, or slope factors result in a condition where mulch and other soil stabilizing practices are not necessary to control erosion and to promptly establish an effective vegetative cover.

356. Revegetation: Standards for Success.

356.100. Success of revegetation will be judged on the effectiveness of the vegetation for the approved postmining land use, the extent of cover compared to the extent of cover of the reference area or other approved success standard, and the general requirements of R645-301-353.

356.110. Standards for success, statistically valid sampling techniques for measuring success, and approved methods are identified in the Division's "Vegetation Information Guidelines, Appendix A."

356.120. Standards for success will include criteria representative of unmined lands in the area being reclaimed to evaluate the appropriate vegetation parameters of ground cover, production, or stocking. Ground cover, production, or stocking will be considered equal to the approved success standard when they are not less than 90 percent of the success standard. The sampling techniques for measuring success will use a 90-percent statistical confidence interval (i.e., one-sided test with a 0.10 alpha error).

356.200. Standards for success will be applied in accordance with the approved postmining land use and, at a minimum, the following conditions:

356.210. For areas developed for use as grazing land or pasture land, the ground cover and production of living plants on the revegetated area will be at least equal to that of a reference area or such other success standards approved by the Division.

356.220. For areas developed for use as cropland, crop production on the revegetated area will be at least equal to that of a reference area or such other success standards approved by the Division. The requirements of R645-302-310 through R645-302-317 apply to areas identified as prime farmland.

356.230. For areas to be developed for fish and wildlife habitat, recreation, shelter belts, or forest products, success of vegetation will be determined on the basis of tree and shrub stocking and vegetative ground cover. Such parameters are described as follows:

356.231. Minimum stocking and planting arrangements will be specified by the Division on the basis of local and regional conditions and after consultation with and approval by Utah agencies responsible for the administration of forestry and wildlife programs. Consultation and approval will be on a permit specific basis and will be performed in accordance with the "Vegetation Information Guidelines" of the division.

356.232. Trees and shrubs that will be used in determining the success of stocking and the adequacy of plant arrangement will have utility for the approved postmining land use. At the time of bond release, such trees and shrubs will be healthy, and at least 80 percent will have been in place for at least 60 percent of the applicable minimum period of responsibility. No trees and shrubs in place for less than two growing seasons will be counted in determining stocking adequacy.

356.233. Vegetative ground cover will not be less than that required to achieve the approved postmining land use.

356.240. For areas to be developed for industrial, commercial, or residential use less than two years after regrading is completed, the vegetative ground cover will not be less than that required to control erosion.

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356.250. For areas previously disturbed by mining that were not reclaimed to the requirements of R645-200 through R645-203 and R645-301 through R645-302 and that are remined or otherwise redisturbed by coal mining and reclamation operations, at a minimum, the vegetative ground cover will be not less than the ground cover existing before redisturbance and will be adequate to control erosion.

356.300. Siltation structures will be maintained until removal is authorized by the Division and the **disturbed area** has been stabilized and revegetated. In no case will the structure be removed sooner than two years after the last augmented seeding.

356.400. When a siltation structure is removed, the land on which the siltation structure was located will be revegetated in accordance with the reclamation plan and R645-301-353 through R645-301-357.

357. Revegetation: Extended Responsibility Period.

357.100. The period of extended responsibility for successful vegetation will begin after the last year of augmented seeding, fertilization, irrigation, or other work, excluding husbandry practices that are approved by the Division in accordance with paragraph R645-301-357.300.

357.200. Vegetation parameters identified in R645-301-356.200 will equal or exceed the approved success standard during the growing seasons for the last two years of the responsibility period. The period of extended responsibility will continue for five or ten years based on precipitation data reported pursuant to R645-301-724.411, as follows:

357.210. In areas of more than 26.0 inches average annual precipitation, the period of responsibility will continue for a period of not less than five full years.

357.220. In areas of 26.0 inches or less average annual precipitation, the period of responsibility will continue for a period of not less than ten full years.

357.300. Husbandry Practices--General Information

357.301. The Division may approve certain selective husbandry practices without lengthening the extended responsibility period. Practices that may be approved are identified in R645-301-357.310 through R645-301-357.365. The operator may propose to use additional practices, but they would need to be approved as part of the Utah Program in accordance with 30 CFR 732.17. Any practices used will first be incorporated into the mining and reclamation plan and approved in writing by the Division. Approved practices are normal conservation practices for unmined lands within the region which have land uses similar to the approved postmining land use of the **disturbed area**. Approved practices may continue as part of the postmining land use, but discontinuance of the practices after the end of the bond liability period will not jeopardize permanent revegetation success. Augmented seeding, fertilization, or irrigation will not be approved without extending the period of responsibility for revegetation success and bond liability for the areas affected by said activities and in accordance with R645-301-820.330.

357.302. The Permittee will demonstrate that husbandry practices proposed for a reclaimed area are not necessitated by inadequate grading practices, adverse soil conditions, or poor reclamation procedures.

357.303. The Division will consider the entire area that is bonded within the same increment, as defined in R645-301-820.110, when calculating the extent of area that may be treated by husbandry practices.

357.304. If it is necessary to seed or plant in excess of the limits set forth under R645-301-357.300, the Division may allow a separate extended responsibility period for these reseeded or replanted areas in accordance with R645-301-820.330.

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357.310. Reestablishing trees and shrubs

357.311. Trees or shrubs may be replanted or reseeded at a rate of up to a cumulative total of 20% of the required stocking rate through 40% of the extended responsibility period.

357.312. If shrubs are to be established by seed in areas of established vegetation, small areas will be scalped. The number of shrubs to be counted toward the tree and shrub density standard for success from each scalped area is limited to one.

357.320. Weed Control and Associated Revegetation. Weed control through chemical, mechanical, and biological means discussed in R645-301-357.321 through R645-301-357.323 is allowed through the entire extended responsibility period for noxious weeds and through the first 20% of the responsibility period for other weeds. Any revegetation necessitated by the following weed control methods will be performed according to the seeding and transplanting parameters set forth in R645-301-357.324.

357.321. Chemical Weed Control. Weed control through chemical means, following the current Weed Control Handbook (published annually or biannually by the Utah State University Cooperative Extension Service) and herbicide labels, is allowed.

357.322. Mechanical Weed Control. Mechanical practices that may be approved include hand roguing, grubbing and mowing.

357.323. Biological Weed Control. Selective grazing by domestic livestock is allowed. Biological control of weeds through disease, insects, or other biological weed control agents is allowed but will be approved on a case-by- case basis by the Division, and other appropriate agency or agencies which have the authority to regulate the introduction and/or use of biological control agents.

357.324. Where weed control practices damage desirable vegetation, areas treated to control weeds may be reseeded or replanted according to the following limitations. Up to a cumulative total of 15% of a reclaimed area may be reseeded or replanted during the first 20% of the extended responsibility period without restarting the responsibility period. After the first 20% of the responsibility period, no more than 3% of the reclaimed area may be reseeded in any single year without restarting the responsibility period, and no continuous reseeded area may be larger than one acre. Furthermore, no seeding is allowed after the first 60% of the responsibility period or Phase II bond release, whichever comes first. Any seeding outside these parameters is considered to be "augmentative seeding," and will restart the extended responsibility period.

357.330. Control of Other Pests.

357.331. Control of big game (deer, elk, moose, antelope) may be used only during the first 60% of the extended responsibility period or until Phase II bond release, whichever comes first. Any methods used will first be approved by the Division and, as appropriate, the land management agency and the Utah Division of Wildlife Resources. Methods that may be used include fencing and other barriers, repellents, scaring, shooting, and trapping and relocation. Trapping and special hunts or shooting will be approved by the Division of Wildlife Resources. Other control techniques may be allowed but will be considered on a case-by-case basis by the Division and by the Utah Division of Wildlife Resources. Appendix C of the Division's "Vegetation Information Guidelines" includes a non-exhaustive list of publications containing big game control methods.

357.332. Control of small mammals and insects will be approved on a case-by- case basis by the Utah Division of Wildlife Resources and/or the Utah Department of Agriculture. The recommendations of these agencies will also be approved by the appropriate land management agency or agencies. Small mammal control will be allowed only during the first 60% of the extended responsibility period or until Phase II bond release, whichever comes first. Insect control will be allowed through the entire extended responsibility period if it is determined, through consultation with the Utah Department of Agriculture or Cooperative Extension Service, that a specific practice is

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being performed on adjacent unmined lands.

357.340. Natural Disasters and Illegal Activities Occurring After Phase II Bond Release. Where necessitated by a natural disaster, excluding climatic variation, or illegal activities, such as vandalism, not caused by any lack of planning, design, or implementation of the mining and reclamation plan on the part of the Permittee, the seeding and planting of the entire area which is significantly affected by the disaster or illegal activities will be allowed as an accepted husbandry practice and thus will not restart the extended responsibility period. Appendix C of the Division's "Vegetation Information Guidelines" references publications that show methods used to revegetate damaged land. Examples of natural disasters that may necessitate reseeding which will not restart the extended responsibility period include wildfires, earthquakes, and mass movements originating outside the **disturbed area**.

357.341. The extent of the area where seeding and planting will be allowed will be determined by the Division in cooperation with the Permittee.

357.342. All applicable revegetation success standards will be achieved on areas reseeded following a disaster, including R645-301-356.232 for areas with a designated postmining land use of forestry or wildlife.

357.343. Seeding and planting after natural disasters or illegal activities will only be allowed in areas where Phase II bond release has been granted.

357.350. Irrigation. The irrigation of transplanted trees and shrubs, but not of general areas, is allowed through the first 20% of the extended responsibility period. Irrigation may be by such methods as, but not limited to, drip irrigation, hand watering, or sprinkling.

357.360. Highly Erodible Area and Rill and Gully Repair. The repair of highly erodible areas and rills and gullies will not be considered an augmentative practice, and will thus not restart the extended responsibility period, if the **affected area** as defined in R645-301-357.363 comprises no more than 15% of the **disturbed area** for the first 20% of the extended responsibility period and if no continuous area to be repaired is larger than one acre.

357.361. After the first 20% of the extended responsibility period but prior to the end of the first 60% of the responsibility period or until Phase II bond release, whichever comes first, highly erodible area and rill and gully repair will be considered augmentative, and will thus restart the responsibility period, if the area to be repaired is greater than 3% of the total **disturbed area** or if a continuous area is larger than one acre.

357.362. The extent of the **affected area** will be determined by the Division in cooperation with the Permittee.

357.363. The area affected by the repair of highly erodible areas and rills and gullies is defined as any area that is reseeded as a result of the repair. Also included in the **affected areas** are interspacial areas of thirty feet or less between repaired rills and gullies. Highly erodible areas are those areas which cannot usually be stabilized by ordinary conservation treatments and if left untreated can cause severe erosion or sediment damage.

357.364. The repair and/or treatment of rills and gullies which result from a deficient surface water control or grading plan, as defined by the recurrence of rills and gullies, will be considered an augmentative practice and will thus restart the extended responsibility period.

357.365. The Permittee shall demonstrate by specific plans and designs the methods to be used for the treatment of highly erodible areas and rills and gullies. These will be based on a combination of treatments recommended in the Soil Conservation Service Critical Area Planting recommendations, literature recommendations including those found in Appendix C of the Division's "Vegetation Information Guidelines", and other successful practices used at other reclamation sites in the State of Utah. Any treatment practices used will be approved by the Division.

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358. Protection of Fish, Wildlife, and Related Environmental Values. The operator will, to the extent possible using the best technology currently available, minimize disturbances and adverse impacts on fish, wildlife, and related environmental values and will achieve enhancement of such resources where practicable.

358.100. No coal mining and reclamation operation will be conducted which is likely to jeopardize the continued existence of endangered or threatened species listed by the Secretary or which is likely to result in the destruction or adverse modification of designated critical habitats of such species in violation of the Endangered Species Act of 1973. The operator will promptly report to the Division any state-or federally-listed endangered or threatened species within the **permit area** of which the operator becomes aware. Upon notification, the Division will consult with appropriate state and federal fish and wildlife agencies and, after consultation, will identify whether, and under what conditions, the operator may proceed.

358.200. No coal mining and reclamation operations will 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 operator will promptly report to the Division any golden or bald eagle nest within the **permit area** of which the operator becomes aware. Upon notification, the Division will consult with the U.S. Fish and Wildlife Service and the Utah Division of Wildlife Resources and, after consultation, will identify whether, and under what conditions, the operator may proceed.

358.300. Nothing in the R645 Rules will authorize the taking of an endangered or threatened species or a bald or golden eagle, its nest, or any of its eggs in violation of the Endangered Species Act of 1973 or the Bald Eagle Protection Act, as amended, 16 U.S.C. 668 et seq.

358.400. The operator conducting coal mining and reclamation operations will avoid disturbances to, enhance where practicable, restore, or replace, wetlands and riparian vegetation along rivers and streams and bordering ponds and lakes. Coal mining and reclamation operations will avoid disturbances to, enhance where practicable, or restore, habitats of unusually high value for fish and wildlife.

358.500. Each operator will, to the extent possible using the best technology currently available:

358.510. Ensure that electric powerlines and other transmission facilities used for, or incidental to, coal mining and reclamation operations on the **permit area** are designed and constructed to minimize electrocution hazards to raptors, except where the Division determines that such requirements are unnecessary;

358.520. Design fences, overland conveyers, and other potential barriers to permit passage for large mammals, except where the Division determines that such requirements are unnecessary; and

358.530. Fence, cover, or use other appropriate methods to exclude wildlife from ponds which contain hazardous concentrations of toxic-forming materials.

R645-301-400. Land Use and Air Quality.

The rules in R645-301-400 present the requirements for information related to Land Use and Air Quality which are to be included in each permit application.

410. Land Use. Each permit application will include a descriptions of the premining and proposed postmining land use(s).

411. Environmental Description.

411.100. Premining Land-Use Information. The application will contain a statement of the condition and capability of the land which will be affected by coal mining and reclamation operations within the proposed **permit area**, including:

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411.110. A map and supporting narrative of the uses of the land existing at the time of the filing of the application. If the premining use of the land was changed within five years before the anticipated date of beginning the proposed operations, the historic use of the land will also be described;

411.120 A narrative of land capability which analyzes the land-use description in conjunction with other environmental resources information required under R645-301-411.100, and R645-301 and R645-302. The narrative will provide analyses of the capability of the land before any coal mining and reclamation operations to support a variety of uses, giving consideration to soil and foundation characteristics, topography, vegetative cover and the hydrology of the area proposed to be affected by coal mining and reclamation operations; and

411.130. A description of the existing land uses and land-use classifications under local law, if any, of the proposed permit and **adjacent areas**.

411.140. Cultural and Historic Resources Information. The application will contain maps as described under R645-301-411.141 and a supporting narrative which describe the nature of cultural and historic resources listed or eligible for listing in the National Register of Historic Places and known archeological sites within the permit and **adjacent areas**. The description will be based on all available information, including, but not limited to, information from the State Historic Preservation Officer and from local archeological, historic, and cultural preservation agencies.

411.141. Cultural and Historic Resources Maps. These maps will clearly show:

411.141.1. The boundaries of any public park and locations of any cultural or historical resources listed or eligible for listing in the National Register of Historic Places and known archeological sites within the permit and **adjacent areas**;

411.141.2. Each cemetery that is located in or within 100 feet of the proposed **permit area**; and

411.141.3. Any land within the proposed **permit area** which is within the boundaries of any units of the National System of Trails or the Wild and Scenic Rivers System, including study rivers designated under section 5(a) of the Wild and Scenic Rivers Act.

411.142. Coordination with the State Historic Preservation Officer (SHPO). The narrative presented under R645-301-411.140 will also describe coordination efforts with and present evidence of clearances by the SHPO. For any publicly owned parks or places listed on the National Register of Historic Places that may be adversely affected by the proposed coal mining and reclamation operations, each plan will describe the measures to be used:

411.142.1. To prevent adverse impacts; or

411.142.2. If valid existing rights exist or joint agency approval is to be obtained under R645-103-236, to minimize adverse impacts.

411.143. The Division may require the applicant to identify and evaluate important historic and archeological resources that may be eligible for listing on the national Register of Historic Places through:

411.143.1. Collection of additional information;

411.143.2. Conducting field investigations; or

411.143.3. Other appropriate analyses.

411.144. The Division may require the applicant to protect historic or archeological properties listed on or eligible for listing on the National Register of Historic Places through appropriate mitigation and treatment

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measures. Appropriate mitigation and treatment measures may be required to be taken after permit issuance provided that the required measures are completed before the properties are affected by any mining operation.

411.200. Previous Mining Activity. The application will state whether the proposed **permit area** has been previously mined, and, if so, the following information, if available:

411.210. The type of mining method used;

411.220. The coal seams or other mineral strata mined;

411.230. The extent of coal or other minerals removed;

411.240. The approximate dates of past mining; and

411.250. The uses of the land preceding mining.

412. Reclamation Plan.

412.100. Postmining Land-Use Plan. Each application will contain a detailed description of the proposed use, following reclamation, of the land within the proposed **permit area**, including a discussion of the utility and capacity of the reclaimed land to support a variety of alternative uses, and the relationship of the proposed use to existing land-use policies and plans. The plan will explain:

412.110. How the proposed postmining land use is to be achieved and the necessary support activities which may be needed to achieve the proposed land use;

412.120. For the purposes of SURFACE COAL MINING AND RECLAMATION ACTIVITIES, where range or grazing is the proposed postmining use, the detailed management plans to be implemented;

412.130. Where a land use different from the premining land use is proposed, all materials needed for approval of the alternative use under R645-301- 413.100 through R645-301-413.334, R645-302-270, R645-302-271.100 through R645- 302-271.400, R645-302-271.600, R645-302-271.800, and R645-302-271.900; and

412.140. The consideration which has been given to making all of the proposed coal mining and reclamation operations consistent with surface owner plans and applicable Utah and local land-use plans and programs.

412.200. Land Owner or Surface Manager Comments. The description will be accompanied by a copy of the comments concerning the proposed use by the legal or equitable owner of record of the surface of the proposed **permit area** and Utah and local government agencies which would have to initiate, implement, approve, or authorize the proposed use of the land following reclamation.

412.300. Suitability and Compatibility. Assure that final fills containing excess spoil are suitable for reclamation and revegetation and are compatible with the natural surroundings and the approved postmining land use.

413. Performance Standards.

413.100. Postmining Land Use. All **disturbed areas** will be restored in a timely manner to conditions that are capable of supporting:

413.110. The uses they were capable of supporting before any mining; or

413.120. Higher or better uses.

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413.200. Determining Premining Uses of Land.

413.210. The premining uses of land to which the postmining land use is compared will be those uses which the land previously supported, if the land has not been previously mined and has been properly managed.

413.220. The postmining land use for land that has been previously mined and not reclaimed will be judged on the basis of the land use that existed prior to any mining: provided that, if the land cannot be reclaimed to the land use that existed prior to any mining because of the previously mined condition, the postmining land use will be judged on the basis of the highest and best use that can be achieved which is compatible with surrounding areas and does not require the disturbance of areas previously unaffected by mining.

413.300. Criteria for Alternative Postmining Land Uses. Higher or better uses may be approved by the Division as alternative postmining land uses after consultation with the landowner or the land management agency having jurisdiction over the lands, if the proposed uses meet the following criteria:

413.310. There is a reasonable likelihood for achievement of the use;

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

413.330. The use will not:

413.331. Be impractical or unreasonable;

413.332. Be inconsistent with applicable land-use policies or plans;

413.333. Involve unreasonable delay in implementation; or

413.334. Cause or contribute to violation of federal, Utah, or local law.

414. Interpretation of R645-301-412 and R645-301-413.100 through R645-301- 413.334, R645-302-270, R645-302-271.100 through R645-302-271.400, R645-302- 271.600, R645-302-271.800, and R645-302-271.900 for the purposes of UNDERGROUND COAL MINING AND RECLAMATION ACTIVITIES, Reclamation Plan: Postmining Land Use. The requirements of R645-301-412-130, for approval of an alternative postmining land use, may be met by requesting approval through the permit revision procedures of R645-303-220 rather than requesting such approval in the original permit application. The original permit application, however, must demonstrate that the land will be returned to its premining land-use capability as required by R645-301-413.100. An application for a permit revision of this type:

414.100. Must be submitted in accordance with the filing deadlines of R645- 303-220;

414.200. Will constitute a significant alteration from the mining operations contemplated by the original permit; and

414.300. Will be subject to the requirements of R645-300-120 through R645- 300-155 and R645-300-200.

420. Air Quality.

421. Coal mining and reclamation operations will be conducted in compliance with the requirements of the Clean Air Act (42 U.S.C. Sec. 7401 et seq.) and any other applicable Utah or federal statutes and regulations containing air quality standards.

422. The application will contain a description of coordination and compliance efforts which have been

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undertaken by the applicant with the Utah Bureau of Air Quality.

423. For all SURFACE COAL MINING AND RECLAMATION ACTIVITIES with projected production rates exceeding 1,000,000 tons of coal per year, the application will contain an air pollution control plan which includes the following:

423.100 An air quality monitoring program to provide sufficient data to evaluate the effectiveness of the fugitive dust control practices proposed under R645-301-423.200 to comply with federal and Utah air quality standards; and

423.200 A plan for fugitive dust control practices as required under R645- 301-244.100 and R645-301-244.300.

424. All plans for SURFACE COAL MINING AND RECLAMATION ACTIVITIES with projected production rates of 1,000,000 tons of coal per year or less, will include a plan for fugitive dust control practices as required under R645-301- 244 and R645-301-244.300.

425. All plans for SURFACE COAL MINING AND RECLAMATION ACTIVITIES with projected production rates of 1,000,000 tons or less will include an air quality monitoring program, if required by the division, to provide sufficient data to judge the effectiveness of the fugitive dust control plan required under R645-301-424.

R645-301-500. Engineering.

The rules in R645-301-500 present the requirements for engineering information which is to be included in a permit application.

510. Introduction. The engineering section of the permit application is divided into the operation plan, reclamation plan, design criteria, and performance standards. All of the activities associated with the coal mining and reclamation operations must be designed, located, constructed, maintained, and reclaimed in accordance with the operation and reclamation plan. All of the design criteria associated with the operation and reclamation plan must be met.

511. General Requirements. Each permit application will include descriptions of:

511.100. The proposed coal mining and reclamation operations with attendant maps, plans, and cross sections;

511.200. The proposed mining operation and its potential impacts to the environment as well as methods and calculations utilized to achieve compliance with design criteria; and

511.300. Reclamation.

512. Certification.

512.100. Cross Sections and Maps. Certain cross sections and maps required to be included in a permit application will be prepared by, or under the direction of, and certified by a qualified, registered, professional engineer or land surveyor, with assistance from experts in related fields such as hydrology, geology and landscape architecture, and will be updated as required by the Division. The following cross sections and maps will be certified:

512.110. Mine workings to the extent known as described under R645-301- 521.110;

512.120. Surface facilities and operations as described under R645-301- 521.124, R645-301-521.164, R645-301-521.165 and R645-301-521.167;

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512.130. Surface configurations as described under R645-301-542.300 and R645- 302-200;

512.140. Hydrology as described under R645-301-722, and as appropriate, R645- 301-731.700 through R645-301-731.740; and

512.150. Geologic cross sections and maps as described under R645-301-622.

512.200. Plans and Engineering Designs. Excess spoil, durable rock fills, coal mine waste, impoundments, primary roads and variances from approximate original contour require certification by a qualified registered professional engineer.

512.210. Excess Spoil. The professional engineer experienced in the design of earth and rock fills will certify the design according to R645-301-535.100.

512.220. Durable Rock Fills. The professional engineer experienced in the design of earth and rock fills must certify that the durable rock fill design will ensure the stability of the fill and meet design requirements according to R645-301-535.100 and R645.301-535.300.

512.230. Coal Mine Waste. The professional engineer experienced in the design of similar earth and waste structures must certify the design of the disposal facility according to R645-301-536.

512.240. Impoundments. The professional engineer will use current, prudent, engineering practices and will be experienced in the design and construction of impoundments and certify the design of the impoundment according to R645- 301-743.

512.250. Primary Roads. The professional engineer will certify the design and construction or reconstruction of primary roads as meeting the requirements of R645-301-534.200 and R645-301-742.420.

512.260. Variance From Approximate Original Contour. The professional engineer will certify the design for the proposed variance from the approximate original contour, as described under R645-302-270, in conformance with professional standards established to assure the stability, drainage and configuration necessary for the intended use of the site.

513. Compliance With MSHA Regulations and MSHA Approvals.

513.100. Coal processing waste dams and embankments will comply with MSHA, 30 CFR 77.216-1 and 30 CFR 77.216-2 (see R645-301-528.400 and R645-301- 536.820).

513.200. Impoundments and sedimentation ponds meeting the size or other qualifying criteria of MSHA, 30 CFR 77.216(a) will comply with the requirements of MSHA, 30 CFR 77.216 (see R645-301-533.600, R645-301-742.222, and R645-301-742.223).

513.300. Underground development waste, coal processing waste and excess spoil may be disposed of in underground mine workings, but only in accordance with a plan approved by MSHA and the Division (see R645-301-528.321).

513.400. Refuse piles will meet the requirements of MSHA, 30 CFR 77.214 and 30 CFR 77.215 (see R645-301-536.900).

513.500. Each shaft, drift, adit, tunnel, exploratory hole, entryway or other opening to the surface from the underground will be capped, sealed, backfilled or otherwise properly managed consistent with MSHA, 30 CFR 75.1771 (see R645-301-551).

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513.600. Discharges into an underground mine are prohibited, unless specifically approved by the Division after a demonstration that the discharge will meet the approval of MSHA (see R645-301-731.511.4).

513.700. The nature, timing and sequence of the SURFACE COAL MINING AND RECLAMATION ACTIVITIES that propose to mine closer than 500 feet to an active underground mine are jointly approved by the Division and MSHA (see R645-301- 523.220).

513.800. Coal mine waste fires will be extinguished in accordance with a plan approved by MSHA and the Division (see R645-301-528.323.1).

514. Inspections. All engineering inspections, excepting those described under R645-301-514.330, will be conducted by a qualified registered professional engineer or other qualified professional specialist under the direction of the professional engineer.

514.100. Excess Spoil. The professional engineer or specialist will be experienced in the construction of earth and rock fills and will periodically inspect the fill during construction. Regular inspections will also be conducted during placement and compaction of fill materials.

514.110. Such inspections will be made at least quarterly throughout construction and during critical construction periods. Critical construction periods will include at a minimum:

514.111. Foundation preparation, including the removal of all organic material and topsoil;

514.112. Placement of underdrains and protective filter systems;

514.113. Installation of final surface drainage systems; and

514.114. The final graded and revegetated fill.

514.120. The qualified registered professional engineer will provide a certified report to the Division promptly after each inspection that the fill has been constructed and maintained as designed and in accordance with the approved plan and the R645-301 and R645-302 Rules. The report will include appearances of instability, structural weakness, and other hazardous conditions.

514.130. Certified reports on Drainage System and Protective Filters.

514.131. The certified report on the drainage system and protective filters will include color photographs taken during and after construction, but before underdrains are covered with excess spoil. If the underdrain system is constructed in phases, each phase will be certified separately.

514.132. Where excess durable rock spoil is placed in single or multiple lifts such that the underdrain system is constructed simultaneously with excess spoil placement by the natural segregation of dumped materials, in accordance with R645-301-535.300 and R645-301-745.300, color photographs will be taken of the underdrain as the underdrain system is being formed.

514.133. The photographs accompanying each certified report will be taken in adequate size and number with enough terrain or other physical features of the site shown to provide a relative scale to the photographs and to specifically and clearly identify the site.

514.140. Inspection Reports. A copy of each inspection report will be retained at or near the mine site.

514.200. Refuse Piles. The professional engineer or specialist experienced in the construction of similar earth and waste structures will inspect the refuse pile during construction.

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514.210. Regular inspections by the engineer or specialist will also be conducted during placement and compaction of coal mine waste materials. More frequent inspections will be conducted if a danger of harm exists to the public health and safety or the environment. Inspections will continue until the refuse pile has been finally graded and revegetated or until a later time as required by the Division.

514.220. Such inspection will be made at least quarterly throughout construction and during the following critical construction periods:

514.221. Foundation preparation including the removal of all organic material and topsoil;

514.222. Placement of underdrains and protective filter systems;

514.223. Installation of final surface drainage systems; and

514.224. The final graded and revegetated facility.

514.230. The qualified registered professional engineer will provide a certified report to the Division promptly after each inspection that the refuse pile has been constructed and maintained as designed and in accordance with the approved plan and R645 Rules. The report will include appearances of instability, structural weakness, and other hazardous conditions.

514.240. The certified report on the drainage system and protective filters will include color photographs taken during and after construction, but before underdrains are covered with coal mine waste. If the underdrain system is constructed in phases, each phase will be certified separately. The photographs accompanying each certified report will be taken in adequate size and number with enough terrain or other physical features of the site shown to provide a relative scale to the photographs and to specifically and clearly identify the site.

514.250. A copy of each inspection report will be retained at or near the mine site.

514.300. Impoundments.

514.310. Certified Inspection. The professional engineer or specialist experienced in the construction of impoundments will inspect the impoundment.

514.311. Inspections will be made regularly during construction, upon completion of construction, and at least yearly until removal of the structure or release of the performance bond.

514.312. The qualified registered professional engineer will promptly, after each inspection, provide to the Division, a certified report that the impoundment has been constructed and maintained as designed and in accordance with the approved plan and the R645 Rules. The report will include discussion of any appearances of instability, structural weakness or other hazardous conditions, depth and elevation of any impounded waters, existing storage capacity, any existing or required monitoring procedures and instrumentation and any other aspects of the structure affecting stability.

514.313. A copy of the report will be retained at or near the mine site.

514.320. Impoundments meeting the NRCS Class B or C criteria for dams in TR- 60, or the size or other criteria of 30 CFR Sec. 77.216 must be examined in accordance with 30 CFR Sec. 77.216-3. Impoundments not meeting the NRCS Class B or C Criteria for dams in TR-60, or subject to 30 CFR Sec. 77.216, shall be examined at least quarterly. A qualified person designated by the operator shall examine impoundments for the appearance of structural weakness and other hazardous conditions.

515. Reporting and Emergency Procedures.

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515.100. The permit application will incorporate a description of the procedure for reporting a slide. The requirements for the description are: At any time a slide occurs which may have a potential adverse effect on public, property, health, safety, or the environment, the permittee who conducts the coal mining and reclamation operations will notify the Division by the fastest available means and comply with any remedial measures required by the Division.

515.200. Impoundment Hazards. The permit application will incorporate a description of notification when potential impoundment hazards exist. The requirements for the description are: If any examination or inspection discloses that a potential hazard exists, the person who examined the impoundment will promptly inform the Division of the finding and of the emergency procedures formulated for public protection and remedial action. If adequate procedures cannot be formulated or implemented, the Division will be notified immediately. The Division will then notify the appropriate agencies that other emergency procedures are required to protect the public.

515.300. The permit application will incorporate a description of procedures for temporary cessation of operations as follows:

515.310. Temporary abandonment will not relieve a person of his or her obligation to comply with any provisions of the approved permit.

515.311. Each person who conducts UNDERGROUND COAL MINING AND RECLAMATION ACTIVITIES will effectively support and maintain all surface access openings to underground operations, and secure surface facilities in areas in which there are no current operations, but operations are to be resumed under an approved permit.

515.312. Each person who conducts SURFACE COAL MINING AND RECLAMATION ACTIVITIES will effectively secure surface facilities in areas in which there are no current operations, but in which operations are to be resumed under an approved permit.

515.320. Before temporary cessation of coal mining and reclamation operations for a period of 30 days or more, or as soon as it is known that a temporary cessation will extend beyond 30 days, each person who conducts coal mining and reclamation operations will submit to the Division a notice of intention to cease or abandon operations. This notice will include:

515.321. For the purposes of UNDERGROUND COAL MINING AND RECLAMATION ACTIVITIES, a statement of the exact number of surface acres and the horizontal and vertical extent of subsurface strata which have been in the **permit area** prior to cessation or abandonment, the extent and kind of reclamation of surface area which will have been accomplished, and identification of the backfilling, regrading, revegetation, environmental monitoring, underground opening closures and water treatment activities that will continue during the temporary cessation.

515.322. For the purposes of SURFACE COAL MINING AND RECLAMATION ACTIVITIES, a statement of the exact number of acres which will have been affected in the **permit area** prior to such temporary cessation, the extent and kind of reclamation of those areas which will have been accomplished, and identification of the backfilling, regrading, revegetation, environmental monitoring, and water treatment activities that will continue during the temporary cessation.

516. Prevention of Slides in SURFACE COAL MINING AND RECLAMATION ACTIVITIES. An undisturbed natural barrier will be provided 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 Division as is needed to assure stability. The barrier will be retained in place to prevent slides and erosion.

520. Operation Plan.

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521. General. The applicant will include a plan, with maps, cross sections, narrative, descriptions, and calculations indicating how the relevant requirements are met. The permit application will describe and identify the lands subject to coal mining and reclamation operations over the estimated life of the operations and the size, sequence, and timing of the subareas for which it is anticipated that individual permits for mining will be sought.

521.100. Cross Sections and Maps. The application will include cross sections, maps and plans showing all the relevant information required by the Division, to include, but not be limited to:

521.110. Previously Mined Areas. These maps will clearly show:

521.111. The location and extent of known workings of active, inactive, or abandoned underground mines, including mine openings to the surface within the proposed permit and **adjacent areas**. The map will be prepared and certified according to R645-301-512; and

521.112. The location and extent of existing or previously surface-mined areas within the proposed **permit area**. The maps will be prepared and certified according to R645-301-512.

521.120. Existing Surface and Subsurface Facilities and Features. These maps will clearly show:

521.121. The location of all buildings in and within 1000 feet of the proposed **permit area**, with identification of the current use of the buildings;

521.122. The location of surface and subsurface man-made features within, passing through, or passing over the proposed **permit area**, including, but not limited to, major electric transmission lines, pipelines, and agricultural drainage tile fields;

521.123. Each public road located in or within 100 feet of the proposed **permit area**;

521.124. The location and size of existing areas of spoil, waste, coal development waste, and noncoal waste disposal, dams, embankments, other impoundments, and water treatment and air pollution control facilities within the proposed **permit area**. The map will be prepared and certified according to R645-301-512; and

521.125. The location of each sedimentation pond, permanent water impoundment, coal processing waste bank and coal processing waste dam and embankment in accordance with R645-301-512.100, R645-301-512.230, R645-301- 521.143, R645-301-521.169, R645-301-528.340, R645-301-531, R645-301-533.600, R645-301-533.700, R645-301-535.140 through R645-301-535.152, R645-301-536.600, R645-301-536.800, R645-301-542.500, R645-301-732.210, and R645-301-733.100.

521.130. Landowners and Right of Entry and Public Interest Maps. These maps and cross sections will clearly show:

521.131. All boundaries of lands and names of present owners of record of those lands, both surface and subsurface, included in or contiguous to the **permit area**;

521.132. The boundaries of land within the proposed **permit area** upon which the applicant has the legal right to enter and begin coal mining and reclamation operations; and

521.133. The measures to be used to ensure that the interests of the public and landowners affected are protected if, under R645-103-234, the applicant seeks to have the Division approve:

521.133.1. Conducting the proposed coal mining and reclamation operations within 100 feet of the right-of-way line of any public road, except where mine access or haul roads join that right-of-way; or

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521.133.2. Relocating a public road.

521.140. Mine Maps and **Permit Area** Maps. These maps and/or cross-section drawings will clearly indicate:

521.141. The boundaries of all areas proposed to be affected over the estimated total life of the coal mining and reclamation operations, with a description of size, sequence and timing of the mining of subareas for which it is anticipated that additional permits will be sought; the coal mining and reclamation operations to be conducted, the lands to be affected throughout the operation, and any change in a facility or feature to be caused by the proposed operations;

521.142. For the purposes of UNDERGROUND COAL MINING AND RECLAMATION ACTIVITIES, the underground workings and the location and extent of areas in which planned-subsidence mining methods will be used and which includes all areas where the measures will be taken to prevent, control, or minimize subsidence and subsidence-related damage (refer to R645-301-525); and

521.143. The proposed disposal sites for placing underground mine development waste and excess spoil generated at surface areas affected by surface operations and facilities for the purposes of UNDERGROUND COAL MINING AND RECLAMATION ACTIVITIES and the proposed disposal site and design of the spoil disposal structures for purposes of SURFACE COAL MINING AND RECLAMATION ACTIVITIES according to R645-301-211, R645-301-212, R645-301-412.300, R645- 301-512.210, R645-301-512.220, R645-301-514.100, R645-301-528.310, R645-301- 535.100 through R645-301-535.130, R645-301-535.300 through R645-301-535.500, R645-536.300, R645-301-542.720, R645-301-553.240, R645-301-745.100, R645-301- 745.300, and R645-301-745.400.

521.150. Land Surface Configuration Maps. These maps will clearly indicate sufficient slope measurements or surface contours to adequately represent the existing land surface configuration of the proposed **permit area** for the purposes of SURFACE COAL MINING AND RECLAMATION ACTIVITIES and the area affected by surface operations and facilities for the purposes of UNDERGROUND COAL MINING AND RECLAMATION ACTIVITIES measured and recorded according to the following:

521.151. Each measurement will consist of an angle of inclination along the prevailing slope extending 100 linear feet above and below or beyond the coal outcrop or the area to be disturbed, or, where this is impractical, at locations specified by the Division. Maps will be prepared and certified according to R645-301-512; and

521.152. Where the area has been previously mined, the measurements will extend at least 100 feet beyond the limits of mining disturbances, or any other distance determined by the Division to be representative of the premining configuration of the land. Maps will be prepared and certified according to R645-301-512.

521.160. Maps and Cross Sections of the Proposed Features for the Proposed **Permit Area**. These maps and cross sections will clearly show:

521.161. Buildings, utility corridors, and facilities to be used;

521.162. The area of land to be affected within the proposed **permit area**, according to the sequence of mining and reclamation;

521.163. Each area of land for which a performance bond or other equivalent guarantee will be posted under R645-301-800;

521.164. Each coal storage, cleaning and loading area. The map will be prepared and certified according to R645-301-512;

521.165. Each topsoil, spoil, coal preparation waste, underground development waste, and noncoal waste

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storage area. The map will be prepared and certified according to R645-301-512;

521.166. Each source of waste and each waste disposal facility relating to coal processing or pollution control;

521.167. Each explosive storage and handling facility;

521.168. For the purposes of SURFACE COAL MINING AND RECLAMATION ACTIVITIES, each air pollution collection and control facility; and

521.169. Each proposed coal processing waste bank, dam, or embankment. The map will be prepared and certified according to R645-301-512.

521.170. Transportation Facilities Maps. Each permit application will describe each road, conveyor, and rail system to be constructed, used, or maintained within the proposed **permit area**. The description will include a map, appropriate cross sections, and specifications for each road width, road gradient, road surface, road cut, fill embankment, culvert, bridge, drainage ditch, drainage structure, and each stream ford that is used as a temporary route.

521.180. Support facilities. Each permit applicant will submit a description, plans, and drawings for each support facility to be constructed, used, or maintained within the proposed **permit area**. The plans and drawings will include a map, appropriate cross sections, design drawings, and specifications to demonstrate compliance with R645-301-526.220 through R645-301-526.222 for each facility.

521.190. Other relevant information required by the Division.

521.200. Signs and Markers Specifications. Signs and markers will:

521.210. Be posted, maintained, and removed by the person who conducts the coal mining and reclamation operations;

521.220. Be a uniform design that can be easily seen and read; be made of durable material; and conform to local laws and regulations;

521.230. Be maintained during all activities to which they pertain;

521.240. Mine and Permit Identification Signs.

521.241. For the purposes of UNDERGROUND COAL MINING AND RECLAMATION ACTIVITIES, identification signs will be displayed at each point of access from public roads to areas of surface operations and facilities on **permit areas**;

521.242. For the purposes of SURFACE COAL MINING AND RECLAMATION ACTIVITIES, identification signs will be displayed at each point of access to the **permit area** from public roads;

521.243. Show the name, business address, and telephone number of the permittee who conducts coal mining and reclamation operations and the identification number of the permanent program permit authorizing coal mining and reclamation operations; and

521.244. Be retained and maintained until after the release of all bonds for the **permit area**;

521.250. Perimeter Markers.

521.251. For the purposes of UNDERGROUND COAL MINING AND RECLAMATION ACTIVITIES, the

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perimeter of all areas affected by surface operations or facilities before beginning mining activities will be clearly marked; or

521.252. For the purposes of SURFACE COAL MINING AND RECLAMATION ACTIVITIES, the perimeter of a **permit area** will be clearly marked before the beginning of surface mining activities;

521.260. Buffer Zone Markers.

521.261. For the purposes of UNDERGROUND COAL MINING AND RECLAMATION ACTIVITIES, signs will be erected to mark buffer zones as required under R645- 301-731.600 and will be clearly marked to prevent disturbance by surface operations and facilities; or

521.262. For the purposes of SURFACE COAL MINING AND RECLAMATION ACTIVITIES, buffer zones will be marked along their boundaries as required under R645-301- 731.600; and

521.270. Topsoil Markers. Markers will be erected to mark where topsoil or other vegetation-supporting material is physically segregated and stockpiled as required under R645-301-234.

522. Coal Recovery. The permit application will include a description of the measures to be used to maximize the use and conservation of the coal resource. The description will assure that coal mining and reclamation operations are conducted so as to maximize the utilization and conservation of the coal, while utilizing the best technology currently available to maintain environmental integrity, so that reaffecting the land in the future through coal mining and reclamation operations is minimized.

523. Mining Method(s). Each application will include a description of the mining operation proposed to be conducted during the life of the mine within the proposed **permit area**, including, at a minimum, a narrative description of the type and method of coal mining procedures and proposed engineering techniques, anticipated annual and total production of coal, by tonnage and the major equipment to be used for all aspects of those operations.

523.100. SURFACE COAL MINING AND RECLAMATION ACTIVITIES proposed to be conducted within the **permit area** within 500 feet of an underground mine will be described to indicate compliance with R645-301-523.200.

523.200. No SURFACE COAL MINING AND RECLAMATION ACTIVITIES will be conducted closer than 500 feet to any point of either an active or abandoned underground mine, except to the extent that:

523.210. The operations result in improved resource recovery, abatement of water pollution, or elimination of hazards to the health and safety of the public; and

523.220. The nature, timing, and sequence of the activities that propose to mine closer than 500 feet to an active underground mine are jointly approved by the Division and MSHA.

524. Blasting and Explosives. For the purposes of SURFACE COAL MINING AND RECLAMATION ACTIVITIES, each permit application will contain a blasting plan for the proposed **permit area** explaining how the applicant will comply with R645-301-524. This plan will include, at a minimum, information setting forth the limitations the operator will meet with regard to ground vibration and airblast, the bases for those limitations, and the methods to be applied in controlling the adverse effects of blasting operations. Each blasting plan will also contain a description of any system to be used to monitor compliance with the standards of R645-301.524.600 including the type, capability, and sensitivity of any blast-monitoring equipment and proposed procedures and locations of monitoring. Blasting operations conducted within 500 feet of active underground mines require approval of MSHA. Blasts that use more than five pounds of explosive or blasting agent will be conducted according to the schedule required under R645-301-524.400. For the purposes of UNDERGROUND COAL

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MINING AND RECLAMATION ACTIVITIES, R645-301-524.100 through R645-301-524.700 apply to surface blasting activities incident to underground coal mining, including, but not limited to, initial rounds of slopes and shafts.

524.100. Blaster Certification. The steps taken to achieve compliance with the blaster certification program must be described in the permit application.

524.110. After July 28, 1987, all surface blasting operations incident to underground mining in Utah will be conducted under the direction of a certified blaster.

524.120. Certificates of blaster certification will be carried by blasters or will be on file at the **permit area** during blasting operations.

524.130. A blaster and at least one other person will be present at the firing of a blast.

524.140. Persons responsible for blasting operations at a blasting site will be familiar with the blasting plan and site-specific performance standards and give on-the-job training to persons who are not certified and who are assigned to the blasting crew or assist in the use of explosives.

524.200. Unless approved by the Division under R645-301-524.220, the blast design must be described in the permit application. The design requirements are:

524.210. An anticipated blast design will be submitted for all blasts if blasting operations will be conducted within:

524.211. 1,000 feet of any building used as a dwelling, public building, school, church, or community or institutional building outside the **permit area**; or

524.212. 500 feet of an active or abandoned underground mine;

524.220. The blast design may be presented as part of a permit application or at a time, before the blast, if approved by the Division;

524.230. The blast design will contain sketches of the drill patterns, delay periods, and decking and will 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 R645-301-524.600;

524.240. The blast design will be prepared and signed by a certified blaster; and

524.250. The Division may require changes to the design submitted.

524.300. The preblasting survey must be described in the permit application. For the purposes of UNDERGROUND COAL MINING AND RECLAMATION ACTIVITIES preblasting surveys are required for blasts that use more than five pounds of blasting agent or explosives. The requirements are:

524.310. At least 30 days before initiation of blasting, the operator will notify, in writing, all residents or owners of dwellings or other structures located within one-half mile of the **permit area** how to request a preblasting survey;

524.320. A resident or owner of a dwelling or structure within one-half mile of any part of the **permit area** may request a preblasting survey. This request will be made, in writing, directly to the operator or to the Division, who will promptly notify the operator. The operator will promptly conduct a preblasting survey of the

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dwelling or structure and promptly prepare a written report of the survey. An updated survey of any additions, modifications, or renovations will be performed by the operator if requested by the resident or owner;

524.330. The operator will determine the condition of the dwelling or structure and will document any preblasting damage and other physical factors that could reasonably be affected by the blasting. Structures such as pipelines, cables, transmission lines, and cisterns, wells, and other water systems warrant special attention; however, the assessment of these structures may be limited to surface conditions and other readily available data;

524.340. The written report of the survey will be signed by the person who conducted the survey. Copies of the report will be promptly provided to the Division and to the person requesting the survey. If the person requesting the survey disagrees with the contents and/or recommendations contained therein, he or she may submit to both the operator and the Division a detailed description of the specific areas of disagreement; and

524.350. Any surveys requested more than ten days before the planned initiation of blasting will be completed by the operator before the initiation of blasting.

524.400. The schedule of blasts will be described in the permit application:

524.410. Unscheduled blasts may be conducted only where public or operator health and safety so requires and for emergency blasting actions. When an operator conducts an unscheduled surface blast incidental to coal mining and reclamation operations, the operator, using audible signals, will notify residents within one-half mile of the blasting site and document the reason in accordance with R645-301-524.760;

524.420. All blasting will be conducted between sunrise and sunset unless nighttime blasting is approved by the Division based upon a showing by the operator that the public will be protected from adverse noise and other impacts. The Division may specify more restrictive time periods for blasting;

524.430. For the purposes of UNDERGROUND COAL MINING AND RECLAMATION ACTIVITIES, the operator will notify, in writing, residents within one-half mile of the blasting site and local governments of the proposed times and locations of blasting operations. Such notice of times that blasting is to be conducted may be announced weekly, but in no case less than 24 hours before blasting will occur;

524.440. For the purposes of SURFACE COAL MINING AND RECLAMATION ACTIVITIES, the operator will conduct blasting operations at times approved by the Division and announced in the blasting schedule. The Division may limit the area covered, timing, and sequence of blasting as listed in the schedule, if such limitations are necessary and reasonable in order to protect the public health and safety or welfare;

524.450. Blasting Schedule Publication and Distribution. For the purposes of SURFACE COAL MINING AND RECLAMATION ACTIVITIES the operator will:

524.451. Publish the blasting schedule in a newspaper of general circulation in the locality of the blasting site at least ten days, but not more than 30 days, before beginning a blasting program;

524.452. Distribute copies of the schedule to local governments and public utilities and to each local residence within one-half mile of the proposed blasting site described in the schedule; and

524.453. Republish and redistribute the schedule at least every 12 months and revise and republish the schedule at least ten days, but not more than 30 days, before blasting whenever the area covered by the schedule changes or actual time periods for blasting significantly differ from the prior announcement; and

524.460. Blasting Schedule Contents. For the purposes of SURFACE COAL MINING AND RECLAMATION ACTIVITIES the blasting schedule will contain, at a minimum:

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524.461. Name, address, and telephone number of operator;

524.462. Identification of the specific areas in which blasting will take place;

524.463. Dates and time periods when explosives are to be detonated;

524.464. Methods to be used to control access to the blasting area; and

524.465. Type and patterns of audible warning and all-clear signals to be used before and after blasting.

524.500. The blasting signs, warnings, and access control must be described in the permit application.

524.510. Blasting Signs. Blasting signs will meet the specifications of R645- 301-521.200. The operator will:

524.511. Conspicuously place signs reading "Blasting Area" along the edge of any blasting area that comes within 100 feet of any public-road right-of-way, and at the point where any other road provides access to the blasting area; and

524.512. At all entrances to the **permit area** from public roads or highways, place conspicuous signs which state "Warning! Explosives in Use", which clearly list and describe the meaning of the audible blast warning and all-clear signals that are in use, and which explain the marking of blasting areas and charged holes awaiting firing within the **permit area**.

524.520. Warnings. Warning and all-clear signals of different character or pattern that are audible within a range of one-half mile from the point of the blast will be given. Each person within the **permit area** and each person who resides or regularly works within one-half mile of the **permit area** will be notified of the meaning of the signals in the blasting schedule for the purposes of SURFACE COAL MINING AND RECLAMATION ACTIVITIES and blasting notification required by R645-301-524.430 for the purposes of UNDERGROUND COAL MINING AND RECLAMATION ACTIVITIES.

524.530. Access Control. Access within the blasting areas will be controlled to prevent presence of livestock or unauthorized persons during blasting and until an authorized representative of the operator has reasonably determined that:

524.531. No unusual hazards, such as imminent slides or undetonated charges, exist; and

524.532. Access to and travel within the blasting area can be safely resumed.

524.600. The control of adverse blasting effects must be described in the permit application. The requirements are:

524.610. General Requirements. Blasting will be conducted to prevent injury to persons, damage to public or private property outside the **permit area**, adverse impacts on any underground mine, and change in the course, channel, or availability of surface or ground water outside the **permit area**.

524.620. Airblast Limits.

524.621. Airblast will not exceed the maximum limits listed below at the location of any dwelling, public building, school, church, or community or institutional building outside the **permit area**, except as provided in R645- 301-524.690.

TABLE

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Lower Frequency Limit of Measuring System, HZ(+3dB)	Maximum Level dB
0.1 Hz or lower--flat response(1)	134 peak
2 Hz or lower--flat response	133 peak
6 Hz or lower--flat response	129 peak
C-weighted--slow response(1)	105 peak dBC

(1)Only when approved by the Division.

524.622. If necessary to prevent damage, the Division may specify lower maximum allowable airblast levels than those of R645-301-524.621 for use in the vicinity of a specific blasting operation.

524.630. Monitoring.

524.631. The operator will conduct periodic monitoring to ensure compliance with the airblast standards. The Division may require airblast measurement of any or all blasts and may specify the locations at which such measurements are taken.

524.632. The measuring systems used will have an upper-end flat-frequency response of at least 200 Hz.

524.633. Flyrock. Flyrock traveling in the air or along the ground will not be cast from the blasting site--more than one-half the distance to the nearest dwelling or other occupied structure; beyond the area of control required under R645-301-524.530; or beyond the permit boundary.

524.640. Ground Vibration.

524.641. General. In all blasting operations, except as otherwise authorized in R645-301-524.690, the maximum ground vibration will not exceed the values approved by the Division. The maximum ground vibration for protected structures listed in R645-301-524.642 will be established in accordance with either the maximum peak-particle-velocity limits of R645-301-524.642 and R645- 301-524.643, the scaled-distance equation of R645-301-524.650, the blasting- level chart of R645-301-524.660, or by the Division under R645-301-524.670. All structures in the vicinity of the blasting area, not listed in R645-301- 524.642, such as water towers, pipelines and other utilities, tunnels, dams, impoundments, and underground mines will be protected from damage by establishment of a maximum allowable limit on the ground vibration, submitted by the operator and approved by the Division before the initiation of blasting.

524.642. Maximum Peak-Particle Velocity. The maximum ground vibration will not exceed the following limits at the location of any dwelling, public building, school, church, or community or institutional building outside the **permit area**:

TABLE

EXPLOSIVES

Distance (D) from Blast Site in feet	Maximum allowable Particle Velocity (Vmax) for ground vibration, in inches/second(1)	Scaled distance factor to be applied without seismic monitoring(2) (Ds)
0 to 300	1.25	50
301 to 5,000	1.00	55
5,001 and beyond	0.75	65

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(1)Ground vibration will be measured as the particle velocity. Particle velocity will be recorded in three mutually perpendicular directions. The maximum allowable peak particle velocity will apply to each of the three measurements.

(2)Applicable in the scaled-distance equation of R645-301-524.651.

524.643. A seismographic record will be provided for each blast.

524.650. Scaled-distance equation.

524.651. An operator may use the scaled-distance equation, W=(D/Ds) super2 , to determine the allowable charge weight of explosives to be detonated in any eight-millisecond period, without seismic monitoring: where W=the maximum weight of explosives, in pounds: D=the distance, in feet, from the blasting site to the nearest protected structure: and Ds=the scaled-distance factor, which may initially be approved by the Division using the values for scaled- distance factor listed in R645-301-524.642.

524.652. The development of a modified scaled-distance factor may be authorized by the Division on receipt of a written request by the operator, supported by seismographic records of blasting at the mine site. The modified scaled-distance factor will be determined such that the particle velocity of the predicted ground vibration will not exceed the prescribed maximum allowable peak particle velocity of R645-301-524.642, at a 95-percent confidence level.

524.660. Blasting-Level-Chart.

524.661. An operator may use the ground-vibration limits in Figure 1 to determine the maximum allowable ground vibration.

(Figure 1, showing maximum allowable ground particle velocity at specified frequencies, is incorporated by reference. Figure 1 may be viewed at 30 CFR 817.67 or at the Division of Oil, Gas and Mining State Office.)

524.662. If the Figure 1 limits are used, a seismographic record including both particle velocity and vibration-frequency levels will be provided for each blast. The method for the analysis of the predominant frequency contained in the blasting records will be approved by the Division before application of this alternative blasting criterion.

524.670. The maximum allowable ground vibration will be reduced by the Division beyond the limits otherwise provided R645-301-524.640, if determined necessary to provide damage protection.

524.680. The Division may require an operator to conduct seismic monitoring of any or all blasts and may specify the location at which the measurements are taken and the degree of detail necessary in the measurement.

524.690. The maximum airblast and ground-vibration standards of R645-301- 524.620 through R645-301-524.632 and R645-301-524.640 through R645-301-524.680 will not apply at the following locations: At structures owned by the permittee and not leased to another person; and at structures owned by the permittee and leased to another person, if a written waiver by the lessee is submitted to the Division before blasting.

524.700. Records of Blasting Operations. The permit application will incorporate a description of the blasting records to be maintained at the mine site for at least three years and upon request, make blasting records available for inspection by the Division or the public. Blasting records will contain the following information:

524.710. A record, including:

524.711. Name of the operator conducting the blast;

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524.712. Location, date, and time of the blast; and

524.713. Name, signature, and certification number of the blaster conducting the blast; and

524.720. Identification, direction, and distance, in feet, from the nearest blast hole to the nearest dwelling, public building, school, church, community or institutional building outside the **permit area**, except those described in R645-301-524.690;

524.730. Weather conditions, including those which may cause possible adverse blasting effects;

524.740. A record of the blast, including:

524.741. Type of material blasted;

524.742. Sketches of the blast pattern including number of holes, burden, spacing, decks, and delay pattern;

524.743. Diameter and depth of holes;

524.744. Types of explosives used;

524.745. Total weight of explosives used per hole;

524.746. The maximum weight of explosives detonated in an eight-millisecond period;

524.747. Initiation system;

524.748. Type and length of stemming; and

524.749. Mats or other protections used;

524.750. If required, a record of seismographic and airblast information, which will include:

524.751. Type of instrument, sensitivity, and calibration signal or certification of annual calibration;

524.752. Exact location of instrument and the date, time, and distance from the blast;

524.753. Name of the person and firm taking the reading;

524.754. Name of the person and firm analyzing the seismographic record; and

524.755. The vibration and/or airblast level recorded; and

524.760. The reasons and conditions for each unscheduled blast.

524.800. Each operator will comply with all appropriate Utah and federal laws and regulations in the use of explosives.

525. Subsidence control plan.

525.100. Pre-subsidence survey. Each application for UNDERGROUND COAL MINING AND RECLAMATION ACTIVITIES will include:

525.110. A map of the permit and **adjacent areas** at a scale of 1:12,000, or larger if determined necessary by the

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Division, showing the location and type of structures and renewable resource lands that subsidence may materially damage or for which the value or reasonably foreseeable use may be diminished by subsidence, and showing the location and type of State-appropriated water that could be contaminated, diminished, or interrupted by subsidence.

525.120. A narrative indicating whether subsidence, if it occurred, could cause material damage to or diminish the value or reasonably foreseeable use of such structures or renewable resource lands or could contaminate, diminish, or interrupt State-appropriated water supplies.

525.130. A survey of the condition of all non-commercial buildings or occupied residential dwellings and structures related thereto, that may be materially damaged or for which the reasonably foreseeable use may be diminished by subsidence, within the area encompassed by the applicable angle of draw; as well as a survey of the quantity and quality of all State- appropriated water supplies within the **permit area** and **adjacent area** that could be contaminated, diminished, or interrupted by subsidence. If the applicant cannot make this survey because the owner will not allow access to the site, the applicant will notify the owner, in writing, of the effect that denial of access will have as described in R645-301-525. The applicant must pay for any technical assessment or engineering evaluation used to determine the pre-mining condition or value of such non-commercial buildings or occupied residential dwellings and structures related thereto and the quantity and quality of State-appropriated water supplies. The applicant must provide copies of the survey and any technical assessment or engineering evaluation to the property owner and to the Division.

525.200. Protected areas.

525.210. Unless excepted by R645-301-525.213, UNDERGROUND COAL MINING AND RECLAMATION ACTIVITIES will not be conducted beneath or adjacent to:

525.211. Public buildings and facilities;

525.212. Churches, schools, and hospitals;

525.213. Impoundments with a storage capacity of 20 acre-feet or more or bodies of water with a volume of 20 acre-feet or more, unless the subsidence control plan demonstrates that subsidence will not cause material damage to, or reduce the reasonably foreseeable use of, such features or facilities; and

525.214. If the Division determines that it is necessary in order to minimize the potential for material damage to the features or facilities described above or to any aquifer or body of water that serves as a significant water source for any public water supply system, it may limit the percentage of coal extracted under or adjacent thereto.

525.220. If subsidence causes material damage to any of the features or facilities covered by R645-301-525.210, the Division may suspend mining under or adjacent to such features or facilities until the subsidence control plan is modified to ensure prevention of further material damage to such features or facilities.

525.230. The Division will suspend coal mining and reclamation operations under urbanized areas, cities, towns, and communities, and adjacent to industrial or commercial buildings, major impoundments, or perennial streams, if imminent danger is found to inhabitants of the urbanized areas, cities, towns, or communities.

525.240. Within a schedule approved by the Division, the operator will submit a detailed plan of the underground workings. The detailed plan will include maps and descriptions, as appropriate, of significant features of the underground mine, including the size, configuration, and approximate location of pillars and entries, extraction ratios, measure taken to prevent or minimize subsidence and related damage, areas of full extraction, and other information required by the Division. Upon request of the operator, information submitted with the detailed plan may be held as confidential, in accordance with the requirements of R645-300-124.

525.300. Subsidence control.

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525.310. Measures to prevent or minimize damage.

525.311. The permittee will either adopt measures consistent with known technology that prevent subsidence from causing material damage to the extent technologically and economically feasible, maximize mine stability, and maintain the value and reasonably foreseeable use of surface lands or adopt mining technology that provides for planned subsidence in a predictable and controlled manner.

525.312. If a permittee employs mining technology that provides for planned subsidence in a predictable and controlled manner, the permittee must take necessary and prudent measures, consistent with the mining method employed, to minimize material damage to the extent technologically and economically feasible to non-commercial buildings and occupied residential dwellings and structures related thereto except that measures required to minimize material damage to such structures are not required if:

525.312.1. The permittee has the written consent of their owners or

525.312.2. Unless the anticipated damage would constitute a threat to health or safety, the costs of such measures exceed the anticipated costs of repair.

525.313. Nothing in this part prohibits the standard method of room-and- pillar mining.

525.400. Subsidence control plan contents. If the survey conducted under R645-301-525.100 shows that no structures, or State-appropriated water supplies, or renewable resource lands exist, or that no material damage or diminution in value or reasonably foreseeable use of such structures or lands, and no contamination, diminution, or interruption of such water supplies would occur as a result of mine subsidence, and if the Division agrees with this conclusion, no further information need be provided under this section. If the survey shows that structures, renewable resource lands, or water supplies exist and that subsidence could cause material damage or diminution in value or reasonably foreseeable use, or contamination, diminution, or interruption of state-appropriated water supplies, or if the Division determines that damage, diminution in value or foreseeable use, or contamination, diminution, or interruption could occur, the application must include a subsidence control plan that contains the following information:

525.410. A description of the method of coal removal, such as longwall mining, room-and-pillar removal or hydraulic mining, including the size, sequence and timing of the development of underground workings;

525.420. A map of the underground workings that describes the location and extent of the areas in which planned-subsidence mining methods will be used and that identifies all areas where the measures described in 525.440, 525.450, and 525.470 will be taken to prevent or minimize subsidence and subsidence-related damage; and, when applicable, to correct subsidence-related material damage;

525.430. A description of the physical conditions, such as depth of cover, seam thickness and lithology of overlaying strata, that affect the likelihood or extent of subsidence and subsidence-related damage;

525.440. A description of the monitoring, if any, needed to determine the commencement and degree of subsidence so that, when appropriate, other measures can be taken to prevent, reduce or correct material damage in accordance with R645-301-525.500;

525.450. Except for those areas where planned subsidence is projected to be used, a detailed description of the subsidence control measures that will be taken to prevent or minimize subsidence and subsidence-related damage, such as, but not limited to:

525.451. Backstowing or backfilling of voids;

525.452. Leaving support pillars of coal;

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525.453. Leaving areas in which no coal is removed, including a description of the overlying area to be protected by leaving coal in place; and

525.454. Taking measures on the surface to prevent or minimize material damage or diminution in value of the surface;

525.460. A description of the anticipated effects of planned subsidence, if any;

525.470. For those areas where planned subsidence is projected to be used, a description of methods to be employed to minimize damage from planned subsidence to non-commercial buildings and occupied residential dwellings and structures related thereto; or the written consent of the owner of the structure or facility that minimization measures not be taken; or, unless the anticipated damage would constitute a threat to health or safety, a demonstration that the costs of minimizing damage exceed the anticipated costs of repair;

525.480. A description of the measures to be taken in accordance with R645- 301-731.530 and R645-301-525.500 to replace adversely affected State- appropriated water supplies or to mitigate or remedy any subsidence-related material damage to the land and protected structures; and

525.490. Other information specified by the Division as necessary to demonstrate that the operation will be conducted in accordance with R645-301- 525.300.

525.500. Repair of damage.

525.510. Repair of damage to surface lands. The permittee must correct any material damage resulting from subsidence caused to surface lands, to the extent technologically and economically feasible, by restoring the land to a condition capable of maintaining the value and reasonably foreseeable uses that it was capable of supporting before subsidence damage.

525.520. Repair or compensation for damage to non-commercial buildings and dwellings and related structures. The permittee must promptly repair, or compensate the owner for, material damage resulting from subsidence caused to any non-commercial building or occupied residential dwelling or structure related thereto that existed at the time of mining. If repair option is selected, the permittee must fully rehabilitate, restore or replace the damaged structure. If compensation is selected, the permittee must compensate the owner of the damaged structure for the full amount of the decrease in value resulting from the subsidence-related damage. The permittee may provide compensation by the purchase, before mining, of a non-cancelable premium- prepaid insurance policy. The requirements of this paragraph apply only to subsidence-related damage caused by underground coal mining and reclamation activities conducted after October 24, 1992.

525.530. Repair or compensation for damage to other structures. The permittee shall either correct material damage resulting from subsidence caused to any structures or facilities not protected by paragraph 525.520 by repairing the damage or compensate the owner of the structures or facilities for the full amount of the decrease in value resulting from the subsidence. Repair of damage includes rehabilitation, restoration, or replacement of damaged structures or facilities. Compensation may be accomplished by the purchase before mining of a non-cancelable premium-prepaid insurance policy.

525.540. Rebuttable presumption of causation by subsidence.

525.541. Rebuttable presumption of causation for damage within angle of draw. If damage to any non-commercial building or occupied residential dwelling or structure related thereto occurs as a result of earth movement within an area determined by projecting an angle of draw equal to that used for that particular mine's compliance with R645-301 from the outermost boundary of any underground mine workings to the surface of the land, a rebuttable presumption exists that the permittee caused the damage. This presumption will normally apply to a 30 degree angle of draw from the vertical, however, the Division may amend the applicable angle of draw for a particular mine

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through the process described in R645-301-525.542.

525.542. Approval of site-specific angle of draw. A permittee or permit applicant may request that the presumption apply to an angle of draw different than 30 degrees. To establish a site-specific angle of draw, an applicant must demonstrate and the Division must determine in writing that the proposed angle of draw has a more reasonable basis than 30 degrees and is based on a site- specific geotechnical analysis of the potential surface impacts of the mining operation.

525.543. No presumption where access for pre-subsidence survey is denied. If the permittee was denied access to the land or property for the purpose of conducting the pre-subsidence survey in accordance with R645-301-525.130 no rebuttable presumption will exist.

525.544. Rebuttal of presumption. The presumption will be rebutted if, for example, the evidence establishes that: The damage predated the mining in question; the damage was proximately caused by some other factor or factors and was not proximately caused by subsidence; or the damage occurred outside the surface area within which subsidence was actually caused by the mining in question.

525.545. Information to be considered in determination of causation. In any determination whether damage to protected structures was caused by subsidence from underground mining, all relevant and reasonably available information will be considered by the Division.

525.550. Adjustment of bond amount for subsidence damage. When subsidence- related material damage to land, structures or facilities protected under R645-301-525.500 through R645-301-525.530 occurs, or when contamination, diminution, or interruption to a water supply protected under Sec. R645-301- 731.530 occurs, the Division must require the permittee to obtain additional performance bond in the amount of the estimated cost of the repairs if the permittee will be repairing, or in the amount of the decrease in value if the permittee will be compensating the owner, or in the amount of the estimated cost to replace the State-appropriated water supply if the permittee will be replacing the water supply, until the repair, compensation, or replacement is completed. If repair, compensation, or replacement is completed within 90 days of the occurrence of damage, no additional bond is required. The Division may extend the 90-day time frame, but not to exceed one year, if the permittee demonstrates and the Division finds in writing that subsidence is not complete, that not all probable subsidence-related material damage has occurred to lands or protected structures, or that not all reasonably anticipated changes have occurred affecting the State-appropriated water supply, and that therefore it would be unreasonable to complete within 90 days the repair of the subsidence-related material damage to lands or protected structures, or the replacement of State-appropriated water supply.

525.600. Compliance. The operator will comply with all provisions of the approved subsidence control plan.

525.700. Public Notice of Proposed Mining. At least six months prior to mining, or within that period if approved by the Division, the underground mine operator will mail a notification to all owners and occupants of surface property and structures above the underground workings. The notification will include, at a minimum, identification of specific areas in which mining will take place, dates that specific areas will be undermined, and the location or locations where the operator's subsidence control plan may be examined.

526. Mine Facilities. The permit application will include a narrative explaining the construction, modification, use, maintenance and removal of the following facilities (unless retention of such facility is necessary for the postmining land use as specified under R645-301-413.100 through R645-301- 413.334, R645-302-270, R645-302-271.100 through R645-302-271.400, R645-302- 271.600, R645-302-271.800, and R645-302-271.900:

526.100. Mine Structures and Facilities.

526.110. Existing Structures. A description of each existing structure proposed to be used in connection with or to facilitate the coal mining and reclamation operation. The description will include:

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526.111. Location;

526.112. Plans or photographs of the structure which describe or show its current condition;

526.113. Approximate dates on which construction of the existing structure was begun and completed;

526.114. A showing, including relevant monitoring data or other evidence, how the structure meets the requirements of R645-301;

526.115. A compliance plan for each existing structure proposed to be modified or reconstructed for use in connection with or to facilitate coal mining and reclamation operations. The compliance plan will include:

526.115.1. Design specifications for the modification or reconstruction of the structure to meet the design standards of R645-301;

526.115.2. A construction schedule which shows dates for beginning and completing interim steps and final reconstruction;

526.115.3. A schedule for monitoring the structure during and after modification or reconstruction to ensure that the requirements of R645-301 are met; and

526.115.4. A showing that the risk of harm to the environment or to public health or safety is not significant during the period of modification or reconstruction; and

526.116. The measures to be used to ensure that the interests of the public and landowners affected are protected if the applicant seeks to have the Division approve:

526.116.1. Conducting the proposed coal mining and reclamation operations within 100 feet of the right-of-way line of any public road, except where mine access or haul roads join that right-of-way; or

526.116.2. Relocating a public road;

526.200. Utility Installation and Support Facilities.

526.210. The utility installations description must state that all coal mining and reclamation operations will 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 owner of those facilities and the Division.

526.220. The support facilities description must state that support facilities will be operated in accordance with a permit issued for the mine or coal preparation plant to which it is incident or from which its operation results. Plans and drawings for each support facility to be constructed, used, or maintained within the proposed **permit area** will include a map, appropriate cross sections, design drawings, and specifications sufficient to demonstrate how each facility will comply with applicable performance standards. In addition to the other provisions of R645-301, support facilities will be located, maintained, and used in a manner that:

526.221. Prevents or controls erosion and siltation, water pollution, and damage to public or private property; and

526.222. To the extent possible using the best technology currently available--minimizes damage to fish, wildlife, and related environmental values; and minimizes additional contributions of suspended solids to streamflow or runoff outside the **permit area**. Any such contributions will not be in excess of limitations of Utah or Federal law;

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526.300. Water pollution control facilities; and

526.400. For SURFACE COAL MINING AND RECLAMATION ACTIVITIES, air pollution control facilities.

527. Transportation Facilities.

527.100. The plan must classify each road.

527.110. Each road will be classified as either a primary road or an ancillary road.

527.120. A primary road is any road which is:

527.121. Used for transporting coal or spoil;

527.122. Frequently used for access or other purposes for a period in excess of six months; or

527.123. To be retained for an approved postmining land use.

527.130. An ancillary road is any road not classified as a primary road.

527.200. The plan must include a detailed description of each road, conveyor, and rail system to be constructed, used, or maintained within the proposed **permit area**. The description will include a map, appropriate cross sections, and the following:

527.210. Specifications for each road width, road gradient, road surface, road cut, fill embankment, culvert, bridge, drainage ditch, and drainage structure;

527.220. Measures to be taken to obtain Division approval for alteration or relocation of a natural drainageway under R645-301-358, R645-301-512.250, R645-301-527.100, R645-301-527.230, R645-301-527.240, R645-301-534.100, R645- 301-534.300, R645-301-542.600, R645-301-742.410, R645-301-742.420, and R645- 301-752.200;

527.230. A maintenance plan describing how roads will be maintained throughout their life to meet the design standards throughout their use.

527.240. A commitment that if a road is damaged by a catastrophic event, such as a flood or earthquake, the road will be repaired as soon as practical after the damage has occurred.

527.250. A report of appropriate geotechnical analysis, where approval of the Division is required for alternative specifications, or for steep cut slopes.

528. Handling and Disposal of Coal, Overburden, Excess Spoil, and Coal Mine Waste. The permit application will include a narrative explaining the construction, modification, use, maintenance, and removal of the following facilities (unless retention of such facility is necessary for the postmining land use as specified under R645-301-413.100 through R645-301-413.334, R645- 302-270, R645-302-271.100 through R645-302-271.400, R645-302-271.600, R645- 302-271.800, and R645-302-271.900):

528.100. Coal removal, handling, storage, cleaning, and transportation areas and structures;

528.200. Overburden;

528.300. Spoil, coal processing waste, mine development waste, and noncoal waste removal, handling, storage, transportation, and disposal areas and structures;

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528.310. Excess Spoil. Excess spoil will be placed in designated disposal areas within the **permit area**, in a controlled manner to ensure mass stability and prevent mass movement during and after construction. Excess spoil will meet the design criteria of R645-301-535. For the purposes of SURFACE COAL MINING AND RECLAMATION ACTIVITIES, the permit application must include a description of the proposed disposal site and the design of the spoil disposal structures according to R645-301-211, R645-301-212, R645-301-412.300, R645-301-512.210, R645-301-512.220, R645-301-514.100, R645-301-528.310, R645-301- 535.100 through R645-301-535.130, R645-301-535.300 through R645-301-535.500, R645-536.300, R645-301-542.720, R645-301-553.240, R645-301-745.100, R645-301- 745.300, and R645-301-745.400.

528.320. Coal Mine Waste. All coal mine waste will be placed in new or existing disposal areas within a **permit area** which are approved by the Division for this purpose. Coal mine waste will meet the design criteria of R645-301-536, however, placement of coal mine waste by end or side dumping is prohibited.

528.321. Return of Coal Processing Waste to Abandoned Underground Workings. For the purposes of UNDERGROUND COAL MINING AND RECLAMATION ACTIVITIES, each plan will 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 Division and MSHA under R645-301-536.520 and meet the design criteria of R645-301-536.700.

528.322. Refuse Piles. Each pile will meet the requirements of MSHA, 30 CFR 77.214 and 30 CFR 77.215, meet the design criteria of R645-301-210, R645-301-512.230, R645-301-513.400, R645-301-514.200, R645-301-515.200, R645- 301-528.320, R645-301-536 through R645-301-536.200, R645-301-536.500, R645- 301-536.900, R645-301-542.730, R645-301-553.250, R645-301-746.100, R645-301- 746.200, and any other applicable requirements.

528.323. Burning and Burned Waste Utilization.

528.323.1. Coal mine waste fires will be extinguished by the person who conducts coal mining and reclamation operations, in accordance with a plan approved by the Division and MSHA. The plan will 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, will be involved in the extinguishing operations.

528.323.2. No burning or burned coal mine waste will be removed from a permitted disposal area without a removal plan approved by the Division. Consideration will be given to potential hazards to persons working or living in the vicinity of the structure.

528.330. Noncoal Mine Waste.

528.331. 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 will be placed and stored in a controlled manner in a designated portion of the **permit area**.

528.332. Final disposal of noncoal mine wastes will be in a designated disposal site in the **permit area** or a State-approved solid waste disposal area. Disposal sites in the **permit area** will be designed and constructed to ensure that leachate and drainage from the noncoal mine waste area does not degrade surface or underground water. Wastes will be routinely compacted and covered to prevent combustion and wind-borne waste. When the disposal is completed, a minimum of two feet of soil cover will be placed over the site, slopes, stabilized, and revegetation accomplished in accordance with R645-301- 244.200 and R645-301-353 through R645-301-357. Operation of the disposal site will be conducted in accordance with all local, Utah, and Federal requirements.

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

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528.334. Notwithstanding any other provision to the R645 Rules, any noncoal mine waste defined as "hazardous" under 3001 of the Resource Conservation and Recovery Act (RCRA) (Pub. L. 94-580, as amended) and 40 CFR Part 261 will be handled in accordance with the requirements of Subtitle C of RCRA and any implementing regulations.

528.340. Underground Development Waste. For the purposes of UNDERGROUND COAL MINING AND RECLAMATION ACTIVITIES the permit application must include a description of the proposed disposal methods for placing underground development waste and excess spoil generated at surface areas affected by surface operations and facilities according to R645-301-211, R645-301-212, R645-301-412.300, R645-301-512.210, R645-301-512.220, R645-301-514.100, R645- 301-528.310, R645-301-535.100 through R645-301-535.130, R645-301-535.300 through R645-301-535.500, R645-536.300, R645-301-536.600, R645-301-542.720, R645-301-553.240, R645-301-745.100, R645-301-745.300, and R645-301-745.400.

528.350. The permit application will include a description of measures to be employed to ensure that all debris, acid-forming and toxic-forming materials, and materials constituting a fire hazard are disposed of in accordance with R645-301-528.330, R645-301-537.200, R645-301-542.740, R645-301-553.100 through R645-301-553.600, R645-301-553.900, and R645-301-747 and a description of the contingency plans which have been developed to preclude sustained combustion of such materials; and

528.400. Dams, embankments and other impoundments.

529. Management of Mine Openings. The permit application will include a description of the measures to be used to seal or manage mine openings within the proposed **permit area**.

529.100. Each shaft or other exposed underground opening will be cased, lined, or otherwise managed as approved by the Division. If these openings are uncovered or exposed by coal mining and reclamation operations within the **permit area** they will be permanently closed unless approved for water monitoring or otherwise managed in a manner approved by the Division.

529.200. For the purposes of UNDERGROUND COAL MINING AND RECLAMATION ACTIVITIES:

529.210. Each mine entry which is temporarily inactive, but has a further projected useful service under the approved permit application, will be protected by barricades or other covering devices, fenced, and posted with signs, to prevent access into the entry and to identify the hazardous nature of the opening. These devices will be periodically inspected and maintained in good operating condition by the person who conducts the activity.

529.220. Each shaft and underground opening which has been identified in the approved permit application for use to return underground development waste, coal processing waste or water to underground workings will be temporarily sealed until actual use.

529.300. R645-301-529 does not apply to holes drilled and used for blasting, in the area affected by surface operations.

529.400. For the purposes of SURFACE COAL MINING AND RECLAMATION ACTIVITIES, each exposed underground opening which has been identified in the approved permit application for use to return coal processing waste to underground workings will be temporarily sealed before use and protected during use by barricades, fences, or other protective devices approved by the Division. These devices will be periodically inspected and maintained in good operating condition by the person who conducts the activity.

530. Operational Design Criteria and Plans.

531. General. Each permit application will include a general plan and detailed design plans for each proposed siltation structure, water impoundment, and coal processing waste bank, dam or embankment within the proposed **permit area**. Each general plan will describe the potential effect on the structure from subsidence of the subsurface

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strata resulting from past underground mining operations, if underground mining has occurred.

532. Sediment Control. The permit application will describe designs for sediment control. Sediment control measures include practices carried out within and adjacent to the **disturbed area**. The sedimentation storage capacity of practices in and downstream from the **disturbed areas** will reflect the degree to which successful mining and reclamation techniques are applied to reduce erosion and control sediment. Sediment control measures consist of the utilization of proper mining and sediment control practices, singly or in combination. Sediment control methods include but are not limited to:

532.100. Disturbing the smallest practicable area at any one time during the mining operation through progressive backfilling, grading, and prompt revegetation as required in R645-301-353.200; and

532.200. Stabilizing the backfilled material to promote a reduction of the rate and volume of runoff in accordance with the requirements of R645-301- 537.200, R645-301-552 through R645-301-553.230, R645-301-553.260 through R645- 301-553.420, R645-301-553.600, and R645-301-553.900.

533. Impoundments.

533.100. An Impoundment meeting the NRCS Class B or C criteria for dams in TR-60, or the size or other criteria of 30 CFR Sec. 77.216(a) shall have a minimum static safety factor of 1.5 for a normal pool with steady state seepage saturation conditions, and have a seismic safety factor of at least 1.2.

533.110 Impoundments not included in 533.100, except for a coal mine waste impounding structure, shall have a minimum static safety factor of 1.3 for a normal pool with steady state seepage saturation conditions or meet the requirements of R645-301-733.210.

533.200. Foundations. Foundations for temporary and permanent impoundments must be designed so that:

533.210. Foundations and abutments for an impounding structure are stable during all phases of construction and operation and are designed based on adequate and accurate information on the foundation conditions. For an impoundment meeting the NRCS Class B or C criteria for dams in TR-60, or the size or other criteria of 30 CFR Sec. 77.216(a), foundation investigation, as well as any necessary laboratory testing of foundation material, shall be performed to determine the design requirements for foundation stability; and

533.220. All vegetative and organic materials will be removed and foundations excavated and prepared to resist failure. Cutoff trenches will be installed if necessary to ensure stability.

533.300. Slope protection will be provided to protect against surface erosion at the site and protect against sudden drawdown.

533.400. Faces of embankments and surrounding areas will be vegetated except that faces where water is impounded may be riprapped or otherwise stabilized in accordance with accepted design practices.

533.500. The vertical portion of any remaining highwall will 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.

533.600. Impoundments meeting the criteria of MSHA, 30 CFR 77.216(a) will comply with the requirements of MSHA, 30 CFR 77.216 and R645-301-512.240, R645-301-514.300, R645-301-515.200, R645-301-533.100 through R645-301-533.600, R645-301-733.220 through R645-301-733.224, and R645-301-743. The plan required to be submitted to the District Manager of MSHA under 30 CFR 77.216 will also be submitted to the Division as part of the permit application.

533.610. Impoundments meeting the Class B or C criteria for dams in the U.S. Department of Agriculture, Natural

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Resources Conservation Service Technical Release No. 60 (210-VI-TR60, Oct. 1985), "Earth Dams and Reservoirs," Technical Release No. 60 (TR-60) shall comply with the requirements of this section for structures that meet or exceed the size or other criteria of the Mine Safety and Health Administration (MSHA). The document entitled "Earth Dams and Reservoirs", published in October, 1985, is hereby incorporated by reference. Copies may be obtained from the National Technical Information Service (NTIS), 5285 Port Royal Road, Springfield, Virginia 22161, order No. PB 87-157509/AS. Copies may be inspected at the Division of Oil Gas and Mining Offices, 1594 West North Temple, Salt Lake City, Utah 84114 or at the Division of Administrative Rules, Archives Building, Capitol Hill Complex, Salt Lake City , Utah 84114-1021. Each detailed design plan for a structure that meets or exceeds the size or other criteria of MSHA, 30 CFR Sec. 77.216(a), shall:

533.611 Be prepared by, or under the direction of, and certified by a qualified registered professional engineer with assistance from experts in related fields such as geology, land surveying, and landscape architecture;

533.612 Include any geotechnical investigation, design, and construction requirements for the structure;

533.613 Describe the operation and maintenance requirements for each structure; and

533.614 Describe the timetable and plans to remove each structure, if appropriate.

533.620. If the structure meets the Class B or C criteria for dams in TR-60 or meets the size or other criteria of 30 CFR Sec. 77.216(a), each plan under R645-301-742.200, 733.200, or 536.820 shall include a stability analysis of the structure. The stability analysis shall at a minimum include strength parameters, pore pressures, and long-term seepage conditions. The plan shall also contain a description of each engineering design assumption and calculation with a discussion of each alternative considered in selecting the specific design parameters and construction methods.

533.700. Plans.

533.710 Each detailed design plan for structures not included in 533.610 shall:

533.711 Be prepared by, or under the direction of, and certified by a qualified, registered, professional engineer, except that all coal processing waste dams and embankments covered by R645-301-536 and R645-301-746.200 shall be certified by a qualified, registered, professional engineer;

533.712 Include any design and construction requirements for the structure, including any required geotechnical information;

533.713 Describe the operation and maintenance requirements for each structure; and

533.714 Describe the timetable and plans to remove each structure, if appropriate.

534. Roads. The permit application will describe designs for roads.

534.100. Roads will be located, designed, constructed, reconstructed, used, maintained, and reclaimed so as to:

534.110. Prevent or control damage to public or private property;

534.120. Use nonacid-or nontoxic-forming substances in road surfacing; and

534.130. Have, at a minimum, a static safety factor of 1.3 for all embankments.

534.140. Have a schedule and plan to remove and reclaim each road that would not be retained under an approved postmining land use.

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534.150. Control or prevent erosion, siltation and the air pollution attendant to erosion by vegetating or otherwise stabilizing all exposed surfaces in accordance with current, prudent engineering practices.

534.200. To ensure environmental protection and safety appropriate for their planned duration and use, including consideration of the type and size of equipment used, the design and reconstruction of roads will incorporate appropriate limits for grade, width, surface materials, and any necessary design criteria established by the Division.

534.300. Primary Roads. Primary roads will meet the requirements of R645-301- 358, R645-301-527.100, R645-301-527.230, R645-301-534.100, R645-301-534.200, R645-301-542.600, R645-301-542.600, and R645-301-762, any necessary design criteria established by the Division, and the following requirements. Primary roads will:

534.310. Be located, insofar as practical, on the most stable available surfaces;

534.320. Be surfaced with rock, crushed gravel, asphalt, or other material approved by the Division as being sufficiently durable for the anticipated volume of traffic and the weight and speed of vehicles using the road;

534.330. Be routinely maintained to include repairs to the road surface, blading, filling potholes and adding replacement gravel or asphalt. It will also include revegetation, brush removal, and minor reconstruction of road segments as necessary; and

534.340. Have culverts that are designed, installed, and maintained to sustain the vertical soil pressure, the passive resistance of the foundation, and the weight of vehicles using the road.

535. Spoil. The permit application will describe designs for spoil placement and disposal.

535.100. Disposal of Excess Spoil. Excess spoil will be placed in designated disposal areas within the **permit area** in a controlled manner. The fill and appurtenant structures will be designed using current, prudent engineering practices and will meet any design criteria established by the Division.

535.110. The fill will be designed to attain a minimum long-term static safety factor of 1.5. The foundation and abutments of the fill must be stable under all conditions of construction. The fill will:

535.111. Be located on the most moderately sloping and naturally stable areas available, as approved by the Division, and be placed, where possible, upon or above a natural terrace, bench, or berm, if such placement provides additional stability and prevents mass movement;

535.112. Be the subject of sufficient foundation investigations. Any necessary laboratory testing of foundation material, will be performed in order to determine the design requirements for foundation stability. The analyses of foundation conditions will take into consideration the effect of underground mine workings, if any, upon the stability of the fill and appurtenant structures; and

535.113. Incorporate keyway cuts (excavations to stable bedrock) or rock toe buttresses to ensure stability where the slope in the disposal area is in excess of 2.8h:1v (36 percent), or such lesser slope as may be designated by the Division based on local conditions. Where the toe of the spoil rests on a downslope, stability analyses will be performed in accordance with R645-301- 535.150 to determine the size of rock toe buttresses and keyway cuts.

535.120. Excess spoil may be disposed of in underground mine workings, but only in accordance with a plan approved by the Division and MSHA under R645- 301-232.100 through R645-301-232.600, R645-301-234, R645-301-242, and R645- 301-243.

535.130. Placement of Excess Spoil. Excess spoil will be transported and placed in a controlled manner in horizontal lifts not exceeding four feet in thickness; concurrently compacted as necessary to ensure mass stability and to prevent mass movement during and after construction; graded so that surface and subsurface drainage is

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compatible with the natural surroundings: and covered with topsoil or substitute material in accordance with R645-301- 232.100 through R645-301-232.600, R645-301-234, R645-301-242, and R645-301- 243. The Division may approve a design which incorporates placement of excess spoil in horizontal lifts other than four feet in thickness when it is demonstrated by the operator and certified by a qualified registered professional engineer that the design will ensure the stability of the fill and will meet all other applicable requirements.

535.140. For the purposes of SURFACE COAL MINING AND RECLAMATION ACTIVITIES the design of the spoil disposal structure will include the results of geotechnical investigations as follows:

535.141. The character of bedrock and any adverse geologic conditions in the disposal area;

535.142. A survey identifying all springs, seepage, and ground water flow observed or anticipated during wet periods in the area of the disposal site;

535.143. A survey of the potential effects of subsidence of the subsurface strata due to past and future mining operations;

535.144. A technical description of the rock materials to be utilized in the construction of those disposal structures containing rock chimney cores or underlain by a rock drainage blanket; and

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

535.150. If for the purposes of SURFACE COAL MINING AND RECLAMATION ACTIVITIES, under R645-301-535.112 and R645-301-535.113, rock-toe buttresses or key-way cuts are required, the application will include the following:

535.151. The number, location, and depth of borings or test pits which will be determined with respect to the size of the spoil disposal structure and subsurface conditions; and

535.152. Engineering specifications utilized to design the rock-toe buttress or key-way cuts which will be determined in accordance with R645-301-535.145.

535.200. Disposal of Excess Spoil: Valley Fills/Head-of-Hollow Fills. Valley fills and head-of-hollow fills will meet the requirements of R645-301-211, R645-301-212, R645-301-412.300, R645-301-512.210, R645-301-514.100, R645-301- 528.310, R645-301-535.100 through R645-301-535.130, R645-301-535.500, R645- 301-536.300, R645-301-542.720, R645-301-553.240, and R645-301-745.100, and these additional requirements.

535.210. Rock-core chimney drains may be used in a head-of-hollow fill, instead of the underdrain and surface diversion system normally required, as long as the fill is not located in an area containing intermittent or perennial streams. A rock-core chimney drain may be used in a valley fill if the fill does not exceed 250,000 cubic yards of material and upstream drainage is diverted around the fill.

535.220. The alternative rock-core chimney drain system will be incorporated into the design and construction of the fill as follows:

535.221. The fill will have along the vertical projection of the main buried channel or rill a vertical core of durable rock at least 16 feet thick which will extend from the toe of the fill to the head of the fill, and from the base of the fill to the surface of the fill. A system of lateral rock underdrains will connect this rock core to each area of potential drainage or seepage in the disposal area. The underdrain system and rock core will be designed to carry the anticipated seepage of water due to rainfall away from the excess spoil fill and from seeps and springs in the foundation of the disposal area. Rocks used in the rock core and underdrains will meet the requirements of R645-

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301-211, R645-301-212, R645-301-412.300, R645-301- 512.210, R645-301-512.220, R645-301-514.100, R645-301-528.310, R645-301- 535.100 through R645-301-535.130, R645-301-535.300 through R645-301-535.500, R645-301-536.300, R645-301-542.720, R645-301-553.240, R645-301-745.100, R645- 301-745.300, and R645-301-745.400;

535.222. A filter system to ensure the proper long-term functioning of the rock core will be designed and constructed using current, prudent engineering practices; and

535.223. Grading may drain surface water away from the outslope of the fill and toward the rock core. In no case, however, may intermittent or perennial streams be diverted into the rock core. The maximum slope of the top of the fill will be 33h:1v (three percent). A drainage pocket may be maintained at the head of the fill during and after construction, to intercept surface runoff and discharge the runoff through or over the rock drain, if stability of the fill is not impaired. In no case will this pocket or sump have a potential capacity for impounding more than 10,000 cubic feet of water. Terraces on the fill will be graded with a three to five percent grade toward the fill and a one percent slope toward the rock core.

535.300. Disposal of Excess Spoil: Durable Rock Fills. The Division may approve the alternative method of disposal of excess durable rock spoil by gravity placement in single or multiple lifts, provided that:

535.310. Except as provided under R645-301-211, R645-301-212, R645-301- 412.300, R645-301-512.210, R645-301-512.220, R645-301-514.100, R645-301- 528.310, R645-301-535.100 through R645-301-535.130, R645-301-535.300 through R645-301-535.500, R645-301-536.300, R645-301-542.720, R645-301-553.240, R645- 301-745.100, R645-301-745.300, and R645-301-745.400 are met;

535.320. The excess spoil consists of at least 80 percent, by volume, durable, nonacid-and nontoxic-forming rock (e.g., sandstone or limestone) that does not slake in water and will not degrade to soil material. Where used, noncemented clay shale, clay spoil, soil or other nondurable excess spoil material will be mixed with excess durable rock spoil in a controlled manner such that no more than 20 percent of the fill volume, as determined by tests performed by a registered engineer and approved by the Division, is not durable rock;

535.330. The fill is designed to attain a minimum long-term static safety factor of 1.5, and an earthquake safety factor of 1.1; and

535.340. The underdrain system may be constructed simultaneously with excess spoil placement by the natural segregation of dumped materials, provided the resulting underdrain system is capable of carrying anticipated seepage of water due to rainfall away from the excess spoil fill and from seeps and springs in the foundation of the disposal area and the other requirements for drainage control are met.

535.400. Disposal of Excess Spoil: Preexisting Benches. Disposal of excess spoil on preexisting benches may be approved by the Division provided that R645-301-211, R645-301-212, R645-301-412.300, R645-301-512.210, R645-301- 514.100, R645-301-535.100, R645-301-535.112 through R645-301-535.130, R645- 301-535.400, R645-301-536.300, R645-301-542.720, R645-301-553.240, R645-301- 745.100, and R645-301-745.400 are met, and the following requirements:

535.410. Excess spoil will be placed only on the solid portion of the preexisting bench;

535.420. The fill will be designed, using current, prudent engineering practices, to attain a long-term static safety factor of 1.3 for all portions of the fill;

535.430. The preexisting bench will be backfilled and graded to: Achieve the most moderate slope possible which does not exceed the angle of repose, and eliminate the highwall to the maximum extent technically practical; and

535.440. Disposal of excess spoil from an upper actively mined bench to a lower preexisting bench by means of

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gravity transport may be approved by the Division provided that:

535.441. The gravity transport courses are determined on a site-specific basis by the operator as part of the permit application and approved by the Division to minimize hazards to health and safety and to ensure that damage will be minimized between the benches, outside the set course, and downslope of the lower bench should excess spoil accidentally move;

535.442. All gravity transported excess spoil, including that excess spoil immediately below the gravity transport courses and any preexisting spoil that is disturbed, is rehandled and placed in horizontal lifts in a controlled manner, concurrently compacted as necessary to ensure mass stability and to prevent mass movement, and graded to allow surface and subsurface drainage to be compatible with the natural surroundings and to ensure a minimum long-term static safety factor of 1.3. Excess spoil on the bench prior to the current mining operation that is not disturbed need not be rehandled except where necessary to ensure stability of the fill;

535.443. A safety berm is constructed on the solid portion of the lower bench prior to gravity transport of the excess spoil. Where there is insufficient material on the lower bench to construct a safety berm, only that amount of excess spoil necessary for the construction of the berm may be gravity transported to the lower bench prior to construction of the berm; and

535.444. Excess spoil will not be allowed on the downslope below the upper bench except on designated gravity transport courses properly prepared according to R645-301-232.100 through R645-301-232.600, R645-301-234, R645- 301-242, and R645-301-243. Upon completion of the fill, no excess spoil will be allowed to remain on the designated gravity transport course between the two benches and each transport course will be reclaimed in accordance with the requirements of R645-301 and R645-302.

535.500. For the purposes of UNDERGROUND COAL MINING AND RECLAMATION ACTIVITIES, spoil resulting from faceup operations for underground coal mine development may be placed at drift entries as part of a cut and fill structure, if the structure is less than 400 feet in horizontal length, and designed in accordance with R645-301-211, R645-301-212, R645-301-412.300, R645-301-512.210, R645-301-512.220, R645-301-514.100, R645-301-528.310, R645- 301-535.100 through R645-301-535.130, R645-301-535.500, R645-301-536.300, R645-301-542.720, R645-301-553.240, R645-301-745.100, R645-301-745.300, and R645-301-745.400.

536. Coal Mine Waste. The permit application will include designs for placement of coal mine waste in new or existing disposal areas within approved portions of the **permit area**. Coal mine waste will be placed in a controlled manner and have a design certification as described under R645-301-512.

536.100. The disposal facility will be designed using current prudent engineering practices and will meet design criteria established by the Division.

536.110. The disposal facility will be designed to attain a minimum long-term static safety factor of 1.5. The foundation and abutments must be stable under all conditions of construction.

536.120. Sufficient foundation investigations, as well as any necessary laboratory testing of foundation material, will be performed in order to determine the design requirements for foundation stability. The analyses of the foundation conditions will take into consideration the effect of underground mine workings, if any, upon the stability of the disposal facility.

536.200. Coal mine waste will be placed in a controlled manner to:

536.210. Ensure mass stability and prevent mass movement during and after construction;

536.220. Not create a public hazard; and

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536.230. Prevent combustion.

536.300. Coal mine waste may be disposed of in excess spoil fills if approved by the Division and, if such waste is:

536.310. Placed in accordance with applicable portions of R645-301-210, R645- 301-513.400, R645-301-514.200, R645-301-528.322, R645-301-536.900, R645-301- 553.250, and R645-301-746.200;

536.320. Nontoxic and nonacid forming; and

536.330. Of the proper characteristics to be consistent with the design stability of the fill.

536.400. New and existing impounding structures constructed of coal mine waste or intended to impound coal mine waste will meet the requirements of R645-301-512.230, R645-301-515.200, R645-301-528.320, R645-301-536 through R645-301-536.200, R645-301-536.500, R645-301-542.730, and R645-301-746.100.

536.410. Coal mine waste will not be used for construction of impounding structures unless it has been demonstrated to the Division that the stability of such a structure conforms to the requirements of R645-301 and R645-302.

536.420. The stability of the structure will be discussed in detail in the design plan submitted to the Division in accordance with R645-301-512.100, R645-301-512.230, R645-301-521.169, R645-301-531, R645-301-533.600, R645-301- 533.700, R645-301-536.800, R645-301-542.500, R645-301-732.210, and R645-301- 733.100.

536.500. Disposal of Coal Mine Waste in Special Areas.

536.510. Coal mine waste materials from activities located outside a **permit area** may be disposed of in the **permit area** only if approved by the Division. Approval will be based upon a showing that such disposal will be in accordance with R645-301-512.230, R645-301-515.200, R645-301-528.320, R645-301-536 through R645-301-536.200, R645-301-536.500, R645-301-542.730, and R645-301- 746.100.

536.520. Underground Disposal. Coal mine waste may be disposed of in underground mine workings, but only in accordance with a plan approved by the Division and MSHA under R645-301-513.300, R645-301-528.321, R645-301-536.700, and R645-301-746.400.

536.600. Underground Development Waste. Each plan will describe the geotechnical investigation, design, construction, operation, maintenance and removal, if appropriate, of the structures and be prepared according to R645- 301-211, R645-301-212,R645-301-412.300, R645-301-512.210, R645-301-512.220, R645-301-514.100, R645-301-528.310, R645-301-535.100,through R645-301-535.130, R645-301-535.300 through R645-301-535.500, R645-301-536.300, R645-301-542.720, R645-301-553.240, R645-301-745.100, R645-301-745.300, and R645-301-745.400.

536.700. Coal Processing Waste. For the purposes of UNDERGROUND COAL MINING AND RECLAMATION ACTIVITIES, each plan for returning coal processing waste to abandoned underground workings will describe the source 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.

536.800. Coal processing waste banks, dams, and embankments will be designed to comply with:

536.810 R645-301-210, R645-301-512.230, R645-301-513.400, R645-301-514.200, R645-301-515.200, R645-301-528.322, R645-301-528.320, R645-301-536 through R645-301-536.200, R645-301-536.400, R645-301-536.500, R645-301-536.900, R645- 301-542.730, R645-301-553.250, and R645-301-746.100 through R645-301-

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746.300.

536.820. Coal processing waste dams and embankments will comply with the requirements of MSHA, 30 CFR 77.216-1 and 30 CFR 77.216-2, and will contain the results of a geotechnical investigation of the proposed dam or embankment foundation area, to determine the structural competence of the foundation which will support the proposed dam or embankment structure and the impounded material. The geotechnical investigation will be planned and supervised by an engineer or engineering geologist, according to the following:

536.821. The number, location, and depth of borings and test pits will be determined using current prudent engineering practice for the size of the dam or embankment, quantity of material to be impounded, and subsurface conditions;

536.822. The character of the overburden and bedrock, the proposed abutment sites, and any adverse geotechnical conditions, which may affect the particular dam, embankment, or reservoir site will be considered;

536.823. All springs, seepage, and ground water flow observed or anticipated during wet periods in the area of the proposed dam or embankment will be identified on each plan; and

536.824. Consideration will be given to the possibility of mudflows, rock- debris falls, or other landslides into the dam, embankment, or impounded material.

536.900. Refuse Piles. Refuse piles will meet the requirements of R645-301- 210, R645-301-512.230, R645-301-513.400, R645-301-514.200, R645-301-515.200, R645-301-528.322, R645-301-528.320, R645-301-536 through R645-301-536.200, R645-301-536.500, R645-301-536.900, R645-301-542.730, R645-301-553.250, R645- 301-746.100 through R645-301-746.200, and the requirements of MSHA, 30 CFR 77.214 and 30 CFR 77.215.

537. Regraded Slopes.

537.100. Each application will contain a report of appropriate geotechnical analysis, where approval of the Division is required for alternative specifications or for steep cut slopes under R645-301-358, R645-301-512.250, R645-301-527.100, R645-301-527.230, R645-301-534.100, R645-301-534.200, R645- 301-534.300, R645-301-542.600, R645-301-742.410, R645-301-742.420, R645-301- 752.200, and R645-301-762.

537.200. For the purposes of UNDERGROUND COAL MINING AND RECLAMATION ACTIVITIES, regrading of settled and revegetated fills to achieve approximate original contour at the conclusion of mining operations will not be required if the following conditions are met.

537.210. Settled and revegetated fills will be composed of spoil or nonacid- or nontoxic-forming underground development waste.

537.220. The spoil or underground development waste will not be located so as to be detrimental to the environment, to the health and safety of the public, or to the approved postmining land use.

537.230. Stability of the spoil or underground development waste will be demonstrated through standard geotechnical analysis to be consistent with backfilling and grading requirements for material on the solid bench (1.3 static safety factor) or excess spoil requirements for material not placed on a solid bench (1.5 static safety factor).

537.240. The surface of the spoil or underground development waste will be vegetated according to R645-301-356 and R645-301-357, and surface runoff will be controlled in accordance with R645-301-742.300.

537.250. If it is determined by the Division that disturbance of the existing spoil or underground development waste would increase environmental harm or adversely affect the health and safety of the public, the Division may allow the existing spoil or underground development waste pile to remain in place. The Division may require

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stabilization of such spoil or underground development waste in accordance with the requirements of R645-301-537.210 through R645-301-537.240.

540. Reclamation Plan.

541. General.

541.100. Persons who cease coal mining and reclamation operations permanently will close or backfill or otherwise permanently reclaim all **affected areas**, in accordance with the R645 Rules and the permit approved by the Division.

541.200. For the purposes of SURFACE COAL MINING AND RECLAMATION ACTIVITIES, all underground openings, equipment, structures, or other facilities not required for monitoring, unless approved by the Division as suitable for the postmining land use or environmental monitoring, will be removed and the affected land reclaimed.

541.300. For the purposes of UNDERGROUND COAL MINING AND RECLAMATION ACTIVITIES, all surface equipment, structures, or other facilities not required for continued underground mining activities and monitoring, unless approved by the Division as suitable for the postmining land use or environmental monitoring will be removed and the affected lands reclaimed.

541.400. Each application will include a plan for the reclamation of the lands within the proposed **permit area** which shows how the applicant will comply with R645-301, and the environmental protection performance standards of the State Program.

542. Narratives, Maps and Plans. The reclamation plan for the proposed **permit area** will include:

542.100. A detailed timetable for the completion of each major step in the reclamation plan;

542.200. A plan for backfilling, soil stabilization, compacting and grading, with contour maps or cross sections that show the anticipated final surface configuration of the proposed **permit area**, in accordance with R645-301-537.200, R645-301-552 through R645-301-553.230, R645-301-553.260 through R645- 301-553.900, and R645-302-234;

542.300. For the purposes of UNDERGROUND COAL MINING AND RECLAMATION ACTIVITIES, final surface configuration maps with cross sections (at intervals specified by the Division) that indicate:

542.310. The anticipated final surface configuration to be achieved for the **affected areas**. The maps and cross sections will be prepared and certified as described under R645-301-512; and

542.320. Location of each facility that will remain on the proposed **permit area** as a permanent feature, after the completion of coal mining and reclamation operations;

542.400. Before abandoning a **permit area** or seeking bond release, a description ensuring all temporary structures are removed and reclaimed, and all permanent sedimentation ponds, impoundments and treatment facilities that meet the requirements of the R645 Rules for permanent structures, have been maintained properly and meet the requirements of the approved reclamation plan for permanent structures and impoundments. The operator will renovate such structures if necessary to meet the requirements of the R645 Rules and to conform to the approved reclamation plan;

542.500. A timetable, and plans to remove each proposed sedimentation pond, water impoundment, and coal processing waste bank, dam, or embankment, if appropriate;

542.600. Roads. A road not to be retained for use under an approved postmining land use will be reclaimed immediately after it is no longer needed for mining and reclamation operations, including:

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542.610. Closing the road to traffic;

542.620. Removing all bridges and culverts; unless approved as part of the postmining land use.

542.630. Scarifying or ripping of the roadbed and replacing topsoil and revegetating disturbed surfaces in accordance with R645-301-232.100 through R645-301-232.600, R645-301-234, R645-301-242, R645-301-243, R645-301-244.200 and R645-301-353 through R645-301-357.

542.640. Removing or otherwise disposing of road-surfacing materials that are incompatible with the postmining land use and revegetation requirements.

542.700. Final Abandonment of Mine Openings and Disposal Areas.

542.710. A description, including appropriate cross sections and maps, of the measures to be used to seal or manage mine openings, and to plug, case or manage other openings within the proposed **permit area**, in accordance with R645-301-529, R645-301-551, R645-301-631, R645-301-738, and R645-301-765.

542.720. Disposal of Excess Spoil. Excess spoil will be placed in designated disposal areas within the **permit area**, in a controlled manner to ensure that the final fill is suitable for reclamation and revegetation compatible with the natural surroundings and the approved postmining land use. Excess spoil that is combustible will be adequately covered with noncombustible material to prevent sustained combustion. The reclamation of excess spoil will comply with the design criteria under R645-301-553.240.

542.730. Disposal of Coal Mine Waste. Coal mine waste will be placed in a controlled manner to ensure that the final disposal facility will be suitable for reclamation and revegetation compatible with the natural surroundings and the approved postmining land use.

542.740. Disposal of Noncoal Mine Wastes.

542.741. 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 will be placed and stored in a controlled manner in a designated portion of the **permit area**. Placement and storage will ensure that fires are prevented, and that the area remains stable and suitable for reclamation and revegetation compatible with the natural surroundings.

542.742. Final disposal of noncoal mine wastes will be in a designated disposal site in the **permit area** or a state-approved solid waste disposal area. Wastes will be routinely compacted and covered to prevent combustion and wind-borne waste. When the disposal is completed, a minimum of two feet of suitable cover will be placed over the site, slopes stabilized, and revegetation accomplished in accordance with R645-301-244.200 and R645-301-353 through R645-301-357, inclusive. Operation of the disposal site will be conducted in accordance with all local, Utah, and federal requirements.

542.800. The reclamation plan for the proposed coal mining and reclamation operations will also include a detailed estimate of reclamation costs as described in R645-301-830.100--R645-301-830.300.

550. Reclamation Design Criteria and Plans. Each permit application will include site specific plans that incorporate the following design criteria for reclamation activities.

551. Casing and Sealing of Underground Openings. When no longer needed for monitoring or other use approved by the Division upon a finding of no adverse environmental or health and safety effects, each shaft, drift, adit, tunnel, or other opening to the surface from underground will be capped, sealed and backfilled, or otherwise properly managed, as required by the Division and consistent with MSHA, 30 CFR 75.1771. Permanent closure measures will be designed to prevent access to the mine workings by people, livestock, fish and wildlife, machinery

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and to keep acid or other toxic drainage from entering ground or surface waters.

552. Permanent Features.

552.100. Small depressions may be constructed if they are needed to retain moisture, minimize erosion, create and enhance wildlife habitat, or assist revegetation.

552.200. Permanent impoundments may be approved if they meet the requirements of R645-301-512.240, R645-301-514.300, R645-301-515.200, R645-301-533.100 through R645-301-533.600, R645-301-542.400, R645-301-733.220 through R645-301- 733.224, R645-301-743, and if they are suitable for the approved postmining land use.

553. Backfilling and Grading. Backfilling and grading design criteria will be described in the permit application. Nothing in R645-301-553 will prohibit the placement of material in road and portal pad embankments located on the downslope, so long as the material used and the embankment design comply with the applicable requirements of R645-301-500 and R645-301-700 and the material is moved and placed in a controlled manner. For the purposes of SURFACE COAL MINING AND RECLAMATION ACTIVITIES rough backfilling and grading will follow coal removal by not more than 60 days or 1500 linear feet. The Division may grant additional time for rough backfilling and grading if the permittee can demonstrate, through a detailed written analysis under R645-301-542.200, that additional time is necessary.

553.100. **Disturbed Areas. Disturbed areas** will be backfilled and graded to:

553.110. Achieve the approximate original contour (AOC), except as provided in R645-301-553.500 through R645-301-553.540 (previously mined areas (PMA's), continuously mined areas (CMA's) and areas subject to the AOC provisions), R645-301-553.600 through R645-301-553.612 (PMA's and CMA's), R645-302-270 (non-mountaintop removal on steep slopes), R645-302-220 (mountaintop removal mining), R645-301-553.700 (thin overburden) and R645-301-553.800 (thick overburden);

553.120. Eliminate all highwalls, spoil piles, and depressions, except as provided in R645-301-552.100 (small depressions); R645-301-553.500 through R645-301-553.540 (PMA's, CMA's and areas subject to approximate original contour (AOC) provisions; R645-301-553.600 through R645-301-553.612 (PMA's and CMA's); and in R645-301-553.650 (highwall management under the (AOC) provisions);

553.130. Achieve a postmining slope that does not exceed either the angle of repose or such lesser slope as is necessary to achieve a minimum long-term static safety factor of 1.3 and prevents slides, except as provided in R645-301-553.530;

553.140. Minimize erosion and water pollution both on and off the site; and

553.150. Support the approved post mining land use.

553.200. Spoil and Waste. Spoil and waste materials will be compacted where advisable to ensure stability or to prevent leaching of toxic materials.

553.210. Spoil, except as provided in R645-301-537.200 (Settled and Revegetated Fills), for the purposes of UNDERGROUND COAL MINING AND RECLAMATION ACTIVITIES, and except where excess spoil is disposed of in accordance with R645-301-211, R645-301-212, R645-301-412.300, R645-301- 512.210, R645-301-512.220, R645-301-514.100, R645-301-528.310, R645-301- 535.100 through R645-301-535.130, R645-301-535.300 through R645-301-535.500, R645-301-536.300, R645-301-542.720, R645-301-553.240, R645-301-745.100, R645- 301-745.300, and R645-301-745.400 will be returned to the mined out surface areas (UNDERGROUND COAL MINING AND RECLAMATION ACTIVITIES) or mined area (SURFACE COAL MINING AND RECLAMATION ACTIVITIES).

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553.220. Spoil may be placed on the area outside the mined-out surface area (UNDERGROUND COAL MINING AND RECLAMATION ACTIVITIES) or in the mined-out area (SURFACE COAL MINING AND RECLAMATION ACTIVITIES) in non-steep slope areas to restore the approximate original contour by blending the spoil into the surrounding terrain if the following requirements are met:

553.221. All vegetative and organic material will be removed from the area;

553.222. The topsoil on the area will be removed, segregated, stored, and redistributed in accordance with R645-301-232.100 through R645-301-232.600, R645-301-234, R645-301-242, and R645-301-243; and

553.223. The spoil will be backfilled and graded on the area in accordance with R645-301-537.200, R645-301-552 through R645-301-553.230, R645-301-553.260 through R645-301-553.420, R645-301-553.600, and R645-301-553.900.

553.230. Preparation of final graded surfaces will be conducted in a manner that minimizes erosion and provides a surface for replacement of topsoil that will minimize slippage.

553.240. The final configuration of the fill (excess spoil) will be suitable for the approved postmining land use. 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 will not be steeper than 2h:1v (50 percent).

553.250. Refuse Piles.

553.251. The final configuration for the refuse pile will be suitable for the approved postmining land use. Terraces may be constructed on the outslope of the refuse pile if required for stability, control of erosion, conservation of soil moisture, or facilitation of the approved postmining land use. The grade of the outslope between terrace benches will not be steeper than 2h:1v (50 percent).

553.252. Following final grading of the refuse pile, the coal mine waste will be covered with a minimum of four feet of the best available, nontoxic and noncombustible material, in a manner that does not impede drainage from the underdrains. The Division may allow less than four feet of cover material based on physical and chemical analyses which show that the requirements of R645-301-244.200 and R645-301-353 through R645-301-357 are met.

553.260. Disposal of coal processing waste and underground development waste in the mined-out surface area (UNDERGROUND COAL MINING AND RECLAMATION ACTIVITIES) or mined-out area (SURFACE COAL MINING AND RECLAMATION ACTIVITIES) will be in accordance with R645-301-210, R645-301-512.230, R645-301-513.400, R645-301-514.200, R645-301-515.200, R645-301-528.322, R645-301-528.320, R645- 301-536 through R645-301-536.200, R645-301-536.500, R645-301-536.900, R645- 301-542.730, R645-301-553.250, and R645-301-746.100 through R645-301-746.200, except that a long-term static safety factor of 1.3 will be achieved.

553.300. Exposed coal seams, acid-and toxic-forming materials, and combustible materials exposed, used, or produced during mining will be adequately covered with nontoxic and noncombustible materials, or treated, to control the impact on surface and ground water in accordance with R645-301- 731.100 through R645-301-731.522 and R645-301-731.800, to prevent sustained combustion, and to minimize adverse effects on plant growth and on the approved postmining land use.

553.400. Cut-and-fill terraces may be allowed by the Division where:

553.410. Needed to conserve soil moisture, ensure stability, and control erosion on final-graded slopes, if the terraces are compatible with the approved postmining land use; or

553.420. Specialized grading, foundation conditions, or roads are required for the approved postmining land use,

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in which case the final grading may include a terrace of adequate width to ensure the safety, stability, and erosion control necessary to implement the postmining land-use plan.

553.500. Previously Mined Areas (PMA's), Continuously Mined Areas (CMA's), and Areas with remaining Highwalls Subject to the Approximate Original Contour (AOC) Provisions.

553.510. Remining operations on PMA's, CMA's, or on areas with remaining highwalls subject to the AOC Provisions will comply with the requirements of R645-301-537.200, R645-301-552 through R645-301-553.230, R645-301-553.260 through R645-301-553.900, and R645-302-234, except as provided in R645-301- 553.500, R645-301-553.600 and R645-301-553.650.

553.520. The backfill of all remaining highwalls will be graded to a slope which is compatible with the approved postmining land use and which provides adequate drainage and long-term stability.

553.530. Any remaining highwall will be stable and not pose a hazard to the public health and safety or to the environment. The operator will demonstrate, to the satisfaction of the Division, that the remaining highwall achieves a minimum long-term static safety factor of 1.3 and prevents slides, or provide an alternative criterion to establish that the remaining highwall is stable and does not pose a hazard to the public health and safety or to the environment; and

553.540. Spoil placed on the outslope during previous mining operations will not be disturbed if such disturbances will cause instability of the remaining spoil or otherwise increase the hazard to the public health and safety or to the environment.

553.600. Previously Mined Areas (PMA's) and Continuously Mined Areas (CMA's). For PMA's and CMA's the special compliance measures include:

553.610. The requirements of R645-301-553.110 and R645-301-553.120, addressing the elimination of highwalls, will not apply to PMA's or CMA's where the volume of all reasonably available spoil is demonstrated in writing to the Division to be insufficient to completely backfill the reaffected or enlarged highwall. The highwall will be eliminated to the maximum extent technically practical in accordance with the following requirements:

553.611. All spoils generated by the remining operation or CMA and any other reasonably available spoil will be used to backfill the area;

553.612. Reasonably available spoil in the immediate vicinity of the remining operation or CMA will be included within the **permit area**.

553.650. Highwall Management Under the Approximate Original Contour Provisions. For situations where a permittee seeks approval for a remaining highwall under the AOC provisions, the permittee will establish, and the Division will find in writing that the remaining highwall will achieve the stability requirements of R645-301-553.530, that the remaining highwall will meet the approximate original contour criteria of R645-301-553.510 and R645- 301-553.520, and that the proposal meets the following criteria:

553.650.100. The remaining highwall will not be greater in height or length than the cliffs and cliff-like escarpments that were replaced or disturbed by the mining operations;

553.650.200. The remaining highwall will replace a preexisting cliff or similar natural premining feature and will resemble the structure, composition, and function of the natural cliff it replaces;

553.650.300. The remaining highwall will be modified, if necessary, as determined by the Division to restore cliff-type habitats used by the flora and fauna existing prior to mining;

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553.650.400. The remaining highwall will be compatible with the post mining land use and the visual attributes of the area; and

553.650.500. The remaining highwall will be compatible with the geomorphic processes of the area.

553.700. Backfilling and Grading: Thin Overburden. For the purposes of SURFACE COAL MINING AND RECLAMATION ACTIVITIES, thin overburden means that sufficient spoil and other waste materials to restore the **disturbed area** to its approximate original contour are not available from the entire **permit area**. A condition of insufficient spoil and other waste materials is deemed to exist when the overburden thickness times the swell factor, plus the thickness of other available waste materials is less than the combined thickness of the overburden and the coal prior to removing the coal. Backfilling and grading to reclaim a thin overburden area would result in a surface configuration of the reclaimed area that would not closely resemble the topography of the land prior to mining or blend into and complement the drainage pattern of the surrounding terrain. The provisions of this section apply only when SURFACE COAL MINING AND RECLAMATION ACTIVITIES cannot be carried out to comply with the requirements of R645-301-537.200, R645-301-552 through R645-301-553.230, R645-301-553.260 through R645-301-553.420, R645-301-553.600, and R645-301- 553.900 to achieve the approximate original contour. The operator will, at a minimum:

553.710. Use all available spoil and waste materials to attain the lowest practicable grade, but not more than the angle of repose; and

553.720. Meet the requirements of R645-301-211, R645-301-212, R645-301- 412.300, R645-301-512.210, R645-301-514.100, R645-301-535.100, R645-301- 535.112 through R645-301-535.130, R645-301-536.300, R645-301-542.720, R645- 301-553.240, and R645-301-745.100.

553.800. Backfilling and Grading: Thick Overburden. For the purposes of SURFACE COAL MINING AND RECLAMATION ACTIVITIES, thick overburden means that more than sufficient spoil and other waste materials to restore the **disturbed area** to its approximate original contour are available from the entire **permit area**. A condition of more than sufficient spoil and other waste materials is deemed to exist when the overburden thickness times the swell factor, plus the thickness of other available waste materials exceeds the combined thickness of the overburden and the coal prior to removing the coal. Backfilling and grading to reclaim a thick overburden area would result in a surface configuration of the reclaimed area that would not closely resemble the topography of the land prior to mining or blend into and complement the drainage pattern of the surrounding terrain. The provisions of this section apply only when SURFACE COAL MINING AND RECLAMATION ACTIVITIES cannot be carried out to comply with the requirements of R645-301-537.200, R645-301-552 through R645-301-553.230, R645-301-553.260 through R645-301-553.420, R645-301- 553.600, and R645-301-553.900 to achieve the approximate original contour. In addition the operator will, at a minimum:

553.810. Use the spoil and waste materials to attain the lowest practicable grade, but not more than the angle of repose;

553.820. Meet the requirements of R645-301-211, R645-301-212, R645-301- 412.300, R645-301-512.210, R645-301-514.100, R645-301-535.100, R645-301- 535.112 through R645-301-535.130, R645-301-536.300, R645-301-542.720, R645- 301-553.240, and R645-301-745.100; and

553.830. Dispose of any excess spoil in accordance with R645-301-211, R645- 301-212, R645-301-412.300, R645-301-512.210, R645-301-512.220, R645-301- 514.100, R645-301-528.310, R645-301-535.100 through R645-301-535.130, R645- 301-535.300 through R645-301-535.500, R645-301-536.300, R645-301-542.720, R645-301-553.240, R645-301-745.100, R645-301-745.300, and R645-301-745.400.

553.900. For the purposes of UNDERGROUND COAL MINING AND RECLAMATION ACTIVITIES, regrading of settled and revegetated fills at the conclusion of coal mining and reclamation operations will not be required if the conditions of R645-301-537.200 are met;

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560. Performance Standards. Coal mining and reclamation operations will be conducted in accordance with the approved permit and requirements of R645-301- 510 through R645-301-553.

R645-301-600. Geology.

The rules in R645-301-600 present the requirements for information related to geology which is to be included in each permit application.

610. Introduction.

611. General Requirements. Each permit application will include descriptions of:

611.100. The geology within and adjacent to the **permit area** as given under R645-301-621 through R645-301-627; and

611.200. Proposed operations given under R645-301-630.

612. All cross sections, maps and plans as required by R645-301-622 will be prepared and certified as described under R645-301-512.100

620. Environmental Description.

621. General Requirements. Each permit application will include a description of the geology within the proposed permit and **adjacent areas** that may be affected or impacted by the proposed coal mining and reclamation operation.

622. Cross Sections, Maps and Plans. The application will include cross sections, maps and plans showing:

622.100. Elevations and locations of test borings and core samplings;

622.200. Nature, depth, and thickness of the coal seams to be mined, any coal or rider seams above the seam to be mined, each stratum of the overburden, and the stratum immediately below the lowest coal seam to be mined;

622.300. All coal crop lines and the strike and dip of the coal to be mined within the proposed **permit area**; and

622.400. Location, and depth if available, of gas and oil wells within the proposed **permit area**.

623. Each application will include geologic information in sufficient detail to assist in:

623.100. Determining all potentially acid-or toxic-forming strata down to and including the stratum immediately below the coal seam to be mined;

623.200. Determining whether reclamation as required by R645-301 and R645-302 can be accomplished; and

623.300. For the purposes of UNDERGROUND COAL MINING AND RECLAMATION ACTIVITIES preparing the subsidence control plan described under R645-301-525 and R645-521-142.

624. Geologic information will include, at a minimum, the following:

624.100. A description of the geology of the proposed permit and **adjacent areas** 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 description will include the regional and structural geology of the permit and **adjacent areas**, and other parameters which influence the required reclamation and it will also show how the regional and structural geology may affect the occurrence, availability, movement, quantity and

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quality of potentially impacted surface and ground water. It will be based on:

624.110. The cross sections, maps, and plans required by R645-301-622.100 through R645-301-622.400.

624.120. The information obtained under R645-301-624.200, R645-301-624.300 and R645-301-625; and

624.130. Geologic literature and practices.

624.200. For the purposes of UNDERGROUND COAL MINING AND RECLAMATION ACTIVITIES, any portion of a **permit area** in which the strata down to the coal seam to be mined will be removed or are already exposed, and for the purposes of SURFACE COAL MINING AND RECLAMATION ACTIVITIES, samples will be collected and analyzed from test borings; drill cores; or fresh, unweathered, uncontaminated samples from rock outcrops 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. The analyses will result in the following:

624.210. Logs showing the lithologic characteristics including physical properties and thickness of each stratum and location of ground water where occurring;

624.220. Chemical analyses identifying those strata that may contain acid-or toxic-forming, or alkalinity-producing materials and to determine their content except that the Division may find that the analysis for alkalinity- producing material is unnecessary; and

624.230. Chemical analysis of the coal seam for acid-or toxic-forming materials, including the total sulfur and pyritic sulfur, except that the Division may find that the analysis of pyritic sulfur content is unnecessary.

624.300. For lands within the permit and **adjacent areas** of UNDERGROUND COAL MINING AND RECLAMATION ACTIVITIES where the strata above the coal seam to be mined will not be removed, samples will be collected and analyzed from test borings or drill cores to provide the following data:

624.310. Logs of drill holes showing the lithologic characteristics, including physical properties and thickness of each stratum that may be impacted, and location of ground water where occurring;

624.320. Chemical analyses for acid-or toxic-forming or alkalinity-producing materials and their content in the strata immediately above and below the coal seam to be mined;

624.330. Chemical analyses of the coal seam for acid-or toxic-forming materials, including the total sulfur and pyritic sulfur, except that the Division may find that the analysis of pyrite sulfur content is unnecessary; and

624.340. For standard room and pillar mining operations, the thickness and engineering properties of clays of soft rock such as clay shale, if any, in the stratum immediately above and below each coal seam to be mined.

625. If determined to be necessary to protect the hydrologic balance, to minimize or prevent subsidence, or to meet the performance standards of R645- 301 and R645-302, the Division may require the collection, analysis and description of geologic information in addition to that required by R645-301- 624.

626. An applicant may request the Division to waive in whole or in part the requirements of R645-301-624.200 and R645-301-624.300. The waiver may be granted only if the Division finds in writing that the collection and analysis of such data is unnecessary because other information having equal value or effect is available to the Division in a satisfactory form.

627. An application for a permit to conduct UNDERGROUND COAL MINING AND RECLAMATION ACTIVITIES will include, at a minimum, a description of overburden thickness and lithology.

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630. Operation Plan.

631. Casing and Sealing of Exploration Holes and Boreholes. Each permit application will include a description of the methods used to backfill, plug, case, cap, seal or otherwise manage exploration holes or boreholes to prevent acid or toxic drainage from entering water resources, minimize disturbance to the prevailing hydrologic balance and to ensure the safety of people, livestock, fish and wildlife, and machinery in the permit and **adjacent area**. Each exploration hole or borehole that is uncovered or exposed by coal mining and reclamation operations within the **permit area** will be permanently closed, unless approved for water monitoring or otherwise managed in a manner approved by the Division. Use of an exploration borehole as a monitoring or water well must meet the provisions of R645-301-731. The requirements of R645-301-631 do not apply to boreholes drilled for the purpose of blasting.

631.100. Temporary Casing and Sealing of Drilled Holes. Each exploration borehole, other drill hole or borehole which has been identified in the approved permit application for use to return underground development waste, coal processing waste or water to underground workings or to be used to monitor ground water conditions will be temporarily sealed before use and for the purposes of SURFACE COAL MINING AND RECLAMATION ACTIVITIES, protected during use by barricades, or fences, or other protective devices approved by the Division. These protective devices will be periodically inspected and maintained in good operating condition by the operator conducting surface coal mining and reclamation activities.

631.200. Permanent Casing and Sealing of Exploration Holes and Boreholes. When no longer needed for monitoring or other use approved by the Division upon a finding of no adverse environmental or health and safety effect, or unless approved for transfer as a water well under R645-301-731.400, each exploration hole or borehole will be plugged, capped, sealed, backfilled or otherwise properly managed under R645-301-631 and consistent with 30 CFR 75.1711. Permanent closure methods will be designed to prevent access to the mine workings by people, livestock, fish and wildlife, and machinery and to keep acid or other toxic drainage from entering water resources.

632. Subsidence Monitoring. Each application for a permit to conduct UNDERGROUND COAL MINING AND RECLAMATION ACTIVITIES will, except where planned subsidence is projected to be used, include as part of the subsidence monitoring plan described under R645-301-525:

632.100. A determination of the commencement and degree of subsidence so other appropriate measures can be taken to prevent or reduce material damage; and

632.200. A map showing the locations of subsidence monitoring points within and adjacent to the **permit area**.

640. Performance Standards.

641. All exploration holes and boreholes will be permanently cased and sealed according to the requirements of R645-301-631 and R645-301-631.200.

642. All monuments and surface markers used as subsidence monitoring points and identified under R645-301-632.200 will be reclaimed in accordance with R645-301-521.210.

R645-301-700. Hydrology.

710. Introduction.

711. General Requirements. Each permit application will include descriptions of:

711.100. Existing hydrologic resources as given under R645-301-720.

711.200. Proposed operations and potential impacts to the hydrologic balance as given under R645-301-730.

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711.300. The methods and calculations utilized to achieve compliance with hydrologic design criteria and plans given under R645-301-740.

711.400. Applicable hydrologic performance standards as given under R645-301- 750.

711.500. Reclamation activities as given under R645-301-760.

712. Certification. All cross sections, maps and plans required by R645-301- 722 as appropriate, and R645-301-731.700 will be prepared and certified according to R645-301-512.

713. Inspection. Impoundments will be inspected as described under R645-301- 514.300.

720. Environmental Description.

721. General Requirements. Each permit application will include a description of the existing, premining hydrologic resources within the proposed permit and **adjacent areas** that may be affected or impacted by the proposed coal mining and reclamation operation.

722. Cross Sections and Maps. The application will include cross sections and maps showing:

722.100. Location and extent of subsurface water, if encountered, within the proposed permit or **adjacent areas**. For UNDERGROUND COAL MINING AND RECLAMATION ACTIVITIES, location and extent will include, but not limited to areal and vertical distribution of aquifers, and portrayal of seasonal differences of head in different aquifers on cross-sections and contour maps;

722.200. Location of surface water bodies such as streams, lakes, ponds and springs, constructed or natural drains, and irrigation ditches within the proposed permit and **adjacent areas**;

722.300. Elevations and locations of monitoring stations used to gather baseline data on water quality and quantity in preparation of the application;

722.400. Location and depth, if available, of water wells in the **permit area** and **adjacent area**; and

722.500. Sufficient slope measurements or contour maps to adequately represent the existing land surface configuration of proposed **disturbed areas** for UNDERGROUND COAL MINING AND RECLAMATION ACTIVITIES and the proposed **permit area** for SURFACE COAL MINING AND RECLAMATION ACTIVITIES will be measured and recorded to take into account natural variations in slope, to provide accurate representation of the range of natural slopes and reflect geomorphic differences of the area to be disturbed.

723. Sampling and Analysis. All water quality analyses performed to meet the requirements of R645-301-723 through R645-301-724.300, R645-301-724.500, R645- 301-725 through R645-301-731, and R645-301-731.210 through R645-301-731.223 will be conducted according to the methodology in the current edition of "Standard Methods for the Examination of Water and Wastewater" or the methodology in 40 CFR Parts 136 and 434. Water quality sampling performed to meet the requirements of R645-301-723 through R645-301-724.300, R645-301-724.500, R645-301-725 through R645-301-731, and R645-301-731.210 through R645-301-731.223 will be conducted according to either methodology listed above when feasible. "Standard Methods for the Examination of Water and Wastewater" is a joint publication of the American Public Health Association, the American Water Works Association, and the Water Pollution Control Federation and is available from the American Public Health Association, 1015 Fifteenth Street, NW, Washington, D. C. 20036.

724. Baseline Information. The application will include the following baseline hydrologic, geologic and climatologic information, and any additional information required by the Division.

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724.100. Ground Water Information. The location and ownership for the permit and **adjacent areas** of existing wells, springs and other ground-water resources, seasonal quality and quantity of ground water, and usage. Water quality descriptions will include, at a minimum, total dissolved solids or specific conductance corrected to 25 degrees C, pH, total iron and total manganese. Ground-water quantity descriptions will include, at a minimum, approximate rates of discharge or usage and depth to the water in the coal seam, and each water-bearing stratum above and potentially impacted stratum below the coal seam.

724.200. Surface water information. The name, location, ownership and description of all surface-water bodies such as streams, lakes and impoundments, the location of any discharge into any surface-water body in the proposed permit and **adjacent areas**, and information on surface-water quality and quantity sufficient to demonstrate seasonal variation and water usage. Water quality descriptions will include, at a minimum, baseline information on total suspended solids, total dissolved solids or specific conductance corrected to 25 degrees C, pH, total iron and total manganese. Baseline acidity and alkalinity information will be provided if there is a potential for acid drainage from the proposed mining operation. Water quantity descriptions will include, at a minimum, baseline information on seasonal flow rates.

724.300. Geologic Information. Each application will include geologic information in sufficient detail, as given under R645-301-624, to assist in:

724.310. Determining the probable hydrologic consequences of the operation upon the quality and quantity of surface and ground water in the permit and **adjacent areas**, including the extent to which surface-and ground-water monitoring is necessary; and

724.320. Determining whether reclamation as required by the R645 Rules can be accomplished and whether the proposed operation has been designed to prevent material damage to the hydrologic balance outside the **permit area**.

724.400. Climatological Information.

724.410. When requested by the Division, the permit application will contain a statement of the climatological factors that are representative of the proposed **permit area**, including:

724.411. The average seasonal precipitation;

724.412. The average direction and velocity of prevailing winds; and

724.413. Seasonal temperature ranges.

724.420. The Division may request such additional data as deemed necessary to ensure compliance with the requirements of R645-301 and R645-302.

724.500. Supplemental information. If the determination of the PHC required by R645-301-728 indicates that adverse impacts on or off the proposed **permit area** may occur to the hydrologic balance, or that acid-forming or toxic- forming material is present that may result in the contamination of ground- water or surface-water supplies, then information supplemental to that required under R645-301-724.100 and R645-301-724.200 will be provided to evaluate such probable hydrologic consequences 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.

724.700. Each permit application that proposes to conduct coal mining and reclamation operations within a valley holding a stream or in a location where the **permit area** or **adjacent area** includes any stream will meet the requirements of R645-302-320.

725. Baseline Cumulative Impact Area Information.

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725.100. Hydrologic and geologic information for the cumulative impact area necessary to assess the probable cumulative hydrologic impacts of the proposed coal mining and reclamation operation and all anticipated coal mining and reclamation operations on surface-and ground-water systems as required by R645-301-729 will be provided to the Division if available from appropriate federal or state agencies.

725.200. If this information is not available from such agencies, then the applicant may gather and submit this information to the Division as part of the permit application.

725.300. The permit will not be approved until the necessary hydrologic and geologic information is available to the Division.

726. Modeling. The use of modeling techniques, interpolation or statistical techniques may be included as part of the permit application, but actual surface-and ground-water information may be required by the Division for each site even when such techniques are used.

727. Alternative Water Source Information. If the probable hydrologic consequences determination required by R645-301-728 indicates that the proposed SURFACE COAL MINING AND RECLAMATION ACTIVITY may proximately result in contamination, diminution, or interruption of an underground or surface source of water within the proposed permit or **adjacent areas** which is used for domestic, agricultural, industrial or other legitimate purpose, then the application will contain information on water availability and alternative water sources, including the suitability of alternative water sources for existing premining uses and approved postmining land uses.

728. Probable Hydrologic Consequences (PHC) Determination.

728.100. The permit application will contain a determination of the PHC of the proposed coal mining and reclamation operation upon the quality and quantity of surface and ground water under seasonal flow conditions for the proposed permit and **adjacent areas**.

728.200. The PHC determination will be based on baseline hydrologic, geologic and other information collected for the permit application and may include data statistically representative of the site.

728.300. The PHC determination will include findings on:

728.310. Whether adverse impacts may occur to the hydrologic balance;

728.320. Whether acid-forming or toxic-forming materials are present that could result in the contamination of surface-or ground-water supplies;

728.330. What impact the proposed coal mining and reclamation operation will have on:

728.331. Sediment yield from the **disturbed area**;

728.332. Acidity, total suspended and dissolved solids and other important water quality parameters of local impact;

728.333. Flooding or streamflow alteration;

728.334. Ground-water and surface-water availability; and

728.335. Other characteristics as required by the Division; and

728.340. Whether the proposed SURFACE COAL MINING AND RECLAMATION ACTIVITY will proximately result in contamination, diminution or interruption of an underground or surface source of water within the proposed

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permit or **adjacent areas** which is used for domestic, agricultural, industrial or other legitimate purpose; Or

728.350. Whether the UNDERGROUND COAL MINING AND RECLAMATION ACTIVITIES conducted after October 24, 1992 may result in contamination, diminution or interruption of State-appropriated water in existence at the time the application is submitted and used for legitimate purposes within the permit or **adjacent areas**.

728.400. An application for a permit revision will be reviewed by the Division to determine whether a new or updated PHC determination will be required.

729. Cumulative Hydrologic Impact Assessment (CHIA).

729.100. The Division will provide an assessment of the probable cumulative hydrologic impacts of the proposed coal mining and reclamation operation and all anticipated coal mining and reclamation operations upon surface-and ground-water systems in the cumulative impact area. The CHIA will be sufficient to determine, for purposes of permit approval whether the proposed coal mining and reclamation operation has been designed to prevent material damage to the hydrologic balance outside the **permit area**. The Division may allow the applicant to submit data and analyses relevant to the CHIA with the permit application.

729.200. An application for a permit revision will be reviewed by the Division to determine whether a new or updated CHIA will be required.

730. Operation Plan.

731. General Requirements. The permit application will include a plan, with maps and descriptions, indicating how the relevant requirements of R645-301- 730, R645-301-740, R645-301-750 and R645-301-760 will be met. The plan will be specific to the local hydrologic conditions. It will contain the steps to be taken during coal mining and reclamation operations through bond release to minimize disturbance to the hydrologic balance within the permit and **adjacent areas**; to prevent material damage outside the **permit area**; to support approved postmining land use in accordance with the terms and conditions of the approved permit and performance standards of R645-301-750; to comply with the Clean Water Act (33 U.S.C. 1251 et seq.); and to meet applicable federal and Utah water quality laws and regulations. The plan will include the measures to be taken to: avoid acid or toxic drainage; prevent to the extent possible using the best technology currently available, additional contributions of suspended solids to streamflow; provide water treatment facilities when needed; and control drainage. For the purposes of SURFACE COAL MINING AND RECLAMATION ACTIVITIES the plan will include measures to be taken to protect or replace water rights and restore approximate premining recharge capacity. The plan will specifically address any potential adverse hydrologic consequences identified in the PHC determination prepared under R645-301-728 and will include preventative and remedial measures.

The Division may require additional preventative, remedial or monitoring measures to assure that material damage to the hydrologic balance outside the **permit area** is prevented. Coal mining and reclamation operations that minimize water pollution and changes in flow will be used in preference to water treatment.

731.100. Hydrologic-Balance Protection.

731.110. Ground-Water Protection. In order to protect the hydrologic balance, coal mining and reclamation operations will be conducted according to the plan approved under R645-301-731 and the following:

731.111. Ground-water quality will be protected by handling earth materials and runoff in a manner that minimizes acidic, toxic or other harmful infiltration to ground-water systems and by managing excavations and other disturbances to prevent or control the discharge of pollutants into the ground water; and

731.112. For the purposes of SURFACE COAL MINING AND RECLAMATION ACTIVITIES ground-water quantity will be protected by handling earth materials and runoff in a manner that will restore approximate premining

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recharge capacity of the reclaimed area as a whole, excluding coal mine waste disposal areas and fills, so as to allow the movement of water to the ground-water system.

731.120. Surface-Water Protection. In order to protect the hydrologic balance, coal mining and reclamation operations will be conducted according to the plan approved under R645-301-731 and the following:

731.121. Surface-water quality will be protected by handling earth materials, ground-water discharges and runoff in a manner that minimizes the formation of acidic or toxic drainage; prevents, to the extent possible using the best technology currently available, additional contributions of suspended solids to streamflow outside the **permit area**; and, otherwise prevent water pollution. If drainage control, restabilization and revegetation of **disturbed areas**, diversion of runoff, mulching or other reclamation and remedial practices are not adequate to meet the requirements of R645-301-731.100 through R645-301- 731.522, R645-301-731.800 and R645-301-751, the operator will use and maintain the necessary water treatment facilities or water quality controls; and

731.122. Surface-water quantity and flow rates will be protected by handling earth materials and runoff in accordance with the steps outlined in the plan approved under R645-301-731.

731.200. Water Monitoring.

731.210. Ground-Water Monitoring. Ground-water monitoring will be conducted according to the plan approved under R645-301-731.200 and the following:

731.211. The permit application will include a ground-water monitoring plan based upon the PHC determination required under R645-301-728 and the analysis of all baseline hydrologic, geologic and other information in the permit application. The plan will provide for the monitoring of parameters that relate to the suitability of the ground water for current and approved postmining land uses and to the objectives for protection of the hydrologic balance set forth in R645-301-731. It will identify the quantity and quality parameters to be monitored, sampling frequency and site locations. It will describe how these data may be used to determine the impacts of the operation upon the hydrologic balance. At a minimum, total dissolved solids or specific conductance corrected to 25 degrees C, pH, total iron, total manganese and water levels will be monitored;

731.212. Ground-water will be monitored and data will be submitted at least every three months for each monitoring location. Monitoring submittals will include analytical results from each sample taken during the approved reporting period. When the analysis of any ground-water sample indicates noncompliance with the permit conditions, then the operator will promptly notify the Division and immediately take the actions provided for in R645-300- 145 and R645-301-731;

731.213. If an applicant can demonstrate by the use of the PHC determination and other available information that a particular water-bearing stratum in the proposed permit and **adjacent areas** is not one which serves as an aquifer which significantly ensures the hydrologic balance within the cumulative impact area, then monitoring of that stratum may be waived by the Division;

731.214. Ground-water monitoring will proceed through mining and continue during reclamation until bond release. Consistent with the procedures of R645- 303-220 through R645-303-228, the Division may modify the monitoring requirements including the parameters covered and the sampling frequency if the operator demonstrates, using the monitoring data obtained under R645-301- 731.214 that:

731.214.1. The coal mining and reclamation operation has minimized disturbance to the prevailing hydrologic balance in the permit and **adjacent areas** and prevented material damage to the hydrologic balance outside the **permit area**; water quantity and quality are suitable to support approved postmining land uses and the SURFACE COAL MINING AND RECLAMATION ACTIVITY has protected or replaced the water rights of other users; or

731.214.2. Monitoring is no longer necessary to achieve the purposes set forth in the monitoring plan approved

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under R645-301-731.211.

731.215. Equipment, structures and other devices used in conjunction with monitoring the quality and quantity of ground water on-site and off-site will be properly installed, maintained and operated and will be removed by the operator when no longer needed.

731.220. Surface-Water Monitoring. Surface-water monitoring will be conducted according to the plan approved under R645-301-731.220 and the following:

731.221. The permit application will include a surface-water monitoring plan based upon the PHC determination required under R645-301-728 and the analysis of all baseline hydrologic, geologic and other information in the permit application. The plan will 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 R645-301-731 as well as the effluent limitations found in R645-301-751;

731.222. The plan will identify the surface water quantity and quality parameters to be monitored, sampling frequency and site locations. It will describe how these data may be used to determine the impacts of the operation upon the hydrologic balance:

731.222.1. At all monitoring locations in streams, lakes and impoundments, that are potentially impacted or into which water will be discharged and at upstream monitoring locations, the total dissolved solids or specific conductance corrected to 25 degrees C, total suspended solids, pH, total iron, total manganese and flow will be monitored; and

731.222.2. For point-source discharges, monitoring will be conducted in accordance with 40 CFR Parts 122 and 123, R645-301-751 and as required by the Utah Division of Environmental Health for National Pollutant Discharge Elimination System (NPDES) permits;

731.223. Surface-water monitoring data will be submitted at least every three months for each monitoring location. Monitoring submittals will include analytical results from each sample taken during the approved reporting period. When the analysis of any surface water sample indicates noncompliance with the permit conditions, the operator will promptly notify the Division and immediately take the actions provided for in R645-300-145 and R645-301-731. The reporting requirements of this paragraph do not exempt the operator from meeting any National Pollutant Discharge Elimination System (NPDES) reporting requirements;

731.224. Surface-water monitoring will proceed through mining and continue during reclamation until bond release. Consistent with R645-303-220 through R645-303-228, the Division may modify the monitoring requirements, except those required by the Utah Division of Environmental Health, including the parameters covered and sampling frequency if the operator demonstrates, using the monitoring data obtained under R645-301-731.224 that:

731.224.1. The operator has minimized disturbance to the hydrologic balance in the permit and **adjacent areas** and prevented material damage to the hydrologic balance outside the **permit area**; water quantity and quality are suitable to support approved postmining land uses and the SURFACE COAL MINING AND RECLAMATION ACTIVITY has protected or replaced the water rights of other users; or

731.224.2. Monitoring is no longer necessary to achieve the purposes set forth in the monitoring plan approved under R645-301-731.221.

731.225. Equipment, structures and other devices used in conjunction with monitoring the quality and quantity of surface water on-site and off-site will be properly installed, maintained and operated and will be removed by the operator when no longer needed.

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731.300. Acid-and Toxic-Forming Materials.

731.310. Drainage from acid-and toxic-forming materials and underground development waste into surface water and ground water will be avoided by:

731.311. Identifying and burying and/or treating, when necessary, materials which may adversely affect water quality, or be detrimental to vegetation or to public health and safety if not buried and/or treated; and

731.312. Storing materials in a manner that will protect surface water and ground water by preventing erosion, the formation of polluted runoff and the infiltration of polluted water. Storage will be limited to the period until burial and/or treatment first become feasible, and so long as storage will not result in any risk of water pollution or other environmental damage.

731.320. Storage, burial or treatment practices will be consistent with other material handling and disposal provisions of R645 Rules.

731.400. Transfer of Wells. Before final release of bond, exploratory or monitoring wells will be sealed in a safe and environmentally sound manner in accordance with R645-301-631, R645-301-738, and R645-301-765. With the prior approval of the Division, wells may be transferred to another party for further use. However, at a minimum, the conditions of such transfer will comply with Utah and local laws and the permittee will remain responsible for the proper management of the well until bond release in accordance with R645- 301-529, R645-301-551, R645-301-631, R645-301-738, and R645-301-765.

731.500. Discharges.

731.510. Discharges into an underground mine.

731.511. Discharges into an underground mine are prohibited, unless specifically approved by the Division after a demonstration that the discharge will:

731.511.1. Minimize disturbance to the hydrologic balance on the **permit area**, prevent material damage outside the **permit area** and otherwise eliminate public hazards resulting from coal mining and reclamation operations;

731.511.2. Not result in a violation of applicable water quality standards or effluent limitations;

731.511.3. Be at a known rate and quality which will meet the effluent limitations of R645-301-751 for pH and total suspended solids, except that the pH and total suspended solids limitations may be exceeded, if approved by the Division; and

731.511.4. Meet with the approval of MSHA.

731.512. Discharges will be limited to the following:

731.512.1. Water;

731.512.2. Coal processing waste;

731.512.3. Fly ash from a coal fired facility;

731.512.4. Sludge from an acid-mine-drainage treatment facility;

731.512.5. Flue-gas desulfurization sludge;

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731.512.6. Inert materials used for stabilizing underground mines; and

731.512.7. Underground mine development wastes.

731.513. Water from the underground workings of an UNDERGROUND COAL MINING AND RECLAMATION ACTIVITY may be diverted into other underground workings according to the requirements of R645-301-731.100 through R645-301-731.522 and R645-301-731.800.

731.520. Gravity Discharges from UNDERGROUND COAL MINING AND RECLAMATION ACTIVITIES.

731.521. Surface entries and accesses to underground workings will be located and managed to prevent or control gravity discharge of water from the mine. Gravity discharges of water from an underground mine, other than a drift mine subject to R645-301-731.522, may be allowed by the Division if it is demonstrated that the untreated or treated discharge complies with the performance standards of R645-301 and R645-302 and any additional NPDES permit requirements.

731.522. Notwithstanding anything to the contrary in R645-301-731.521, the surface entries and accesses of drift mines first used after January 21, 1981 and located in acid-producing or iron-producing coal seams will be located in such a manner as to prevent any gravity discharge from the mine.

731.530. State-appropriated water supply. The permittee will promptly replace any State-appropriated water supply that is contaminated, diminished or interrupted by UNDERGROUND COAL MINING AND RECLAMATION ACTIVITIES conducted after October 24, 1992, if the affected water supply was in existence before the date the Division received the permit application for the activities causing the loss, contamination or interruption. The baseline hydrologic and geologic information required in R645-301-700. will be used to determine the impact of mining activities upon the water supply.

731.600. Stream Buffer Zones.

731.610. No land within 100 feet of a perennial stream or an intermittent stream will be disturbed by coal mining and reclamation operations, unless the Division specifically authorizes coal mining and reclamation operations closer to, or through, such a stream. The Division may authorize such activities only upon finding that:

731.611. Coal mining and reclamation operations will not cause or contribute to the violation of applicable Utah or federal water quality standards and will not adversely affect the water quantity and quality or other environmental resources of the stream; and

731.612. If there will be a temporary or permanent stream channel diversion, it will comply with R645-301-742.300.

731.620. The area not to be disturbed will be designated as a buffer zone, and the operator will mark it as specified in R645-301-521.260.

731.700. Cross Sections and Maps. Each application will contain for the proposed **permit area**:

731.710. A map showing the locations of water supply intakes for current users of surface water flowing into, out of and within a hydrologic area defined by the Division, and those surface waters which will receive discharges from **affected areas** in the proposed **permit area**;

731.720. A map showing the locations of each water diversion, collection, conveyance, treatment, storage and discharge facility to be used. The map will be prepared and certified according to R645-301-512;

731.730. A map showing locations and elevations of each station to be used for water monitoring during coal

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mining and reclamation operations. The map will be prepared and certified according to R645-301-512;

731.740. A map showing the locations of each existing and proposed sedimentation pond, impoundment and coal processing waste bank, dam or embankment. The map will be prepared and certified according to R645-301-512;

731.750. Cross sections for each existing and proposed sedimentation pond, impoundment and coal processing waste bank, dam or embankment. The cross sections will be prepared and certified according to R645-301-512.200; and

731.760. Other relevant cross sections and maps required by the Division depending on the structures and facilities located in the **permit area**.

731.800. Water Rights and Replacement. Any person who conducts SURFACE COAL MINING AND RECLAMATION ACTIVITIES will replace the water supply of an owner of interest in real property who obtains all or part of his or her supply of water for domestic, agricultural, industrial, or other legitimate use from an underground or surface source, where the water supply has been adversely impacted by contamination, diminution, or interruption proximately resulting from the surface mining activities. Baseline hydrologic information required in R645-301-624.100 through R645-301-624.200, R645-301-625, R645-301-626, R645-301-723 through R645-301-724.300, R645-301-724.500, R645-301-725 through R645-301-731, and R645-301-731.210 through R645-301-731.223 will be used to determine the extent of the impact of mining upon ground water and surface water.

732. Sediment Control Measures.

732.100. Siltation Structures. Siltation structures will be constructed and maintained to comply with R645-301-742.214. Any siltation structure that impounds water will be constructed and maintained to comply with R645-301-512.240, R645-301-514.300, R645-301-515.200, R645-301-533.100 through R645- 301-533.600, R645-301-733.220 through R645-301-733.224, and R645-301-743.

732.200. Sedimentation Ponds.

732.210. Sedimentation ponds whether temporary or permanent, will be designed in compliance with the requirements of R645-301-356.300, R645-301-356.400, R645-301-513.200, R645-301-742.200 through R645-301-742.240, and R645-301-763. Any sedimentation pond or earthen structure which will remain on the proposed **permit area** as a permanent water impoundment will also be constructed and maintained to comply with the requirements of R645-301-743, R645-301-533.100 through R645-301-533.600, R645-301-512.240, R645-301-514.310 through R645-301- 514.321 and R645-301-515.200.

732.220. Each plan will, at a minimum, comply with the MSHA requirements given under R645-301-513.100 and R645-301-513.200.

732.300. Diversions. All diversions will be constructed and maintained to comply with the requirements of R645-301-742.100 and R645-301-742.300.

732.400. Road Drainage. All roads will be constructed, maintained and reconstructed to comply with R645-301-742.400.

732.410. The permit application will contain a description of measures to be taken to obtain Division approval for alteration or relocation of a natural drainageway under R645-301-358, R645-301-512.250, R645-301-527.100, R645-301- 527.230, R645-301-534.100, R645-301-534.200, R645-301-534.300, R645-301- 542.600, R645-301-742.410, R645-301-742.420, R645-301-752.200, and R645-301- 762.

732.420. The permit application will contain a description of measures, other than use of a rock headwall, to be taken to protect the inlet end of a ditch relief culvert, for Division approval under R645-301-358, R645-301-

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512.250, R645-301-527.100, R645-301-527.230, R645-301-534.100, R645-301-534.200, R645- 301-534.300, R645-301-542.600, R645-301-742.410, R645-301-742.420, R645-301- 752.200, and R645-301-762.

733. Impoundments.

733.100. General Plans. Each permit application will contain a general plan and detailed design plans for each proposed water impoundment within the proposed **permit area**. Each general plan will:

733.110. Be prepared and certified as described under R645-301-512;

733.120. Contain maps and cross sections;

733.130. Contain a narrative that describes the structure;

733.140. Contain the results of a survey as described under R645-301-531;

733.150. Contain preliminary hydrologic and geologic information required to assess the hydrologic impact of the structure; and

733.160. Contain a certification statement which includes a schedule setting forth the dates when any detailed design plans for structures that are not submitted with the general plan will be submitted to the Division. The Division will have approved, in writing, the detailed design plan for a structure before construction of the structure begins.

733.200. Permanent and Temporary Impoundments.

733.210. Permanent and temporary impoundments will be designed to comply with the requirements of R645-301-512.240, R645-301-514.300, R645-301-515.200, R645-301-533.100 through R645-301-533.600, R645-301-733.220 through R645-301- 733.226, R645-301-743.240, and R645-301-743. Each plan for an impoundment meeting the size or other criteria of the Mine Safety and Health Administration will comply with the requirements of 30 CFR 77.216-1 and 30 CFR 77.216-2. The plan required to be submitted to the District Manager of MSHA under 30 CFR 77.216 will be submitted to the Division as part of the permit application package. For impoundments not included in R645-301- 533.610 the Division may establish through the State program approval process engineering design standards that ensure stability comparable to a 1.3 minimum static safety factor in lieu of engineering tests to establish compliance with the minimum static safety factor of 1.3 specified in R645-301-533.110.

733.220. A permanent impoundment of water may be created, if authorized by the Division in the approved permit based upon the following demonstration:

733.221. The size and configuration of such impoundment will be adequate for its intended purposes;

733.222. The quality of impounded water will be suitable on a permanent basis for its intended use and, after reclamation, will meet applicable Utah and federal water quality standards, and discharges from the impoundment will meet applicable effluent limitations and will not degrade the quality of receiving water below applicable Utah and federal water quality standards;

733.223. The water level will be sufficiently stable and be capable of supporting the intended use;

733.224. Final grading will provide for adequate safety and access for proposed water users;

733.225. The impoundment will not result in the diminution of the quality and quantity of water utilized by adjacent or surrounding landowners for agricultural, industrial, recreational or domestic uses; and

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733.226. The impoundment will be suitable for the approved postmining land use.

733.230. The Division may authorize the construction of temporary impoundments as part of coal mining and reclamation operations.

733.240. If any examination or inspection discloses that a potential hazard exists, the person who examined the impoundment will promptly inform the Division according to R645-301-515.200.

734. Discharge Structures. Discharge structures will be constructed and maintained to comply with R645-301-744.

735. Disposal of Excess Spoil. Areas designated for the disposal of excess spoil and excess spoil structures will be constructed and maintained to comply with R645-301-745.

736. Coal Mine Waste. Areas designated for the disposal of coal mine waste and coal mine waste structures will be constructed and maintained to comply with R645-301-746.

737. Noncoal Mine Waste. Noncoal mine waste will be stored and final disposal of noncoal mine waste will comply with R645-301-747.

738. Temporary Casing and Sealing of Wells. Each well which has been identified in the approved permit application to be used to monitor ground water conditions will comply with R645-301-748 and be temporarily sealed before use and for the purposes of SURFACE COAL MINING AND RECLAMATION ACTIVITIES protected during use by barricades, or fences, or other protective devices approved by the Division. These devices will be periodically inspected and maintained in good operating condition by the operator conducting SURFACE COAL MINING AND RECLAMATION ACTIVITIES.

740. Design Criteria and Plans.

741. General Requirements. Each permit application will include site-specific plans that incorporate minimum design criteria as set forth in R645-301-740 for the control of drainage from disturbed and undisturbed areas.

742. Sediment Control Measures.

742.100. General Requirements.

742.110. Appropriate sediment control measures will be designed, constructed and maintained using the best technology currently available to:

742.111. Prevent, to the extent possible, additional contributions of sediment to stream flow or to runoff outside the **permit area**;

742.112. Meet the effluent limitations under R645-301-751; and

742.113. Minimize erosion to the extent possible.

742.120. Sediment control measures include practices carried out within and adjacent to the **disturbed area**. The sedimentation storage capacity of practices in and downstream from the **disturbed areas** will reflect the degree to which successful mining and reclamation techniques are applied to reduce erosion and control sediment. Sediment control measures consist of the utilization of proper mining and reclamation methods and sediment control practices, singly or in combination. Sediment control methods include, but are not limited to:

742.121. Retaining sediment within **disturbed areas**;

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742.122. Diverting runoff away from **disturbed areas**;

742.123. Diverting runoff using protected channels or pipes through **disturbed areas** so as not to cause additional erosion;

742.124. Using straw dikes, riprap, check dams, mulches, vegetative sediment filters, dugout ponds and other measures that reduce overland flow velocities, reduce runoff volumes or trap sediment;

742.125. Treating with chemicals; and

742.126. For the purposes of UNDERGROUND COAL MINING AND RECLAMATION ACTIVITIES, treating mine drainage in underground sumps.

742.200. Siltation Structures. Siltation structures shall be designed in compliance with the requirements of R645-301-742.

742.210. General Requirements.

742.211. Additional contributions of suspended solids and sediment to streamflow or runoff outside the **permit area** will be prevented to the extent possible using the best technology currently available.

742.212. Siltation structures for an area will be constructed before beginning any coal mining and reclamation operations in that area and, upon construction, will be certified by a qualified registered professional engineer to be constructed as designed and as approved in the reclamation plan.

742.213. Any siltation structures which impounds water will be designed, constructed and maintained in accordance with R645-301-512.240, R645-301- 514.300, R645-301-515.200, R645-301-533.100 through R645-301-533.600, R645- 301-733.220 through R645-301-733.224, and R645-301-743.

742.214. For the purposes of UNDERGROUND COAL MINING AND RECLAMATION ACTIVITIES, any point-source discharge of water from underground workings to surface waters which does not meet the effluent limitations of R645-301-751 will be passed through a siltation structure before leaving the **permit area**.

742.220. Sedimentation Ponds.

742.221. Sedimentation ponds, when used, will:

742.221.1. Be used individually or in series;

742.221.2. Be located as near as possible to the **disturbed area** and out of perennial streams unless approved by the Division; and

742.221.3. Be designed, constructed, and maintained to:

742.221.31. Provide adequate sediment storage volume;

742.221.32. Provide adequate detention time to allow the effluent from the ponds to meet Utah and federal effluent limitations;

742.221.33. Contain or treat the 10-year, 24-hour precipitation event ("design event") unless a lesser design event is approved by the Division based on terrain, climate, or other site-specific conditions and on a demonstration by the operator that the effluent limitations of R645-301-751 will be met;

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742.221.34. Provide a nonclogging dewatering device adequate to maintain the detention time required under R645-301-742.221.32.

742.221.35. Minimize, to the extent possible, short circuiting;

742.221.36. Provide periodic sediment removal sufficient to maintain adequate volume for the design event;

742.221.37. Ensure against excessive settlement;

742.221.38. Be free of sod, large roots, frozen soil, and acid-or toxic forming coal-processing waste; and

742.221.39. Be compacted properly.

742.222. Sedimentation ponds meeting the size or other qualifying criteria of the MSHA, 30 CFR 77.216(a) will comply with all the requirements of that section, and will have a single spillway or principal and emergency spillways that in combination will safely pass a 100-year, 6-hour precipitation event or greater event as demonstrated to be necessary by the Division.

742.223. Sedimentation ponds not meeting the size or other qualifying criteria of the MSHA, 30 CFR 77.216(a) will provide a combination of principal and emergency spillways that will safely discharge a 25-year, 6-hour precipitation event or greater event as demonstrated to be needed by the Division. Such ponds may use a single open channel spillway if the spillway is:

742.223.1. Of nonerodible construction and designed to carry sustained flows; or

742.223.2. Earth-or grass-lined and designed to carry short-term infrequent flows at non-erosive velocities where sustained flows are not expected.

742.224. In lieu of meeting the requirements of R645-301-742.223.1 and 742.223.2 the Division may approve a temporary impoundment as a sedimentation pond 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 in accordance with R645-301-512.200 that the sedimentation pond will safely control the design precipitation event. The water will be removed from the pond in accordance with current, prudent, engineering practices and any sediment pond so used will not be located where failure would be expected to cause loss of life or serious property damage.

742.225. An exception to the sediment pond location guidance in R645-301- 742.224 may be allowed:

742.225.1. Impoundments meeting the NRCS Class B or C criteria for dams in TR-60, or the size or other criteria of 30 CFR Sec. 77.216(a) shall be designed to control the precipitation of the probable maximum precipitation of a 6-hour event, or greater event specified by the Division.

742.225.2. Impoundments meeting the NRCS Class B or C criteria for dams in TR-60, or the size or other criteria of 30 CFR Sec. 77.216(a) shall be designed to control the precipitation of the probable maximum precipitation of a 6-hour event, or greater event specified by the Division.

742.230. Other Treatment Facilities.

742.231. Other treatment facilities will be designed to treat the 10-year, 24-hour precipitation event unless a lesser design event is approved by the Division based on terrain, climate, other site-specific conditions and a demonstration by the operator that the effluent limitations of R645-301-751 will be met.

742.232. Other treatment facilities will be designed in accordance with the applicable requirements of R645-301-

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742.220.

742.240. Exemptions. Exemptions to the requirements of R645-301-742.200 and R645-301-763 may be granted if the disturbed drainage area within the total **disturbed area** is small and the operator demonstrates that siltation structures and alternate sediment control measures are not necessary for drainage from the **disturbed areas** to meet the effluent limitations under R645- 301-751 or the applicable Utah and federal water quality standards for the receiving waters.

742.300. Diversions.

742.310. General Requirements.

742.311. With the approval of the Division, any flow from mined areas abandoned before May 3, 1978, and any flow from undisturbed areas or reclaimed areas, after meeting the criteria of R645-301-356.300, R645-301-356.400, R645- 301-513.200, R645-301-742.200 through R645-301-742.240, and R645-301-763 for siltation structure removal, may be diverted from **disturbed areas** by means of temporary or permanent diversions. All diversions will be designed to minimize adverse impacts to the hydrologic balance within the permit and **adjacent areas**, to prevent material damage outside the **permit area** and to assure the safety of the public. Diversions will not be used to divert water into underground mines without approval of the Division in accordance with R645- 301-731.510.

742.312. The diversion and its appurtenant structures will be designed, located, constructed, maintained and used to:

742.312.1. Be stable;

742.312.2. Provide protection against flooding and resultant damage to life and property;

742.312.3. Prevent, to the extent possible using the best technology currently available, additional contributions of suspended solids to streamflow outside the **permit area**; and

742.312.4. Comply with all applicable local, Utah, and federal laws and regulations.

742.313. Temporary diversions will be removed when no longer needed to achieve the purpose for which they were authorized. The land disturbed by the removal process will be restored in accordance with R645-301 and R645-302. Before diversions are removed, downstream water-treatment facilities previously protected by the diversion will be modified or removed, as necessary, to prevent overtopping or failure of the facilities. This requirement will not relieve the operator from maintaining water-treatment facilities as otherwise required. A permanent diversion or a stream channel reclaimed after the removal of a temporary diversion will be designed and constructed so as to restore or approximate the premining characteristics of the original stream channel including the natural riparian vegetation to promote the recovery and the enhancement of the aquatic habitat.

742.314. The Division may specify additional design criteria for diversions to meet the requirements of R645-301-742.300.

742.320. Diversion of Perennial and Intermittent Streams.

742.321. Diversion of perennial and intermittent streams within the **permit area** may be approved by the Division after making the finding relating to stream buffer zones under R645-301-731.600.

742.322. The design capacity of channels for temporary and permanent stream channel diversions will be at least equal to the capacity of the unmodified stream channel immediately upstream and downstream from the diversion.

742.323. The requirements of R645-301-742.312.2 will be met when the temporary and permanent diversion for

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perennial and intermittent streams are designed so that the combination of channel, bank and floodplain configuration is adequate to pass safely the peak runoff of a 10-year, 6-hour precipitation event for a temporary diversion and a 100-year, 6-hour precipitation event for a permanent diversion.

742.324. The design and construction of all stream channel diversions of perennial and intermittent streams will be certified by a qualified registered professional engineer as meeting the performance standards of R645-301 and R645-302 and any design criteria set by the Division.

742.330. Diversion of Miscellaneous Flows.

742.331. Miscellaneous flows, which consist of all flows except for perennial and intermittent streams, may be diverted away from **disturbed areas** if required or approved by the Division. Miscellaneous flows will include ground- water discharges and ephemeral streams.

742.332. The design, location, construction, maintenance, and removal of diversions of miscellaneous flows will meet all of the performance standards set forth in R645-301-742.310.

742.333. The requirements of R645-301-742.312.2 will be met when the temporary and permanent diversions for miscellaneous flows are designed so that the combination of channel, bank and floodplain configuration is adequate to pass safely the peak runoff of a 2-year, 6-hour precipitation event for a temporary diversion and a 10-year, 6-hour precipitation event for a permanent diversion.

742.400. Road Drainage.

742.410. All Roads.

742.411. To ensure environmental protection and safety 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 will incorporate appropriate limits for surface drainage control, culvert placement, culvert size, and any necessary design criteria established by the Division.

742.412. No part of any road will be located in the channel of an intermittent or perennial stream unless specifically approved by the Division in accordance with applicable parts of R645-301-731 through R645-301-742.300.

742.413. Roads will be located to minimize downstream sedimentation and flooding.

742.420. Primary Roads.

742.421. To minimize erosion, a primary road is to be located, insofar as practical, on the most stable available surfaces.

742.422. Stream fords by primary roads are prohibited unless they are specifically approved by the Division as temporary routes during periods of construction.

742.423. Drainage Control.

742.423.1. Each primary road will be designed, 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 will be designed to pass the peak runoff safely from a 10-year, 6-hour precipitation event, or an alternative event of greater size as demonstrated to be needed by the Division.

742.423.2. Drainage pipes and culverts will be constructed to avoid plugging or collapse and erosion at inlets and

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outlets.

742.423.3. Drainage ditches will be designed to prevent uncontrolled drainage over the road surface and embankment. Trash racks and debris basins will be installed in the drainage ditches where debris from the drainage area may impair the functions of drainage and sediment control structures.

742.423.4. Natural stream channels will not be altered or relocated without the prior approval of the Division in accordance with R645-301-731.100 through R645-301-731.522, R645-301-731.600, R645-301-731.800, R645-301-742.300, and R645-301-751.

742.423.5. Except as provided in R645-301-742.422, drainage structures will be used for stream channel crossings, made using bridges, culverts or other structures designed, constructed and maintained using current, prudent engineering practice.

743. Impoundments.

743.100. General Requirements. The requirements of R645-301-743 apply to both temporary and permanent impoundments. Impoundments meeting the Class B or C criteria for dams in the U.S. Department of Agriculture, Natural Resources Conservation Service Technical Release No. 60 (210-VI-TR60, Oct. 1985), "Earth Dams and Reservoirs," shall comply with the, "Minimum Emergency Spillway Hydrologic Criteria," table in TR-60 and the requirements of this section. Copies may be obtained from the National Technical Information Service (NTIS), 5285 Port Royal Road, Springfield, Virginia 22161, order No. PB 87-157509-AS. Copies may be inspected at the Division of Oil Gas and Mining Offices, 1594 West North Temple, Salt Lake City, Utah 84114 or at the Division of Administrative Rules, Archives Building, Capitol Hill Complex, Salt Lake City, Utah 84114-1021.

743.110. Impoundments meeting the criteria of the MSHA, 30 CFR 77.216(a) will comply with the requirements of 77.216 and R645-301-512.240, R645-301- 514.300, R645-301-515.200, R645-301-533.100 through R645-301-533.600, R645- 301-733.220 through R645-301-733.224, and R645-301-743. The plan required to be submitted to the District Manager of MSHA under 30 CFR 77.216 will also be submitted to the Division as part of the permit application.

743.120. The design of impoundments will be prepared and certified as described under R645-301-512. Impoundments will have adequate freeboard to resist overtopping by waves and by sudden increases in storage volume. Impoundments meeting the NRCS Class B or C criteria for dams in TR-60 shall comply with the freeboard hydrograph criteria in the "Minimum Emergency Spillway Hydrologic Criteria" table in TR-60.

743.130. Impoundments will include either a combination of principal and emergency spillways or a single spillway as specified in 743.131 which will be designed and constructed to safely pass the design precipitation event or greater event specified in R645-301-743.200 or R645-301-743.300.

743.131. The Division may approve a single-open channel spillway that is:

743.131.1. Of nonerodible construction and designed to carry sustained flows; or

743.131.2. Earth-or grass lined and designed to carry short-term, infrequent flows at non-erosive velocities where sustained flows are not expected.

743.131.3 Except as specified in R645-301-742.224 the required design precipitation event for an impoundment meeting the spillway requirements of R645-301-743.130 is:

743.131.4 For an impoundment meeting the NRCS Class B or C criteria for dams in TR-60, the emergency spillway hydrograph criteria in the "Minimum Emergency Spillway Hydrologic Criteria" table in TR-60, or greater event as specified by the Division.

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743.131.5 For an impoundment meeting or exceeding the size or other criteria of 30 CFR Sec. 77.216(a), a 100-year 6-hour event, or greater event as specified by the Division.

743.131.6 For an impoundment not included in R645-301-743.131.4 or 743.131.5, a 25-year 6-hour event, or greater event as specified by the Division.

743.132 In lieu of meeting the requirements of 743.131 the Division may approve an impoundment which meets the requirements of the sediment pond criteria of R645-301-742.224 and 742.225.

743.140. Impoundments will be inspected as described under R645-301-514.300.

743.200. The design precipitation event for the spillways for a permanent impoundment meeting the size or other criteria of MSHA rule 30 CFR 77.216(a) is a 100-year, 6-hour precipitation event, or such larger event as demonstrated to be needed by the Division.

743.300. The design precipitation event for the spillways for an impoundment not meeting the size or other criteria of MSHA rule 30 CFR 77.216(a) is a 25-year, 6-hour precipitation event, or such larger event as demonstrated to be needed by the Division.

744. Discharge Structures.

744.100. Discharge from sedimentation ponds, permanent and temporary impoundments, coal processing waste dams and embankments, and diversions will 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.

744.200. Discharge structures will be designed according to standard engineering design procedures.

745. Disposal of Excess Spoil.

745.100. General Requirements.

745.110. Excess spoil will be placed in designated disposal areas within the **permit area**, in a controlled manner to:

745.111. Minimize the adverse effects of leachate and surface water runoff from the fill on surface and ground waters;

745.112. Ensure permanent impoundments are not located on the completed fill. Small depressions may be allowed by the Division if they are needed to retain moisture or minimize erosion, create and enhance wildlife habitat or assist revegetation, and if they are not incompatible with the stability of the fill; and

745.113. Adequately cover or treat excess spoil that is acid-and toxic- forming with nonacid nontoxic material to control the impact on surface and ground water in accordance with R645-301-731.300 and to minimize adverse effects on plant growth and the approved postmining land use.

745.120. Drainage control. If the disposal area contains springs, natural or manmade water courses, or wet weather seeps, the fill design will include diversions and underdrains as necessary to control erosion, prevent water infiltration into the fill and ensure stability.

745.121. Diversions will comply with the requirements of R645-301-742.300.

745.122. Underdrains will consist of durable rock or pipe, be designed and constructed using current, prudent

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engineering practices and meet any design criteria established by the Division. The underdrain system will be designed to carry the anticipated seepage of water due to rainfall away from the excess spoil fill and from seeps and springs in the foundation of the disposal area and will be protected from piping and contamination by an adequate filter. Rock underdrains will be constructed of durable, nonacid-, nontoxic-forming rock (e.g., natural sand and gravel, sandstone, limestone or other durable rock) that does not slake in water or degrade to soil materials and which is free of coal, clay or other nondurable material. Perforated pipe underdrains will be corrosion resistant and will have characteristics consistent with the long-term life of the fill.

745.200. Valley Fills and Head-of-Hollow Fills.

745.210. Valley fills and head-of-hollow fills will meet the applicable requirements of R645-301-211, R645-301-212, R645-301-412.300, R645-301- 512.210, R645-301-514.100, R645-301-528.310, R645-301-535.100 through R645- 301-535.130, R645-301-535.500, R645-301-536.300, R645-301-542.720, R645-301- 553.240, and R645-301-745.100 and the requirements of R645-301-745.200 and R645-301-535.200.

745.220. Drainage Control.

745.221. The top surface of the completed fill will be graded such that the final slope after settlement will be toward properly designed drainage channels. Uncontrolled surface drainage may not be directed over the outslope of the fill.

745.222. Runoff from areas above the fill and runoff from the surface of the fill will be diverted into stabilized diversion channels designed to meet the requirements of R645-301-742.300 and to safely pass the runoff from a 100-year, 6-hour precipitation event.

745.300. Durable Rock Fills. The Division may approve disposal of excess durable rock spoil provided the following conditions are satisfied:

745.310. Except as provided in R645-301-745.300, the requirements of R645- 301-211, R645-301-212, R645-301-412.300, R645-301-512.210, R645-301-514.100, R645-301-528.310, R645-301-535.100 through R645-301-535.130, R645-301-535.500, R645-301-536.300, R645-301-542.720, R645-301-553.240, and R645-301-745.100 are met;

745.320. The underdrain system may be constructed simultaneously with excess spoil placement by the natural segregation of dumped materials, provided the resulting underdrain system is capable of carrying anticipated seepage of water due to rainfall away from the excess spoil fill and from seeps and springs in the foundation of the disposal area and the other requirements for drainage control are met; and

745.330. Surface water runoff from areas adjacent to and above the fill is not allowed to flow onto the fill and is diverted into stabilized diversion channels designed to meet the requirements of R645-301-742.300 and to safely pass the runoff from a 100-year, 6-hour precipitation event.

745.400. Preexisting Benches. The Division may approve the disposal of excess spoil through placement on preexisting benches, provided that the requirements of R645-301-211, R645-301-212, R645-301-412.300, R645-301-512.210, R645-301- 512.220, R645-301-514.100, R645-301-535.100, R645-301-535.112 through R645- 301-535.130, R645-301-535.300 through R645-301-536.300, R645-301-542.720, R645-301-553.240, R645-301-745.100, R645-301-745.300, and R645-301-745.400 and the requirements of R645-301-535.400 are met.

746. Coal Mine Waste.

746.100. General Requirements.

746.110. All coal mine waste will be placed in new or existing disposal areas within a **permit area** which are

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approved by the Division.

746.120. Coal mine waste will be placed in a controlled manner to minimize adverse effects of leachate and surface water runoff on surface and ground water quality and quantity.

746.200. Refuse Piles.

746.210. Refuse piles will meet the requirements of R645-301-512.230, R645- 301-515.200, R645-301-528.320, R645-301-536 through R645-301-536.200, R645- 301-536.500, R645-301-542.730, and R645-301-746.100 and the additional requirements of R645-301-210, R645-301-513.400, R645-301-514.200, R645-301- 528.322, R645-301-536.900, R645-301-553.250, and R645-301-746.200 and the requirements of the MSHA, 30 CFR 77.214 and 77.215.

746.211. If the disposal area contains springs, natural or manmade water courses, or wet weather seeps, the design will include diversions and underdrains as necessary to control erosion, prevent water infiltration into the disposal facility and ensure stability.

746.212. Uncontrolled surface drainage may not be diverted over the outslope of the refuse pile. Runoff from areas above the refuse pile and runoff from the surface of the refuse pile will be diverted into stabilized diversion channels designed to meet the requirements of R645-301-742.300 to safely pass the runoff from a 100-year, 6-hour precipitation event. Runoff diverted from undisturbed areas need not be commingled with runoff from the surface of the refuse pile.

746.213. Underdrains will comply with the requirements of R645-301-745.122.

746.220. Surface Area Stabilization.

746.221. Slope protection will be provided to minimize surface erosion at the site. All **disturbed areas**, including diversion channels that are not riprapped or otherwise protected, will be revegetated upon completion of construction.

746.222. No permanent impoundments will be allowed on the completed refuse pile. Small depressions may be allowed by the Division if they are needed to retain moisture, minimize erosion, create and enhance wildlife habitat, or assist revegetation, and if they are not incompatible with stability of the refuse pile.

746.300. Impounding structures. New and existing impounding structures constructed of coal mine waste or intended to impound coal mine waste will meet the requirements of R645-301-512.230, R645-301-515.200, R645-301-528.320, R645-301-536 through R645-301-536.200, R645-301-536.500, R645-301-542.730, and R645-301-746.100.

746.310. Coal mine waste will not be used for construction of impounding structures unless it has been demonstrated to the Division that the use of coal mine waste will not have a detrimental effect on downstream water quality or the environment due to acid seepage through the impounding structure. The potential impact of acid mine seepage through the impounding structure will be discussed in detail.

746.311. Each impounding structure constructed of coal mine waste or intended to impound coal mine waste will be designed, constructed and maintained in accordance with R645-301-512.240, R645-301-513.200, R645-301-514.310 through R645-301-514.330, R645-301-515.200, R645-301-533.100 through R645-301-533.500, R645-301-733.230, R645-301-733.240, R645-301-743.100, and R645-301-743.300. Such structures may not be retained permanently as part of the approved postmining land use.

746.312 Each impounding structure constructed of coal mine waste or intended to impound coal mine waste that meets the criteria of 30 CFR 77.216(a) will have sufficient spillway capacity to safely pass, adequate storage capacity

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to safely contain, or a combination of storage capacity and spillway capacity to safely control the probable maximum precipitation of a 6-hour precipitation event, or greater event as demonstrated to be needed by the Division.

746.320. Spillways and outlet works will be designed to provide adequate protection against erosion and corrosion. Inlets will be protected against blockage.

746.330. Drainage control. 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 will be diverted into stabilized diversion channels designed to meet the requirements of R645-301-742.300 and designed to safely pass the runoff from a 100-year, 6-hour design precipitation event.

746.340. Impounding structures constructed of or impounding coal mine waste will be designed and operated so that at least 90 percent of the water stored during the design precipitation event will be removed within a 10-day period following that event.

746.400. Return of Coal Processing Waste to Abandoned Underground Workings. Each permit application to conduct UNDERGROUND COAL MINING AND RECLAMATION ACTIVITIES will, if appropriate, include a plan of proposed methods for returning coal processing waste to abandoned underground workings as follows:

746.410. The plan will 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;

746.420. The plan will describe each permanent monitoring well to be located in the backfilled areas, the stratum underlying the mined coal and gradient from the backfilled area; and

746.430. The requirements of R645-301-513.300, R645-301-528.321, R645-301- 536.700, R645-301-746.410 and R645-746.420 will also apply to pneumatic backfilling operations, except where the operations are exempted by the Division from requirements specifying hydrologic monitoring.

747. Disposal of Noncoal Mine Waste.

747.100. Noncoal mine waste, including but not limited to grease, lubricants, paints, flammable liquids, garbage, machinery, lumber and other combustible materials generated during coal mining and reclamation operations will be placed and stored in a controlled manner in a designated portion of the **permit area** or state-approved solid waste disposal area.

747.200. Placement and storage of noncoal mine waste within the **permit area** will ensure that leachate and surface runoff do not degrade surface or ground water.

747.300. Final disposal of noncoal mine waste within the **permit area** will ensure that leachate and drainage does not degrade surface or underground water.

748. Casing and Sealing of Wells. Each water well will be cased, sealed, or otherwise managed, as approved by the Division, to prevent acid or other toxic drainage from entering ground or surface water, to minimize disturbance to the hydrologic balance, and to ensure the safety of people, livestock, fish and wildlife, and machinery in the permit and **adjacent area**. If a water well is exposed by coal mining and reclamation operations, it will be permanently closed unless otherwise managed in a manner approved by the Division. Use of a drilled hole or borehole or monitoring well as a water well must comply with the provision of R645-301-731.100 through R645-301-731.522 and R645-301- 731.800.

750. Performance Standards.

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All coal mining and reclamation operations will be conducted to minimize disturbance to the hydrologic balance within the permit and **adjacent areas**, to prevent material damage to the hydrologic balance outside the **permit area** and support approved postmining land uses in accordance with the terms and conditions of the approved permit and the performance standards of R645-301 and R645-302. For the purposes of SURFACE COAL MINING AND RECLAMATION ACTIVITIES, operations will be conducted to assure the protection or replacement of water rights in accordance with the terms and conditions of the approved permit and the performance standards of R645-301 and R645-302.

751. Water Quality Standards and Effluent Limitations. Discharges of water from areas disturbed by coal mining and reclamation operations will be made in compliance with all Utah and federal water quality laws and regulations and with effluent limitations for coal mining promulgated by the U.S. Environmental Protection Agency set forth in 40 CFR Part 434.

752. Sediment Control Measures. Sediment control measures must be located, maintained, constructed and reclaimed according to plans and designs given under R645-301-732, R645-301-742 and R645-301-760.

752.100. Siltation structures and diversions will be located, maintained, constructed and reclaimed according to plans and designs given under R645-301- 732, R645-301-742 and R645-301-763.

752.200. Road Drainage. Roads will be located, designed, constructed, reconstructed, used, maintained and reclaimed according to R645-301-732.400, R645-301-742.400 and R645-301-762 and to achieve the following:

752.210. Control or prevent erosion, siltation and the air pollution attendant to erosion by vegetating or otherwise stabilizing all exposed surfaces in accordance with current, prudent engineering practices;

752.220. Control or prevent additional contributions of suspended solids to stream flow or runoff outside the **permit area**;

752.230. Neither cause nor contribute to, directly or indirectly, the violation of effluent standards given under R645-301-751;

752.240. Minimize the diminution to or degradation of the quality or quantity of surface-and ground-water systems; and

752.250. Refrain from significantly altering the normal flow of water in streambeds or drainage channels.

753. Impoundments and Discharge Structures. Impoundments and discharge structures will be located, maintained, constructed and reclaimed to comply with R645-301-733, R645-301-734, R645-301-743, R645-301-745 and R645-301-760.

754. Disposal of Excess Spoil, Coal Mine Waste and Noncoal Mine Waste. Disposal areas for excess spoil, coal mine waste and noncoal mine waste will be located, maintained, constructed and reclaimed to comply with R645-301-735, R645-301-736, R645-301-745, R645-301-746, R645-301-747 and R645-301-760.

755. Casing and Sealing of Wells. All wells will be managed to comply with R645-301-748 and R645-301-765. Water monitoring wells will be managed on a temporary basis according to R645-301-738.

760. Reclamation.

761. General Requirements. Before abandoning a **permit area** or seeking bond release, the operator will ensure that all temporary structures are removed and reclaimed, and that all permanent sedimentation ponds, diversions, impoundments and treatment facilities meet the requirements of R645-301 and R645-302 for permanent structures, have been maintained properly and meet the requirements of the approved reclamation plan for permanent structures

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and impoundments. The operator will renovate such structures if necessary to meet the requirements of R645-301 and R645-302 and to conform to the approved reclamation plan.

762. Roads. A road not to be retained for use under an approved postmining land use will be reclaimed immediately after it is no longer needed for coal mining and reclamation operations, including:

762.100. Restoring the natural drainage patterns;

762.200. Reshaping all cut and fill slopes to be compatible with the postmining land use and to complement the drainage pattern of the surrounding terrain.

763. Siltation Structures.

763.100. Siltation structures will be maintained until removal is authorized by the Division and the **disturbed area** has been stabilized and revegetated. In no case will the structure be removed sooner than two years after the last augmented seeding.

763.200. When the siltation structure is removed, the land on which the siltation structure was located will be regraded and revegetated in accordance with the reclamation plan and R645-301-358, R645-301-356, and R645-301-357. Sedimentation ponds approved by the Division for retention as permanent impoundments may be exempted from this requirement.

764. Structure Removal. The application will include the timetable and plans to remove each structure, if appropriate.

765. Permanent Casing and Sealing of Wells. When no longer needed for monitoring or other use approved by the Division upon a finding of no adverse environmental or health and safety effects, or unless approved for transfer as a water well under R645-301-731.100 through R645-301-731.522 and R645-301- 731.800, each well will be capped, sealed, backfilled, or otherwise properly managed, as required by the Division in accordance with R645-301-529.400, R645-301-631.100, and R645-301-748. Permanent closure measures will be designed to prevent access to the mine workings by people, livestock, fish and wildlife, machinery and to keep acid or other toxic drainage from entering ground or surface waters.

R645-301-800. Bonding and Insurance.

The rules in R645-301-800 set forth the minimum requirements for filing and maintaining bonds and insurance for coal mining and reclamation operations under the State Program.

810. Bonding Definitions and Division Responsibilities.

811. Terms used in R645-301-800 may be found defined in R645-100-200.

812. Division Responsibilities--Bonding.

812.100. The Division will prescribe and furnish forms for filing performance bonds.

812.200. The Division will prescribe by regulation terms and conditions for performance bonds and insurance.

812.300. The Division will determine the amount of the bond for each area to be bonded, in accordance with R645-301-830. The Division will also adjust the amount as acreage in the **permit area** is revised, or when other relevant conditions change according to the requirements of R645-301-830.400.

812.400. The Division may accept a self-bond if the permittee meets the requirements of R645-301-860.300 and

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any additional requirements in the State or Federal program.

812.500. The Division will release liability under a bond or bonds in accordance with R645-301-880 through R645-301-880.800.

812.600. If the conditions specified in R645-301-880.900 occur, the Division will take appropriate action to cause all or part of a bond to be forfeited in accordance with procedures of that Section.

812.700. The Division will require in the permit that adequate bond coverage be in effect at all times. Except as provided in R645-301-840.520, operating without a bond is a violation of a condition upon which the permit is issued.

820. Requirement to File a Bond.

820.100. After a permit application under R645-301 has been approved, but before a permit is issued, the applicant will file with the Division, on a form prescribed and furnished by the Division, a bond or bonds for performance made payable to the Division and conditioned upon the faithful performance of all the requirements of the State Program, the permit and the reclamation plan.

820.110. Areas to be covered by the Performance Bond are:

820.111. The bond or bonds will cover the entire **permit area**, or an identified increment of land within the **permit area** upon which the operator will initiate and conduct coal mining and reclamation operations during the initial term of the permit.

820.112. As coal mining and reclamation operations on succeeding increments are initiated and conducted within the **permit area**, the permittee will file with the Division an additional bond or bonds to cover such increments in accordance with R645-830.400.

820.113. The operator will identify the initial and successive areas or increments for bonding on the permit application map submitted for approval as provided in the application, and will specify the bond amount to be provided for each area or increment.

820.114. Independent increments will be of sufficient size and configuration to provide for efficient reclamation operations should reclamation by the Division become necessary pursuant to R645-301-880.900.

820.120. An operator will not disturb any surface areas, succeeding increments, or extend any underground shafts, tunnels, or operations prior to acceptance by the Division of the required performance bond.

820.130. The applicant will file, with the approval of the Division, a bond or bonds under one of the following schemes to cover the bond amounts for the **permit area** as determined in accordance with R645-301-830:

820.131. A performance bond or bonds for the entire **permit area**;

820.132. A cumulative bond schedule and the performance bond required for full reclamation of the initial area to be disturbed; or

820.133. An incremental-bond schedule and the performance bond required for the first increment in the schedule.

820.200. Form of the Performance Bond.

820.210. The Division will prescribe the form of the performance bond.

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820.220. The Division may allow for:

820.221. A surety bond;

820.222. A collateral bond;

820.223. A self-bond; or

820.224. A combination of any of these bonding methods.

820.300. Period of Liability.

820.310. Performance bond liability will be for the duration of the coal mining and reclamation operations and for a period which is coincident with the operator's period of extended responsibility for successful revegetation provided in R645-301-356 or until achievement of the reclamation requirements of the State Program and permit, whichever is later.

820.320. With the approval of the Division, a bond may be posted and approved to guarantee specific phases of reclamation within the **permit area** provided the sum of phase bonds posted equals or exceeds the total amount required under R645-301-830 and 830.400. The scope of work to be guaranteed and the liability assumed under each phase bond will be specified in detail.

820.330. Isolated and clearly defined portions of the **permit area** requiring extended liability may be separated from the original area and bonded separately with the approval of the Division. Such areas will be limited in extent and not constitute a scattered, intermittent, or checkerboard pattern of failure. Access to the separated areas for remedial work may be included in the area under extended liability if deemed necessary by the Division.

820.340. If the Division approves a long-term, intensive agricultural postmining land-use, in accordance with R645-301-413, the applicable five-or ten-year period of liability will commence at the date of initial planting for such long-term agricultural use.

820.350. General.

820.351. The bond liability of the permittee will include only those actions which he or she is obligated to take under the permit, including completion of the reclamation plan, so that the land will be capable of supporting the postmining land use approved under R645-301-413.

820.352. Implementation of an alternative postmining land-use approved under R645-301-413.300 which is beyond the control of the permittee need not be covered by the bond. Bond liability for prime farmland will be as specified in R645-301-880.320.

830. Determination of Bond Amount.

830.100. The amount of the bond required for each bonded area will:

830.110. Be determined by the Division;

830.120. Depend upon the requirements of the approved permit and reclamation plan;

830.130. Reflect the probable difficulty of reclamation, giving consideration to such factors as topography, geology, hydrology and revegetation potential; and

830.140. Be based on, but not limited to, the detailed estimated cost, with supporting calculations for the estimates,

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submitted by the permit applicant.

830.200. The amount of the bond will be sufficient to assure the completion of the reclamation plan if the work has to be performed by the Division in the event of forfeiture, and in no case will the total bond initially posted for the entire area under one permit be less than $10,000.

830.300. An additional inflation factor will be added to the subtotal for the permit term. This inflation factor will be based upon an acceptable Costs Index.

830.400. Adjustment of Amount.

830.410. The amount of the bond or deposit required and the terms of the acceptance of the applicant's bond will be adjusted by the Division from time to time as the area requiring bond coverage is increased or decreased or where the cost of future reclamation changes. The Division may specify periodic times or set a schedule for reevaluating and adjusting the bond amount to fulfill this requirement.

830.420. The Division will:

830.421. Notify the permittee, the surety, and any person with a property interest in collateral who has requested notification under R645-301-860.260 of any proposed adjustment to the bond amount; and

830.422. Provide the permittee an opportunity for an informal conference on the adjustment.

830.430. A permittee may request reduction of the amount of the performance bond upon submission of evidence to the Division providing that the permittee's method of operation or other circumstances reduces the estimated cost for the Division to reclaim the bonded area. Bond adjustments which involve undisturbed land or revision of the cost estimate of reclamation are not considered bond release subject to procedures of R645-301-880.100 through R645-301-880.800.

830.440. In the event that an approved permit is revised in accordance with the R645 rules, the Division will review the bond for adequacy and, if necessary, will require adjustment of the bond to conform to the permit as revised.

830.500. An operator's financial responsibility under R645-301-525.230 for repairing material damage resulting from subsidence may be satisfied by the liability insurance policy required under R645-301-890.

840. General Terms and Conditions of the Bond.

840.100. The performance bond will be in an amount determined by the Division as provided in R645-301-830.

840.200. The performance bond will be payable to the Division.

840.300. The performance bond will be conditioned upon faithful performance of all the requirements of the State Program and the approved permit, including completion of the reclamation plan.

840.400. The duration of the bond will be for the time period provided in R645-301-820.300.

840.500. General.

840.510. The bond will provide a mechanism for a bank or surety company to give prompt notice to the Division and the permittee of any action filed alleging the insolvency or bankruptcy of the surety company, the bank, or the permittee, or alleging any violations which would result in suspension or revocation of the surety or bank charter or license to do business.

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840.520. Upon the incapacity of a bank or surety company by reason of bankruptcy, insolvency, or suspension or revocation of a charter or license, the permittee will be deemed to be without bond coverage and will promptly notify the Division. The Division, upon notification received through procedures of R645-301-840.510 or from the permittee, will, in writing, notify the operator who is without bond coverage and specify a reasonable period, not to exceed 90 days, to replace bond coverage. If an adequate bond is not posted by the end of the period allowed, the operator will cease coal extraction and will comply with the provisions of R645-301-541.100 through R645-301-541.400 as applicable and will immediately begin to conduct reclamation operations in accordance with the reclamation plan. Mining operations will not resume until the Division has determined that an acceptable bond has been posted.

850. Bonding Requirements for UNDERGROUND COAL MINING AND RECLAMATION ACTIVITIES and Associated Long-Term Coal-Related Surface Facilities and Structures.

850.100. Responsibilities. The Division will require bond coverage, in an amount determined under R645-301-830, for long-term surface facilities and structures, and for areas disturbed by surface impacts incident to UNDERGROUND COAL MINING AND RECLAMATION ACTIVITIES, for which a permit is required. Specific reclamation techniques required for underground mines and long-term facilities will be considered in determining the amount of bond to complete the reclamation.

850.200. Long-term period of liability.

850.210. The period of liability for every bond covering long-term surface disturbances will commence with the issuance of a permit, except that to the extent that such disturbances will occur on a succeeding increment to be bonded, such liability will commence upon the posting of the bond for that increment before the initial surface disturbance of that increment. The liability period will extend until all reclamation, restoration, and abatement work under the permit has been completed and the bond is released under the provisions of R645-301-880.100 through R645-301-880.800 or until the bond has been replaced or extended in accordance with R645-301-850.230.

850.220. Long-term surface disturbances will include long-term coal-related surface facilities and structures, and surface impacts incident to underground coal mining activities which disturb an area for a period that exceeds five years. Long-term surface disturbances include, but are not limited to: surface features of shafts and slope facilities; coal refuse areas; powerlines; boreholes; ventilation shafts; preparation plants; machine shops, roads and loading and treatment facilities.

850.230. To achieve continuous bond coverage for long-term surface disturbances, the bond will be conditioned upon extension, replacement or payment in full, 30 days prior to the expiration of the bond term.

850.240. Continuous bond coverage will apply throughout the period of extended responsibility for successful revegetation and until the provisions of R645-301-880.100 through R645-301-880.800 inclusive have been met.

850.300. Bond Forfeiture. The Division will take action to forfeit a bond pursuant to R645-301-850 if 30 days prior to bond expiration the operator has not filed:

850.310. The performance bond for a new term as required for continuous coverage; or

850.320. A performance bond providing coverage for the period of liability, including the period of extended responsibility for successful revegetation.

860. Forms of Bonds.

860.100. Surety Bonds.

860.110. A surety bond will be executed by the operator and a corporate surety licensed to do business in Utah.

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860.120. Surety bonds will be noncancellable during their terms, except that surety bond coverage for lands not disturbed may be canceled with the prior consent of the Division. The Division will advise the surety, within 30 days after receipt of a notice to cancel bond, whether the bond may be canceled on an undisturbed area.

860.200. Collateral Bonds.

860.210. Collateral bonds, except for letters of credit, cash accounts and real property, will be subject to the following conditions:

860.211. The Division will keep custody of collateral deposited by the applicant until authorized for release or replacement as provided in R645-301- 870 and R645-301-880;

860.212. The Division will value collateral at its current market value, not at face value;

860.213. The Division will require that certificates of deposit be made payable to or assigned to the Division both in writing and upon the records of the bank issuing the certificates. If assigned, the Division will require the banks issuing these certificates to waive all rights of setoff or liens against those certificates;

860.214. The Division will not accept an individual certificate of deposit in an amount in excess of $100,000 or the maximum insurable amount as determined by the Federal Deposit Insurance Corporation or the Federal Savings and Loan Insurance Corporation.

860.220. Letters of credit will be subject to the following conditions:

860.221. The letter may be issued only by a bank organized or authorized to do business in the United States;

860.222. Letters of credit will be irrevocable during their terms. A letter of credit used as security in areas requiring continuous bond coverage will be forfeited and will be collected by the Division if not replaced by other suitable bond or letter of credit at least 30 days before its expiration date;

860.223. The letter of credit will be payable to the Division upon demand, in part or in full, upon receipt from the Division of a notice of forfeiture issued in accordance with R645-301-880.900.

860.230. Real property posted as a collateral bond will meet the following conditions:

860.231. The applicant will grant the Division a first mortgage, first deed of trust, or perfected first lien security interest in real property with a right to sell or otherwise dispose of the property in the event of forfeiture under state law;

860.232. In order for the Division to evaluate the adequacy of the real property offered to satisfy collateral requirements, the applicant will submit a schedule of the real property which will be mortgaged or pledged to secure the obligations under the indemnity agreement. The list will include:

860.232.1. A description of the property;

860.232.2. The fair market value as determined by an independent appraisal conducted by a certified appraiser approved by the Division; and

860.232.3. Proof of possession and title to the real property;

860.233. The property may include land which is part of the **permit area**; however, land pledged as collateral for a bond under this section will not be disturbed under any permit while it is serving as security under this section.

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860.240. Cash accounts will be subject to the following conditions:

860.241. The Division may authorize the operator to supplement the bond through the establishment of a cash account in one or more federally insured or equivalently protected accounts made payable upon demand to, or deposited directly with, the Division. The total bond including the cash account will not be less than the amount required under terms of performance bonds including any adjustments, less amounts released in accordance with R645-301- 880;

860.242. Any interest paid on a cash account will be retained in the account and applied to the bond value of the account unless the Division has approved the payment of interest to the operator;

860.243. Certificates of deposit may be substituted for a cash account with the approval of the Division; and

860.244. The Division will not accept an individual cash account in an amount in excess of $100,000 or the maximum insurable amount as determined by the Federal Deposit Insurance Corporation or the Federal Savings and Loan Insurance Corporation.

860.250. Bond Value of Collateral.

860.251. The estimated bond value of all collateral posted as assurance under this section will be subject to a margin which is the ratio of bond value to market values, as determined by the Division. The margin will reflect legal and liquidation fees, as well as value depreciation, marketability and fluctuations which might affect the net cash available to the Division to complete reclamation.

860.252. The bond value of collateral may be evaluated at any time, but it will be evaluated as part of the permit renewal and, if necessary, the performance bond amount increased or decreased. In no case will the bond value of collateral exceed the market value.

860.260. Persons with an interest in collateral posted as a bond, and who desire notification of actions pursuant to the bond, will request the notification in writing to the Division at the time collateral is offered.

860.300. Self-Bonding.

860.310. Definitions. Terms used in self-bonding are defined under R645-100- 200.

860.320. The Division may accept a self bond from an applicant for a permit if all of the following conditions are met by the applicant or its parent corporation guarantor:

860.321. The applicant designates a suitable agent, resident within the state of Utah, to receive service of process;

860.322. The applicant has been in continuous operation as a business entity for a period of not less than five years. Continuous operation will mean that business was conducted over a period of five years immediately preceding the time of application:

860.322.1. The Division may allow a joint venture or syndicate with less than five years of continuous operation to qualify under this requirement if each member of the joint venture or syndicate has been in continuous operation for at least five years immediately preceding the time of application;

860.322.2. When calculating the period of continuous operation, the Division may exclude past periods of interruption to the operation of the business entity that were beyond the applicant's control and that do not affect the applicant's likelihood of remaining in business during the proposed coal mining and reclamation operations;

860.323. The applicant submits financial information in sufficient detail to show that the applicant meets one of the

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following criteria:

860.323.1. The applicant has a current rating for its most recent bond issuance of "A" or higher as issued by either Moody's Investor Service or Standard and Poor's Corporation;

860.323.2. The applicant has a tangible net worth of at least $10 million, a ratio of total liabilities to net worth of 2.5 times or less and a ratio of current assets to current liabilities of 1.2 times or greater; or

860.323.3. The applicant's fixed assets in the United States total at least $20 million and the applicant has a ratio of total liabilities to net worth of 2.5 times or less and a ratio of current assets to current liabilities of 1.2 times or greater; and

860.324. The applicant submits:

860.324.1. Financial statements for the most recently completed fiscal year accompanied by a report prepared by an independent certified public accountant in conformity with generally accepted accounting principles and containing the accountant's audit opinion or review opinion of the financial statements with no adverse opinion;

860.324.2. Unaudited financial statements for completed quarters in the current fiscal year;

860.324.3. Additional unaudited information as requested by the Division; and

860.324.4. Annual reports for the five years immediately preceding the time of application.

860.330. The Division may accept a written guarantee for an applicant's self bond from a parent corporation guarantor, if the guarantor meets the conditions of R645-301-860.321 through R645-301-860.324 as if it were the applicant. Such a written guarantee will be referred to as a "corporate guarantee." The terms of the corporate guarantee will provide for the following:

860.331. If the applicant fails to complete the reclamation plan, the guarantor will do so or the guarantor will be liable under the indemnity agreement to provide funds to the Division sufficient to complete the reclamation plan, but not to exceed the bond amount;

860.332. The corporate guarantee will remain in force unless the guarantor sends notice of cancellation by certified mail to the applicant and to the Division at least 90 days in advance of the cancellation date, and the Division accepts the cancellation; and

860.333. The cancellation may be accepted by the Division if the applicant obtains a suitable replacement bond before the cancellation date or if the lands for which the self bond, or portion thereof, was accepted have not been disturbed.

860.340. The Division may accept a written guarantee for an applicant's self bond from any corporate guarantor, whenever the applicant meets the conditions of R645-301-860.321, R645-301-860.322, and R645-301-860.324 and the guarantor meets the conditions of R645-301-860.321 through R645-301-860.324 as if it were the applicant. Such a written guarantee will be referred to as a "nonparent corporate guarantee." The terms of this guarantee will provide for compliance with the conditions of R645-301-860.331 through R645-301-860.333. The Division may require the applicant to submit any information specified in R645-301-860-323 in order to determine the financial capabilities of the applicant.

860.350. For the Division to accept an applicant's self bond, the total amount of the outstanding and proposed self bonds of the applicant for coal mining and reclamation operations will not exceed 25 percent of the applicant's tangible net worth in the United States. For the Division to accept a corporate guarantee, the total amount of the parent corporation guarantor's present and proposed self bonds and guaranteed self bonds for surface coal mining and

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reclamation operations will not exceed 25 percent of the guarantor's tangible net worth in the United States. For the Division to accept a nonparent corporate guarantee, the total amount of the nonparent corporate guarantor's present and proposed self bonds and guaranteed self bonds will not exceed 25 percent of the guarantor's tangible net worth in the United States.

860.360. If the Division accepts an applicant's self bond, an indemnity agreement will be submitted subject to the following requirements:

860.361. The indemnity agreement will be executed by all persons and parties who are to be bound by it, including the parent corporation guarantor, and will bind each jointly and severally;

860.362. Corporations applying for a self bond, and parent and nonparent corporations guaranteeing an applicant's self bond shall submit an indemnity agreement signed by two corporate officers who are authorized to bind their corporations. A copy of such authorization shall be provided to the Division along with an affidavit certifying that such an agreement is valid under all applicable federal and Utah laws. In addition, the guarantor shall provide a copy of the corporate authorization demonstrating that the corporation may guarantee the self bond and execute the indemnity agreement.

860.363. If the applicant is a partnership, joint venture or syndicate, the agreement will bind each partner or party who has a beneficial interest, directly or indirectly, in the applicant;

860.364. Pursuant to R645-301-880.900, the applicant, parent or nonparent corporate guarantor shall be required to complete the approved reclamation plan for the lands in default or to pay to the Division an amount necessary to complete the approved reclamation plan, not to exceed the bond amount.

860.365. The indemnity agreement when under forfeiture will operate as a judgment against those parties liable under the indemnity agreement.

860.370. The Division may require self-bonded applicants, parent and nonparent corporate guarantors to submit an update of the information required under R645-301-860.323 and R645-301-860-324 within 90 days after the close of each fiscal year following the issuance of the self bond or corporate guarantee.

860.380. If at any time during the period when a self bond is posted, the financial conditions of the applicant, parent, or nonparent corporate guarantor change so that the criteria of R645-301-860.323 and R645-301-860.340 are not satisfied, the permittee will notify the Division immediately and will within 90 days post an alternate form of bond in the same amount as the self bond. Should the permittee fail to post an adequate substitute bond, the provisions of R645-301-840.500 will apply.

870. Replacement of Bonds.

870.100. The Division may allow a permittee to replace existing bonds with other bonds that provide equivalent coverage.

870.200. The Division will not release existing performance bonds until the permittee has submitted, and the Division has approved, acceptable replacement performance bonds. Replacement of a performance bond pursuant to this section will not constitute a release of bond under R645-301-880.100 through R645-301- 880.800.

880. Requirement to Release Performance Bonds.

880.100. Bond release application.

880.110. The permittee may file an application with the Division for the release of all or part of a performance bond. Applications may be filed only at times or during seasons authorized by the Division in order to properly

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evaluate the completed reclamation operations. The times or seasons appropriate for the evaluation of certain types of reclamation will be identified in the approved mining and reclamation plan.

880.120. Within 30 days after an application for bond release has been filed with the Division, the operator will submit a copy of an advertisement placed at least once a week for four successive weeks in a newspaper of general circulation in the locality of the coal mining and reclamation operations. The advertisement will be considered part of any bond release application and will contain the permittee's name, permit number and approval date, notification of the precise location of the land affected, the number of acres, the type and amount of the bond filed and the portion sought to be released, the type and appropriate dates of reclamation work performed, a description of the results achieved as they relate to the operator's approved reclamation plan and the name and address of the Division to which written comments, objections, or requests for public hearings and informal conferences on the specific bond release may be submitted pursuant to R645-301-880.600 and R645-301-880.800. In addition, as part of any bond release application, the applicant will submit copies of letters which he or she has sent to adjoining property owners, local governmental bodies, planning agencies, sewage and water treatment authorities, and water companies in the locality in which the coal mining and reclamation operation took place, notifying them of the intention to seek release from the bond.

880.130. The permittee shall include in the application for bond release a notarized statement which certifies that all applicable reclamation activities have been accomplished in accordance with the requirements of the Act, the regulatory program, and the approved reclamation plan. Such certification shall be submitted for each application or phase of bond release.

880.200. Inspection by the Division.

880.210. Upon receipt of the bond release application, the Division will, within 30 days, or as soon thereafter as weather conditions permit, conduct an inspection and evaluation of the reclamation work involved. The evaluation will consider, among other factors, the degree of difficulty to complete any remaining reclamation, whether pollution of surface and subsurface water is occurring, the probability of future occurrence of such pollution and the estimated cost of abating such pollution. The surface owner, agent or lessee will be given notice of such inspection and may participate with the Division in making the bond release inspection. The Division may arrange with the permittee to allow access to the **permit area**, upon request of any person with an interest in bond release, for the purpose of gathering information relevant to the proceeding.

880.220. Within 60 days from the filing of the bond release application, if no public hearing is held pursuant to R645-301-880.600, or, within 30 days after a public hearing has been held pursuant to R645-301-880.600, the Division will notify in writing the permittee, the surety or other persons with an interest in bond collateral who have requested notification under R645-301-860.260 and the persons who either filed objections in writing or objectors who were a party to the hearing proceedings, if any, if its decision to release or not to release all or part of the performance bond.

880.300. The Division may release all or part of the bond for the entire **permit area** if the Division is satisfied that all the reclamation or a phase of the reclamation covered by the bond or portion thereof has been accomplished in accordance with the following schedules for reclamation of Phases I, II and III:

880.310. At the completion of Phase I, after the operator completes the backfilling and regrading (which may include the replacement of topsoil) and drainage control of a bonded area in accordance with the approved reclamation plan, 60 percent of the bond or collateral for the applicable area;

880.320. At the completion of Phase II, after revegetation has been established on the regraded mined lands in accordance with the approved reclamation plan, an additional amount of bond. When determining the amount of bond to be released after successful revegetation has been established, the Division will retain that amount of bond for the revegetated area which would be sufficient to cover the cost of reestablishing revegetation if completed by a third party and for the period specified for operator responsibility in UCA 40-10-17(t) of the Act for reestablishing

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revegetation. No part of the bond or deposit will be released under this paragraph so long as the lands to which the release would be applicable are contributing suspended solids to streamflow or runoff outside the **permit area** in excess of the requirements set by UCA 40-10-17(j) of the Act and by R645-301-751 or until soil productivity for prime farmlands has returned to the equivalent levels of yield as nonmined land of the same soil type in the surrounding area under equivalent management practices as determined from the soil survey performed pursuant to UCA 40-10-11(4) of the Act and R645-301-200. Where a silt dam is to be retained as a permanent impoundment pursuant to R645-301-700, the Phase II portion of the bond may be released under this paragraph so long as provisions for sound future maintenance by the operator or the landowner have been made with the Division; and

880.330. At the completion of Phase III, after the operator has completed successfully all surface coal mining and reclamation operations, the release of the remaining portion of the bond, but not before the expiration of the period specified for operator responsibility in R645-301-357. However, no bond will be fully released under provisions of this section until reclamation requirements of the Act and the permit are fully met.

880.400. If the Division disapproves the application for release of the bond or portion thereof, the Division will notify the permittee, the surety, and any person with an interest in collateral as provided for in R645-301-860.260, in writing, stating the reasons for disapproval and recommending corrective actions necessary to secure the release and allowing an opportunity for a public hearing.

880.500. When an application for total or partial bond release is filed with the Division, the Division will notify the municipality in which the coal mining and reclamation activities are located by certified mail at least 30 days prior to the release of all or a portion of the bond.

880.600. Any person with a valid legal interest which might be adversely affected by release of the bond, or the responsible officer or head of any federal, state, or local governmental agency which has jurisdiction by law or special expertise with respect to any environmental, social or economic impact involved in the operation or which is authorized to develop and enforce environmental standards with respect to such operations, will have the right to file written objections to the proposed release from bond with the Division within 30 days after the last publication of the notice required by R645-301- 880.120. If written objections are filed and a hearing is requested, the Division will inform all the interested parties of the time and place of the hearing and will hold a public hearing within 30 days after receipt of the request for the hearing. The date, time and location of the public hearing will be advertised by the Division in a newspaper of general circulation in the locality for two consecutive weeks. The public hearing will be held in the locality of the coal mining and reclamation operations from which bond release is sought, or at the location of the Division office, at the option of the objector.

880.700. For the purpose of the hearing under R645-301-880.600, the Division will have the authority to administer oaths, subpoena witnesses or written or printed material, compel the attendance of witnesses or the production of materials and take evidence including, but not limited to, inspection of the land affected and other surface coal mining operations carried on by the applicant in the general vicinity. A verbatim record of each public hearing will be made and a transcript will be made available on the motion of any party or by order of the Division.

880.800. Without prejudice to the right of an objector or the applicant, the Division may hold an informal conference as provided in UCA 40-10-13(a) of the Act to resolve such written objections. The Division will make a record of the informal conference unless waived by all parties, which will be accessible to all parties. The Division will also furnish all parties of the informal conference with a written finding of the Division based on the informal conference and the reasons for said finding.

880.900. Forfeiture of Bonds.

880.910. If an operator refuses or is unable to conduct reclamation of an unabated violation, if the terms of the permit are not met, or if the operator defaults on the conditions under which the bond was accepted, the Division will take the following action to forfeit all or part of a bond or bonds for any **permit area** or an increment of a **permit area**:

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880.911. Send written notification by certified mail, return receipt requested, to the permittee and the surety on the bond, if any, informing them of the determination to forfeit all or part of the bond including the reasons for the forfeiture and the amount to be forfeited. The amount will be based on the estimated total cost of achieving the reclamation plan requirements;

880.912. Advise the permittee and surety, if applicable, of the conditions under which forfeiture may be avoided. Such conditions may include, but are not limited to:

880.912.1. Agreement by the permittee or another party to perform reclamation operations in accordance with a compliance schedule which meets the conditions of the permit, the reclamation plan and the State Program and a demonstration that such party has the ability to satisfy the conditions; or

880.912.2. The Division may allow a surety to complete the reclamation plan, or the portion of the reclamation plan applicable to the bonded phase or increment, if the surety can demonstrate an ability to complete the reclamation in accordance with the approved reclamation plan. Except where the Division may approve partial release authorized under R645-301-880.100 through R645-301-880.800, no surety liability will be released until successful completion of all reclamation under the terms of the permit, including applicable liability periods of R645-301-820.300.

880.920. In the event forfeiture of the bond is required by this section, the Division will:

880.921. Proceed to collect the forfeited amount as provided by applicable laws for the collection of defaulted bonds or other debts if actions to avoid forfeiture have not been taken, or if rights of appeal, if any, have not been exercised within a time established by the Division, or if such appeal, if taken, is unsuccessful; and

880.922. Use funds collected from bond forfeiture to complete the reclamation plan, or portion thereof, on the **permit area** or increment, to which bond coverage applies.

880.930. Upon default, the Division may cause the forfeiture of any and all bonds deposited to complete reclamation for which the bonds were posted. Bond liability will extend to the entire **permit area** under conditions of forfeiture.

880.931. In the event the estimated amount forfeited is insufficient to pay for the full cost of reclamation, the operator will be liable for remaining costs. The Division may complete, or authorize completion of, reclamation of the bonded area and may recover from the operator all costs of reclamation in excess of the amount forfeited.

880.932. In the event the amount of performance bond forfeited was more than the amount necessary to complete reclamation, the unused funds will be returned by the Division to the party from whom they were collected.

890. Terms and Conditions for Liability Insurance.

890.100. The Division will require the applicant to submit as part of its permit application a certificate issued by an insurance company authorized to do business in Utah certifying that the applicant has a public liability insurance policy in force for the coal mining and reclamation activities for which the permit is sought. Such policy will provide for personal injury and property damage protection in an amount adequate to compensate any persons injured or property damaged as a result of the coal mining and reclamation operations, including the use of explosives and who are entitled to compensation under the applicable provisions of state law. Minimum insurance coverage for bodily injury and property damage will be $300,000 for each occurrence and $500,000 aggregate.

890.200. The policy will 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 under this chapter.

890.300. The policy will include a rider requiring that the insurer notify the Division whenever substantive changes are made in the policy including any termination or failure to renew.

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890.400. The Division may accept from the applicant, in lieu of a certificate for a public liability insurance policy, satisfactory evidence from the applicant that it satisfies applicable state self-insurance requirements approved as part of the State Program and the requirements of R645-301-890.100 through R645-301-890.300.

KEY: reclamation, coal mines

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UTAH ADMINISTRATIVE CODE
NATURAL RESOURCES
R645. OIL, GAS AND MINING; COAL.
Current through February 1, 2000

R645-303. Coal Mine Permitting: Change, Renewal, and Transfer, Assignment, or Sale of Permit Rights.

R645-303-100. General Information on the Change, Renewal, Assignment or Sale of Permit Rights.

110. Objectives. The objectives of R645-303 are to:

111. Provide procedures for the Division to review, change, and renew permits under the regulatory program; and

112. Provide procedures for transfer, sale, or assignment of rights granted in permits under the State Program.

120. Responsibilities of the Division. The Division will:

121. Ensure that permits are revised prior to changes in coal mining and reclamation operations;

122. Ensure that all permits are regularly reviewed to determine that coal mining and reclamation operations under these permits are conducted in compliance with the State Program;

123. Effectively review and act on applications to renew existing permits in a timely manner, to ensure that coal mining and reclamation operations continue, if they comply with the State Program; and

124. Ensure that no person conducts coal mining and reclamation operations, through the transfer, sale, or assignment of rights granted under permits, without the prior approval of the Division.

R645-303-200. Permit Review, Change and Renewal.

210. Division Review of Permits.

211. The Division will review each permit issued and outstanding under the State Program during the term of the permit. This review will occur not later than the middle of each permit term and as follows:

211.100. Permits with a term longer than five years will be reviewed no less frequently than the permit midterm or every five years, whichever is more frequent;

211.200. Permits with variances granted in accordance with R645-302-220 and R645-302-280 will be reviewed no later than three years from the date of issuance of the permit unless, for variances issued in accordance with R645- 302-220, the permittee affirmatively demonstrates that the proposed development is proceeding in accordance with the terms of the permit; and

211.300. Permits containing experimental practices issued in accordance with R645-302-210 and permits with a variance from approximate original contour requirements in accordance with R645-302-270 will be reviewed as set forth in the permit or at least every two and one-half years from the date of issuance as required by the Division in accordance with R645-302-217 and R645-302-273, respectively.

212. After the review required by R645-303-211, or at any time, the Division may, by order, require reasonable permit change in accordance with R645-303- 220 to ensure compliance with the State Program.

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213. Any order of the Division requiring permit change will be based upon written findings and will be subject to the provisions for administrative and judicial review under R645-300-200. Copies of the order will be sent to the permittee.

214. Permits may be suspended or revoked in accordance with R645-400.

220. Permit Changes.

221. At any time during the term of a permit, the permittee may submit to the Division, pursuant to R645-303-220, an Application for Permit Change. The Division will review and respond to an initial Application for a Permit Change within 15 days of receipt of the application.

222. The operator will obtain approval of a permit change by making application in accordance with R645-303-220 for changes in the method of conduct of mining or reclamation operations or in the conditions authorized or required under the approved permit; provided, however, that any extensions to the approved **permit area**, except for Incidental Boundary Changes, must be processed and approved through application for a new permit and may not be approved under R645-303-221 through R645-303-228.

223. The Application for Permit Change will identify the proposed change, or changes, and include the information required under, R645-301, and R645-302 to the extent applicable to the proposed change or changes. The Application for Permit Change will be categorized as a Significant Permit Revision if it involves any of the changes or circumstances set forth in R645-303-224. All other Applications for Permit Change, including Incidental Boundary Changes, will be categorized as Permit Amendments.

224. An Application for Permit Change must be categorized and processed as a Significant Permit Revision for any of the following changes or circumstances:

224.100. An increase in the size of the surface or subsurface **disturbed area** in an amount of 15 percent, or greater, than the **disturbed area** under the approved permit;

224.200. Engaging in operations outside of the cumulative impact area as defined in the Cumulative Hydrologic Impact Assessment (CHIA);

224.300. Engaging in operations in hydrologic basins other than those authorized in the approved permit;

224.400. In order to continue operation after the cancellation or material reduction of the liability insurance policy, capability of self-insurance, performance bond, or other equivalent guarantee upon which the original permit was issued; or

224.500. As otherwise required under applicable law or regulation.

225. Applications for Significant Permit revisions and Permit Amendments will be submitted to the Division at least 120 days and 60 days, respectively, before the change in operations is expected to be implemented.

226. Significant Permit Revisions as provided in R645-303-224 will be reviewed and processed by the Division in accordance with the requirements of R645-300-100 and R645-300-200, and the information requirements of R645-301 and R645-302, including requirements for notice, public participation, and notice of decision.

227. Permit Amendments will be processed in accordance with the requirements of R645-300-100 and R645-300-200, and the information requirements of R645-301 and R645-302, except that permit amendments will not be subject to requirements for notice, public participation, or notice of decision of R645- 300-100.

228. The Division will approve or disapprove the Application for Significant Permit Revisions and Permit

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Amendments, within 120 days and 60 days, respectively, of receipt by the Division of the Administratively Complete Application for Permit Change. The Director may extend the designated time period if it is determined that due to weather conditions, or other considerations, it is physically impossible to perform the review of the Application for Permit Change within that time period.

230. Permit Renewals.

231. General. A valid permit, issued pursuant to the State Program, will carry with it the right of successive renewal, within the approved boundaries of the existing permit, upon expiration of the term of the permit.

232. Application Requirements and Procedures.

232.100. An application for renewal of a permit will be filed with the Division at least 120 days before expiration of the existing permit term.

232.200. An application for renewal of a permit will be in the form required by the Division and will include at a minimum:

232.220. Evidence that a liability insurance policy or adequate self- insurance under R645-301-800 will be provided by the applicant for the proposed period of renewal;

232.230. Evidence that the performance bond in effect for the operation will continue in full force and effect for any renewal requested, as well as any additional bond required by the Division pursuant to R645-301-800;

232.240. A copy of the proposed newspaper notice and proof of publication of same, as required by R645-300-121.100; and

232.250. Additional, revised, or updated information required by the Division.

232.300. Applications for renewal will be subject to the requirements of public notification and public participation contained in R645-300-120 and R645-300-152.

232.400. If an application for renewal includes any proposed revisions to the permit, such revisions will be identified and subject to the requirements of R645-303-220.

232.500. Irrespective of any other R645 rule requirements for permitting coal mining and reclamation operations, a permittee may renew a permit for the purpose of reclamation only if solely reclamation activities remain to be done and no coal will be extracted, processed, or handled. Obligations established under a permit will continue regardless of whether the authorization to extract, process, or handle coal has expired or has been terminated, revoked, or suspended.

233. Approval Process.

233.100. Criteria for approval. The Division will approve a complete and accurate application for permit renewal, unless it finds, in writing that:

233.110. The terms and conditions of the existing permit are not being satisfactorily met;

233.120. The present coal mining and reclamation operations are not in compliance with the environmental protection standards of the State Program;

233.130. The requested renewal substantially jeopardizes the operator's continuing ability to comply with the State Program on existing **permit areas**;

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233.140. The operator has not provided evidence of having liability insurance or self-insurance as required in R645-301-890;

233.150. The operator has not provided evidence that any performance bond required to be in effect for the operation will continue in full force and effect for the proposed period of renewal, as well as any additional bond the Division might require pursuant to R645-301-800; or

233.160. Additional, revised, or updated information required by the Division under R645-303-232.250 has not been provided by the applicant.

233.200. Burden of Proof. In the determination of whether to approve or deny a renewal of a permit, the burden of proof will be on the opponents of renewal.

233.300. Alluvial Valley Floor Variance. If the coal mining and reclamation operation authorized by the original permit was not subject to the standards contained in sections 40-10-11(2)(e)(i) and (ii) of the Act and R645-302-320, because the permittee complied with the exceptions in the proviso to section 40-10-11(2)(e)(ii) of the Act, the portion of the application for renewal of the permit that addresses new land areas previously identified in the reclamation plan for the original permit will not be subject to the standards contained in sections 40-10-11(2)(e)(i) and (ii) of the Act and R645-302-320.

234. Renewal Term. Any permit renewal will be for a term not to exceed the period of the original permit established under R645-300-150.

235. Notice of Decision. The Division will send copies of its decision to the applicant, to each person who filed comments or objections on the renewal, to each party to any informal conference held on the permit renewal, and to the Office.

236. Administrative and Judicial Review. Any person having an interest which is or may be adversely affected by the decision of the Division will have the right to administrative and judicial review set forth in R645-300-200.

R645-303-300. Transfer, Assignment, or Sale of Permit Rights.

310. General Information. No transfer, assignment, or sale of rights granted by a permit will be made without the prior written approval of the Division.

320. Application Requirements. An applicant for approval of the transfer, assignment, or sale of permit rights will:

321. Provide the Division with an application for approval of the proposed transfer, assignment, or sale including:

321.100. The name and address of the existing permittee and permit number or other identifier;

321.200. A brief description of the proposed action requiring approval; and

321.300. The legal, financial, compliance, and related information required by R645-301-100 for the applicant for approval of the transfer, assignment, or sale of permit rights;

322. Advertise the filing of the application in a newspaper of general circulation in the locality of the operations involved, indicating the name and address of the applicant, the permittee, the permit number or other identifier, the geographic location of the permit, and the address to which written comments may be sent; and

323. Obtain appropriate performance bond coverage in an amount sufficient to cover the proposed operations, as

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required under R645-301-800.

330. Public Participation. Any person having an interest which is or may be adversely affected by a decision on the transfer, assignment, or sale of permit rights, including an official of any federal, state, or local government agency, may submit written comments on the application to the Division, within 30 days of the advertisement publication described under R645-303-322.

340. Criteria for Approval. The Division may allow a permittee to transfer, assign, or sell permit rights to a successor, if it finds in writing that the successor:

341. Is eligible to receive a permit in accordance with R645-300-132 and R645-300-133;

342. Has submitted a performance bond or other guarantee, or obtained the bond coverage of the original permittee, as required by R645-301-800; and

343. Meets any other requirements specified by the Division.

350. Notification.

351. The Division will notify the permittee, the successor, commentators, and the Office of its findings.

352. The successor will immediately provide notice to the Division of the consummation of the transfer, assignment, or sale of permit rights.

360. Continued Operation Under Existing Permit. The successor in interest will assume the liability and reclamation responsibilities of the existing permit and will conduct the coal mining and reclamation operations in full compliance with the State Program and the terms and conditions of the existing permit, unless the applicant has obtained a new or revised permit as provided in the R645-200, R645-300, R645-301, R645-302-100 through R645-302-290, R645- 302-310, R645-302-320, and R645-303.

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UTAH ADMINISTRATIVE CODE
NATURAL RESOURCES
R645. OIL, GAS AND MINING; COAL.
Current through February 1, 2000

R645-400. Inspection and Enforcement: Division Authority and Procedures.

R645-400-100. General Information on Authority and Procedures.

110. Right of Entry.

111. Within the State of Utah, Division representatives may enter upon and through any coal exploration or coal mining and reclamation operation without advance notice upon presentation of appropriate credentials. No search warrant will be required, except that the State may provide for its use with respect to entry into a building.

112. Division representatives may inspect any monitoring equipment or method of exploration or operation and have access to and may copy any records required under the approved State Program. Division representatives may exercise these rights at reasonable times, without advance notice, upon presentation of appropriate credentials. No search warrant will be required, except that the State may provide for its use with respect to entry into a building.

120. Enforcement Authority. Nothing in the Federal Act or the State Program will be construed as eliminating any additional enforcement rights or procedures which are available under State law to the Division, but which are not specifically enumerated in Sections 40-10-20 and 40-10-22 of the Act.

130. Inspection Program.

131. The Division will conduct an average of at least one partial inspection per month of each active coal mining and reclamation operation under its jurisdiction, and will conduct a partial inspection of each inactive coal mining and reclamation operation under its jurisdiction as are necessary to ensure effective enforcement of the State Program. A partial inspection is an on-site or aerial review of a person's compliance with some of the permit conditions and requirements imposed under the State Program.

132. The Division will conduct an average of at least one complete inspection per calendar quarter of each active or inactive coal mining and reclamation operation under its jurisdiction. A complete inspection is an on-site review of a person's compliance with all permit conditions and requirements imposed under the State Program, within the entire area disturbed or affected by the coal mining and reclamation operation. Abandoned sites may be inspected on a frequency as determined by the procedures set out in the definition of "abandoned sites" which is found in R645-100-200.

133. The Division will conduct inspections of coal explorations as are necessary to ensure compliance with the State Program.

134. Aerial Inspection.

134.100. Aerial inspections will be conducted in a manner which reasonably ensures the identification and documentation of conditions at each coal mining and reclamation operation inspected.

134.200. Any potential violation observed during an aerial inspection will be investigated on-site within three (3) days: provided, that any indication of a condition, practice or violation constituting cause for the issuance of a cessation order under section 40-10-22(1)(b) of the Act will be investigated on site immediately, and provided

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further, that an on-site investigation of a potential violation observed during an aerial inspection will not be considered to be an additional partial or complete inspection for the purposes of R645-400-131 and R645-400-132.

135. The inspections required under R645-400-131 through R645-400-134 will:

135.100. Be carried out on an irregular basis, so as to monitor compliance at all operations, including those which operate nights, weekends, or holidays;

135.200. Occur without prior notice to the permittee or any agent or employee of such permittee, except for necessary on-site meetings; and

135.300. Include the prompt filing of inspection reports adequate to enforce the requirements of the approved State Program.

136. For the purposes of R645-400 an inactive coal mining and reclamation operation is one for which:

136.100. The Division has secured from the permittee the written notice provided for under R645-301-515.320; or

136.200. Reclamation Phase II as defined at R645-301-880.320 has been completed and the liability of the permittee has been reduced by the Division in accordance with the State Program.

140. Availability of Records.

141. The Division will make available to the Director of the Office, upon request, copies of all documents relating to applications for and approvals of existing, new, or revised coal exploration approvals or coal mining and reclamation operations permits and all documents relating to inspection and enforcement actions.

142. Copies of all records, reports, inspection materials, or information obtained by the Division will be made immediately available to the public in the area of mining until at least five years after expiration of the period during which the subject operation is active or is covered by any portion of a reclamation bond so that they are conveniently available to residents of that area, except:

142.100. As otherwise provided by federal law; and

142.200. For information not required to be made available under R645-203, R645-300-124 or R645-400-144.

143. The Division will ensure compliance with R645-400-142 by either:

143.100. Making copies of all records, reports, inspection materials, and other subject information available for public inspection at a federal, Utah or local government office in the county where the mining is occurring or proposed to occur; or

143.200. At the Division's option and expense, providing copies of subject information promptly by mail at the request of any resident of the area where the mining is occurring or is proposed to occur. Provided, that the Division will maintain for public inspection, at a federal, Utah or local government office in the county where the mining is occurring or proposed to occur, a description of the information available for mailing and the procedure for obtaining such information.

144. In order to protect preparation for hearings and enforcement proceedings, the Director of the Office and the Division may enter into agreements regarding procedures for the special handling of investigative and enforcement reports and other such materials.

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150. Public Participation. The State Program provides for public participation in the enforcement of the State Program in R645-400-200, R645- 400-300, R645-401, and the Board's Procedural Rules.

160. Compliance Conference.

161. Compliance conferences between a permittee and an authorized representative of the Division are provided for and described in R645-400-162 through R645-400-165.

162. A permittee may request an on-site compliance conference with an authorized representative of the Division to review the compliance status of any condition or practice proposed at any coal exploration or coal mining and reclamation operation. Any such conference will not constitute an inspection within the meaning of UCA 40-10-22 and R645-400-130, or any applicable permit or exploration approval.

163. The Division may accept or refuse any request to conduct a compliance conference under R645-400-162.

164. The authorized representative at any compliance conference will review such proposed conditions and practices in order to advise whether any such condition or practice may become a violation of any requirement of the Act, the approved State Program or any applicable permit or exploration approval.

165. Neither the holding of a compliance conference under this section nor any opinion given by the authorized representative at such a conference will affect:

165.100. Any rights or obligations of the Division or of the permittee with respect to any inspection, notice of violation or cessation order, whether prior or subsequent to such compliance conference; or

165.200. The validity of any notice of violation or cessation order issued with respect to any condition or practice reviewed at the compliance conference.

R645-400-200. Information Related to Inspections.

210. Requests for Inspections.

211. A citizen may request a Division inspection under UCA 40-10-22 by furnishing to the Division a signed, written statement (or an oral report followed by a signed, written statement) giving the Division reason to believe that a violation of the State Program or any applicable permit or exploration approval has occurred, and including a phone number and address where the citizen can be contacted.

212. The identity of any person supplying information to the Division relating to a possible violation or imminent danger or harm will remain confidential with the Division if requested by that person, unless that person elects to accompany the inspector on the inspection, or unless disclosure is required under Utah or federal law.

213. If a Division inspection is conducted as a result of information provided to the Division by a citizen as described in R645-400-211, the citizen will be notified as far in advance as practicable when the inspection is to occur and will be allowed to accompany the authorized representative of the Division during the inspection. Such person has a right of entry to, upon, and through the coal exploration or coal mining and reclamation operation about which he or she provided information, but only if he or she is in the presence of and is under control, direction and supervision of the authorized representative while on the mine property. Such right of entry does not include a right to enter buildings without consent of the person in control of the building or without a search warrant. All citizens so visiting mine sites are required to comply with applicable MSHA safety standards.

214. Within 10 days of the Division inspection or, if there is no inspection within 15 days of receipt of the citizen's written statement, the Division will send the citizen the following:

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214.100. If an inspection was made, a description of the enforcement action taken, which may consist of copies of the Division inspection report and all notices of violation and cessation orders issued as a result of the inspection or an explanation of why no enforcement action was taken;

214.200. If no Division inspection was conducted, an explanation of the reason why; and

214.300. An explanation of the citizen's right, if any, to informal review of the action or inaction of the Division under R645-400-240.

215. The Division will give copies of all materials in R645-400-214 within the time limits specified in that Rule to the person alleged to be in violation, except that the name of the citizen will be removed unless disclosure of the citizen's identity is permitted under R645-400-212.

220. Right of Entry.

221. Each authorized representative of the Division conducting an inspection under R645-400 through R645-401:

221.100. Will have a right of entry to, upon, and through any coal exploration or coal mining and reclamation operation without advance notice or a search warrant, upon presentation of appropriate credentials;

221.200. May, at reasonable times and without delay, have access to and copy any records, and inspect any monitoring equipment or method of operation required under the State Program or any condition of an exploration approval or permit imposed under the State Program; and

221.300. Will have a right to gather physical and photographic evidence to document conditions, practices or violations at the site.

222. No search warrant will be required with respect to any activity under R645-400-221 except that a search warrant may be required for entry into a building.

230. Review of Adequacy and Completeness of Inspection. Any person who is or may be adversely affected by coal mining and reclamation operations or coal exploration operations may notify the Director in writing of any alleged failure on the part of the Division to make adequate and complete or periodic inspections as provided in R645-400-130 or R645-400-210. The notification will contain information to demonstrate the belief that the person is or may be adversely affected including the basis for his or her belief that the Division has failed to conduct the required inspections. The Director will within 15 days of receipt of the notification, determine whether there is sufficient information to create a reasonable belief that R645-400-130 or R645-400-210 are not being complied with, and if not, will immediately order an inspection to remedy the noncompliance. The Director will, also furnish the complainant with a written statement of the reasons for such determination and the actions, if any, taken to remedy the noncompliance.

240. Review of Decision Not to Inspect or Enforce.

241. Any person who is or may be adversely affected by coal exploration or coal mining and reclamation operations may ask the Director to review informally an authorized representative's decision not to inspect or take appropriate enforcement action with respect to any violation alleged by that person in a request for State inspection under R645-400-210. The request for review will be in writing and include a statement of how the person is or may be adversely affected and why the decision merits review.

242. The Director will conduct the review and inform the person, in writing, of the results of the review within 30 days of his or her receipt of the request. The person alleged to be in violation will also be given a copy of the results of the review, except that the name of the citizen will not be disclosed unless confidentiality has been

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waived or disclosure is required under Utah or federal law.

243. Informal review under this section will not affect any right to formal review or to a citizen's suit under the State Program.

R645-400-300. Provisions of State Enforcement.

310. Cessation Orders.

311. The Division will immediately order a cessation of coal mining and reclamation operations or of the relevant portion thereof, if it finds, on the basis of any Division inspection, any violation of the State Program, or any condition of a permit or an exploration approval under the State Program, which:

311.100. Creates an imminent danger to the health or safety of the public; or

311.200. Is causing or can reasonably be expected to cause significant, imminent environmental harm to land, air, or water resources.

312. Coal mining and reclamation operations conducted by any person without a valid coal mining 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, unless such operations are an integral, uninterrupted extension of previously permitted operations, and the person conducting such operations has filed a timely and complete application for a permit to conduct such operations.

313. If the cessation ordered under R645-400-311 will not completely abate the imminent danger or harm in the most expeditious manner physically possible, the Division will impose affirmative obligations on the person to whom it is issued to abate the violation. The order will specify the time by which abatement will be accomplished.

314. When a notice of violation has been issued under R645-400-320 and the permittee fails to abate the violation within the abatement period fixed or subsequently extended by the Division then the Division will immediately order a cessation of coal exploration or coal mining and reclamation operations or of the portion relevant to the violation. A cessation order issued under R645- 400-314 will require the permittee to take all steps the Division deems necessary to abate the violations covered by the order in the most expeditious manner physically possible.

315. A cessation order issued under R645-400-311 or R645-400-314 will be in writing, signed by the authorized representative of the Division who issued it, and will set forth with reasonable specificity:

315.100. The nature of the violation;

315.200. The remedial action or affirmative obligation required, if any, including interim steps, if appropriate;

315.300. The time established for abatement, if appropriate, including the time for meeting any interim steps;

315.400. A reasonable description of the portion of the coal exploration or coal mining and reclamation operations to which it applies; and

315.500. The order will remain in effect until the violation has been abated or until vacated, modified or terminated in writing by the Division.

316. Reclamation operations and other activities intended to protect public health and safety and the environment will continue during the period of any order unless otherwise provided in the order.

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317. The Division may modify, terminate or vacate a cessation order for good cause, and may extend the time for abatement if the failure to abate within the time previously set was not caused by lack of diligence on the part of the permittee.

318. The Division will terminate a cessation order by written notice to the permittee, when it is determined that all conditions, practices or violations listed in the order have been abated. Termination will not affect the right of the Board to assess civil penalties for those violations under R645-401.

319. Within sixty days after issuing a cessation order, the Division will notify in writing any person who has been identified under R645-300-147 and R645-301-112.300 and 112.400 as owning or controlling the permittee, that the cessation order was issued and that the person has been identified as an owner or controller.

320. Notices of Violation.

321. The Division will issue a notice of violation if, on the basis of a Division inspection carried out during the enforcement of a State Program it finds a violation of the State Program or any condition of a permit or an exploration approval imposed under the State Program which does not create an imminent danger or harm for which a cessation order must be issued under R645- 400-310.

322. When on the basis of any Division inspection other than one described in R645-400-321, the Division determines that there exists a violation of the State Program or any condition of a permit or an exploration approval required by the Act or the cessation order must be issued under R645-400-310, the Division will issue a notice of violation to the permittee or his agent fixing a reasonable time not to exceed 90 days for the abatement of the violation and providing opportunity for a conference before the Division.

323. A notice of violation issued under R645-400-320 will be in writing, signed by the authorized representative of the Division, and will set forth reasonable specificity:

323.100. The nature of the violation;

323.200. The remedial action required, which may include interim steps;

323.300. A reasonable time for abatement, which may include time for accomplishment of interim steps; and

323.400. A reasonable description of the portion of the coal exploration or coal mining and reclamation operations to which it applies.

324. The Division may extend the time set for abatement or for accomplishment of an interim step, if the failure to meet the time previously set was not caused by lack of diligence on the part of the permittee. The total time for abatement under a notice of violation, including all extensions, will not exceed 90 days from the date of issuance except upon a showing by the permittee that it is not feasible to abate the violation within 90 calendar days due to one or more of the circumstances in R645-400-327. An extended abatement date pursuant to this section will not be granted when the permittee's failure to abate within 90 days has been caused by lack of diligence or intentional delay by the permittee in completing the remedial action required.

325. If the permittee fails to meet any time set for abatement or for accomplishment of an interim step, the Division will issue a cessation order under R645-400-314.

326. The Division will terminate a notice of violation by written notice to the permittee, when the Division determines that all violations listed in the notice of violation have been abated. Termination will not affect the right of the Board to assess civil penalties for those violations which have been abated, nor will termination affect the right of the Board to assess civil penalties for those violations under R645-401.

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327. Circumstances which may qualify a coal mining and reclamation operation for an abatement period of more than 90 days are:

327.100. Where 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 a valid permit expires or is required, for reasons not within the control of the permittee;

327.200. Where 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;

327.300. Where the permittee cannot abate within 90 days due to a labor strike;

327.400. Where 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

327.500. Where abatement within 90 days requires action that would violate safety standards established by statute or regulation under the Mine Safety and Health Act of 1977.

328. Other information on abatement times extended beyond 90 days.

328.100. Whenever an abatement time in excess of 90 days is permitted, interim abatement measures will be imposed to the extent necessary to minimize harm to the public or the environment.

328.200. If any of the conditions in R645-400-327 exists, the permittee may request the authorized representative of the Division to grant an abatement period exceeding 90 days. The authorized representative will not grant such an abatement period without the concurrence of the Director or his or her designee and the abatement period granted will not exceed the shortest possible time necessary to abate the violation. The permittee will have the burden of establishing by clear and convincing proof that he or she is entitled to any extension under the provisions of R645-400-324 and R645-400- 327.

328.300. In determining whether or not to grant an abatement period exceeding 90 days the authorized representative may consider any relevant written or oral information from the permittee or any other source. The authorized representative will promptly and fully document in the file his or her reasons for granting or denying the request. The Director or designee of the Director specified in R645-400-328.200 will review this document before concurring in or disapproving the extended abatement date and will promptly and fully document the reasons for his or her concurrence or disapproval in the file.

328.400. Any determination made under R645-400-328.200 or R645-400-328.300 will contain a right of appeal to the Board under R645-400-360.

328.500. No extension granted under R645-400-328.200 or R645-400-328.300 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 R645-400-328.200.

329. Enforcement actions at abandoned sites. The Division may refrain from using a notice of violation or cessation order for a violation at an abandoned site, as defined in R645-100-200., if abatement of the violation is required under any previously issued notice on order.

330. Suspension or Revocation of Permits.

331. The Board will issue an order to a permittee requiring him or her to show cause why his or her permit and

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right to mine under the State Program should not be suspended or revoked, if the Board determines that a pattern of violations of any requirements of the State Program, or any permit condition required by the Act exists or has existed, and that each violation was caused by the permittee willfully or through an unwarranted failure to comply with those requirements or conditions. A finding of unwarranted failure to comply will be based upon a demonstration of greater than ordinary negligence on the part of the permittee. Violations by any person conducting coal mining and reclamation operations on behalf of the permittee will be attributed to the permittee, unless the permittee establishes that they were acts of deliberate sabotage.

332. Pattern of Violation.

332.100. The Director may determine that a pattern of violations exists or has existed, based upon two or more Division inspections of the **permit area** within a 12-month period, after considering the circumstances, including:

332.110. The number of violations, cited on more than one occasion, of the same or related requirements of the State Program or the permit; and

332.120. The number of violations, cited on more than one occasion, of different requirements of the State Program or the permit; and

332.130. The extent to which the violations were isolated departures from lawful conduct.

332.200. If after the review described in R645-400-332, the Director determines that a pattern of violation exists or has existed and that each violation was caused by the permittee willfully or through unwarranted failure to comply, he or she will recommend that the Board issue an order to show cause as provided in R645-400-331.

332.300. The Director will promptly review the history of violations of any permittee who has been cited for violations of the same or related requirements of the State Program, or the permit during three or more state inspections of the **permit area** within a 12-month period. If, after such review, the Director determines that a pattern of violations exists or has existed, he or she will recommend that the Board issue an order to show cause as provided in paragraph R645-400-331.

333. Number of Violations.

333.100. In determining the number of violations within a 12-month period, the Director will consider only violations issued as a result of a state inspection carried out during enforcement of the State Program.

333.200. The Director may not consider violations issued as a result of inspections other than those mentioned in R645-400-333.100 in determining whether to exercise his or her discretion under R645-400-332.100, except as evidence of the willful or unwarranted nature of the permittee's failure to comply.

334. Whenever a permittee fails to abate a violation contained in a notice of violation or cessation order within the abatement period set in the notice or order or as subsequently extended, the Director will review the permittee's history of violations to determine whether a pattern of violations caused by the permittee's willful or unwarranted failure to comply exists pursuant to this section, and will make a recommendation to the Board concerning whether or not an order to show cause should issue pursuant to R645-400-331.

335. Hearing Procedures.

335.100. If the permittee files an answer to the show cause order and requests a hearing, a formal public hearing on the record will be conducted pursuant to the R641 Rules before the Board or at the Board's option by an administrative hearing officer. The hearing officer will be a person who meets minimum requirements for a hearing officer under Utah law. At such hearing the Division will have the burden of establishing a prima facie case for suspension or revocation of the permit based upon clear and convincing evidence. The ultimate burden of

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persuasion that the permit should not be suspended or revoked will rest with the permittee.

The Board or Officer will give 30 days written notice of the date, time and place of the hearing to the Director, the permittee and any intervenor. Upon receipt of the notice the Director will publish it, if practicable, in a newspaper of general circulation in the area of the coal mining and reclamation operations, and will post it at the Division office closest to those operations. Upon written request by the permittee, such hearing may at the Board's option be held at or near the mine site within the county in which the permittee's operations are located.

335.200. Within 60 days after the hearing, the Board will prepare a written determination, or the Officer will prepare a written determination to the Board, as to whether or not a pattern of violation exists. If the determination is prepared by the hearing officer, it will be reviewed by the Board which will make the final decision thereon. If the Board finds a pattern of violations and revokes or suspends the permit and the permittee's right to mine under the State Program, the permittee will immediately cease coal mining operations on the **permit area** and will:

335.210. If the permit and the right to mine under the State Program are revoked, complete reclamation within the time specified in the order; or

335.220. If the permit and the right to mine under the State Program are suspended, complete all affirmative obligations to abate all conditions, practices, or violations as specified in the order.

340. Service of Notices of Violation, Cessation Orders and Show Cause Orders.

341. A notice of violation or cessation order will be served on the permittee or his designated agent promptly after issuance, as follows:

341.100. By tendering a copy at the coal exploration or coal mining and reclamation operation to the designated agent or to the individual who, based upon reasonable inquiry by the authorized representative, appears to be in charge of the coal exploration or coal mining and reclamation operation referred to in the notice or order. If no such individual can be located at the site, a copy may be tendered to any individual at the site who appears to be an employee or agent of the permittee. Service will be complete upon tender of the notice or order and will not be deemed incomplete because of refusal to accept.

341.200. As an alternative to R645-400-341.100, service may be made by sending a copy of the notice or order by certified mail or by hand to the permittee or his designated agent. Service will be complete upon tender of the notice or order by mail and will not be deemed incomplete because of refusal to accept.

342. A show cause order may be served on the permittee in either manner provided in R645-400-341.

343. Designation by any person of an agent for service of notices and orders will be made in writing to the Division.

350. Informal Public Hearing.

351. Except as provided in R645-400-352 and R645-400-353 a notice of violation or cessation order which requires cessation of mining, expressly or by necessary implication, will expire within 30 days after it is served unless an informal public hearing has been held within that time. The hearing will be held at or reasonably close to the mine site so that it may be viewed during the hearing or at any other location acceptable to the Division and the permittee. The Division office nearest to the mine site will be deemed to be reasonably close to the mine site unless a closer location is requested and agreed to by the Division. Expiration of a notice or order will not affect the Board's right to assess civil penalties for the violations mentioned in the notice or order under R645-401.

352. A notice of violation or cessation order will not expire as provided in R645-400-351, if the condition,

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practice or violation in question has been abated or if the informal public hearing has been waived, or if, with the consent of the permittee, the informal public hearing is held later than 30 days after the notice or order was served. For purposes of R645-400-352:

352.100. The informal public hearing will be deemed waived if the permittee:

352.110. Is informed, by written notice served in the manner provided in R645-400-352.200, that he or she will be deemed to have waived an informal public hearing unless he or she requests one within 30 days after service of the notice; and

352.120. Fails to request an informal public hearing within that time;

352.200. The written notice referred to in R645-400-352.110 will be delivered to the permittee by an authorized representative or sent by certified mail to the permittee no later than five days after the notice or order is served on the permittee; and

352.300. The permittee will be deemed to have consented to an extension of the time for holding the informal public hearing if his or her request is received on or after the 21st day after service of the notice or order. The extension of time will be equal to the number of days elapsed after the 21st day.

353. The Division will give as much advance notice as is practicable of the time, place, and subject matter of the informal public hearing to:

353.100. The permittee; and

353.200. Any person who filed a report which led to that notice or order.

354. The Division will also post notice of the hearing at the office closest to the mine site, and publish it, where practicable, in a newspaper of general circulation in the area of the mine.

355. An informal public hearing will be conducted by a representative of the Board who may accept oral or written arguments and any other relevant information from any person attending.

356. Within five days after the close of the informal public hearing, the Division will affirm, modify or vacate the notice or order in writing. The decision will be sent to:

356.100. The permittee; and

356.200. Any person who filed a report which led to the notice or order.

357. The granting or waiver of an informal public hearing will not affect the right of any person to formal review under UCA 40-10-22-(3). At such formal review proceedings, no evidence as to statements made or evidence produced at an informal public hearing will be introduced as evidence or to impeach a witness.

360. Board Review of Citations.

361. Petition Process.

361.100. A permittee issued a notice of violation or cessation order under R645-400-320 or R645-400-310 or a person having an interest which is or may be adversely affected by the issuance, modification, vacation or termination of a notice or order, may request review of the Division's action by filing an application for review and request for hearing pursuant to UCA 40-10-22(3) and the Board's Rules within 30 days after receiving notice of the action.

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361.200. Upon written petition by the operator or an interested party, the Board, at its discretion, or a hearing examiner appointed by the Board, pursuant to UCA 40-6-10(6), may be requested to hold a hearing at the site of the operation or within such reasonable proximity to the site that any viewings of the site can be conducted during the course of public hearing.

361.300. The Board will issue an order concerning the cessation order within 30 days after its next regularly scheduled hearing of receipt of the petition for review of the Division's cessation order.

362. The filing of a petition for review and request for a hearing under R645-400-360 will not operate as a stay of any notice or order, or of any modification, termination or vacation of either.

370. Inability to Comply.

371. No cessation order or notice of violation issued under R645-400-300 may be vacated because of inability to comply.

372. Inability to comply may not be considered in determining whether a pattern of violations exists.

373. Unless caused by lack of diligence, inability to comply may be considered only in mitigation of the amount of civil penalty under R645-401 and of the duration of the suspension of a permit under R645-400-330.

380. Compliance Conference.

381. A permittee may request an on-site compliance conference with an authorized representative to review the compliance status of any condition or practice proposed at any coal exploration or coal mining and reclamation operation. Any such conference will not constitute an inspection within the meaning of UCA 40-10-22 or R645-400-100.

382. The Division may accept or refuse any request to conduct a compliance conference under R645-400-381. Where the Division accepts such a request, reasonable notice of the scheduled date and time of the compliance conference will be given to the permittee.

383. The authorized representative at any compliance conference will review such proposed conditions and practices as the permittees may request in order to determine whether any such condition or practice may become a violation of any requirement of the Act or of any applicable permit or exploration proposal.

384. Neither the holding of any compliance conference under R645-400-380 nor any opinion given by the authorized representative at such a conference will affect:

384.100. Any rights or obligations of the Division or of the permittee with respect to any inspection, notice of violation or cessation order, whether prior or subsequent to such conference; or

384.200. The validity of any notice of violation or cessation order issued with respect to any condition or practice reviewed at the compliance conference.

390. Injunctive Relief.

391. The Division may request the Utah Attorney General's office to institute a civil action for relief, including a permanent or temporary injunction, restraining order or any other order, in the district court for the district in which the coal exploration or coal mining and reclamation operation is located or in which the permittee has his principal office, whenever that permittee, in violation of the State Program or any condition of an exploration approval or permit:

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391.100. Violates or fails or refuses to comply with any order or decision of the Division under the State Program;

391.200. Interferes with, hinders or delays the Division in carrying out the provisions of the State Program;

391.300. Refuses to admit the Division to a mine;

391.400. Refuses to permit inspection of a mine by the Division;

391.500. Refuses to furnish any required information or report;

391.600. Refuses to permit access to or copying of any required records; or

391.700. Refuses to permit inspection of monitoring equipment.

392. No citizen suits may be brought pursuant to UCA 40-10-21 if the Board, Division or State Attorney General has commenced and is diligently prosecuting a civil action under R645-400-391, however, in any such action in a state court any interested person may intervene as permitted by and in accordance with Rule 24 of the Utah Rules of Civil Procedure.

KEY: reclamation, coal mines

October 1, 1999

Notice of Continuation June 15, 1995

40-10-1 et seq.
UT ADC R645-400
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