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TECHNICAL MEMORANDUM

Utah Coal Regulatory Program

January 25, 2011

TO: Internal File

THRU: Joe Helfrich, Biologist and Team Lead 

FROM: James Owen, Reclamation Engineer

RE: Permit Application, Carbon Resources LLC, Kinney #2, C/007/0047, Task #3646

SUMMARY:

On October 4, 2010, the Utah Division of Oil, Gas & Mining (DOG M) received a permit application from Carbon Resources, LLC. The application was submitted for the purpose of permitting the Kinney No.2 Mine. The proposed mine site is located approximately ½ mile north of Scofield, Utah and east of Utah State Highway 96. Previous coal mining operations have occurred within much of the mine plan area.

The application was a resubmission and was meant to provide a response to deficiencies that were identified by DOGM during review of an earlier submittal (February, 2008). The applicant states that the permit application was completely reformatted to address applicable regulations and to respond to the technical deficiencies.

This technical memorandum will address and identify findings and provide a technical review of the engineering and bonding information submitted with the application. This review is based on compliance with the permit application requirements as detailed in the Utah Coal Mining Rules sections R645-301-500 (engineering) and R645-301-800 (bonding).

The following are deficiencies that were identified during the technical review:

- **R645-301-526.116.1**; The applicant must provide a detailed plan on the changes/work that will be done on Utah Highway SR 96 in connection with mine access. This plan must be presented along with the appropriate UDOT approval.
- **R645-301-522, -301-523, -301-521.100**; The applicant must update the information (the dates, in particular) that are outlined in the general coal development and production sequence located on pages 5-17, 5-19, and any other

location where the sequence is describe in the permit application. Map 15, Mine Plan Layout & Production Schedule, must also be updated to reflect the appropriate projected development & production dates.

- **R645-301-525;** The applicant must provide a complete subsidence control plan. Specifically, the applicant must demonstrate how they will comply with each of the regulations within R645-301-525. This includes but is not limited to the following sub-deficiencies:
 - **R645-301-525.100;** As part of the subsidence control plan, the applicant must conduct and present the results of a pre-subsidence survey as well as provide a narrative indicating whether subsidence, if it occurred, could cause material damage or to diminish the value or reasonable foreseeable use of structures, resources, or water supplies. If the pre-subsidence survey described in R645-301-525.100 shows that no such structures or renewable resource lands exist, or no material damage or diminution could be caused in the event of mine subsidence, and if the Division agrees with such conclusion, no further information need be provided in the application under this section.
 - **R645-301-525.300, -301-525.490;** As part of the subsidence control plan, the applicant must include a narrative or description of the subsidence control methods that will be applied (some are described in R645-301-450 through R645-301-454). This may include such methods as backfilling of voids; leaving support pillars of coal; leaving areas in which no coal is removed, including a description of the overlying area to be protected by leaving the coal in place.
 - **R645-301-525.440, -301-525.490;** As part of the subsidence control plan, and non-dependent upon the results of the pre-subsidence survey, the applicant should include a description of the subsidence monitoring that will be conducted to determine the commencement and degree of subsidence so that, when appropriate, other measures can be taken to prevent, reduce, or correct material damage. This may include visual monitoring (using photography), elevation monitoring (using point surveys/GPS/elevation control points), aerial monitoring (using aerial surveys), etc. This monitoring will be used to demonstrate

and prove whether or not subsidence is occurring using the mining/filling methods that are described in the permit application.

- **R645-301-525.500, -301-525.490;** As part of the subsidence control plan, the applicant must include a commitment to correct any material damage resulting from any 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 which it was capable of supporting before subsidence, and, to the extent required under applicable provisions of State law, either correct material damage resulting from subsidence caused to any structures or facilities by repairing the damage or compensate the owner of such structures or facilities in the full amount of the diminution in value resulting from the subsidence. Repair of damage includes rehabilitation, restoration, compensation, or replacement of damaged structures or facilities.
- **R645-301-525.500;** As part of the subsidence control plan, the application must include a commitment to mail a notification to all owners and occupants of surface properties and structures above the underground workings at least 6 months prior to mining, or within that period if approved by the Division. The notification shall 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.
- **R645-301-512.250;** The applicant must have Maps 20 through 22 correctly certified. Figure 25 appears to have a copy of a professional engineer's certification but is unreadable due to its insufficient size. The Division recommends that the applicant follow the requirements detailed in State Rules R156-22-601 for seal requirements. Other forms of certification are acceptable.
- **R645-301-512.120, -301-121.200;** The applicant must remove any text within the permit application that states that no coal preparation or processing plant is planned for the mine. According to the definitions in the Administrative Introduction to the Utah Coal Mining Rules (R645-100), a "Coal Processing Plant" means any 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 Preparation or Coal Processing" means the chemical and physical process and the cleaning, concentrating, or other processing or preparation of coal.

- **R645-301-528.320, -301-121.200;** Within Chapter 5 of the permit application, the applicant must refer to any "underground development rock" or "mine development rock" as either coal mine waste, underground development waste, or coal processing waste. According to the definitions in the Administrative Introduction to the Utah Coal Mining Rules (R645-100), "Coal Mine Waste" is divided into two categories: coal processing waste and underground development waste. "Coal Processing Waste" means earth materials which are separated from the product coal during cleaning, concentrating, or other processing or preparation of coal. "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. The applicant must clearly define which material is which. The Division considers the rock materials that are encountered during mining operations that *are not* separated or "cleaned" from coal materials to be underground development waste and will be approved to be returned to designated areas underground. The Division considers the rock materials encountered during mining that *are* separated, cleaned, or processed in anyway through any type of coal preparation or coal processing plant, from coal materials to be coal processing waste and will be not be approved to be returned to designated areas underground unless the applicant can demonstrate compliance with R645-301-528.321, R645-301-536.520, R645-301-536.700, and R645-301-746.400. Any materials (high or low ash content) that are stockpiled and sold as combustible carbonaceous rock that can be classified as anthracite, bituminous, sub-bituminous, or lignite are considered coal.
- **R645-301-528.320;** The applicant states that underground development waste will be temporarily stored at an area on the load-out pad and that the area is capable on containing approximately 3,900 tons of material. The applicant must state the maximum amount of time that the material will remain on the load site. The Division needs this information so that there will be no confusion about what constitutes temporary storage. If the Division considers the maximum storage time to be greater that temporary status, the applicant must demonstrate compliance with all regulations in R645-301-536.

- **R645-301-536.510;** If the applicant wants to ship coal processing waste or underground development waste off site, the applicant must state specifically to which permitted disposal site the material will be sent. In addition, the receiving site must also be permitted to receive material from the Applicant. All pertinent details and information pertaining to a Letter of Intent for disposal with Arch Coal must be included in Chapter 5 of the permit application or referenced in the appropriate sections of Chapter 5 of the permit application
- **R645-301-524.240;** The applicant must include a commitment that in the event that surface blasting is required, the applicant will submit a certified blast design as an amendment to the generic blast plan provide. The applicant must commit to not blasting until the certified blast design has been reviewed and approved by the Division.
- **R645-301-551;** As per MSHA 30 CFR 75.1711, the applicant must edit the plan for reclamation of mine openings to include a commitment to backfill all portal openings with a minimum of 25 feet of material. This backfill must be placed in addition to the portal seals that will be constructed. Map 17 should be edited to include a backfilled adit in final reclamation status.
- **R645-301-512.130;** All reclamation maps should be properly certified. For example, Map 29, Mine Surface Facilities Area Post-Mining Topography, has not been properly certified.
- **R645-301-800;** The applicant must demonstrate compliance with all of the regulations pertaining to bonding at such a time as bond calculation and reclamation cost estimates can be evaluated based on the details within an approved permit application. All direct and indirect reclamation costs must be included for proper bond calculation. The Division will evaluate the bonding requirements after technical issues with the permit application have been addressed.

TECHNICAL MEMORANDUM

Utah Coal Regulatory Program

TECHNICAL ANALYSIS:

ENVIRONMENTAL RESOURCE INFORMATION

Regulatory Reference: Pub. L 95-87 Sections 507(b), 508(a), and 516(b); 30 CFR 783., et. al.

GENERAL

Regulatory Reference: 30 CFR 783.12; R645-301-411, -301-521, -301-721.

Analysis:

The application included a description of the engineering-related existing and pre-mining environmental resources within the proposed permit area and adjacent areas that may be affected or impacted by the proposed underground mining activities of the Kinney No.2 Mine. This information is included on pages 5-5 through 5-16.m General descriptions and environmental resource information can be found on pages 1-1 through 1-9.

Findings:

Contents and information provided are sufficient enough to meet the minimum requirements of this section of the Utah Coal Mining Rules.

PERMIT AREA

Regulatory Requirements: 30 CFR 783.12; R645-301-521.

Analysis:

The application included a description of the permit boundary and permit area. The description identifies the lands subject to coal mining operations and the anticipated area for which permits for mining are sought. The description can be found on pages 1-19 and 1-20. The applicant also included a table that describes the acreages for permit area and disturbed area and lists the owners of the areas. The table can be found on page 1-17.

Findings:

Contents and information provided are sufficient enough to meet the minimum requirements of this section of the Utah Coal Mining Rules.

MAPS, PLANS, AND CROSS SECTIONS OF RESOURCE INFORMATION

Regulatory Reference: 30 CFR 783.24, 783.25; R645-301-323, -301-411, -301-521, -301-622, -301-722, -301-731.

Analysis:

Coal Resource and Geologic Information Maps

Figures 2 through 10 within the Geology section of the application include information on the 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. All coal crop lines and the strike and dip of the coal to be mined within the proposed permit area.

Existing Structures and Facilities Maps

Existing structures are included on Map 14, Mine Surface Facilities Area and Pre Mining Topography Map.

Existing Surface Configuration Maps

Pre-mining topography details are included on Map 14, Mine Surface Facilities Area and Pre Mining Topography Map.

Mine Workings Maps

Future and past mine workings details are included on Map 15, Mine Plan Layouts and Production Schedule. Previous mining activity details are included on Map 5, Previous Mining Activates.

Monitoring and Sampling Location Maps

There are no subsidence-monitoring locations for this permit application.

Permit Area Boundary Maps

The permit area is depicted on Map 7, Regional Hydrology.

Findings:

Contents and information provided are sufficient enough to meet the minimum requirements of this section of the Utah Coal Mining Rules.

OPERATION PLAN

MINING OPERATIONS AND FACILITIES

Regulatory Reference: 30 CFR 784.2, 784.11; R645-301-231, -301-526, -301-528.

Analysis:

Within the application are general descriptions of the mining operations proposed to be conducted during the life of the mine within the proposed permit area, including, a narrative description of the type and method of coal mining procedures and proposed engineering techniques, anticipated annual and total production of coal, and the major equipment to be used for all aspects of those operations

Descriptions are included for the construction, modification, use, maintenance, and removal of a sedimentation pond, mine facilities, storage areas and structures; coal removal facilities, top-soil storage facilities, materials handling and storage, and transportation areas and structures

The applicant states that the proposed mining and related activities will require limited surface support facilities and that the facilities to be utilized in conjunction with the proposed operations will include new facilities to be constructed in the proposed Kinney No. 2 Mine surface facilities area. Surface facilities will be operated, maintained, and ultimately reclaimed in a manner that prevents or controls erosions and siltation, water pollution, and damage to public or private property; and to the extent possible using the best technology currently available. Required surface facilities are shown and identified on Map 13, Surface Facilities Map.

A number of structures will be required to support the proposed mining and related operations. These facilities will be used to provide storage, maintenance, and support services for mine personnel, equipment, and materials and supplies and will specifically include the following facilities:

- Storage Sheds – 5 each
- Shop – Warehouse
- Fueling Facility
- Mine Office – Bath House
- Water Tank

- Electrical Substation
- Explosives Magazine
- Explosive Cap Magazine

These structures are shown on Map 13, Surface Facilities and are described in details within section R645-301-528 of the permit application, beginning on page 5-52. These descriptions include shop facilities, office, bath house building, maintenance shop, conveyor system, load-out facilities, and warehouse facilities. Figure 26 depicts the coal handling flow sheet. Figure 27 provides a complete elevation schematic of the conveyor system. Figures 28 and 29 depict the plan views of bath house configuration for the lower and upper levels. Figures 30 and 31 depict section views of the bath house. Figure 32 depicts a plan view of the warehouse & shop configuration. Figure 33 & 34 show different cross section views of the warehouse and shop configuration.

Findings:

Contents and information provided are sufficient enough to meet the minimum requirements of this section of the Utah Coal Mining Rules.

EXISTING STRUCTURES:

Regulatory Reference: 30 CFR 784.12; R645-301-526.

Analysis:

The only existing structures consist of a small stone, concrete, and railroad tie building that historically housed a mine fan, a small concrete building used as a powder magazine, and several foundation structures. None of these structures will be used by the Kinney No.2 Mine. These structures can be found on Map 14, Mine Surface Facilities, Pre-Mining Topography Map.

Findings:

Since none of these structures will be used by the Kinney No.2 Mine, no further descriptions, information or details are required. Contents and information provided are sufficient enough to meet the minimum requirements of this section of the Utah Coal Mining Rules.

RELOCATION OR USE OF PUBLIC ROADS

Regulatory Reference: 30 CFR 784.18; R645-301-521, -301-526.

Analysis:

On page 5-37, within section 526.116.1 of the permit application, the applicant states that one public road passes through the permit boundary. Utah Highway SR 96 passes through the northwest corner of the permit boundary and is adjacent to the operations area. The highway is within 100 feet of operations.

Public notice was offered during two public notice and comment periods. The applicant states that no comments were received regarding the highway and Kinney No.2 Mine operations.

The applicant states that the new mine facilities access road will generally follow the alignment of the undeveloped dirt road which begins near the south end of the proposed operations on Highway 96.

On page 5-10, the applicant states that required highway modifications will occur prior to mine development and entirely within the existing Highway 96 right of way and will be conducted under approved plans developed in consultation with the Utah Department of Transportation (UDOT).

Discussions with UDOT have been held and a preliminary plan for access to the mine has been presented to UDOT. UDOT requires a standard intersection design that provides turn lanes into the mine site from both directions as well as through lanes and acceleration and deceleration lanes. Final modification plans will be approved by UDOT prior to any work on the intersection. The applicant states that before any highway work is done, DOGM will be presented with the UDOT approval.

Findings:

The applicant does not have finalized plans approved for changes to be made to public road Utah Highway SR 96. Contents and information provided are not sufficient enough to meet the minimum requirements of this section of the Utah Coal Mining Rules. The following deficiency has been identified:

- **R645-301-526.116.1;** The applicant must provide a detailed plan on the changes/work that will be done on Utah Highway SR 96 in connection with mine access. This plan must be presented along with the appropriate UDOT approval.

COAL RECOVERY

Regulatory Reference: 30 CFR 817.59; R645-301-522.

Analysis:

The applicant lists as its project objectives: maximize recovery of available coal resource, optimize coal production efficiency and economics, facilitate potential development of nearby coal reserves, provide a safe healthy secure working environment, and minimize potential adverse environmental impacts.

The applicant states that after its review and evaluation of possible alternative mining scenarios, that final mine plans were selected as the best combination of mine layout, mining method, and mining sequence in order to maximize the utilization and conservation of the coal, while utilizing the best technology currently available to maintain environmental integrity, so that re-affecting the land in the future through coal mining operations is minimized.

On pages 5-16 through 5-29, the applicant included a description of the measures to be used to maximize the use and conservation of the coal resources. This description includes coal recovery, mine development and sequence, use and conservation of coal resource, mining method, mining equipment and activities, projected annual coal production, support activities, pillar dimension details, and approach to old mine workings areas. The applicant will utilize room development mining methods as the primary coal extraction and production technique. The primary production equipment will include continuous miners, shuttle cars, LHD scoops, and roof bolters.

Findings:

The proposed coal development, production, and mining sequence details have not been updated in terms of the appropriate dates. Contents and information provided are not sufficient enough to meet the minimum requirements of this section of the Utah Coal Mining Rules. The following deficiency has been identified:

- **R645-301-522, -301-523, -301-521.100;** The applicant must update the information (the dates, in particular) that are outlined in the general coal development and production sequence located on pages 5-17, 5-19, and any other location where the sequence is describe in the permit application. Map 15, Mine Plan Layout & Production Schedule, must also be updated to reflect the appropriate projected development & production dates.

SUBSIDENCE CONTROL PLAN

Regulatory Reference: 30 CFR 784.20, 817.121, 817.122; R645-301-521, -301-525, -301-724.

Analysis:

On page 5-31, in section R645-301-525 of the permit application, the applicant states that subsidence typically only occurs at the surface where pillars have been extracted, or where longwall mining methods remove substantial blocks of coal. No second mining, or pillar extraction, or longwall mining that would result in subsidence is planned for the Kinney No. 2 Mine, therefore no subsidence is anticipated.

Renewable Resources Survey

The application did not include any type of details of a pre-subsidence survey showing whether structures or renewable resource lands exist within the proposed permit area and adjacent area and whether subsidence, if it occurred, could cause material damage or diminution of reasonably foreseeable use of such structures or renewable resource lands.

Subsidence Control Plan

In the permit application, the subsidence control plan is over-simplified. The application does not include a narrative indicated whether subsidence, if it occurred could cause material damage or to diminish the value or reasonable foreseeable use of structure or resource or water supplies. The application does not include a description of 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. The application does not include any detailed description of the subsidence control measures that will be taken to prevent or minimize subsidence and subsidence-related damage in the event that subsidence occurs. The Division recognizes that there are many control methods that are being applied but have not been included in this section, such as backfilling of voids; leaving support pillars of coal; leaving areas in which no coal is removed, including a description of the overlying area to be protected by leaving the coal in place.

Performance Standards for Subsidence Control

The applicant provides no commitment to 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 which it was capable of supporting before subsidence, and, to the extent required under applicable provisions of State law, either correct material damage resulting from subsidence caused to any structures or facilities by repairing the damage or compensate the owner of such structures or facilities in the full amount of the diminution in value resulting from the subsidence.

Notification

The application includes no commitment to mail a notification to all owners and occupants of surface property and structures above the underground workings at least 6 months prior to mining. The notification shall 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.

Findings:

Contents and information provided are not sufficient enough to meet the minimum requirements of this section of the Utah Coal Mining Rules. The following deficiencies have been identified:

- **R645-301-525;** The applicant must provide a complete subsidence control plan. Specifically, the applicant must demonstrate how they will comply with each of the regulations within R645-301-525. This includes but is not limited to the following sub-deficiencies:
 - **R645-301-525.100;** As part of the subsidence control plan, the applicant must conduct and present the results of a pre-subsidence survey as well as provide a narrative indicating whether subsidence, if it occurred, could cause material damage or to diminish the value or reasonable foreseeable use of structures, resources, or water supplies. If the pre-subsidence survey described in R645-301-525.100 shows that no such structures or renewable resource lands exist, or no material damage or diminution could be caused in the event of mine subsidence, and if the Division agrees with such conclusion, no further information need be provided in the application under this section.
 - **R645-301-525.300, -301-525.490;** As part of the subsidence control plan, the applicant must include a narrative or description of the subsidence control methods that will be applied (some are described in R645-301-450 through R645-301-454). This may include such methods as backfilling of voids; leaving support pillars of coal; leaving areas in which no coal is removed, including a description of the overlying area to be protected by leaving the coal in place.
 - **R645-301-525.440, -301-525.490;** As part of the subsidence control plan, and non-dependent upon the results of the pre-subsidence survey, the applicant should include a description of the subsidence monitoring that will be conducted to determine the commencement and degree of subsidence so that, when appropriate, other measures can be taken to prevent, reduce, or correct material damage. This may include visual monitoring (using photography), elevation monitoring (using point surveys/GPS/elevation control points), aerial monitoring (using aerial surveys), etc. This monitoring will be used to demonstrate and prove

whether or not subsidence is occurring using the mining/filling methods that are described in the permit application.

- **R645-301-525.500, -301-525.490;** As part of the subsidence control plan, the applicant must include a commitment to correct any material damage resulting from any 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 which it was capable of supporting before subsidence, and, to the extent required under applicable provisions of State law, either correct material damage resulting from subsidence caused to any structures or facilities by repairing the damage or compensate the owner of such structures or facilities in the full amount of the diminution in value resulting from the subsidence. Repair of damage includes rehabilitation, restoration, compensation, or replacement of damaged structures or facilities.

- **R645-301-525.500;** As part of the subsidence control plan, the application must include a commitment to mail a notification to all owners and occupants of surface properties and structures above the underground workings at least 6 months prior to mining, or within that period if approved by the Division. The notification shall 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.

SLIDES AND OTHER DAMAGE

Regulatory Reference: 30 CFR Sec. 817.99; R645-301-515.

Analysis:

On page 5-2 of the application, the applicant states that certain situations involving accident, emergencies, or unforeseen circumstances may require immediate or timely reporting to provide for appropriate coordination of required control and mitigation measures. This includes slides which may have potential adverse effects on public health and safety, property, or the environment. This also includes other damage to excess spoil fills, impoundments, etc.

At any time a slide occurs which may have a potential adverse effect on public, property, health, safety, or the environment, the person who conducts the underground mining activities shall notify the Division by the fastest available means and comply with any remedial measures

required by the Division. The permit application includes a description of notification when potential impoundment hazards exist.

Findings:

Contents and information provided are sufficient enough to meet the minimum requirements of this section of the Utah Coal Mining Rules. The following deficiencies have been identified:

ROAD SYSTEMS AND OTHER TRANSPORTATION FACILITIES

Regulatory Reference: 30 CFR Sec. 784.24, 817.150, 817.151; R645-301-521, -301-527, -301-534, -301-732.

Analysis:

In conjunction with the proposed mining and related operations, the applicant will construct, operate, and maintain a number of new roads and will operate and maintain several existing roads. Roads will be used as transportation facilities for personnel, equipment, and supplies.

Road Classification System

All roads are classified as primary roads. This classification includes any roads used for transporting coal or spoil, roads which are used frequently for periods exceeding 6 months, and roads which will be retained to support the post-mining land use. The applicant states that all roads will be utilized on a frequent, long term basis to support the proposed mining and related operations.

Plans and Drawings

The proposed primary roads are depicted on Map 13, Surface Facilities Map. Profiles for all seven roads (PR-1 through PR-7) are provided on Maps 20 through 22, Mine Road Profiles. Typical road construction practices, road configuration and dimensions for roads are illustrated in Figure 25 within the text.

Performance Standards

The applicant states that all roads have been or will be design and constructed to the extent operationally feasible in the most stable areas available and outside of the channel of intermittent or perennial streams. The applicant states that design and construction of all primary roads will be certified by a certified by a qualified Registered Professional Engineer. Road PR-1

will be a paved asphalt road with all-weather travel surface from Highway 96 to the Shop-warehouse building. PR-2 will also be paved to the mine office building. The mine office pad will also be paved. All other primary roads will be constructed using compacted road base and durable granular surfacing.

Road construction will involve cut and fill earthwork operations. No potential acid or toxic forming materials will be utilized in road construction or as surfacing material. Cut and fill slopes will be established at maximum grades up to 0.8H: 1V. Typical road construction practices, road configuration and dimensions for roads are illustrated in Figure 25. Road gradients will vary from flat to a maximum of approximately 14.5% for the majority of the roads. Road embankments will be constructed and compacted in a controlled manner to provide a minimum static safety factor of 1.3. Only road PR-6 had a gradient about 14.5%, at 18.8%.

Adequately sized ditches and culverts will be installed and maintained to effectively carry road and other disturbed area drainage. The locations of all proposed ditches are shown on Map 24, Drainage and Sediment Control Plan Map. The applicant states that all roads and ditches will be operated and maintained according to the requirement of Utah Coal Mining Rules.

Primary Road Certification

Typical Primary Road configurations for sloping and level terrain were included in Figure 25 within the text. Within Figure 25, the applicant provides the details of the thickness of asphalt and sub-base. Also, the proposed primary roads are depicted on Map 13, Surface Facilities Map. Profiles for all seven roads (PR-1 through PR-7) are provided on Maps 20 through 22, Mine Road Profiles. Map 13 is correctly certified. Maps 20 through 22 have no certification. Figure 25 appears to have a copy of a professional engineer's certification but is unreadable due to its insufficient size.

Other Transportation Facilities

The mine's coal handling system will consist of both the underground coal haulage system and the surface coal handling components which will transport coal from the mine portal to the truck load-out. Components of the surface portion of the coal handling system are shown on Map 13, Surface Facilities Map and include:

- Conveyor SB-1
- Conveyor Transfer Tower
- Conveyor SB-2
- Non-spec Coal Pile & Stacking Tube
- Conveyor SB-3
- Spec Coal Pile & Stacking Tube
- Conveyor SB-4
- Screening & Crushing Building

- **Truck Load-out Building**

The applicant states that the coal handling system had been designed using the best current technology and accepted engineering practices to provide adequate transportation for mined material.

The application included a detailed description of the conveyor system that will be used for mine material transportation. The description included details of conveyor transfer & details, conveyor components, vibrating aprons, pan feeders, and coal stockpiles. The description includes construction, operation, and maintenance of the conveyor system and load-out facilities.

Findings:

Contents and information provided are not sufficient enough to meet the minimum requirements of this section of the Utah Coal Mining Rules. The following deficiencies have been identified:

- **R645-301-512.250;** The applicant must have Maps 20 through 22 correctly certified. Figure 25 appears to have a copy of a professional engineer's certification but is unreadable due to its insufficient size. The Division recommends that the applicant follow the requirements detailed in State Rules R156-22-601 for seal requirements. Other forms of certification are acceptable.

SPOIL AND WASTE MATERIALS

Regulatory Reference: 30 CFR Sec. 701.5, 784.19, 784.25, 817.71, 817.72, 817.73, 817.74, 817.81, 817.83, 817.84, 817.87, 817.89; R645-100-200, -301-210, -301-211, -301-212, -301-412, -301-512, -301-513, -301-514, -301-521, -301-526, -301-528, -301-535, -301-536, -301-542, -301-553, -301-745, -301-746, -301-747.

Analysis:

Disposal of Noncoal Mine Wastes

Non-coal mine wastes generated in conjunction with mining and related activities include but are not limited to used oil and lubricants, garbage, paper waste, machinery parts, tires, cable, wood waste, and other miscellaneous debris. All non-coal solid wastes will be collected and stored in dumpsters or similar closed containers. Larger solid waste materials including such items as equipment, machinery parts, tires, and cables will be temporarily stored in designated sap yards located in areas as shown on Map 13, Surface Facilities Map. Non-coal wastes will be regularly collected and disposed of by a contract disposal service and hauled to a State-approved waste disposal site. The applicant will adhere to the disposal requirements of the State of Utah and the EPA.

Coal Mine Waste

The applicant states that “development rock from underground mining” operations activities may be temporarily stockpiled in the portal area and will be periodically loaded into rear dump trucks and hauled to temporary stockpile areas until it can be returned to the mine, where it will be placed in areas specifically designated for this purpose. Materials that the applicant describes as “mine development waste consisting of rock with no ‘coally’ materials” will be stored at an area on the load-out pad as shown on Map 13, Surface Facilities Map. The area designated is capable of containing approximately 3,900 tons of material.

This material will be placed into designated panel areas inside the mine and will serve to encapsulate pillars. The applicant states that this will passively stabilize pillars in those areas with some confinement. The applicant states that these backfill areas will be ventilated until they are filled and have been monitored for products of combustion for a period of 1 year after backfill operations are complete. If no significant products of combustion have been found the area will be sealed and monitored according to an approved ventilation plan.

The waste rock will be rock, carbonaceous shale, floor clay, and parting material. The source of the material will be general mine development, slope/raise development, overcast development, etc. The material will be conveyed out of the mine with/ or in the same manner as coal is conveyed. Continuous miners, electric shuttle cars, and LHD scoops will be used to load and haul waste rock to the mine conveyor system. The rock will then be conveyed to the surface, separated from the coal, and temporarily stockpiled. The surface coal haulage system has been designed to facilitate mine rock handling through the stacking tube and a dumping flop gate. The rock will then be hauled back underground and stored in the areas designated as disposal areas and depicted on Map 15, Mine Plan Layout & Production Schedule Map.

Refuse Piles

There are no planned surface deposits of coal mine waste for the Kinney No. 2 mine. Coal mine waste will be stockpiled temporarily in the location depicted on Map 13 of the permit application.

Burning and Burned Waste Utilization

No burned waste is expected to be encountered and there are no plans to burn or utilize burned waste in the permit application.

Return of Coal Processing Waste to Abandoned Underground Workings

In multiple places throughout the engineering section of the application, the applicant states that the mine’s development waste material is not coal processing waste since no coal preparation plant is planned. However, according to the definitions of “coal processing waste”

and “coal processing plant” in R645-100, the application describes having coal processing waste returned to underground workings.

Excess Spoil:

There will be no spoil for the Kinney No. 2 Mine since there will no overburden removed during coal mining and reclamation operations.

Findings:

Contents and information provided are not sufficient enough to meet the minimum requirements of this section of the Utah Coal Mining Rules. The following deficiencies have been identified:

- **R645-301-512.120, -301-121.200;** The applicant must remove any text within the permit application that states that no coal preparation or processing plant is planned for the mine. According to the definitions in the Administrative Introduction to the Utah Coal Mining Rules (R645-100), a “Coal Processing Plant” means any 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 Preparation or Coal Processing” means the chemical and physical process and the cleaning, concentrating, or other processing or preparation of coal.
- **R645-301-528.320, -301-121.200;** Within Chapter 5 of the permit application, the applicant must refer to any “underground development rock” or “mine development rock” as either coal mine waste, underground development waste, or coal processing waste. According to the definitions in the Administrative Introduction to the Utah Coal Mining Rules (R645-100), “Coal Mine Waste” is divided into two categories: coal processing waste and underground development waste. “Coal Processing Waste” means earth materials which are separated from the product coal during cleaning, concentrating, or other processing or preparation of coal. “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. The applicant must clearly define which material is which. The Division considers the rock materials that are encountered during mining operations that *are not* separated or “cleaned” from coal materials to be underground development waste and will be approved to

be returned to designated areas underground. The Division considers the rock materials encountered during mining that *are* separated, cleaned, or processed in anyway through any type of coal preparation or coal processing plant, from coal materials to be coal processing waste and will be not be approved to be returned to designated areas underground unless the applicant can demonstrate compliance with R645-301-528.321, R645-301-536.520, R645-301-536.700, and R645-301-746.400. Any materials (high or low ash content) that are stockpiled and sold as combustible carbonaceous rock that can be classified as anthracite, bituminous, sub-bituminous, or lignite are considered coal.

- **R645-301-528.320;** The applicant states that underground development waste will be temporarily stored at an area on the load-out pad and that the area is capable on containing approximately 3,900 tons of material. The applicant must state the *maximum amount of time* that the material will remain on the load site. The Division needs this information so that there will be no confusion about what constitutes temporary storage. If the Division considers the maximum storage time to be greater that temporary status, the applicant must demonstrate compliance with all regulations in R645-301-536.
- **R645-301-536.510;** If the applicant wants to ship coal processing waste or underground development waste off site, the applicant must state specifically to which permitted disposal site the material will be sent. In addition, the receiving site must also be permitted to receive material from the Applicant. All pertinent details and information pertaining to a Letter of Intent for disposal with Arch Coal must be included in Chapter 5 of the permit application or referenced in the appropriate sections of Chapter 5 of the permit application.

HYDROLOGIC INFORMATION

Regulatory Reference: 30 CFR Sec. 773.17, 774.13, 784.14, 784.16, 784.29, 817.41, 817.42, 817.43, 817.45, 817.49, 817.56, 817.57; R645-300-140, -300-141, -300-142, -300-143, -300-144, -300-145, -300-146, -300-147, -300-147, -300-148, -301-512, -301-514, -301-521, -301-531, -301-532, -301-533, -301-536, -301-542, -301-720, -301-731, -301-732, -301-733, -301-742, -301-743, -301-750, -301-761, -301-764.

Analysis:

Sediment Control Measures

The applicant states that drainage and sediment control structures, which will be constructed and utilized in conjunction with the proposed mining and related activities, will effectively route natural drainage through the mine surface disturbance area, intercept and route undisturbed drainage from upslope areas around disturbance areas, and collect and route disturbed area drainage to sedimentation structures to allow settlement of suspended solids prior

to discharge to natural drainages. The applicant states that drainage and settlement control structures required under the proposed permit application will include Sedimentation Pond 1, a number of undisturbed drainage diversion ditches, disturbed area collection ditches, drainage culverts, containment berms, and various alternative drainage and sediment control measures as appropriate. Sediment control measures include practices carried out within and adjacent to the disturbed area.

Ponds, Impoundments, Banks, Dams, and Embankments

The applicant states that Sedimentation Pond 1 has been designed and will be constructed to meet the following regulatory design criteria:

- Located as close as possible to the disturbed area and out of perennial streams unless approved by the Division.
- Provide adequate storage drainage
- Provide adequate detention time to meet applicable effluent standards
- Provide a non-clogging dewatering device
- Minimize short circuiting
- Facilitate periodic sediment removal
- Foundation structures will be stable under all conditions of construction and operation

The applicant states that in addition, Sedimentation Pond 1 design has been prepared by or under the direction of a certified by a qualified Registered Professional Engineer in accordance with Rules R645-301-512.200 and 240.

The applicant states that the sedimentation pond will be inspected quarterly by a qualified person for any indication on structural weakness or other hazardous condition, instability, erosion, or other problems. Impounded water depth will be measured, and any required structural monitoring will be performed. The qualified registered professional engineer, or qualified registered professional land surveyor as applicable, shall promptly after each inspection provide to the Division a certified report that the impoundment has been constructed and/or maintained as designed and in accordance with the approved plan and this section. The report shall include discussion of any appearance of instability, structural weakness or other hazardous condition, 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. A copy of the report shall be retained at or near the mine-site. If any examination or inspection discloses that a potential hazard exists, the person who examined the impoundment shall 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 shall be notified immediately. The Division shall then notify the appropriate agencies that other emergency procedures are required to protect the public.

Sedimentation Pond 1 will be located at the northern end of the mine site, as shown on Maps 24 and 13. It is the only sedimentation pond that is proposed to be used for mining operations. The total contributing drainage area for pond 1 is approximately 28 acres. The pond has been designed to provide adequate total retention capacity of 3.15 acre feet.

The applicant states that Sediment Pond has been designed to meet a minimum 1.3 static safety factor and all other provisions of the required regulations. The pond does not meet the NRCS Class B or C criteria for dams in TR-60 or the size or other criteria of 30 CFR Section 77.216.

Stability analyses were performed for the proposed pond and sudden drawdown conditions. For the sudden drawdown condition, the phreatic surface was modeled to be within one foot of the slope surface 10 feet down-slope of the crest, existing at the toe of the slope after full drawdown. A factor of safety of 3.37 was obtained for the steady state condition. For sudden drawdown, the factor of safety reduces to 2.3. Both are above the required 1.3. Map 25, Sediment Pond No. 1, Sections and Details has been certified by a Registered Professional Engineer.

Findings:

Contents and information provided are sufficient enough to meet the minimum requirements of this section of the Utah Coal Mining Rules. The following deficiencies have been identified:

SUPPORT FACILITIES AND UTILITY INSTALLATIONS

Regulatory Reference: 30 CFR Sec. 784.30, 817.180, 817.181; R645-301-526.

Analysis:

The proposed mining and related operations will utilize new utility installations including electrical distribution, telephone, potable and raw water, and sewer systems. All existing and proposed utility installations are shown on Map 13, Surface Facilities Map.

Descriptions were provided for electrical power systems that will service the mining operation. Electrical power will be provided through an existing power line running north-south immediately east of the portal area. The power line is shown on Map 11, Regional Surface Ownership Map. Electrical voltage will be reduced from the existing power source at a substation located at the portal pad. The substation location is depicted on Map 13.

All proposed electrical components will be designed, constructed, and operated in accordance with regulatory requirements. Any new power lines will be constructed with "raptor proof" power poles. Design specification for these poles is located on Figure 22 on page 3-62

within the biology section of the permit application. All substations, electrical transformers, switchgear, and electrical control components will either be located so that it is not readily accessible to wildlife and the public or appropriate fences with locked gates or other enclosures will be utilized to limit access to authorized personnel.

Buried or overhead telephone lines will be extended by US West from Highway 96 to provide telephone service for mine facilities.

The applicant states that potable water, raw water, and sewer connections are expected to be provided by the town of Scofield. Water requirements for the mine are calculated to be a maximum of 4.7 acre feet per year potable water and 61 acre feet per year non-potable water for mining operations.

Findings:

Contents and information provided are sufficient enough to meet the minimum requirements of this section of the Utah Coal Mining Rules.

SIGNS AND MARKERS

Regulatory Reference: 30 CFR Sec. 817.11; R645-301-521.

Analysis:

The applicant commits to posting and maintaining all required signs and markers in compliance with the applicable regulatory provisions of R645-301-521.200. Sign and markers will be constructed of durable materials and will be posted so as to be clearly visible. Mine identification signs listing the name, business address, and telephone number of the permittee and the permit number will be clearly posted. Perimeter markers will be posted for topsoil stockpile, blasting areas, buffer zones, etc.

All required signs and markers will be maintained or replaced during the period of active operations, site reclamation, and until final bond release is approved for all areas within the permit boundaries.

Findings:

Contents and information provided are sufficient enough to meet the minimum requirements of this section of the Utah Coal Mining Rules.

USE OF EXPLOSIVES

Analysis:

General Requirements

The application states that any surface blasting will be conducted by or under the direction of a certified blaster. Certificates of blaster certification will be carried by blasters or shall be on file at the permit area during blasting operations. A blaster and at least one other person shall be present at the firing of a blast. Any blaster who is responsible for conducting blasting operations at a blasting site shall be familiar with the site-specific performance standards and give direction and 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.

A blast design was included with the permit application (Exhibit 15, Kinney No. 2 Mine Blasting Plan). Blasting operations will be conducted within 1,000 feet of State Highway 96 and within 500 feet of abandoned underground mines.

The blast design contains sketches of the drill patterns, delay periods, and decking and shall indicate the type and amount of explosives to be used, critical dimensions, and the location and general description of structures to be protected, as well as a discussion of design factors to be used, which protect the public and meet the applicable air-blast, fly-rock, and ground-vibration standards. The blast design does not have indication that it was prepared and signed by a certified blaster.

Pre-blasting Survey

Within the permit application, the applicant makes a commitment that at least 30 days before initiation of blasting, the operator shall notify, in writing, all residents or owners of dwellings or other structures located within 1/2 mile of the permit area how to request a pre-blasting survey. A resident or owner of a dwelling or structure within 1/2 mile of any part of the permit area may request a pre-blasting survey. This request shall be made, in writing, directly to the operator or to the Division, who shall promptly notify the operator. The operator shall promptly conduct a pre-blasting survey of the dwelling or structure and promptly prepare a written report of the survey. An updated survey of any additions, modifications, or renovations shall be performed by the operator if requested by the resident or owner.

General Performance Standards

The applicant commits to notify, in writing, residents within 1/2 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. Unscheduled blasts may be conducted only where public or operator health and safety so require and for emergency blasting actions.

Blasting Signs, Warnings, And Access Control

The operator states that 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 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.

Warning and all-clear signals of different character or pattern that are audible within a range of 1/2 mile from the point of the blast shall be given. Each person within the permit area and each person who resides or regularly works within 1/2 mile of the permit area shall be notified of the meaning of the signals in the blasting notification.

Access within the blasting areas shall be controlled to prevent presence of livestock or unauthorized persons during blasting and until an authorized representative of the operator has reasonably determined that no unusual hazards, such as imminent slides or un-detonated charges, exist and access to and travel within the blasting area can be safely resumed.

Control of Adverse Effects

The applicant states that blasting shall 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. UDOT will be notified if Highway 96 needs to be temporarily closed for blasting activities.

Records of Blasting Operations

The applicant states that it will retain a record of all blasts for at least 3 years. Upon request, copies of these records shall be made available to the Division and to the public for inspection.

Findings:

Contents and information provided are not sufficient enough to meet the minimum requirements of this section of the Utah Coal Mining Rules. The following deficiencies have been identified:

- **R645-301-524.240;** The applicant must include a commitment that in the event that surface blasting is required, the applicant will submit a certified blast design as an amendment to the generic blast plan provide. The applicant must commit to not blasting until the certified blast design has been reviewed and approved by the Division.

MAPS, PLANS, AND CROSS SECTIONS OF MINING OPERATIONS

Regulatory Reference: 30 CFR Sec. 784.23; R645-301-512, -301-521, -301-542, -301-632, -301-731, -302-323.

Analysis:

The application included maps depicting affected areas, mine facilities, mine workings, and monitoring and sampling locations. The maps depict Location of each facility used in conjunction with mining operations such as buildings, roads, and facilities to be used in mining and reclamation operations or by others within the permit area; each coal storage, cleaning, and loading area; each topsoil, spoil, coal preparation waste, underground development waste, each water diversion, collection, conveyance, treatment, storage and discharge facility; each source of waste and each waste disposal facility. Also included are the locations and extent of known workings of proposed, active, inactive, or abandoned underground mines, including mine openings to the surface within the proposed permit and adjacent areas.

Findings:

Contents and information provided are sufficient enough to meet the minimum requirements of this section of the Utah Coal Mining Rules. The following deficiencies have been identified:

RECLAMATION PLAN

GENERAL REQUIREMENTS

Regulatory Reference: PL 95-87 Sec. 515 and 516; 30 CFR Sec. 784.13, 784.14, 784.15, 784.16, 784.17, 784.18, 784.19, 784.20, 784.21, 784.22, 784.23, 784.24, 784.25, 784.26; R645-301-231, -301-233, -301-322, -301-323, -301-331, -301-333, -301-341, -301-342, -301-411, -301-412, -301-422, -301-512, -301-513, -301-521, -301-522, -301-525, -301-526, -301-527, -301-528, -301-529, -301-531, -301-533, -301-534, -301-536, -301-537, -301-542, -301-623, -301-624, -301-625, -301-626, -301-631, -301-632, -301-731, -301-723, -301-724, -301-725, -301-726, -301-728, -301-729, -301-731, -301-732, -301-733, -301-746, -301-764, -301-830.

Analysis:

Beginning on page 5-82 of Chapter 5 of the permit application, the applicant included details of the reclamation plan. This section provides a plan for the reclamation of the lands within the proposed permit area, showing how the applicant will comply with the regulatory program and the environmental protection performance standards. It also includes practices to be used to restore disturbed areas resulting from mining and related activities to productive self sustaining use. The general steps for reclamation include:

- Facility Demolition & Removal
- Stabilization and Sealing of Mine Openings
- Disposal of Non-Coal Wastes, and Mine Waste Materials
- Backfilling and Grading to Establish Final Design Configuration
- Drainage Re-establishment
- Road Removal
- Removal and Reclamation of Sedimentation Ponds and Associated Structures
- Soil/Substitute Replacement
- Revegetation
- Soil and Seed Stabilization
- Post-Reclamation Management, Maintenance, & Monitoring

The plan contains a detailed timetable for the completion of each major step in the reclamation plan. Details are provided for initial, interim, and final reclamation. Final reclamation include a plan for backfilling, soil stabilization, compacting, and grading,

A post mining contour map (Map 29) is provided. This provides the details for the anticipated final surface configuration of the proposed permit area; a plan for redistribution of topsoil, subsoil, and other material

Findings:

Contents and information provided are sufficient enough to meet the minimum requirements of this section of the Utah Coal Mining Rules. The following deficiencies have been identified:

BACKFILLING AND GRADING AND AOC RESTORATION

Regulatory Reference: 30 CFR Sec. 784.15, 785.16, 817.102, 817.107, 817.133; R645-301-234, -301-412, -301-413, -301-512, -301-531, -301-533, -301-553, -301-536, -301-542, -301-731, -301-732, -301-733, -301-764, 30 CFR Sec. 785.15, 817.102, 817.107; R645-301-234, -301-537, -301-552, -301-553, -302-230, -302-231, -302-232, -302-233.

Analysis:

Following completion of mining and related operations and subsequent facility removal and sealing of mine openings, the associated disturbances will be backfilled and re-graded to achieve the approximate original contour; eliminate steep cuts and highwall exposure, spoil piles, and depressions; 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 to prevent slides; minimize erosion and water pollution both on and off the site; and, support the approved postmining land use. Final backfilling and grading will require the movement of approximately 221,877 cubic yards of material.

The applicant states that slope limitations for final cut and fill slopes will result in slope configurations having a static factor of safety of at least 1.4. The designed factor of safety for any benched slope is 1.5

The postmining slope is not expected to vary greatly from the approximate original contour. Small depressions will be constructed to retain moisture, minimize erosion, create and enhance wildlife habitat, or assist revegetation. The topsoil on the area shall be removed, segregated, stored, and redistributed in accordance with regulatory requirements; the spoil shall be backfilled and graded on the area in accordance with the general requirements for backfilling and grading. Preparation of final-graded surfaces shall be conducted in a manner that minimizes erosion and provides a surface for replacement of topsoil that will minimize slippage.

Findings:

Contents and information provided are sufficient enough to meet the minimum requirements of this section of the Utah Coal Mining Rules. The following deficiencies have been identified:

MINE OPENINGS

Regulatory Reference: 30 CFR Sec. 817.13, 817.14, 817.15; R645-301-513, -301-529, -301-551, -301-631, -301-748, -301-765, -301-748.

Analysis:

The applicant states that five main portals will be constructed. These opening will be permanently sealed on completion of mining. The plan states that portals will be sealed and stabilized by constructing a concrete block wall, at a minimum of 25 feet in-by the portal opening. Further casing and sealing details are located on page 5-92 of the permit application.

Findings:

Contents and information provided are not sufficient enough to meet the minimum requirements of this section of the Utah Coal Mining Rules. The following deficiencies have been identified:

- **R645-301-551;** As per MSHA 30 CFR 75.1711, the applicant must edit the plan for reclamation of mine openings to include a commitment to backfill all portal openings with a minimum of 25 feet of material. This backfill must be placed in addition to the portal seals that will be constructed. Map 17 should be edited to include a backfilled adit in final reclamation status.

ROAD SYSTEMS AND OTHER TRANSPORTATION FACILITIES

Regulatory Reference: 30 CFR Sec. 701.5, 784.24, 817.150, 817.151; R645-100-200, -301-513, -301-521, -301-527, -301-534, -301-537, -301-732.

Analysis:

Reclamation

With the exception of roads to be used for post-mining land use, roads will be reclaimed in accordance with the approved reclamation plan as soon as practicable after it is no longer needed for mining and reclamation operations. This reclamation shall include: closing the road to traffic; removing all bridges and culverts unless approved as part of the postmining land use; removing or otherwise disposing of road-surfacing materials that are incompatible with the postmining land use and revegetation requirements

Retention

The applicant states that certain roads within the mine facilities area will continue to provide access to areas during reclamation and extended liability periods. Roads to be retained for an approved postmining land are classified as primary roads and designed constructed and maintained in accordance with the requirements for primary roads and in consideration of the approved postmining land use.

Findings:

Contents and information provided are sufficient enough to meet the minimum requirements of this section of the Utah Coal Mining Rules. The following deficiencies have been identified:

HYDROLOGIC INFORMATION

Regulatory Reference: 30 CFR Sec. 784.14, 784.29, 817.41, 817.42, 817.43, 817.45, 817.49, 817.56, 817.57; R645-301-512, -301-513, -301-514, -301-515, -301-532, -301-533, -301-542, -301-723, -301-724, -301-725, -301-726, -301-728, -301-729, -301-731, -301-733, -301-742, -301-743, -301-750, -301-751, -301-760, -301-761.

Analysis:

Hydrologic Reclamation Plan

The applicant states that in conjunction with backfilling and grading activities, the applicant will establish a post-mining drainage configuration which is compatible with the natural drainage pattern. Additional information pertaining to hydraulic reclamation is provided in hydrology section (R645-301-700) of the permit application.

Findings:

Contents and information provided are sufficient enough to meet the minimum requirements of this section of the Utah Coal Mining Rules. The following deficiencies have been identified:

MAPS, PLANS, AND CROSS SECTIONS OF RECLAMATION OPERATIONS

Regulatory Reference: 30 CFR Sec. 784.23; R645-301-323, -301-512, -301-521, -301-542, -301-632, -301-731.

Analysis:

Maps with the following information were included in the permit application: affected area (permit boundary), bonded area, final reclamation contours, final surface configuration, and reclamation surface features. Not all maps were correctly certified.

Findings:

Contents and information provided are non sufficient enough to meet the minimum requirements of this section of the Utah Coal Mining Rules. The following deficiencies have been identified:

- **R645-301-512.130;** All reclamation maps should be properly certified. For example, Map 29, Mine Surface Facilities Area Post-Mining Topography, has not been properly certified.

BONDING AND INSURANCE REQUIREMENTS

Regulatory Reference: 30 CFR Sec. 800; R645-301-800, et seq.

Analysis:

In chapter 8 of the permit application, the applicant states that the bond amount will depend on the requirements of the approved permit and reclamation plan. Bond reclamation calculations do not accompany the permit application. The applicant will obtain and post a bond after the Division approves its permit application but before the division issues a permit. The Division will evaluate the bonding requirements after technical issues with the permit application have been addressed.

Findings:

Contents and information provided are non sufficient enough to meet the minimum requirements of this section of the Utah Coal Mining Rules. The following deficiencies have been identified:

- **R645-301-800;** The applicant must demonstrate compliance with all of the regulations pertaining to bonding at such a time as bond calculation and reclamation cost estimates can be evaluated based on the details within an approved permit application. All direct and indirect reclamation costs must be included for proper bond calculation. The Division will evaluate the bonding requirements after technical issues with the permit application have been addressed.

RECOMMENDATIONS:

Division approval should not be granted until all of the above mentioned deficiencies have been addressed.