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State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

August 29, 2016

Emailed 9/12/16

Kirk Nicholes, Resident Agent
Alton Coal Development, LLC
463 North 100 West, Suite 1
Cedar City, Utah 84720

Subject: Deficiency in Abatement of NOV 21183, Task #5267 Alton Coal Development, LLC, Coal Hollow Mine, C/025/0005

Dear Mr. Nicholes:

The Division has reviewed your application for addressing NOV #21183. The Division has identified deficiencies that must be addressed before final approval can be granted. The deficiencies are listed as an attachment to this letter.

The deficiencies authors are identified so that your staff can communicate directly with that individual should questions arise. The plans as submitted are denied. Please resubmit the entire application so that the abatement requirements can be met and the violation can be terminated. You should also note that the deadline for completing the abatement is this Thursday, September 15th. It appears you may need an additional extension of time in order to get the required plans submitted and to allow the Division time to review and approve them. An extension request should be made to this office by close of business tomorrow in order to avoid further enforcement action with respect to this NOV. If you have any questions, please call me at (801) 5389-5325.

Sincerely,

Daron R. Haddock
Coal Program Manager

attachment

cc: Dana Dean
Priscilla Burton



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Technical Analysis and Findings

Utah Coal Regulatory Program

PID: C0250005
TaskID: 5267
Mine Name: COAL HOLLOW
Title: PIT B1 BORROW AREA (NOV 21183)

Summary

The amendment is intended to meet abatement requirements of NOV 21183. Although there are minor additions to Sections 331, 340, and 352 in Chapter 3, this amendment also incorporates other changes to Chapter 3 for general housekeeping purposes. Therefore, a full review of Chapter 3 is included herein.

Deficiencies Details:

Ireinhart

General Contents

Permit Application Format and Contents

Analysis:

Analysis:
This amendment was submitted to abate NOV 21183, which was issued June 3, 2016 for excavating the excess spoil pile below pre-mining contours and creating a steep cut slope where the pre-mining surface was 10h:1v. Surveyed elevations presented by ACD on May 31, 2016 confirmed that five acres of land was cut 28 feet below pre-mining topography, removing 72,000 CY of overburden and leaving a steep cut face (1.5h:1v).

Abatement required for NOV 21183 was written as follows:

Update the MRP narrative with plans for interim reclamation and stabilization of the cut slope affected. State the size of the area affected. Include volumes of spoil to be placed as fill. Describe plans to place fill in a controlled manner, blend contours, provide compaction, control drainage and erosion to establish vegetation. Plans will be designed and certified by a P.E. Provide a timeline for the interim work. Provide existing and proposed interim reclamation contours on a map, with a commitment to provide an as-built survey of the reclamation construction. State in the MRP the volume of excess spoil remaining for other reclamation uses. Adjust the bond line items for all work accordingly. Provide these complete and adequate plans by August 2, 2016.

The application describes the development of a new Pit B1 in the borrow area that will remove coal from beneath the cut slope. The cut slope will become part of the Pit B1 highwall. Pit B1 will extend from the cut slope West and North into the

Borrow Area, covering 14.2 acres. Mining in Pit B1 will be followed by interim reclamation of the 14.2 acre pit and the associated high wall.

The interim reclamation contours are shown on drawings 5-35 and 5-36. The maps of this reclamation are on a scale of 1 in. = 500 ft. with cross-sections shown on a scale of 1 in. = 300 ft. Section 542.100 states that Pit B1 will be fully mined and immediately backfilled (to the intermediate landform shown in Drawings 5-35 and 5-36) in 2016. The interim reclamation will leave a 3h:1v slope against the South permit boundary and a 3h:1v slope along the excess spoil pile north face (Dwg 5-36, cross-section J-J').

The plans do not provide abatement of NOV 21183, because existing and proposed interim contours were not placed on a map of a scale that could be used to evaluate the operational and final contours of the area.

The plans do not provide abatement of NOV 21183, because existing and proposed interim contours were not placed on a map of a scale that could be used to evaluate the operational and final contours of the area; because there is no commitment to provide an as-built survey of the reclamation construction following interim reclamation; because volumes of excess spoil remaining after reclamation of the cut slope are not stated; because the plans do not describe the method to provide compaction, control drainage and erosion to establish vegetation; and because there is no reclamation timeline provided for the major steps of subsoil and topsoil placement.

The application received on August 31, 2017 included revisions to engineering and bonding, Chapter 5 and Chapter 8 of the MRP. Chapter 3 Biology was updated to include the Pit1Borrow area as received Friday September 9, 2016.

Deficiencies Details:

R645-400-326, The plans do not provide abatement of NOV 21183, because existing and proposed interim contours were not placed on a map of a scale that could be used to evaluate the operational and final contours of the area; because there is no commitment to provide an as-built survey of the reclamation construction following interim reclamation; because volumes of excess spoil remaining after reclamation of the cut slope are not stated; because the plans do not describe the method to provide compaction, control drainage and erosion to establish vegetation; and because there is no reclamation timeline provided for the major steps of subsoil and topsoil placement.

R645-301-121.100, Specific details of the interim reclamation of Pit B1 which are partially described in Appendix 2-4 must be referenced in MRP Chapters 2, 5 and 7 of the application and elaborated upon as necessary to meet soils, hydrology and engineering requirements of the Utah R645 Coal Rules as specified in this findings document.

pburton

Environmental Resource Information

General

Analysis:

The amendment meets State of Utah R645-301-300 requirements for a description of the vegetative, fish, and wildlife resources of the permit area and adjacent areas.

The amendment describes vegetative, fish, and wildlife resources of the permit area and adjacent area (North Private Lease and Coal Hollow Lease) in Section 321. Detailed vegetation information and reports are provided in Appendix 3-2, 3-4 and 3-9. Potential impacts to those resources are discussed in the Operations Plan sections 331, 332, Proposed reclamation design to restore or enhance those resources is described in Section 342 and appendix 3-9.

Ireinhart

Vegetation Resource Information

Analysis:

The amendment meets the State of Utah R645-301-321 requirements for vegetation resource information.

Section 321.100 describes plant communities within the permit area and drawing 3-1 shows reference areas. Detailed vegetation information that is repeated in Appendix 3-2, 3-4, and 3-9 was removed and simply referenced to improve clarity and decrease bulk of the document. Vegetation surveys identify if any listed or proposed endangered or threatened species of plants may occur in the permit area. The description is adequate to predict the potential for reestablishing vegetation and

includes productivity measurements on all lands that will be disturbed. Productivity is expressed as pounds/acre and is listed in table 3-34.

Irreinhart

Fish and Wildlife Resource Information

Analysis:

The amendment meets the State of Utah R645-301-322 requirements for fish and wildlife resource information.

In Section 322 the amendment describes fish and wildlife resource information within the proposed permit area and any reference areas. It also includes a history of agency consultation and studies conducted in an effort to design the protection and enhancement plan required under R645-301-333. The area is not likely to include any listed proposed endangered or threatened species of plants or animals as evidenced by USFWS Consultation Code 06E23000-2016-SLI-0325 and analysis in table 3-35.

The permit area contains habitats of unusually high value for the Greater Sage-grouse. As such, Appendix 3-8 has been developed in consultation with Utah Division of Wildlife to outline specific monitoring and mitigation measures required by the Permittee.

The Division determined that approval of this amendment would not affect a listed species or designated critical habitat and therefore did not initiate informational consultation with U.S. Fish and Wildlife Service.

Irreinhart

Maps Vegetation Reference Area

Analysis:

The amendment meets the State of Utah R645-301-323 requirements for maps and aerial photographs.

Drawing 3-1 shows vegetation types and plant communities, including sample locations.

Irreinhart

Operation Plan

Mining Operations and Facilities

Analysis:

The amendment does not meet all the State of Utah R645 requirements for Mining Operations and Facilities.

The amendment does not meet the requirements of R645-301-523 due to misleading information regarding the disturbed acres within Chapter 5 Section 521.140. Narrative within Chapter 5 Section 521.140 states, "The current disturbance is 342 acres and will increase to 372.5 acres to include the borrow area." The current disturbance includes the borrow area, 372.5 acres and the footprint of Pit B-1 is centered within the borrow area. The Permittee must update Chapter 5 Section 521.140 narrative to show the approved area of disturbance is 372.5 acres.

The amendment meets the requirements of R645-301-526, and 528 by addressing a description of the mining operation, method of coal mining, engineering techniques, anticipated annual and total production of coal by tonnage, and major equipment to be used for all aspects of those operations proposed to be conducted during the life. Chapter 5 Section 521.140 describes the general South Private Lease operations. The section was amended to include the proposed Pit B-1 within the borrow area that was encountered incidental to reclamation efforts in the excess spoil pile. The amendment included Drawing 5-10 that now details the location of Pit B-1 to include approximately 14 acres within the previously described borrow area. Narrative was added throughout Chapter 5 detailing that Pit B-1 will be excavated and simultaneously backfilled to remove all coal from the borrow volume to reach the intermediate landform depicted in Drawing 5-35 and 5-36. See the analysis of reclamation for missing information regarding the reclamation of Pit B-1 and "simultaneous backfill". The Interim landform depicted in said drawings is the topography of the site until underground mining operations are completed within Pit 10. At the completion of Pit 10 underground mining, all remaining excess spoil and the borrow area will be utilized in reclamation to achieve a final contour depicted on Drawing 5-37 and 5-37A.

Deficiencies Details:

R645-301-523: The Permittee must update Chapter 5 Section 521.140 narrative to show the approved area of disturbance is 372.5 acres not 342.

cparker

Coal Recovery

Analysis:

The amendment meets the State of Utah R645 requirements for Coal Recovery.

The amendment meets the requirements of R645-301-522 due to a discussion of the measures used to maximize the use and conservation of the coal resources. The Permittee encountered coal below the excess spoil pile during reclamation efforts at the South Private lease that triggered this amendment. The reclamation efforts of removing the overburden to reclaim the remaining extents of Pit 9 make access to this coal economical, where it would not have been otherwise. Narrative was added to Chapter 5 Section 522 detailing the addition of Pit B-1 on Drawings 5-9 and 5-10. The overburden removal above the Pit has presumably reduced the original thicker overburden to approximately 38 feet. Pit B-1 will be developed in a similar open pit design with truck/shovel techniques to minimize losses of coal. General details of the pit design can be viewed on Drawings 5-11. Drawing 5-9 details that the average overburden removal associated with Pit B-1 is 38 feet. The addition of Pit B-1 includes an estimated yearly coal production of 118,000 tons of coal recovered, bringing the total recoverable surface coal in the South Private Lease to 3,416,000 tons of coal.

Narrative was added to Chapter 5 Section 522 detailing the last Pit B-1 to be, "extracted to an extent that protects the eventual regrading and reclamation efforts in the Borrow area..". Upon the completion of mining in Pit B-1 the intermediate landform shown on Drawing 5-35 and 5-36 will be put in place until the closure of underground mining operations. At the closure of underground operations the South Private lease area will be returned to a contour similar to Drawing 5-37 and 5-37A.

cparker

Subsidence Control Plan Renewable Resource

Analysis:

The amendment meets the State of Utah R645-301-332 requirements for describing impacts of subsidence to fish, wildlife, and vegetative resources.

Anticipated impacts of subsidence on wildlife and vegetation are described in Section 332 and 525. Although the Permittee does not project mining induced subsidence, they will conduct surface observation walkovers of each of the 4 developed panel areas. If surface cracking, sinkholes or other surface impacts are noted, they will be reported to the Division and subsequently repaired. Appendix 7-15 describes the PHC and in the event that diminution of discharge rates from seeps and springs occurs, any lost water will be replaced using the water replacement source specified in R645-301-727. Due to the nature of disturbance associated with surface mining, the Permittee has committed to compensatory mitigation efforts as identified in Appendix 3-8.

lreinhart

Fish and Wildlife Protection and Enhancement Plan

Analysis:

The amendment meets the State of Utah R645-301-333 requirements to describe the use of best technology currently available to minimize adverse impacts to fish and wildlife, including compliance with the Endangered Species Act.

A discussion of practices implemented to avoid or minimize impacts on fish and wildlife species is located in Section 333. The identified species that is impacted is the Greater Sage-grouse and protection and enhancement measures have been based on Greater Sage-grouse habitat. Since quality sage-grouse habitat is synonymous with quality sagebrush ecosystems, sage-grouse habitat improvement projects will also provide benefits to the resident wildlife population.

Because of the unavoidable impact to Greater Sage-grouse habitat, ACD has committed to compensatory mitigation at a rate of 1,700 acres for the disturbance associated with the Coal Hollow Lease and 4:1 (habitat improvement : disturbance) for the North Private Lease. Other compensatory mitigation includes work to reestablish connectivity between Alton and

Hoyt's Ranch, establishment of a core sage-grouse conservation area, predator control plans, and restoration of quality brood rearing habitat through reclamation.

Other measures include a wildlife awareness program, posted speed limits, safety meetings regarding awareness of important wildlife species in the area, designing transmission facilities to minimize electrocution hazards to raptors, and wildlife friendly fence designs.

Ireinhart

Topsoil and Subsoil

Analysis:

Analysis:

The extent of disturbed land associated with mining Pit B1 is shown as 14.2 acres on Dwg 5-19. Removal of coal from Pit 1B will require removal of 248,600 CY overburden (Dwg 5-16 and Section 528.200 and 553). This will allow recovery of an additional 118,000 Tons of coal (Dwg 5-9 and Sec 522). Pit B1 is shown as part of the total 177.6 excavated area in the South Lease on Dwg 5-17.

Section 542 states that the area disturbed to access the coal in Pit B1 will be graded, subsoiled and treated according to plans in Chap 2. Chapter 2, Section 231.200 states that regraded subsoil will be mulched and seeded to develop topsoil. Section 231.300 states that the proposed substitute topsoil will be tested prior to its salvage. It is important to agree upon the sampling protocol and parameters to be analyzed before reclamation.

Deficiencies Details:

R645-301-233 et seq, Please specify the sampling protocol and parameters to be analyzed for determining suitability of the substitute topsoil upon final reclamation.

pburton

Vegetation

Analysis:

The amendment meets the State of Utah R645-301-331 requirements for protection of vegetation.

The amendment describes measures to disturb the smallest practicable area at any one time and prompt establishment and maintenance of vegetation for interim stabilization of disturbed areas to minimize surface erosion in Section 331.

Each mine segment will be contemporaneously reclaimed as the next segment is developed. The exceptions to this are semi-permanent locations such as loadout, office buildings, underground access and pit 10. These locations needed for mining operations have been designed to disturb the smallest practicable area and areas not needed for immediate use will be stabilized with interim vegetation seeding.

Ireinhart

Road Systems Classification

Analysis:

The amendment does not meet the State of Utah R645 requirements for Road Systems and Other Transportation Facilities.

The amendment does not meet the requirements of R645-301-527.100 by failing to classify the full extent of primary haul road associated with Pit B-1 as a primary haul road. The Permittee is hauling coal along the full length of the road; therefore the full length of the road meets the R645 definition of a primary haul road and must meet all applicable R645 regulations.

Deficiencies Details:

R645-301-521.170, R645-301-527.121, R645-301-534: The Permittee must add a complete narrative and drawings that meet all R645 regulations for Primary Haul Roads.

cparker

Road System Plans and Drawings

Analysis:

The amendment does not meet the State of Utah R645 requirements for Transportation Plans and Drawings.

The amendment does not meet the requirements of R645-301-534.100 by failing to submit all the required profile and plan view plans and details for the full extent of the primary haul road associated with the new Pit B-1. R645-301-521.170, R645-301-527.121, R645-301-534 and each road to be maintained within the permit area.

Deficiencies Details:

R645-301-521.170, R645-301-527.121, R645-301-534 The Permittee must submit all the required profile and plan view plans and details for the full extent of the primary haul road

cparker

Road System Certification

Analysis:

The amendment does not meet the State of Utah R645 requirements for Primary Road Certification

The amendment does not meet the requirements of R645-301-521.170, R645-301-527.121, R645-301-527.230, and R645-301-534.100 through -534.300 by failing to include the primary haul road associated with Pit B-1 across bond released areas. The amendment is missing a narrative of the road in Chapter 5 Section 521.170. There is a vague discussion of the beginning extent of this section of primary road within said section and Drawing 5-3 shows the location the discussed segment. The amendment contemplates the addition of PitB-1 that lies further west beyond the initial pits and across Phase I bond release areas.

R645-301-521.170, R645-301-527.121, R645-301-527.230, and R645-301-534.100 through -534.300 require the Permittee to submit plans and drawing for each road to be prepared by or under the direction of and certified by a qualified registered professional engineer. The Permittee must amend Drawing 5-3, Drawing 5-22, and Drawing 5-23 to show the full extent of the primary haul road associated with Pit B-1 and include an updated narrative in Chapter 5 Section 521.170 and 527.200 discussing the operational use, maintenance and reclamation of the full extent of the primary haul road.

The Permittee also failed to detail a clear line item reclamation cost estimate for the bond showing the additional primary haul road through the Phase I bond release areas.

Deficiencies Details:

R645-301-521.170, R645-301-527.121, R645-301-527.230, and R645-301-534.100 through -534.300: The Permittee must submit detailed plans that meet the above R645 regulations to show the full extent of the primary haul road associated with Pit B-1.

R645-301-521.170, R645-301-527.121, R645-301-527.230, and R645-301-534.100 through -534.300: The Permittee must submit detail narrative describing the operation, maintenance and reclamation that meets the above R645 regulations for the full extent of the primary haul road associated with Pit B-1.

R645-301-521.170, R645-301-527.121, R645-301-527.230, and R645-301-534.100 through -534.300, R645-301-542.800, R645-301-830.140: The Permittee must provide a clear line item on the reclamation cost estimate for the Division to be able to determine the final bond amount associated with reclamation of the primary haul road's full extent from the facilities to Pit B-1.

cparker

Spoil Waste Excess Spoil

Analysis:

The amendment does not meet the State of Utah R645 requirements for spoil.

The amendment does not meet reclamation requirements of R645-301-512.210, R645-301-514.100, R645-301-521.143, R645-301-528, and R645-301-535.100 due to no clear narrative detailing how spoil will be handled during the development of Pit B-1 to achieve the interim topography on Drawing 5-35. Vague narrative was added to Chapter 5 Section 528.200

detailing the overburden removal associated with Pit B-1 would be simultaneously backfilled. The total overburden handling within 2015 and 2016 was amended to state 2,375,581 CY in 2015 and 248,600 CY in 2016. The total overburden handled within the South Private lease is predicted to be 16,068,658 at the mine's closure. The Permittee failed to include enough details regarding the placement and handling of the spoil associated with developing Pit B-1 that would achieve the interim topography. The increase in overall overburden requires a significantly more detailed justification detailing how operation pit footprint of Pit B-1 will be reclaimed. The narrative must detail how the void left from the coal removal within Pit B-1 and placement of the spoil during pit development will achieve a topography similar to cross section J-J' on Drawing 5-36. The amendment then must also show justification for the drainage during operations of Pit B-1 and how the interim reclamation topography reclaims Pit B-1 to meet all R645 regulations.

Deficiencies Details:

R645-301-512.210, R645-301-514.100, R645-301-521.143, R645-301-528, and R645-301-535.100: The Permittee shall provide a significantly more detailed narrative describing the operational removal of spoil during the development and operations of Pit B-1 and how the "simultaneously backfilled" will achieve the interim reclamation topography, maintain control drainage, and reclaim Pit B-1 to R645 regulation in the interim.

cparker

Hydrologic Sediment Control Measures

Analysis:

The amendment does not meet the State of Utah R645 requirements for Hydrology.

The amendment does not include a narrative, maps, or calculations on how impacts to the hydrologic balance will be minimized during mining and reclamation activities. The amendment does not show where diversions will be installed to convey disturbed area runoff from Pit B-1 to Pond 3. There are no maps or narratives outlining the watershed and its boundary that will be affected by mining activity.

Deficiencies Details:

R645-301-731: The amendment does not meet the State of Utah R645 requirements for Hydrology. The following deficiencies must be addressed prior to final approval:

The amendment does not include plans for how impacts to the hydrologic balance will be minimized during mining activities. The amendment must include a narrative and a map of relevant sediment control measures that will be implemented (diversions, surface drainage, affected watersheds) that will prevent additional contributions of suspended solids from exiting the permit area.

kstorrar

Signs and Markers

Analysis:

Analysis:

The plan must indicate that perimeter markers will mark the extent of Pit B1 and that archaeological site 42KA1313 (outside the permit area) barricaded and monitored prior to disturbance per Division correspondence dated 7/19/2016.

Deficiencies Details:

R645-301-521, The plan must indicate that perimeter markers will mark the extent of Pit B1 and that archaeological site 42KA1313 (outside the permit area) barricaded and monitored prior to disturbance per Division correspondence dated 7/19/2016.

pburton

Maps Affected Area

Analysis:

The amendment meets the State of Utah R645-301-521.100 requirements for Affected Area Maps.

The amendment meets the requirements of R645-301-521.100 through-521.130 by updating all the relevant maps for the entire area shown on the mine plan as detailed on Drawing 5-10. A total of 14.2 acres will be disturbed with the pit extent of

Pit B-1. Drawing 5-37 and 5-37A show that at final reclamation AOC will be achieved to fit the post mining land use and restore original drainage patterns.

cparker

Maps Affected Area

Analysis:

The amendment meets the State of Utah R645-301-323 requirements for maps and aerial photographs.

Drawings 3-2, 3-3, 3-4, & 3-5 show habitats of high value for wildlife in the area. Detailed maps and photos of vegetation are provided in respective appendices.

lreinhart

Maps Facilities

Analysis:

The amendment does not meet the State of Utah R645 requirements Mining Facilities Maps.

The amendment meets the requirements of R645-301-521.120 through-521.125 which require maps to clearly show surface and subsurface facilities. Drawing 5-3 was updated to show the new coal recovery line detailing Pit B-1. The line shown on Drawing 5-3 denotes the pit's base extent not the pit crest, see Drawing 5-16 for the full pit crest footprint.

The amendment does not meet the requirements of R645-301-521.170 by not included the full length of the primary haul road associated with Pit B-1.

Deficiencies Details:

R645-301-521.170: The Permittee must amend Drawing 5-3, Drawing 5-22, and Drawing 5-23 to show the full extent of the primary haul road associated with Pit B-1

cparker

Maps Mine Workings

Analysis:

The amendment meets the State of Utah R645-301-521.140 requirements for Mine Workings Maps.

The amendment meets the requirements of R645-301-521.140 which requires maps that clearly show all mine plans on Drawing 5-9, 5-10, and 5-16. Drawing 5-9 shows that the average strip ratio for Pit B-1 will be 2.2 with an average coal thickness of 17.3 feet. The Permittee predicts a recovery of 95% of the coal for a total of 118,000 tons of coal recovered. Drawing 5-10 detailed the expected base of the pit open to coal removal with the associated year. The full extent of Pit B-1 is depicted to be extracted within 2016 year. Drawing 5-16 details the overburden removal sequence with the new Pit B-1 present at the original excess spoil pile. The extent of Pit B-1 shown on said drawing depicts the extent of the pit crest. Approximately 248,600 cubic yards of overburden will be removed to develop Pit B-1.

cparker

Reclamation Plan

General Requirements

Analysis:

The amendment does not meet the State of Utah R645 requirements for Reclamation Activities.

The requirements of R645-301-540 are not met within the amendment as Chapter 5 was amended to introduce an interim reclamation of the borrow area that lacks specific operational and reclamation details on how Pit B-1 spoil will be handled. The Division is unable to determine grading volumes to achieve both the interim topography and final reclamation topography and how Pit B-1 will be reclaimed to meet R645 regulation in the interim reclamation scenario.

Chapter 5 was updated to include the interim and final reclamation of the South Private Lease to account for the development of Pit B-1 within the borrow area. Chapter 5 Section 540 narrative was amended to detail the excavation and "simultaneous backfill" of Pit B-1. At the completion of coal removal from Pit B-1 the area will be reclaimed to the intermediate landform, detailed on Drawings 5-35 and 5-36. Post mining topography and cross sections of the final reclamation plans are provided on Drawing 5-37A and 5-37.

The operational development of Pit B-1 will create a highwall along the southern boundary of the borrow area, as shown on Drawing 5-18. The current site conditions have established a high wall along the southern boundary that extends beyond the toe of the interim reclaimed regraded slope detailed on Drawing 5-35 and 5-36. The Division's inspection photos and the topography presented on Drawing 5-18 shows excavation already beyond the toe of the reclaimed interim re graded slope. To achieve the regraded slope along the southern boundary to meet R645-301-553.120 the Permittee would need to place fill meeting R645-301-542.800, R645-301-130, -R645-301-553.230. Yet, the Permittee included narrative that states that the Pit B-1 is contained within the borrow area on several drawing and within the MRP states that the pit will be simultaneously backfilled. The provided narrative is too vague and lacks clearly depicted operation elevations (profile view) and pit crests (plan view) of the Pit B-1 for the Division to be able to determine if the provided statement is accurate and is insufficient information for to the Division to determine if the bond must account for additional grading required to achieve the proposed interim reclamation and final reclamation regrade slope.

The amendment also provides no justification how Pit B-1 is reclaimed to meet all R645 regulations during the interim reclamation scenario. The only maps provided show a vague project plan pit crest extent on Drawing 5-16 and a single profile J-J' on Drawing 5-35 and 5-36 for the interim. The amendment presents conflicting information presented between Drawing 5-18 and 5-35 topography, in concert with no narrative detailing how the Permittee will achieve the interim topography through "continuously backfilled" within the MRP,

Minor narrative amendments included Chapter 5 Section 513.500 was updated to reflect that the Pit 10 portals will be reclaimed with an approximate vertical depth of 112 feet, as shown on Drawing 5-37A.

Deficiencies Details:

R645-301-537, R645-301-542.800, R645-301-130, -R645-301-553.230: The Permittee must provide a detailed narrative describing the how the highwall of Pit B-1 will be reclaimed through "simultaneous backfill." The Permittee must provide enough details including grading volumes required to achieve the interim and final slope. The amendment must include enough details for the Division to be able to determine that the full extent of the operational pit crest are either contained completely within the borrow area void and provide a detailed reclamation plan for the regraded slope to meet R645-301-537, R645-301-542.200, R645-301-542.800, R645-301-553.100-.150 and R645-301-553.230.

R645-301-537, R645-301-542.200, R645-301-542.800, R645-301-553.100-.150 and R645-301-553.230: The Permittee must also provide enough information to show the reclamation of Pit B-1 meeting all R645 regulations during the interim reclamation scenario.

cparker

WildLife Protection

Analysis:

The amendment meets the State of Utah R645-301-342 requirements for a fish and wildlife plan for the reclamation and postmining phase of operation.

Enhancement measures are identified in Section 342 and include restoration efforts (both through reclamation and offsite mitigation) aimed at improving sage-brush ecosystems. Because most of the premining rangeland conditions consist of heavy brush (pinyon-juniper and sage) and low quality herbaceous vegetation (grasses and forbs) on the native rangelands, reclamation efforts are aimed at restoring these ecosystems to an earlier seral state dominated by grasses and forbs (healthy).

Although not the primary PMLU, wildlife species will benefit from the final reclamation seed mix identified on table 3-37. These mixtures includes plant species that provide nutritional value and cover for wildlife.

The Division has determined the proposed operation will 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.

Ireinhart

Approximate Original Contour Restoration

Analysis:

The amendment does not meet the State of Utah R645 requirements for Approximate Original Contour Restoration.

The amendment does not meet the R645-301-537, R645-301-542.200, R645-301-542.800, R645-301-553.100-.150 and R645-301-553.230 due to insufficient information contained within the application for the Division to be able to determine if the proposed Pit B-1 highwalls are contained completely within the borrow area to be excavated at final reclamation of the site. The amendment did not include any detailed information to meet R645 regulations in the event fill must be placed along the exposed remaining highwall during the interim and final reclamation of the southern boundary of the borrow area. The Permittee must provide a narrative describing the interim reclamation associated with Pit B-1. With further detailed information, Division will then be able to determine if additional bond will be required to achieve the final regraded slope. The Permittee must provide more detailed narrative of the operational pit crest and floor elevations showing that the full operation extent of Pit B-1 is located in the eventual borrow area void to removal all bonding requirements.

Drawing 5-37 and 5-37A show that at final reclamation AOC will be achieved to fit the post mining land use and restore original drainage patterns. AOC as defined by R645-301-553.100 through -553.150 is achieved when the final grade closely resembles the general surface configuration of the land prior to mining activities and provides a subsurface foundation for vegetative cover capable of stabilizing the surface from erosion.

Deficiencies Details:

R645-301-537, R645-301-542.200, R645-301-542.800, R645-301-553.100-.150 and R645-301-553.230: The Permittee must provide a narrative describing the interim reclamation associated with Pit B-1. The Division will then be able to determine if additional bond will be required to achieve the final regraded slope.

cparker

Backfill and Grading General

Analysis:

The amendment does not meet the State of Utah R645 requirements for Backfill and Grading.

The amendment does not meet the general requirements of R645-301-553 due to a lack of information detailing a general backfill and grading plan to achieve the interim topography depicted on Drawing 5-35 and 5-36. The MRP must detail how disturbed areas will be backfilled and graded to achieve the approximate original contour, eliminate all highwalls, spoil piles, and depressions, and achieve a postmining slope that does not exceed either the angle of repose or such lesser slope as is necessary to achieve a 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.

A statement was added to the MRP detailing that in preparation for final borrow, Pit B-1 will be excavated and simultaneously backfilled to remove all coal from the borrow volume and reach the intermediate landform depicted on Drawings 5-35 and 5-36. The Permittee must provide a narrative describing the interim reclamation associated with Pit B-1. With further detailed information Division will then be able to determine if additional bond will be required to achieve the final regraded slope. The Permittee must provide more detailed narrative of the operational pit crest and floor elevations showing that the full operation extent of Pit B-1 is located in the eventual borrow area void to removal all bonding requirements.

The total overburden handling within 2015 and 2016 was amended to state 2,375,581 CY in 2015 and 248,600 CY in 2016. The total overburden handled within the South Private lease is predicted to be 16,068,658 at the mine's closure. The Permittee must provide a more detailed narrative explaining the volume of void left from the coal removal of Pit B-1 to demonstrate that the required additional 1.3 MCY of borrow required for Pit 10 are still available.

Deficiencies Details:

R645-301-537, R645-301-542.200, R645-301-542.800, R645-301-553.100-.150 and R645-301-553.230: The Permittee must provide a more detailed narrative explaining the volume of void left from the coal removal of Pit B-1 to demonstrate that the required additional 1.3 MCY of borrow required for Pit 10 are still available.

R645-301-537, R645-301-542.200, R645-301-542.800, R645-301-553.100-.150 and R645-301-553.230: he Permittee must provide more detailed narrative of the operational pit crest and floor elevations showing that the full operation extent of Pit

B-1 is located in the eventual borrow area void.

cparker

Topsoil and Subsoil

Analysis:

Analysis:

The surface 12 inches of "cultivated subsoil" from 14+ acres of Pit B1 interim reclamation will be stripped and replaced as substitute topsoil on a 36.2 acre area associated with Pit B1 and the excess spoil pile (App. 2-4 and Sec. 231.200). Describe the details of salvage and handling, stockpile placement and protection of the topsoil and subsoil salvaged from Pit B1 area during mining operations.

Section 224 suggests Pit 10 East bench soils are suitable for use in reclamation. Soil sample site 16AS33 is unacceptable for this purpose due to pH values of 8.9 and 9.0 in the surface six inches as well as high carbonate content. This concept could be re-visited at final reclamation, but at this time, the plan should reflect that soils represented by site 16AS33 are not suitable for use as substitute.

The plan does not provide a timetable to assure placement of topsoil immediately following subsoil placement.

Deficiencies Details:

R645-301-234 and R645-301-231.100, Describe the details of salvage and handling, stockpile placement and protection of the topsoil and subsoil salvaged from Pit B1 area during mining operations.

R645-301-231, Section 224 suggests Pit 10 East bench soils are suitable for use in reclamation. Soil sample site 16AS33 is unacceptable for this purpose due to pH values of 8.9 and 9.0 in the surface six inches as well as high carbonate content. This concept could be re-visited at final reclamation, but at this time, the plan should reflect that soils represented by site 16AS33 are not suitable for use as substitute.

R645-301-241 and R645-301-542.100, Please provide a timetable to assure placement of topsoil immediately following subsoil placement.

pburton

Road System Reclamation

Analysis:

The amendment meets the State of Utah R645 requirements for Reclamation of Roads.

The requirements of R645-301-534 are met within the amendment as there is no change to the existing MRP reclamation of roads throughout the permitted area.

cparker

Road System Retention

Analysis:

The amendment meets the State of Utah R645 requirements for Retention of Roadway Facilities.

The requirements of R645-301-534 and -552 are met within the amendment as there is no change to the existing MRP reclamation of roads that will be retained at the end of mining that exist throughout the permitted area.

cparker

Contemporaneous Reclamation General

Analysis:

The amendment meets the State of Utah R645-301-352 requirements for contemporaneous reclamation.

Section 352 discusses contemporaneous reclamation. A detailed schedule and timetable for the completion of each major

step in the mine plan is Chapter 5 of the MRP. Drawing 5-38 shows the schedule for the Coal Hollow Lease Area and Drawing 5-76 shows the schedule for the North Private Lease.

Once the coal is removed, the pit will be backfilled by spoil from adjacent mine pits. Once the pit is backfilled to the planned final surface contour, suitable topsoil and subsoil will be replaced, and the area reseeded. The Alternate highwall mining will reduce the practicable area to be reclaimed. With prompt establishment and maintenance of vegetation, immediate stabilization of disturbed areas will minimize surface erosion.

In each mined segment, the mine plan includes redistributing subsoil and topsoil followed by seeding this segment with the final seed mix contemporaneously, or at the same time the mining begins in the next segment. The mine plan has been engineered to disturb the smallest practicable area at any one time. With prompt establishment and maintenance of vegetation, immediate stabilization of disturbed areas will minimize surface erosion.

Pit 10 (the last pit shown on Drawing 5-9 and Drawing 5-10 as Pit B-1) at the Coal Hollow Mine will be encountered incident to reclamation and borrow activities where it would not have been practical to mine otherwise. As shown on Drawing 5-16, this pit is fully contained within the greater Borrow Area and will be fully mined and immediately backfilled (to the intermediate landform shown in Drawings 5-35 and 5-36) in 2016. This backfill will then remain in place until closure of the Underground Mine and finally rehandled as backfill to Pit 10. Subsoil will be placed over the final graded mining surface to an average depth of 1.5 feet for interim reclamation after mining has been completed. Organic mulches will be incorporated into the soil to improve the fertility of the subsoil placed on the interim reclamation surface and seeded with the intermediate seed mix. Incorporation of mulch into the soil will improve the fertility of the subsoil used for interim reclamation cover. The surface foot (12) inches of amended subsoil will be salvaged as cultivated topsoil at the end of the interim reclamation period.

Ireinhart

Revegetation General Requirements

Analysis:

The amendment meets the State of Utah R645-301-341 requirements for revegetation plan.

The reclamation plan for final revegetation is located in Section 340. The plan describes how all lands disturbed by mining and operations (except water areas and surface of roads approved as part of the postmining land use) comply with the biological protection performance standards. The plan includes a detailed schedule and timetable for each major step in Chapter 5, seed mixtures (Final in Sec. 341.210 & and Interim in 234.230), planting methods (341.220), mulching (341.230). Measures proposed to determine success of revegetation are identified in section 356 and include production and cover requirements since grazing and pasture are the primary post mining land uses. Wildlife use is a secondary use and therefore, seed mixtures have been developed to include shrubs and forbs beneficial to wildlife.

Ireinhart

Revegetation Timing

Analysis:

The amendment meets the State of Utah R645-301-354 for revegetation timing.

The planting schedule is identified in section 354 and 341.100 and identifies early spring and late fall for the seeding period which is the favorable planting time for this location.

Ireinhart

Revegetation Standards for Success

Analysis:

The amendment meets the State of Utah R645-301-356 requirements for revegetation standards for success.

The Permittee commits to using approved sampling techniques for measuring success as identified in DOGM's Vegetation Information Guidelines, Appendix A. Success standards are identified in Section 356. The primary PMLU is grazing land or pasture land, and 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. On areas identified as wetland, and authorized by the Army Corp of Engineers, success standards will meet Corp requirements. Because wildlife habitat is a secondary post mining land use, ACD consulted with DOGM and UDWR to determine an appropriate shrub stocking density of 10% of the reference site for sagebrush/grass locations.

ireinhart

Stabilization of Surface Areas

Analysis:

Analysis:

Pit B1 will be backfilled, graded, and subsoiled. The subsoiled surface will be stabilized with mulch and seeded to develop suitable substitute topsoil for the borrow area over the life of mine (Section 542.100 and Sec.231.100).

Spoil current stockpiled in the former excess spoil pile requires interim stabilization. The area to be stabilized and the method of stabilization of the spoil must be described.

Deficiencies Details:

R645-301-231.200, Please specify the organic mulch and a seed mix that includes legumes to be used to develop the substitute topsoil over the regraded, subsoiled surface of Pit B1.

R645-301-244.100, Spoil current stockpiled in the former excess spoil pile requires interim stabilization. The area to be stabilized and the method of stabilization of the spoil must be described.

pburton

Cessation of Operations

Analysis:

The amendment meets the State of Utah R645 requirements for Cessation of Operations

The requirements of R645-301-515 and -541 are met within the amendment as there is no change to the existing MRP plan of communication with the appropriate parties in the event of the cessation of operations and final reclamation.

cparker

Maps Bonded Area

Analysis:

The amendment meets the State of Utah R645 requirements for Bonded Area.

The requirements of R645-301-800 are met within the amendment as the bonded area map, Drawing 5-18 and 5-19 were updated within this amendment to show the planned release schedule and the total 372.5 acres of disturbance.

cparker

Maps Reclamation Backfilling and Grading

Analysis:

The amendment does not meet the State of Utah R645 requirements for Reclamation Backfilling and Grading Maps.

The requirements of R645-301-542 are not met within the amendment as Drawings 5-35 and 5-36 need to show the operation and reclaimed extents of Pit B-1. Labeling the extents on the profile view will provide justification for volume calculations required for bonding determinations. The Permittee must introduce the interim reclamation scenario and must provide enough justification that the topography presented on Drawing 5-35 and 5-36 meets relevant R645 regulations. At the time of final closure the site will be returned to the topography depicted on Drawings 5-37 and 5-37A.

Deficiencies Details:

R645-301-121.200, R645-301-542: The Permittee must show and label the operation and reclaimed extents of Pit B-1 on Drawings 5-35 and 5-36

Maps Reclamation Facilities

Analysis:

The amendment meets the State of Utah R645 requirements for Reclamation Facilities Maps

The requirements of R645-301-542 are met within the amendment as Drawings 5-35 and 5-36 were added to the existing MRP plan of backfilling and grading areas or volumes to detail the intermediate reclamation of the site until the final closure of the underground operations within Pit 10. The primary haul road associated with Pit B-1 will be fully reclaimed. At the time of final closure the site will be returned to the topography depicted on Drawings 5-37 and 5-37A

cparker

Maps Reclamation Surface and Subsurface Man Made

Analysis:

The amendment meets the State of Utah R645 requirements for Reclamation of Surface and Subsurface Manmade Features Maps.

The requirements of R645-301-542 are met within the amendment as there is no change to the existing MRP plan in the surface and or subsurface manmade features within the permit area. Drawings 5-35 and 5-36 were added to the existing MRP plan of backfilling and grading areas or volumes to detail the intermediate reclamation of the site until the final closure of the underground operations within Pit 10. At the time of final closure the site will be returned to the topography depicted on Drawings 5-37 and 5-37A

cparker

Bonding and Insurance General

Analysis:

The amendment meets the State of Utah R645-301-357 requirements for extended responsibility period.

The average annual precipitation is less than 26.0 inches and therefore, the extended responsibility period will be 10 years.

Ireinhart

Bonding Determination of Amount

Analysis:

The amendment does not meet the State of Utah R645 requirements for Determination of Bond Amount.

The amendment does not meet the requirements of R645-301-830.140 as the Permittee submitted detailed bond information in regards to the amendment that shows an increase of 249,000CY associated with Pit B-1 with no re grading cost and the addition of the extension of the primary haul road beyond the reconstructed county road. The borrow area is associated with 62 acres of subsoil and top soil placement. The individual pits are associated with the rough grading volumes. From the previous amendment adding the borrow area to reach the required 1.3 MCY to reclaim pit 10, the total volume required to backfill all the pits increased 249,000CY. The Permittee must bond for the worst case scenario which for this amendment contemplates the full 249,000 CY of backfill required for Pit B-1. To meet the R645-301-542.800 and R645-301-830.140 the Permittee must provide more detail information to show no need to post additional bond associated with reclaiming Pit B-1. The Permittee must also add a line item to account for the reclamation of the primary haul road associated with Pit B-1.

Deficiencies Details:

R645-301-542.800 and R645-301-830.140: The Permittee must supply additional reclamation plans for the Division to be able to determine if addition bond is required to reclaim Pit B-1. The Permittee must also add a line item to account for the reclamation of the primary haul road associated with Pit B-1.

cparker