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Technical Analysis and Findings

Utah Coal Regulatory Program

October 12, 2016

PID: **C0070041**
TaskID: **5268**
Mine Name: **WEST RIDGE MINE**
Title: **MIDTERM PERMIT REVIEW**

Summary

The following is a list of all amendments that have been recorded in CTS since the permit was issued 1/31/14

Task 5015, Citizen Complain
Task 4977, NOV #21156
Task 4905, Bond Sheet Corrections
Task 4904, Raptor Survey File Location
Task 4882, Ownership and Control
Task 4725, Certificate Location

Deficiencies Details:

lreinhart

General Contents

Identification of Interest

Analysis:

The MRP does not meet the State of Utah R645 requirements for Identification of Interest. The following deficiency must be addressed prior to final approval

Chapter 1, Section 112 contains the Identification of Interests for the West Ridge Mine. West Ridge Resources, Inc is the operator. The MRP incorrectly identifies Jay Marshall as the resident agent.

Ownership and Control (Appendix 1-7) was updated and incorporated into the approved MRP 4/27/15.

Update Section 112.220 to replace Jay Marshall who retired.

Deficiencies Details:

The MRP does not meet the State of Utah R645 requirements for Identification of Interest. The following deficiency must be

addressed prior to final approval

R645-301-112 The Permittee must update Section 112.220 with correct current contact information.

lreinhart

Violation Information

Analysis:

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

The Applicant/Violator System was queried on 9/1/16. Results display 1 outstanding violation that must be resolved. Violation is a State Civil Penalty coded “conditional”, indicating a settlement, payment plan, or pending challenge. Violation code 65-N, 091871 Mcelroy Coal Co, Permit U003383 in WV.

Citation 21156 was issued 09/10/2015 for failure to monitor seismic requirements as outlined in Appendix 5-13A. The NOV was terminated when the Permittee resumed the monitoring.

Citation 21186 was issued on 09/15/2016 for failure to follow seismic monitoring.

Deficiencies Details:

The amendment does not meet the State of Utah R645 requirements for Identification of Interest. The following deficiency must be addressed prior to final approval

R645-301-113: The Permittee must disclose the AVS violation and provide evidence of resolution to the Division. Appendix 1-2 must be updated to include the AVS violation and NOV 21156 and NOV 21186.

lreinhart

Right of Entry

Analysis:

The MRP meets the State of Utah R645 requirements for Right of Entry.

Right of Entry information is proved in Ch. 1, tables 1-1 through 1-3. There have been no lease relinquishments since the permit was renewed 4/1/14.

lreinhart

Permit Term

Analysis:

The MRP does not meet the State of Utah R645 requirements for providing a correct permit term. The permit term as outlined in Section 116.100 indicates mining will cease in Dec. 2017 and reclaimed throughout 2018. However, mining has already ceased and reclamation activities have not been initiated.

Deficiencies Details:

The MRP does not meet the State of Utah R645 requirements for providing a correct permit term.

R645-301-116:The Permittee must update the Permit Term as outlined in Section 116.100 to reflect the current plans and intentions.

lreinhart

Environmental Resource Information

Fish and Wildlife Resource Information

Analysis:

The MRP meets the State of Utah R645 requirements for Fish and Wildlife Resource Information.

On 4/17/15 the Permittee submitted amendment to replace the cover sheet to 3-2 with a new cover sheet to indicate the location of the confidential Raptor Surveys.

Chapter 3, Page 3-8 & 3-9 requires locations within the permit area that contain potential raptor nesting habitat will be surveyed in the field within one year of any proposed mining activity that could result in subsidence. Should any nests be found, West Ridge Resources, Inc. would consult with the Division (DOGM), the Division of Wildlife Resources and the US Fish and Wildlife Service.

Raptor surveys were preformed and the report was submitted as required for 2015. Two active Golden Eagle nests were located and successfully hatched chicks.

The â€œVegetation Monitoring at the Experiments Test Plotâ€• report was provided in 2015 and revealed conditions are about the same as they have been in the previous years. The continuation of this study provides little value since the experiment of cut/fill over the existing top soil has occurred and the site has stabilized. The operator may elect to discontinue this study at their request.

lreinhart

Operation Plan

Mining Operations and Facilities

Analysis:

The Division initiated a mid-term review of the West Ridge mining and reclamation plan (Task ID #5090) in September 2016 in accordance with R645-303-211. This Technical Memorandum presents the findings of the Midterm Permit review for the West Ridge mine related to engineering and bonding, including:
• A review of the Plan to ensure that the requirements of all the permit conditions, Division orders, notice of violations (NOVs), abatement plans, and permittee-initiated Plan changes approved subsequent to permit approval or renewal are appropriately incorporated into the Plan document.
• A review of the application portions of the permit to ensure that the mine plan contains the commitments for the application of the best technology currently available (BTCA) to prevent additional contributions of suspended solids to stream flows outside of the permit area.
• Evaluate the compliance status of the permit to ensure that all unabated enforcement actions comport with current regulations for abatement; verify the status of all finalized penalties levied subsequent to permit issuance or permit renewal, and verify that there are no demonstrated patterns of violation (POV). This will include an AVS check to ensure that Ownership and Control information is current and correct.
• Evaluate the reclamation bond to ensure that coverage adequately addresses permit changes approved subsequent to permit approval or renewal, and to ensure that the bond amount is appropriately escalated in current-year dollars.
• Evaluate the permit for compliance with variances or special permit conditions related to engineering and bonding.
• Optional for active mines, mandatory for reclamation only sites: conduct a technical site visit in conjunction with the assigned compliance inspector to document the status and effectiveness for operational, reclamation, and contemporaneous reclamation practices undertaken on predetermined portions of the disturbed area to minimize, to the extent practicable, the contribution of acid or toxic materials to surface or groundwater, and to otherwise prevent water pollution.

The Permittee has not submitted a formally revised reclamation cost estimate. A site visit to observe current site maintenance is scheduled for October 11, 2016.

The current MRP meets all the State of Utah R645 requirements for Mining Operations and Facilities.

The current MRP meets the requirements of R645-301-523, -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. West Ridge mine consisted of coal leases SL-068754, UTU-75862, ML 47711, ML 49287, ML 51744, and the Penta Creek fee lease in the West Ridge area of eastern Carbon County. The mining method consists of a single longwall and two continuous miner sections. Mining sequencing began in the southeastern portion of the lease area and moved north in an eastward direction. The projected life of the West Ridge mine in 2013 was 15 years. The surface facilities associated with the mine are located in C Canyon, in the previously disturbed area. The original disturbed area was 1.62 acres but the surface operations increased the disturbance to 29 acres.

cparker

Existing Structures

Analysis:

The current MRP meets the State of Utah R645 requirements for Existing Structures.

The current MRP meets the requirements of R645-301-526 by providing updated information to include the discussion of no existing buildings at the previous surface site in C Canyon. Map 4-1 shows the pre mining topography on a large scale along with several small roads that exist within the permit area, e.g Carbon County Road RS2477. Map 5-1 shows C Canyon previous disturbances. Appendix 5-8 details the pre-mining subsidence survey conducted prior to the commencement of West Ridge mining operations.

cparker

Relocation or Use of Public Roads

Analysis:

The current MRP meets the State of Utah R645 requirements for the Relocation or Use of Public Roads.

The current MRP meets the requirements of R645-301-521.133 due to information detailing measure to be used such as a general mining method that will be employed under or within 100 ft of public roads to protect interest of the public. Map 4-1 shows the pre mining topography on a large scale along with several small roads that exist within the permit area, e.g Carbon County Road RS2477. The road is primarily used to access the top of West Ridge by ranchers in the area. Approximately 960 feet of the existing Carbon County road into C Canyon has been added to the West Ridge mine permit area and included in the disturbed area. All public roads located within or approximately 100 feet of the permit area are depicted on Map 4-1.

cparker

Coal Recovery

Analysis:

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

The current MRP meets the requirements of R645-301-522 due to a discussion of the measures to be used to maximize the use and conservation of the coal resources. Appendix 5-3 through appendix 5-3E detail the BLM R2P2 approved plans to maximize the coal recovery for the respective leases. Map 5-4B shows the mining blocks completed for the West Ridge mine. SITLA concurrence for the previously mentioned mine plans is located in Appendix 5-10. The mine is expected to produce about 42 million tons of coal.

cparker

Subsidence Control Plan Renewable Resource

Analysis:

The current MRP meets the State of Utah R645-301-525.130 requirements for Subsidence Control Plan with a renewable resources survey.

The requirements of R645-301-525.130 are met in the current MRP as the Permittee presented a clear subsidence plan for protected areas. A pre-mining subsidence survey was conducted for the adjacent area and is located in Appendix 5-8. No renewable resource lands were found within the permit area or adjacent area.

cparker

Subsidence Control Plan Subsidence

Analysis:

The current MRP meets the State of Utah R645-301-525.400 requirements for Subsidence Control Plan.

The requirements of R645-301-525.400 are met in the current MRP as the Permittee presented a clear subsidence plan for protected areas. Map 5-7 identified the mining rea for which planned subsidence mining methods will be used. A conservative angle of draw of 20 degrees was used to project the maximum of extent of subsidence. The seep and spring

density for the West Ridge mined area was roughly estimated to be 21.1 springs/seeps per square mile producing an average 74.8 gpm/sq mile compared to an unmined area spring/seep density of 22.4 springs/seeps per square mile producing an average 79.3 gpm/ sq mi.

cparker

Subsidence Control Plan Performance STD

Analysis:

The current MRP meets the State of Utah R645-301-525.requirements for Performance Standards for Subsidence Control.

The current MRP meets the requirements of R645-301-525.300 due to a discussion that addresses the measures the Permittee will conduct subsidence monitoring through aerial photography and mapping. Thirteen permanent subsidence monitoring control points were established that are monitored annually. Panels will be monitored until the effects of mining have stabilized and vertical movement is less than six inches/year. The monitoring stations and reports are shown on Map 5-7 and Appendix 5-18 No subsidence inducing mining will take place below the Grassy Trail Reservoir. A post mining stability summary report of the mining induced seismicity is included in Appendix 5-16.

cparker

Subsidence Control Plan Notification

Analysis:

The current MRP meets the State of Utah R645-301-525.700 requirements for Public Notice of Proposed Mining.

The requirements of R645-301-525.700 are met in the current MRP as the Permittee presented a clear subsidence plan for protected areas that includes the appropriate notification at least six months prior to mining.

cparker

Subsidence Control Plan Slides and Other Damage

Analysis:

The current MRP meets the State of Utah R645 requirements for Slides and Other Damage.

The current MRP meets the requirements of R645-301-515.100 with procedures already described within the existing MRP detailing the emergency contact procedures in the event of a slide.

cparker

Road Systems Classification

Analysis:

The current MRP meets the State of Utah R645 requirements for Road Systems and Other Transportation Facilities.

The current MRP meets the requirements of R645-301-527.100 by classify each road as primary or ancillary.

cparker

Road System Plans and Drawings

Analysis:

The current MRP meets the State of Utah R645 requirements for Transportation Plans and Drawings.

The current MRP meets the requirements of R645-301-534.100 by submitting plans and drawing for each road to be maintained within the permit area. Figure 5-3 details the West Ridge road typical cross section. Map 5-15 details all other mine roads within the permit's disturbed area.

cparker

Road System Performance Standards

Analysis:

The current MRP meets the State of Utah R645 requirements for Performance Standards of roads within the permit area.

The current MRP meets the requirements of R645-301-534.150 by submitting plans and drawing for each road to be maintained within the permit area to prevent and control erosion. See Appendix 7-4 for all runoff from road surfacing to be treated through mine drainage controls.

cparker

Road System Certification

Analysis:

The current MRP meets the State of Utah R645 requirements for Primary Road Certification

The current MRP meets the requirements of R645-301-521.170 by submitting plans and drawing for each road to be prepared by or under the direction of and certified by a qualified registered professional engineer.

cparker

Road System Other Transportation Facilities

Analysis:

The current MRP meets the State of Utah R645 requirements for Other Transportation Facilities.

The current MRP meets the requirements of R645-301-521.170 by submitting plans and drawing for each road, conveyor, and rail system to be used within the proposed permit area. A conveyor belt system was utilized to transport coal from out of the mine to the surface were it was crushed and transported as ROM product. A 60 inch mine conveyor was utilized underground and discharged from approximately 80 feet into a stockpile of approximately 30,000 tons.

cparker

Spoil Waste Disposals of Noncoal Mine Wastes

Analysis:

The current MRP meets the State of Utah R645 requirements for Spoil and Waste Materials.

The current MRP meets the minimum standards or R645-301-528.330 due to not changes in the MRP text noncoal mine waste disposal located in the current MRP.

cparker

Spoil Waste Coal Mine Waste

Analysis:

The current MRP meets the State of Utah R645 requirements for Coal Mine Waste.

The current MRP meets the minimum standards or R645-301-528.320 due to not changes in the MRP text that only a minor 12 CY of waste will be disposed of in an approved coal refuse site at Andalex wildcat and two temporary waste rock storage areas shown on Map 5-5.

cparker

Spoil Waste Refuse Piles

Analysis:

The current MRP meets meet the State of Utah R645 requirements for Refuse Piles

The current MRP meets the minimum standards or R645-301-528.322 due to not changes in the MRP text.

cparker

Spoil Waste Burning and Burned Waste Utilization

Analysis:

The current MRP meets the State of Utah R645-301-513.800 and R645-301-528.323 requirements due to no changes in the MRP text that no waste will be burned within the Permit area.

cparker

Spoil Waste Coal Processing Waste to Abandoned

Analysis:

The current MRP meets the State of Utah R645 requirements for the approved return of coal development into abandoned underground workings.

The current MRP meets the minimum standards or R645-301-528.340 due to not changes in the MRP text the no coal processing waste will be abandoned in the underground workings.

cparker

Spoil Waste Excess Spoil

Analysis:

The current MRP meets the State of Utah R645 requirements for excess spoil.

The current MRP meets the requirements of R645-301-512.210, R645-301-514.100, R645-301-521.143, R645-301-528, and R645-301-535.100 as there is no change in the approved MRP Chapter 5 Section 528.310 that states that no excess spoil will be generated.

cparker

Hydrologic Water Quality Standards

Analysis:

The West Ridge Mining and Reclamation Plan (MRP) does not meet the State of Utah R645 requirements for Water Quality Standards and Effluent Limitations.

The West Ridge Mine operates under a Utah Division of Water Quality (DWQ) Utah Pollution Discharge Elimination System Permit (UPDES #UTU0025640). The permit specifies the reporting and self-monitoring requirements for two UPDES points: UPDES Outfall 001, discharge from the sediment pond to 'C' Canyon ephemeral drainage; and UPDES Outfall 002, discharge from the underground workings to the 'C' Canyon ephemeral drainage. At the time of this mid-term review, it's unclear as to what the current UPDES Permit effluent limitations are.

Based upon communication with Kim Shelley (DWQ), the renewal process for UPDES Permit #UTU0025640 is currently underway and not completed. Division inspections identified that the permit expired April 30th, 2016. According to Ms. Shelley (DWQ), the permit has been extended until such time as the permit renewal process is completed. Ms. Shelley further indicated that the West Ridge Mine is in compliance with their UPDES permit.

Additionally, the West Ridge Mine has not been issued a violation for additional contributions of suspended solids off the permit area since July 21st, 2010 (NOV #10063). Since the issuance of that notice of violation, the West Ridge Mine has maintained their sediment controls and been successful in preventing off-site impacts as a result of sedimentation flowing outside the permit area.

Deficiencies Details:

The West Ridge Mining and Reclamation Plan (MRP) does not meet the State of Utah R645 requirements for Water Quality Standards and Effluent Limitations.

The Permittee must update Appendix 7-10 (and cover page) with the up to date UPDES Permit (#UTU0025640). It's is the Division's understanding that the Division of Water Quality (DWQ) is currently working on finalizing the renewal of the permit. Once DWQ has completed that process, the current UPDES Permit can be submitted for inclusion into the West Ridge MRP.

schriste

Hydrologic Diversion General

Analysis:

The West Ridge MRP meets the State of Utah R645 requirements for Diverions.

All diversions (drainage controls) within the permit area consist of culverts and ditches. Map 7-1, Drainage Area Map and Map 7-2, Mine Site Drainage Map identify the drainages, disturbed as well undisturbed area diversions for the main mine facility. With the exception of alternative sediment control areas (ASCA's), all disturbed area drainage is routed to the primary sedimentation pond. All the diversions are temporary and will be removed during reclamation. The Diversions consist of undisturbed area bypass culverts, disturbed area culverts and undisturbed and disturbed area ditches.

Appendix 5-14, Bear Canyon Gob Gas Vent Hole, provides the operational information for the gob gas venting facility at the West Ridge Mine. As the site is small (0.24 acres), the Permittee utilizes a disturbed area drainage ditch to handle resulting storm water flow. The ditch is lined with rip rap with sedimentation logs installed every 50'.

schriste

Hydrologic Sediment Control Measures

Analysis:

The West Ridge Mining and Reclamation Plan (MRP) meets the State of Utah R645 requirements for sediment control measures.

The sediment controls have been designed to prevent, to the extent possible, additional contributions of sediment to stream flow or to runoff outside the permit area; meet the applicable State and Federal effluent limitations; and minimize erosion to the extent possible.

Structures utilized in the sediment control plan include disturbed and undisturbed area diversion channels, sedimentation ponds, containment berms, silt fences and road diversion culverts.

There are four alternate sediment control areas (ASCA's) described in Section R645-301-742 and in Appendix 7-4. They are depicted on Plate 7-2, Mine Site Drainage Map (ASCA-W, ASCA-X, ASCA-Y and ASCA-Z). The combined ASCA areas encompases approximately 4.18 acres. the ASCAs as described in the MRP utilize either one or a combination of silt-fencing, straw bales, rip-rap, and vegetative cover. The ASCAs represent the Best Technology Currently Available (BTCA) in controlling sediment in areas that do not report to the sedimentation pond.

schriste

Hydrologic Impoundments

Analysis:

The West Ridge Mining and Reclamation Plan (MRP) meets the State of Utah R645 requirements for Hydrologic Impoundments.

The West Ridge Mine utilizes two sedimentation ponds in series (Cells A and B). Togethery, they are designed to safely contain the runoff from the contributing watersheds from a 10-year/24-hour precipitation event, along with a minimum of three years of sediment storage.

Appendix 7-4 presents the sediment pond design, stage volume data and design summary. Computer backup data for the runoff and soil loss for each contributing watershed is presented in Appendix 1 of Appendix 7-4. The sediment pond plan and cross sections are provided in Maps 7-4 and Map 7-4A.

The sediment ponds meet the requirements and design standards of the State of Utah R645 Coal Mining Rules for

sedimentation ponds. The sediment ponds represent the Best Technology Currently Available to prevent additional contributions of suspended solids to stream flows outside the permit area.

schriste

Support Facilites and Utility Installations

Analysis:

The current MRP meets the State of Utah R645 requirements for Support Facilities and Utility Installations.

The current MRP meets the requirements of R645-301-521.180 and -526 the require the description, plans, and drawing for each support facility to be constructed, used, or maintained within the proposed permit area. Chapter 5 section 526 details all the constructed support facilities associated with the surface disturbance in C Canyon.

cparker

Signs and Markers

Analysis:

The current MRP meets the State of Utah R645 requirements for Signs and Markers.

The current MRP meets the requirements of R645-301-521.200 by the general discussion of signs in Chapter 5 page 5-3. The signs list all the required information including the company name, permit number, address, and phone number.

cparker

Explosives General

Analysis:

The current MRP meets the State of Utah R645 requirements for general Use of Explosives.

The current MRP meets the requirements of R645-301-524 by no changes made to the blasting plan of the MRP within the current MRP.

cparker

Explosives Preblasting Survey

Analysis:

The current MRP meets the State of Utah R645 requirements for a Preblasting Survey.

The current MRP meets the requirements of R645-301-524.300 by no changes made to the preblasting survey plan of the MRP within the current MRP.

cparker

Explosives General Performance Standards

Analysis:

The current MRP meets the State of Utah R645 requirements for establishing General Performance Standards.

The current MRP meets the requirements of R645-301-524.430 by no changes made to the performance standards established in the Blasting plan of the MRP within the current MRP.

cparker

Explosives Blasting Signs Warnings Access Control

Analysis:

The current MRP meets the State of Utah R645 requirements for Blasting Signs and Warnings

The current MRP meets the requirements of R645-301-524.460 and -524.530 by no changes made to the blasting schedule contents and access control contained within the blasting plan of the MRP.

cparker

Explosvies Control of Adverse Effects

Analysis:

The current MRP meets the State of Utah R645 requirements for Blasting: Control of Adverse Effects

The current MRP meets the requirements of R645-301-524.600 by no changes made to the performance standards to prevent injury or damage to public or private property outside the permit area.

cparker

Explosives Records of Blasting Operations

Analysis:

The current MRP meets the State of Utah R645 requirements for Records of Blasting Operations

The current MRP meets the requirements of R645-301-524.700 by no changes made to the blasting record to be kept on site at the mine.

cparker

Maps Affected Area

Analysis:

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

The current MRP meets the requirements of R645-301-521.100 through-521.130 by not updating all the relevant maps for the entire area shown on the mine plan as detailed on MAP 5A.

cparker

Maps Facilities

Analysis:

The current MRP meets the State of Utah R645 requirements Mining Facilities Maps.

The current MRP meets the requirements of R645-301-521.120 through-521.125 which require maps to clearly show existing surface and subsurface facilities on Map 5-5.

cparker

Maps Mine Workings

Analysis:

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

The current MRP meets the requirements of R645-301-521.140 which requires maps that clearly show all mine plans on Map 5-4A.

cparker

Maps Certification Requirements

Analysis:

The current MRP meets the State of Utah R645-301-512Certification Requirements.

R645-301-512 requirements are met as all mine drawings and plates are stamped by a Utah certified professional engineer, Jay Marshall, with experience in underground mining operations.

cparker

Reclamation Plan

General Requirements

Analysis:

The current MRP meets the State of Utah R645 requirements for Reclamation Activities.

The requirements of R645-301-540 are met within the current MRP as there is no change to the existing MRP reclamation details that all mining activities will be permanently reclaimed in accordance with regulations and approved permit. All surface equipment, structures, or other facilities not designated to be let in conjunction with the post mining land use plan will be disassembled and removed. The reclamation plan for the disturbed areas is presented in detail in Appendix 5-5. Figure 5-1 and 5-2 detail how the portals will be reclaimed. All highwalls will be backfilled as described in Appendix 5-9. Map 5-9 shows the mine site reclamation drainage plan and Table 5-1 show the reclamation time table.

cparker

Approximate Original Contour Restoration

Analysis:

The current MRP meets the State of Utah R645 requirements for Approximate Original Contour Restoration.

The current MRP meets the minimum R645-301-512.200 ,-553.110 through -553.150, and -302-270 due to the proposed post mining land use change that would not require a variance from approximate original contour (AOC) as shown on Map 5-9. Maps 5-6A, 5-6B and 5-6c show that AOC will be replaced during reclamation activities in plan view.

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.

cparker

Backfill and Grading General

Analysis:

The current MRP meets the State of Utah R645 requirements for Backfill and Grading.

The current MRP meets the general requirements of R645-301-553 by failing to detail a general backfill and grading plan that details 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 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.

The requirements of R645-301-553 are met within the current MRP as there is no change to the existing MRP grading reclamation details that state the post mining highwall slopes will be constructed to achieve a long term stability. The slope stability analyses for the reclamation of the site are found in appendix 5-4.

cparker

Mine Openings

Analysis:

The current MRP does not meet the State of Utah R645 requirements for Mine Openings.

The requirements of R645-301-513.500, R645-301-529, and R645-301-551 are met within the current MRP as there is no

change to the existing MRP sealing of mine openings at the time of final reclamation. Chapter 5 Section 513.500 and 542 details that upon final completion of mining activities any shafts, drifts, exploratory holes, or entryways from the surface will be capped, sealed and backfilled consistent with MSHA 30 CFR 75.1771. The Mine portals will be sealed by constructing a Kennedy block stopping at least 25 feet in from the surface opening and then backfilled 25 from the entry with incombustible earth materials.

cparker

Topsoil and Subsoil

Analysis:

Analysis:
The objectives of the West Ridge mid-term review are outlined in a letter dated September 1, 2016 to Karin Madsen. Item A. refers to review of permit conditions and permittee-initiated plan changes.

CATCHBASINS:
MRP Vol. 2, Appendix 5-15, Attachment 9 (p. 13 & 14) states that catch basins would no longer be needed after completion of down dip long wall panels in 2012, since water would be allowed to accumulzte in the lower mine. The reclamation of all catch basins would follow, upon consultation with the Division. Soil sampling at reclamation would also be completed. Appendix 5-15 should be updated at this time to summarize the mining progression and the plans for catch basin reclamation and soil sampling as described.

BEAR CANYON:
The status of the Bear Cyn Gob Vent Hole and potential reclamation should be described in Appendix 5-14.

B CANYON:
The status of the temporary re-opening of the B Cyn portal (construction/reclamation) should be described in Appendix 5-19.

Deficiencies Details:

R645-301-250,
(1) MRP Vol. 2, Appendix 5-15, Attachment 9 (p. 13 & 14) states that catch basins would no longer be needed after completion of down dip long wall panels in 2012, since water would be allowed to accumulzte in the lower mine. The status of the catch basins should be updated in Appendix 5-15.
(2)The status of the Bear Cyn Gob Vent Hole and potential reclamation should be described in Appendix 5-14.
(3)The status of the temporary re-opening of the B Cyn portal (construction/reclamation) should be described in Appendix 5-19.

pburton

Road System Reclamation

Analysis:

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

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

cparker

Road System Retention

Analysis:

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

The requirements of R645-301-534 and -552 are met within the current MRP as there is no change to the existing MRP reclamation of roads that will be retailed at the end of mining that exist throughout the permitted area. Appendix 5-2 contains the approval letter for the mine to use 100 feet of Carbon County's C Canyon road and the commitment to leave the road post mining in a condition which provides safe and convenient access to public lands.

cparker

Revegetation Standards for Success

Analysis:

The MRP does not meet the State of Utah R645 requirements for providing adequate reference areas to be used to measure reclamation success.

West Ridge Mine has three reference areas that are delineated on MRP Map 3-1 as required under R645-301-323.100. These reference areas represent Douglas fir/maple, pinyon-juniper, and Douglas fir/Rocky Mountain juniper communities. On May 19, 2016, the Division physically inspected each reference area. The pinyon-juniper and Douglas fir/Rocky Mountain juniper areas were in the same vegetative condition as those approved in the MRP. However, the Maple/Aspen site had been impacted from adjacent boulder fallout which had altered ground cover, production, and woody species density at that precise location. As such, the Division requests the Permittee relocate the Maple/Aspen reference site to another appropriate location that meets the Division's regulatory requirements.

Deficiencies Details:

The MRP does not meet the State of Utah R645 requirements for providing adequate reference areas to be used to measure reclamation success.

The Permittee must relocate the Maple/Aspen reference site to a new location that meets the objectives of a reference area. This reference area must be approved by the Division and incorporated into the MRP.

lreinhart

Cessation of Operations

Analysis:

The current MRP meets the State of Utah R645 requirements for Cessation of Operations

The requirements of R645-301-515 and -541 are met within the current MRP 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 in Chapter 5 Section 515.

cparker

Maps Affected Area Boundary

Analysis:

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

The requirements of R645-301-542 are met within the current MRP as there is no change to the existing MRP plan

cparker

Maps Bonded Area

Analysis:

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

The requirements of R645-301-800are meet within the current MRP as the bonded area map is up to date as detailed on Map 5-5.

cparker

Maps Reclamation BackFilling and Grading

Analysis:

The current MRP meets the State of Utah R645 requirements for Reclamation Backfilling and Grading Maps.

The requirements of R645-301-542 are met within the current MRP as there is no change to the existing MRP plan of backfilling and grading areas or volumes in Appendix 5-5 and maps 5-9 through 5-12.

cparker

Maps Reclamation Facilities

Analysis:

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

The requirements of R645-301-542 are met within the current MRP as there is no change to the existing MRP plan of facilities that will remain post mining operations.

cparker

Maps Reclamation Final Surface Configuration

Analysis:

The current MRP meets the State of Utah R645 requirements for Final Surface Configuration Maps.

The requirements of R645-301-542 are met within the current MRP as there is no change to the existing MRP plan of the estimated final surface configuration back to AOC.

cparker

Maps Reclamation Surface and Subsurface Man Made

Analysis:

The current MRP 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 current MRP as there is no change to the existing MRP plan in the surface and or subsurface manmade features within the permit area.

cparker

Maps Reclamation Certification Requirments

Analysis:

The current MRP meets the State of Utah R645 requirements for Certification Requirements

R645-3010-512 requirements are met as all mine drawings and plates are stamped by a Utah certified professional engineer, Jay Marshal, who has experience in underground mining operations.

cparker

Bonding Determination of Amount

Analysis:

The Mid-term does not meet the minimum requirements of R645-301-830.140 as the Permittee failed to submit detailed bond information in regards to the Mid-term.

Deficiencies Details:

The Mid-term does not meet the minimum requirements of R645-301-830.140 as the Permittee failed to submit detailed bond information in regards to the Mid-term.

The Division requires an evaluation of the reclamation cost estimate during each midterm permit review. This cost estimate is then escalated for five years or until the next midterm review. In accordance with the requirements of R645-301-830, and -301-830.140, it is the Permittee responsibility to provide detailed estimated cost sheets to support the reclamation cost estimate.

The Permittee must update the unit cost data used in the 2011 Midterm Permit Review reclamation cost estimate to 2016 unit costs using the 2016 R.S. Means Heavy Construction Cost Data manual. All computation sheets for demolition, earthwork and re-vegetation must be updated and submitted to the Division so the Division can determine the required bond amount needed through 2021.

The total 2016 reclamation cost for the West Ridge Mine (sum of the direct and indirect costs) must be escalated from 2016 to 2021 (5 years) using an escalation factor of 1.007 % (the 2015 escalation factor)

This escalated cost is rounded to the nearest $ 1,000 to determine the amount of required bond which must be posted with the Division by the Permittee.

Please submit the Mid-term updates.

bwiser

Special Categories

Experimental Practices Mining

Analysis:

Analysis:
There are two commitments related to the experimental practice of burying sol in-place.

A commitment to quantitatively evaluate the experimental practice for five years is found in MRP, Vol. 1, Section 231.100 (p. 2-11) and in App. 2-6 (page 21). As described, this sampling will be conducted over five years after test plot reclamation if the monitoring indicates reclamation success.

The plots were reclaimed and seeded in September 2006. The 2010 sampling results were first provided in the 2010 annual report and every year since. There have been no significant differences in total living cover between the conventional and experimental techniques. Based upon the successful revegetation reported over the last five years, this commitment should be retired. The Division and OSM have communicated about this issue and are in agreement (email from C. Belka, 9/19/2016 and email from PBurton to file, 9/21/2016).

A second commitment to monitor the fill to protect buried topsoil is found in App. 2-8 addendum. This fill is protecting the topsoil below will be removed during reclamation and placed in the backfill as described in Section 231.100 (p. 2-7). The results of this analysis over the last eight years demonstrate that at locations T1 & T3, the fill is accumulating salt from road de-icing. Consequently, the permittee should commit to an alternative de-icing treatment for treating roads in winter.

Deficiencies Details:

R645-302-210,
(1) A commitment to quantitatively evaluate the experimental practice for five years is found in MRP, Vol. 1, Section 231.100 (p. 2-11) and in App. 2-6 (page 21). Based upon the successful revegetation reported over the last ten years, the MRP narrative in Chapter 2 and Appendix 2-6 should state that this monitoring commitment has been fulfilled.

(2) A second commitment to monitor the fill to protect buried topsoil is found in App. 2-8 addendum. The results of this analysis over the last eight years demonstrate that at locations T1 & T3, the fill is accumulating salt from road de-icing. Consequently, the permittee should commit to an alternative de-icing treatment for treating roads in winter.

pburton