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Technical Analysis and Findings

Utah Coal Regulatory Program

February 13, 2017

PID: C0070033
TaskID: 5355
Mine Name: WILDCAT LOADOUT
Title: MIDTERM COMPLETION RESPONSE

General Contents

Right of Entry

Analysis:

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

The previous analysis (Task ID #5283) identified a deficiency relative to the documentation provided in the MRP relative to right of entry. Appendix B of the approved mining and reclamation plan (MRP) contained an out of date right of way agreement from the Bureau of Land Management (BLM). The Permittee was directed to provide an up to date BLM right of way agreement.

The Permittee has provided the updated BLM right of way agreement (ROW Grant UTU-48027). The document was executed on October 16th, 2014 with signatures from the field manager of the BLM's Price Field Office and the general manager of the Wildcat Loadout site. BLM land specialists indicated to Division staff that there have been no amendments to the right of away agreement since the October 2014 execution date and that the agreement is valid until 2034.

schriste

Legal Description

Analysis:

The MRP describes and identifies the lands (on a map) subject to coal mining over the life of the operation, including the size, sequence, and timing of the mining anticipated and permit boundaries.

The permit area legal description was updated with this midterm to change acreage of the permit area to 123.19 acres and adds SW1/4SE1/4SW1/4NE1/4 Section 33 T.13S., R9E. Plate 1-B (Disturbance Areas) has been updated to show the correct permit boundary.

Ireinhart

Operation Plan

Mining Operations and Facilities

Analysis:

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 by including 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.

The mitigation plan for DO-04 regarding windblown coal fines is contained with Appendix P of the MRP. In 2014 the MRP included the additional operations of crude oil unloading station, storage system, and railcar loading station on the west side of the Utah Railroad tracks. The oil transloading is outside the jurisdiction of UDOGM but is within the Wildcat Loadout permit area therefore items pertaining to the operations of the oil transloading are addressed in Chapter 9 of the Wildcat MRP.

carker

Topsoil and Subsoil

Analysis:

The results of the review of the response to the midterm review meet the State of Utah R645 requirements for topsoil protection R645-301-230. The results of the site visit on November 2nd, 2016 for this facility indicated that the establishment of vegetation from the previous spring seeding effort was minimal.

The Division's soil scientist, (Priscilla Burton), biologist (Joe Helfrich) and Kit Pappas met at the Division's Price field office on February 7, 2017. Interim and permanent seed mixes for site reclamation were discussed as well as seed mixes for the topsoil stock piles and vegetation test plots. A review of previous inspection reports indicated that the insitu topsoil area had been seeded on March 14 of 2014. Additional vegetation information from pre-disturbance surveys indicated that Wyoming Big sage, Kochia and Winterfat were the main shrubs.

Recommended procedures for the enhancement of vegetation on the insitu topsoil include:

Broadcast seeding with a mixture of grasses on snow by February 28th;

We recommend broadcast seeding Forage kochia, Bassia prostrata, variety 'Snowstorm' @ 1 lbs PLS/acre (9 PLS seed/sq ft) and

Basin wildrye, Leymus cinereus, variety 'Trailhead' at 2.6 lbs PLS/ac (7.8 PLS/sq ft) and

Winterfat, Krascheninnikovia lanata, 'Northern Cold Desert Germplasm' variety @ 2.3 lbs PLC/ac (6.9 PLS/sq/ft).

jhelfric

Topsoil and Subsoil

Analysis:

Analysis:

The information in the MRP meets the requirements of soil salvage R645-301-232. There are four stopsoil stockpiles on site: Topsoil piles A, B, E & F. These stockpiles are shown on Plate 1. These topsoil stockpiles have been in place for decades without developing a protective cover of vegetation, as required by R645-301-234.230. (See discussion of topsoil stockpiles in Inspection Report # 3253, dated 9/13/2012.) On February 7, 2017, Division representatives Priscilla Burton and Joe Helfrich met with IPA representative, Kit Pappas to discuss the historical record of seeding and treatments applied to the stockpiles. The following is a timeline of topsoil stockpile treatments:

1984 topsoil salvaged from 20 acres. Seeded with final reclamation mix, less shrubs. (Henry Sauer, April 25, 1989 Internal Folder 0023.pdf)

1988 topsoil was sampled for laboratory analysis (App. D)

1989. April. Topsoil pile E has numerous desirable species in ample proportion with some bare spots, (H. Sauer, 1989 Internal Folder 0023.pdf). Topsoil piles A-D required reseeding.

1989 Construction of topsoil pile F.

1989 December. drill seeding of the level top surface of topsoil piles B, C, D and side slopes were hand broadcast (Burt Jeanselme, December 19, 1989, Internal folder 0001.pdf). The piles were seeded with modified interim mix that was the final mix without shrubs and which included 3 lbs/ac great basin wild rye (*Elymus cinereus*) in place of needle and thread grass and 2.5 lbs/ac slender wheat grass (*Agropyron trachycaulum*) at a (Outgoing folder, document 0001, Lynn Kunzler, 11/17/1989).

NOTE: The final and interim mixes found in the MRP pgs. 3-21 through 3-23 are not the original seed mixes seeded in 1989. They were revised in the early 2000's.

1990. January. Sideslopes of topsoils Piles B, C, D and the entire topsoil pile F and A were not seeded due to snow accumulation.

1994 Stockpiles B, C, D were consolidated into one pile called B on the West side of the RR tracks.

1994 Test plots on the level surface of the consolidated topsoil pile B were drill seeded. Testing: irrigation vs. no irrigation; 1T/ac vs 4 T/ac alfalfa hay/acre; 1 T/ac hay incorporated with 1.5 T straw on surface vs. 1 T/ac hay incorporated w/ 1.5 T oats or barley straw on surface.

1997 Test Plot evaluation concludes irrigation favors Fairway Crested wheatgrass to the exclusion of native grasses. Mulch favors the seeded prostrate kochia a desirable non-native over the grasses. (2003 Incoming Document 0001.pdf, Mike Glasson, 3/11/2003.)

2002 December. the consolidated topsoil pile B was seeded again. The seed mix tag could not be found in the files. It is assumed that the interim mix was used.

2002 June. Topsoil pile A was reseeded and straw mulch was applied. Erosion control matting was pinned on top of straw. (2002 Internal File 0012.pdf, Pete Hess, 6/19/2002 Inspection Report.)

2010 October. Coal fine accumulations were removed from Sediment Pond B ASCA area. Straw was distributed at a rate of 1.17 Tons/ac over the 7.26 acre area and then disced in to the soil prior to seeding. Seeding was completed on 10/7/2010 7, 50 lb bags of seed were hand broadcast. Seed included sand lovegrass, blue grama, sand dropseed, desert globemallow, slender wheatgrass, western wheatgrass, thickspike wheatgrass, white yarrow, triticale, Indian Ricegrass (2010 Incoming 10072010.pdf and 10072010a.pdf) Seed was cross-disced into the soil (Internal File 10072010.pdf).

2012. Globemallow and grasses were doing well on the Sed Pond B ASCA area. Triticale growth is stunted and poor. (9/13/2012, Insp Rpt #3253, Amanda Daniels and Priscilla Burton)

2014 March. Coal was scraped from In Situ topsoil storage A-1 (Internal 3/14/2014.doc, Priscilla Burton Inspection Report #3770). Within a few days, seed was broadcast. The mix was blue grama, desert globemallow, desert marigold, sand dropseed, slender wheatgrass, western wheatgrass and purple three-awn (Incoming 3/11/2014.pdf). There was no mulch applied.

The 1982 Soil Survey conducted by Earl Jensen (Appendix D) reports the dominant vegetation to be Indian ricegrass, Russian thistle, cheatgrass, big sagebrush, and kochia. Important plants to be Indian ricegrass, galleta, Wyoming big sagebrush and winterfat and in the pinyon/juniper benches: salina wildrye and Indian ricegrass. The survey suggests adapted native species, Russian wildrye, crested wheatgrass and prostrate kochia are suitable for rangeland seeding.

Taking all the above into account and recognizing that this year is a banner water year, (there was 30 inches of snow in January at Wildcat), it was decided to seed a grass and a shrub on topsoil piles A, B, E, F, and A-1 (in situ) on top of melting snow by the end of February, 2017. The species would be those not previously seeded, so that success of seeding into snow would be determined easily. Grass species discussed were alkali sacaton (*Sporobolus airoides*) or Indian rice grass (*Stipa hymenoides*). Shrub species discussed were winterfat (*Krascheninnikovia lanata*) or forage kochia (*Bassia prostrata*). The final selection of species is dependent on availability. There will be no surface roughening possible and no mulch applied. The seed will be directly broadcast on top of snow. Site conditions during seeding, photographs and seed tag will be reported to the Division by Mr. Pappas.

pburton

Reclamation Plan

Maps Bonded Area

Analysis:

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

The amendment meets the requirements of R645-301-521.140 due to information stated in the mine plan details and plates which match the provided legal description of the mine boundary. Plate 1 through Plate 1B show the Permit area of 123.19 acres of which a total disturbed area of 111.62 acres. On November 16, 2015 the Permittee updated Exhibit B of the Surety company bond agreement to include the 11.62 acres of disturbance.

cparker

Bonding Determination of Amount

Analysis:

The Wildcat, Midterm Completion Response is deficient and does not meet the State of Utah R645 requirements for Determination of Bond amount.

The submitted Wildcat, Midterm Completion Response does not meet the requirements of R645-301-830.140 as the Permittee failed to include all of the bonding sheet that are currently in the incorporated Mine Reclamation Plan.

The following are sheets incorporated in December 2014 but were not submitted:

Oil Storage Tanks (4) 30
4 Inch Piping 31
6 Inch Piping 32
Misc. Equip. Removal 33
Lighting 34

Deficiencies Details:

The Wildcat, Midterm Completion Response is deficient and does not meet the State of Utah R645 requirements for Determination of Bond amount.

Permittee needs to submitted Wildcat, Midterm Completion Response according to R645-301-830.140 by providing detailed estimated cost sheets to support the reclamation cost estimates.

The Permittee must update the unit cost data used in the prior approved bonding calculations for 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.

In accordance with R645-301-830.410, Division Technical Directive 007, and Office of Surface Mining Handbook for Calculation of Reclamation Bond Amounts the Permittee may utilize third party contractors for cost references when a general cost references does not adequately describe the required reclamation task. In the event the Permittee utilizes local third party contractors cost estimates within the reclamation bond amount additional information must be submitted with the application including a minimum of three individual quotes for the work. References may include items such as a letter or email transcript but must include all relevant contact information from the contractor so that the Division may contact said contractor to verify unit cost is valid in the event the Division was the hiring personal. References must be submitted at the time the reclamation bond amount is submitted to the Division.

In accordance with R645-301-830.410, Division Technical Directive 007, and Office of Surface Mining Handbook for Calculation of Reclamation Bond Amounts the Permittee must utilize bare unit costs when using standardized cost reference manuals such as R.S. Means Heavy Construction. The Division applies an indirect cost of 26.8% that covers overhead and profit calculations in the indirect line items of the total sheet.

The total reclamation cost for the Mine (sum of the direct and indirect costs) must be escalated from 2016 to 2021 (5 years) using an escalation factor of 0.7 %.

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.

bwiser