

#4254
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TECHNICAL MEMORANDUM

Utah Coal Regulatory Program

March 7, 2013

TO: Internal File

FROM: Priscilla Burton, Team Lead *PB hm sbs*

RE: Change in Mining Sequence, Coal Hollow Mine, Alton Coal Development, LLC, C/025/0005, Task ID #4254

SUMMARY:

The February 12, 2013 revision extends the expected mine life to 2017 (Year 6) and describes two concurrently active pit areas in the NE1/4 and SE ¼ of Section 30, beginning in Year 3 (2013) as shown on Dwg. 5-10. The change in mining sequence rearranges the progress of mining and reclamation. The application describes a preferred reclamation scenario wherein reclamation of Pits 16-21 is delayed until overburden from the adjacent BLM Lease By Application area is available. The mined out Pits 16-21 will be 50 acres in size, requiring 6,300,000 loose cubic yards to reclaim the 1,500 ft. x 1,300 ft area. The "Alternative," bonded scenario is to re-handle the Excess Spoil pile to backfill Pits 16 - 21.

The Permittee should address the following deficiencies prior to approval:

R645-301-121.100, Only existing topsoil stockpiles and subsoil stockpiles should be indicated on Drawing 2-2.

R645-301-232.600, The timing for live-haul topsoil salvage shown on Dwg. 2-2 needs to be revised in accordance with the new overburden removal sequence shown on Dwg. 5-2 Disturbance Sequence.

R645-301-234, In the event that live topsoil haulage exceeds replacement depth, a temporary storage location should be selected for the excess. The storage location should be shown on Dwg. 2-2. Excess live haul must be mulched and seeded in accordance with the fugitive dust control plan and the soil handling plans found in Sections 231.100 and 241.100).

R645-301-422, The application must provide documentation of communication with the DEQ/DAQ concerning the changes in exposed surface area described by the application.

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R645-301-121.200,

- 1) The legend on Dwg. 5-10 should indicate that Year 1 refers to the year mining began, 2011.
- 2) Redline text on page 5-22 incorrectly states that the mining will occur in the “southwest ¼ of Sec 30, beginning with pit 28”. Please correct this statement to read, “southeast ¼ Sec 30” or “southwest ¼ Sec 29”.
- 3) Dwg. 5-18 shows overlap of Stage 2 and active pits in the NW ¼ Sec 29, please redraw Stage 2 and correct the number of backfilled acres accordingly.
- 4) The Division observed that Stage 3 Backfill reclamation area includes pits 13 – 22; however, the calculations on Dwg. 5-19 provide a total LCY of backfill and overburden for “Phase 3 Overburden (Pits 14 – 22).” Please revise calculations accordingly.
- 5) Dwg. 5-17 should illustrate a stage of activity in pits 1, 2, 4, & 7.
- 6) Dwg. 5-3 refers to Dwg. 2-2 for topsoil placement; however, Dwg. 2-2 must be revised to show the re-arranged live haul requirements for reclamation.
- 7) Please reconcile the Phases shown on Dwg. 5-3 with the Reclamation Sequence shown on Dwg. 5-38.

TECHNICAL ANALYSIS:

OPERATION PLAN

TOPSOIL AND SUBSOIL

Regulatory Reference: 30 CFR Sec. 817.22; R645-301-230.

Analysis:

Topsoil Removal and Storage

Mine pits and mining sequence are described in Section 523. Annual topsoil removal is shown on Dwg 5-2 Disturbance Sequence. Overburden removal is shown on Dwg 5-16. Operational sequence and contemporaneous reclamation sequence is shown on Dwg 5-10, and Dwgs 5-17 through 5-19. The Permittee references years of mining on Dwg 5-10. The permit was issued in December 2009. Coal was first mined in 2011. The current year, 2013, is the third year of mining. Dwg. 2-2 illustrates topsoil removal and storage locations as well as the source of topsoil live-haul for contemporaneous reclamation sites by year of mining. The legend in Dwg 2-2 should be revised to follow the mining sequence described in the application and shown on Dwgs. 5-2 Disturbance Sequence.

Note: all engineering drawings have a scale of 500 ft/inch, whereas soils drawings Dwg. 2-1 and 2-2 are scaled at 400 ft/inch.

Four topsoil stockpiles and a subsoil pile were located as shown on Drawing 2-2. The Temporary Subsoil pile and 2/3 of Topsoil pile #3 have since been utilized on Stage 1 of the Excess Spoil Reclamation pile. The remainder of Topsoil pile #3 will be used in reclamation of the Excess Spoil reclamation in the spring/summer of 2013.

Dwg. 5-2 shows the 45 acres of topsoil salvage in 2013, which includes the access road west of pits 16 - 28, the surface acreage of 9, 27 and 28 and Pond #4. Sample locations for this topsoil are shown on Dwg. 2-1. Using the average soil salvage depth for this area of 8 inches, a total of 47,916 cu yds will be salvaged and live hauled. Dwg. 5-38 highlights 36 acres to be reclaimed in 2013. The average topsoil replacement depth is 8 - 9 inches of topsoil (Sections 233.100 and 240). Therefore, the 36 acres will require 38,322 cu yds of topsoil. The 2013 reclamation area will utilize the remainder of topsoil pile #3 (approximately 10,000 cu yds) and half of topsoil pile #4 (56,000 cu yds). Under this scenario, there will be no live haul. The plan should evaluate the use of live haul and Dwg. 2-2 should indicate a storage location for topsoil that cannot be live hauled. According to the approved plan, stored topsoil expected to remain in place for one year or longer must be mulched and seeded in accordance with the fugitive dust control plan and the soil handling plans. If Topsoil pile #4 is not utilized in 2013, it should be seeded and mulched in accordance with Section 231.100. Stockpiles to be left in place less than one year will be treated with a tackifier (Section 244.100). The surfaces of all stockpiles will be roughened by gouging, pocking or ripping (Section 244.100).

Appendix C of Appendix 2-1 provides a summation of the laboratory data from soil sample sites.

Findings:

The application should be approved with the following requirement:

R645-301-121.100, Only existing topsoil stockpiles and subsoil stockpiles should be indicated on Drawing 2-2.

R645-301-232.600, The timing for live-haul topsoil salvage shown on Dwg. 2-2 needs to be revised in accordance with the new overburden removal sequence shown on Dwg. 5-2 Disturbance Sequence.

R645-301-234, In the event that live topsoil haulage exceeds replacement depth, a temporary storage location should be selected for the excess. The storage location should be

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shown on Dwg. 2-2. Excess live haul must be mulched and seeded in accordance with the fugitive dust control plan and the soil handling plans found in Sections 231.100 and 241.100).

AIR POLLUTION CONTROL PLAN

Regulatory Reference: 30 CFR 784.26, 817.95; R645-301-244, -301-420.

Analysis:

The fugitive dust control plan, found in Appendix 4-5, required by R645-301-423 states that during operations the Permittee will stabilize exposed surface areas using mulch and tackifier (R645-301-244.100); will minimize and control erosion of regraded areas (and topsoil and subsoil piles) and will control sediment contributions to streams from stockpiles (R645-301-244.320 and R645-301-526.220, *et seq*), using tackifier or surface roughening, mulch, and vegetation (R645-301-244.300).

The App. 4-5 fugitive dust control plan includes the following:

- Mulch or tackifier application for unseeded topsoil/subsoil stockpiles.
- Seeding of topsoil stockpiles in existence longer than one year.
- Tackifier on graded, unseeded reclamation areas.
- Water sprays (as needed) for material handling points (crushing, screening, transfer, loading, dumping); for excavation and pushing activities; for construction and demolition; for drilling and blasting; and for cleared areas.
- Water sprays or chemical treatment or gravel as needed on unpaved roads and yard areas.
- Synthetic cover on haul truck beds as needed.
- Coarse gravel at entrances to and exits from public roads.

The fugitive dust control plan in App 4-5 describes monitoring of fugitive dust from material storage, material handling, haul roads, yard areas, and cleared, leveled, unvegetated areas. The App. 4-5 monitoring program includes the following:

- The site supervisor will periodically observe the dust at the permit boundary to determine the level of control needed.
- Level 1, 0 – 5% opacity at the permit boundary triggers increased watering frequency and an application of magnesium chloride on the Out of Pit haulroads.
- Level 2, 5 – 10% opacity will result in even more water and/or magnesium chloride applications
- Level 3, Greater than 10% at the permit boundary triggers increased watering frequency and an application of magnesium chloride on the Out of Pit haulroads.

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- Production will stop if dust cannot be reduced to 5 – 10% opacity.
- Records of watering will be provided in the Annual report.

The application describes the mining of 1 million tons/year or less of coal. However, the fugitive dust control plan found in Appendix 4-5 has not been revised and statements in App. 4-5 (referencing the requirement of R645-301-423 et seq, for surface mines producing greater than 1,000,000 tons/year) purposefully remain to allow flexibility in the future.

The application must provide documentation of communication with the DEQ/DAQ concerning the changes in exposed surface area described by the application. The AO limits haul road distance and tonnage of overburden and topsoil removed annually.

Findings:

R645-301-422, The application must provide documentation of communication with the DEQ/DAQ concerning the changes in exposed surface area described by the application.

MAPS, PLANS, AND CROSS SECTIONS OF MINING OPERATIONS

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

Analysis:

Drawing 5-2, Disturbance Sequence, shows the areas to be disturbed in each year of coal recovery.

Drawing 5-10, Coal Removal Sequence, shows the anticipated yearly progression and pit alignment. Refer to this Drawing for pit numbers.

Drawing 5-16 shows the overburden removal sequence. Live-haul topsoil salvage shown on Dwg. 2-2 needs to be revised accordingly. See deficiency written under R645-301-232.600.

Drawings 5-17, 5-18 and 5-19 show the sequence of reclamation in three stages. Dwg. 5-17 shows the Stage 1 reclamation. Dwg. 5-17 should illustrate a stage of activity in pits 1, 2, 4, & 7. At the completion of Stage 2 reclamation, Dwg. 5-18 shows the active pit locations to be pits 13 – 15 and pits 22 & 23. At the completion of Stage 3 reclamation, Dwg. 5-19 shows pits numbered 16 – 21 (50 acres) remaining open and pits 22 & 23 (14 acres) backfilled, but requiring topsoil. Disposition of these 64 disturbed acres are the question relative to the reclamation plan for this site.

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Drawing 5-3 shows three phases of reclamation, but does not provide acreage for the phases. Phase 3 reclamation corresponds to Stage 3 backfill and Stage 3 remaining pit areas shown on Dwg. 5-19.

Dwg. 5-38 shows the reclamation sequence by year, with final reclamation of all surface areas including the facilities yard and the Stage 3 pit occurring in the final year, 2017. It is difficult to reconcile Dwg. 5-38 with the three phases of reclamation shown on Dwg. 5-3. As shown on these two drawings, Phase 1 would be completed in 2017 and Phase 2 would be completed in 2015, and Phase 3 would be completed in 2017.

The Permittee has provided two options for the reclamation of the final pit area. The first option is to obtain leases outside the proposed permit boundary, and use spoil from the new leases to reclaim the final pit area of the proposed Coal Hollow permit boundary. This is the Applicant's preferred scenario and the final topography under this preferred scenario is shown on Dwgs. 5-35 and 5-36. These drawings have not changed with this submittal. The preferred reclamation scenario for Pits 16-28 is based on ACD being the successful bidder on the adjacent federal leases. Map 1-2, Project Area LBA shows the location of the Alton Coal LBA federal leases that must be acquired through the bidding process. If Alton Coal Development cannot obtain the federal leases, then they will proceed with the alternative reclamation scenario shown on Dwg. 5-37 and 5-37A.

Were ACD to be the successful bidder on the Alton Coal LBA, the addition of those leases would be a significant revision to the Coal Hollow Mining permit and the preferred scenario could be approved at that time.

ACD has mentioned the possible need for a Temporary Cessation status approval by the Division should coal recovery from Pits 16-21 be completed prior to all permitting approvals being in place for the permit expansion. The Division will process any application made by ACD for a Temporary Cessation status as expeditiously as possible, and will meet the permitting time frame for significant revisions established under R645-300-131.111.1.

Findings:

R645-301-121.200,

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7) Please reconcile the Phases shown on Dwg 5-3 with the Reclamation Sequence shown on Dwg 5-38.

BACKFILLING AND GRADING

Regulatory Reference: 30 CFR Sec. 785.15, 817.102, 817.107; R645-301-234, -301-537, -301-552, -301-553, -302-230, -302-231, -302-232, -302-233.

Analysis:

General

The Applicant has requested a variance from the requirements of R645-301-553 to backfill within 60 days or 1500 linear feet of coal removal. Final mining in Pits 21 north to pit 16 (as shown on Dwg 5-19) create a pit that is 1,500 ft x 1,300 ft area, and that requires 6,300,000 Loose Cubic Yards of backfill as stated on page 5-66 and 5-67.

The Permittee has provided two options for the reclamation of the final pit area. The Preferred Scenario is to use spoil from the Alton LBA lease area, outside the current permit boundary, to reclaim the final pit area (pits 16 - 21), leaving post mining topography as shown on Dwgs. 5-35 and 5-36. The Alternative Scenario, requires rehandling 6,300,000 LCY of overburden from the Excess Spoil pile to fill pits 16 -21. In this scenario, the post mining topography is shown on Dwgs 5-37 and 5-37A.

Under both scenarios, all areas are expected to be reclaimed by 2017 as Drawing 5-38, Reclamation Sequence illustrates. The preferred scenario depends entirely upon acquiring the Alton LBA. The Division cannot bond for a hypothetical situation. Therefore, the alternative scenario is the bonded scenario. ACD should provide documentation that acquiring the LBA is likely and imminent, within 60 days of coal recovery from pits 21 and 20, to receive an exemption from the requirements of backfilling and grading outlined in R645-301-553.

ACD’s request for an exemption from the requirements of R645-301-553 for Pits 16 through 21 is acknowledged by the Division, but cannot be approved at this time.

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Findings:

Rough backfilling and grading operations will follow coal removal by not more than 60 days or 1500 linear feet. **No variance has been issued from the requirements of R645-301-553. The information provided** meets the minimum regulatory requirements of the R645 Coal Mining Rules.

RECOMMENDATIONS:

Prior to approval, the deficiencies and outlined in this memo (and discussed with the Permittee during a site visit on March 5, 2013) should be addressed.

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