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Technical Analysis and Findings

Utah Coal Regulatory Program

May 11, 2016

PID: C0070039
TaskID: 5099
Mine Name: DUGOUT CANYON MINE
Title: AS-BUILT REFUSE PILE

Operation Plan

Topsoil and Subsoil

Analysis:

Analysis:

The MRP update meets the requirements of R645-301-121.200, because corrections to the total volume of topsoil and subsoil stated on pages 2-15 and in RA Attachment 2-2 and RA Table 2-2 now reconcile with the surveyed, as-built drawing volumes. The as-built drawing shows the expansion produced a new subsoil pile holding 2,753 CY, but due to the surveyed volume changes, the amount of borrow required to reclaim the site has decreased by only 400 CY.

A soil survey of the 0.73 acre expansion was completed by EIS Environmental & Engineering Consultants on December 1, 2015, just prior to the salvage of subsoil. This survey states that subsoils in previously disturbed USDA Map Unit 50* (Haverdad Loam, 1-5% slopes) and Map Units B & M would be salvaged.

Subsoil salvaged from this expansion was stored in Subsoil Pile #2 (2,753 CY) as shown on the As Built Soil Stockpiles Drawing dated 2/2016. The as-built shows the locations of two topsoil and two subsoil stockpiles, their volumes and their cross sections.

The narrative in Chapter 2, pages 2-15 and 2-16 along with RA Attachment 2-2 have been revised with the sum of as-built volumes for topsoil and subsoil. RA Table 2-2 Soil Salvage Volumes has total volumes correspond with as-built surveyed total volumes.

The total volume of cover required for the waste rock site remains 91,720 CY. Although 2,753 CY were salvaged during this expansion, correction of the over-estimates of volumes stockpiled produced a net change of only + 400 CY in the amount of material stockpiled. Therefore the volume of borrow material required to achieve that amount of cover over the waste changed by only -400 CY and is now 56,795 CY.

*1981 Carbon County Soil Survey on line at
http://www.nrcs.usda.gov/Internet/FSE_MANUSCRIPTS/utah/UT616/0/carbon.pdf

pburton

Spoil Waste Refuse Piles

Analysis:

The amendment meets meet the State of Utah R645 requirements for Refuse Piles.

The amendment meets the minimum standards or R645-301-528.322 due updating the recovered topsoil and subsoil volumes. The total topsoil recovered was 8,549 CY (compared to the original estimate 7,298 CY) and 11,964 CY (compared to the original estimate of 18,029 CY). The total cover material available at the site is 23,460 CY (with an additional 2,947 CY of additional cover material generated during the creation of perimeter ditches). A total of 91,720 CY is required for the site, therefore the remaining 56,795 CY will need to be imported from the borrow site.

cparker

Maps Facilities

Analysis:

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

The amendment meets the minimum requirements of R645-301-521.120 through-521.125 which require maps to clearly show existing surface and subsurface facilities. Plate 2-2 was updated to reflect the recovered topsoil and subsoil volumes.

cparker

Maps Certification Requirements

Analysis:

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

R645-301-512 minimum requirements are met as all mine drawings and plates are stamped by a Utah certified professional engineer, David Spillman, an engineer with experience in underground mining operations and waste rock design.

cparker

Reclamation Plan

Maps Reclamation Final Surface Configuration

Analysis:

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

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

cparker

Bonding Determination of Amount

Analysis:

The amendment meets the State of Utah R645 requirements for Determination of Bond Amount.

The amendment meets the minimum requirements of R645-301-830.140 as the Permittee submitted detailed asbuilt information that is below the bonded amounts currently used for the reclamation bond amount. The MRP asbuilt now states that the total cover material available at the site is 23,460 CY from on site with dozer grading and the remaining 56,795 trucked from the borrow site. The bond current is costed for moving 23,060 CY at the site and hauling an additional 57195 CY from the borrow area. The difference in the onsite material results in approximately a \$300 increase while the difference of hauling and handling borrow material decrease the cost approximately \$1,600. The Permittee did not elect to change the volumes within this amendment, therefore the current bond is over bonded for reclamation of the site by approximately \$1,300.

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