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DEPARTMENT OF NATURAL RESOURCES

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December 15, 2020

Karin Madsen, Resident Agent
UtahAmerican Energy, Inc.
P.O. Box 910
East Carbon, Utah 84520-0910

Subject: Upper Pad Extension, UtahAmerican Energy, Inc., Horse Canyon Mine, C/007/0013, Task #6233

Dear Ms. Madsen:

The Division has reviewed your application. 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.

A bonding deficiency has been identified for revegetation procedures. Given that the currently posted bond is roughly equivalent to the current reclamation liability for the property, it's likely that a bond increase will be required as a result of this amendment. Given the pending permit transfer for the Horse Canyon Mine and the requirement that adequate bond be in place prior to approval, it's imperative that this bonding deficiency be resolved in a timely fashion.

The plans as submitted are denied. Please resubmit the entire application by January 14th, 2021. If you have any questions, please call me at (801) 538-5350.

Sincerely,

Steve Christensen
Coal Program Manager

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Technical Analysis and Findings

Utah Coal Regulatory Program

PID: C0070013
TaskID: 6233
Mine Name: HORSE CANYON MINE
Title: UPPER PAD EXTENSION

General Contents

Right of Entry

Analysis:

The application meets the R645 requirements for Right of Entry.

The application proposes to install a culvert in an incised trench along the southeast edge of the disturbed area. The culvert will be bedded in compacted fill base and then covered with 2 feet of compacted fill once installed. Cut and fill calculations provided on Plate 5-7E-6 reveal that 1951.91 cubic yards of fill is needed to complete this project. The proposed source of fill is a borrow area that straddles the north side of Pond 1.

A previous review found this section deficient because the Permittee was proposing to borrow from undisturbed portions of the BLM Right-of-Way UTU-91789, which would require special permission from the BLM and a modification to the terms of the current ROW. Instead, the Permittee has opted to abandon the plans to borrow from undisturbed ROW UTU-91789 in lieu of borrowing from an already disturbed portion of ROW UTU-77122.

jeatchel

Permit Application Format and Contents

Analysis:

The application does not meet the State of Utah R645 requirements for Permit Application Format and Contents.

Some editing of the document is necessary so that it will be clear and concise.

Chapter 1 Section 116, page 13, states the existing disturbed area is 41.66 acres of which 35.62 have actually been disturbed and 1.84 acres remain undisturbed. This is not correct mathematically and does not agree with the revised Plate 2-3 acreage table. Revised Plate 2-3 states 40.11 total permit acres. The revised acreage is based on aerial surveys conducted in 2017 (Incoming document 11102020.6233.pdf, page 4). Please make the appropriate corrections to the disturbed and undisturbed area stated in Section 116 and/or on Plate 2-3.

Due to changes in undisturbed area, Exhibit A (Plate 5-2, representing the bonded area in the reclamation agreement) must be updated in the Reclamation Agreement prior to the pending transfer of the permit.

Deficiencies Details:

The application does not meet the State of Utah R645 requirements for Clear and Concise. The following deficiency

must be addressed prior to final approval:

R645-301-121.200,

1. Chapter 1 Section 116, page 13, states the existing disturbed area is 41.66 acres of which 35.62 have actually been disturbed and 1.84 acres remain undisturbed. This is not correct mathematically and does not agree with the revised Plate 2-3 acreage table. Revised Plate 2-3 states 40.11 total permit acres. The revised acreage is based on aerial surveys conducted in 2017 (Incoming document 11102020.6233.pdf, page 4). Please make the appropriate corrections to the disturbed and undisturbed area stated in Section 116 and/or on Plate 2-3.
2. The legend of Plate 2-3a must indicate the meaning of the green color attributed to several areas on the plate.
3. The map unit column of the Available Soil Resources table incorrectly labels RBT map unit as RB2 (Sec. 232.100, page 9).
4. Update the list of Plates in the Chapter 5 Table of Contents.
5. Longitudinal profile of UC-6 and UC-7 on Plate 5-7E-2 is shown looking southeasterly, not northwesterly. Please make the appropriate correction.
6. The final reclamation plan for the UC culvert system is described in a note on Plate 5-7E-7. If this information remains on the plate, it must be divided into two columns (similar to the note on Dwg 5-7E-1) so that each column can be read on a page at 100% magnification. Right now the note is wider than page width at 100% magnification and the reader must move the page left to right with each line in order to read the note. Ideally, the information would be placed in an Appendix (such as Appendix 5-8 Reclamation and Enhancement Plan) with reference to that appendix in the MRP narrative and the Plate.
7. Final reclamation topography for the borrow area has not changed from that shown on Plates 5-6 and Plate 7-7 (pond 1). However both these plates and the profile shown on 5-7b-1 and associated cross-sections on Plates 5-7A-2 through 5-7A4 and Plates 5-7B-2 through 5-7B-6 require updates for working profile and disturbed area locations.
8. Due to the change of undisturbed area since 2018, Exhibit A (Plate 5-2 representing the bonded area in the reclamation agreement) must be updated in the Reclamation Agreement prior to the pending transfer of the permit.

pburton

Environmental Resource Information

Historic and Archeological Resource Information

Analysis:

The amendment meets the State of Utah R645-301-411 requirements for Historic and Archeological Resource Information.

Plate 5-7e-1, Item #2 contains cultural resource information for the project area. The proposal does not change the currently-permitted boundaries of the permit area. This portion of the permit area was inventoried for cultural resources under the 1998 "Cultural Resource Inventory of the Soil Testing Area for the Lila Canyon Coal Project" report. This report does not indicate any known cultural resources in the project area.

Included in the submittal is an unanticipated discovery clause which fulfills terms of the Programmatic Agreement between OSM, DOGM, BLM, and SHPO regarding the mine. If any unanticipated cultural or historic resources are discovered during the course of operations, work in the area will cease immediately and DOGM will be notified. DOGM will then notify the other agencies and initiate consultation regarding whether, and under what circumstances, work may continue.

tmiller

Operation Plan

Mining Operations and Facilities

Analysis:

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

The application does not satisfy the requirements of R645-301-521 and R645-301-526 because the application lacks

an engineering narrative that describes how the proposed culvert channel will be designed and constructed in accordance with the R645 regulations. The application contains several Plates that contain notes and explanations along with the design illustrations. A narrative at the top of Plate 5-7E-1 provides a description of how the culvert will be constructed in addition to archaeological considerations. This information should be placed in an Appendix (such as Appendix 5-4 New Facility Design) with reference to that appendix in the MRP narrative and the Plate. The culvert construction information in bullets 3 - 10 should be reported in the Chapter 5 Engineering section and the archaeological information in bullet 2 should be appended to the Chapter 4 Land Use section.

Deficiencies Details:

The application does not meet the State of Utah R645 requirements for Mining Operations and Facilities. The following deficiency must be addressed prior to final approval:

R645-301-521, -526, and -121.200: The Permittee must include the description of the proposed culvert channel construction in an Appendix with reference to that appendix in the MRP narrative and the Plate.

jeatchel

Fish and Wildlife Protection and Enhancement Plan

Analysis:

The amendment meets the State of Utah R645-301-358 requirements for Fish and Wildlife Protection and Enhancement.

The proposed project is set to occur within the existing permit area. The primary consideration related to wildlife with this proposal is raptor nest protection. A map of known raptor nests is found in the MRP on Confidential Plate 3-1. Wildlife exclusionary period commitments in the Permittee's MRP apply to this project and must be adhered to. This means initiation of construction may not begin after February 1st without prior authorization from DOGM, DWR, BLM, and USFWS as indicated in Ch. 3, Section 333.300, p. 20 of the MRP.

tmiller

Topsoil and Subsoil

Analysis:

The Mining and Reclamation Plan does not meet the Utah R645 requirements for Soil: Operation Plan.

This amendment describes the installation of culverts UC-5, UC-6, and UC-7 in the ephemeral wash located in the SE corner of the disturbed area (Chap. 5, Section 520, p. 25). The culvert will be seated on, and covered with, compacted fill. The fill will come from soil cut from the North slope of Pond 1 and from the slopes adjacent to the ephemeral channel (Plate 5-2). The culvert installation detail is shown on Plate 5-7E-2.

Section 232.710 currently describes the ROM coal stockpile area as one of minimal disturbance. Chapter 2, Section 232.710 must be updated to acknowledge the protection of 0.25 acres of soil *in situ* with geotextile beneath the culvert and refer to further information in Chap 5, Section 520, p. 26 and Plate 5-7E-1. In addition, the statement found in Section 232.710, regarding 5.95 acres, may no longer be accurate.

According information presented on Plate 2-3 (revised with this amendment), the proposed culvert installation will add 0.98 acres of new disturbance, labeled on Plate 2-3 as undisturbed area number 5. Revised Plate 2-3 shows the projected salvage volumes, including the borrow area. As built will provide actual volumes salvaged. Soil will not be salvaged from the drainage itself (Plate 5-7E-1) and this should be stated in Chapter 2, Section 232.710.

Installing the culvert will entail removal of VBJ soils from the borrow area and XBS and RBG soils (and a small amount of RBT soil) on the SE slope adjacent to the upper pad at the installation area (Plate 2-3 and Chap. 2, App. A2 Salvageable Soils Map). [Note: The culvert installation area has been impacted by coal fines and has been repeatedly vacuumed to prevent accumulations of coal fines on the undisturbed soils. After several vacuuming attempts, the ROM coal stockpile salvage area was called out as an area of minimal soil recovery due to steep slopes and jersey barriers were installed to protect the area.]

The culvert installation area is vegetated with pinyon juniper. Pre-mining soil survey estimated 12 inches of subsoil from the XBS soil and 8 inches from the RBG soil, and 6 inches from RBT soil. (Plate 2-3 states a potential salvage of 883

bank CY). The MRP states that the soil salvage operation will be conducted under the direction of a certified soils specialist. The soils specialist will be present during the salvage to interpret site conditions and salvage depth (Section 232.100, p. 11). Notations on Plates 2-3 and 2-3a state that the Available Resources Table in Section 232.100 will be updated with as-built information. Boulders larger than three feet in diameter will be excluded from the topsoil stockpile (Section 232.100, p. 10).

Soil pedestals will be used to confirm the subsoil salvage cut depth (Section 232.500). An As-built map will show where subsoil has been used as fill (Section 232.500).

The area of topsoil salvage (including the 0.01 acres undisturbed area on the slope of pond 1) and the borrow fill location is shown on Plate 2-3. The location where topsoil will not be salvaged due to steep rocky slopes, and the location of soil buried *in situ* is shown on Plate 5-7E-1. The soils left in situ will be grubbed and protruding rocks will be removed (Plate 5-7E-1, Note 4). Soil protected in situ in the channel will be covered with a geotextile fabric (Plate 5-7E-1, Note 6).

Plate 5-7E-1 shows two potential work access locations that are described in Note 1. However, in Notes 7 & 8, topsoil salvage is described after the culvert is installed. This is not practical; since the fill is coming from the slopes and because access will likely trample existing topsoil. Topsoil must be removed before culvert installation, in accordance with R645-301-232.600.

Salvaged topsoil will be placed on the SW side of the topsoil stockpile (Plate 2-3 and Plate 5-7E-1, Notes 7&8). The culvert will be buried with subsoil cut from the borrow area identified on Plate 5-2 and from disturbed and undisturbed locations identified on Plate 5-7E-1. A longitudinal profile of the culvert and fill is shown on Plate 5-7E-2.

The total required fill material is 2,215 CY of which 1,952 CY will be imported from the borrow location (Plate 5-7E-6 Cut/Fill Comparison table). The borrow material is to be cut from the slope of pond 1 from an area approximately 250 ft x 75 ft, as shown on Plate 2-3 and 5-2. The Division calculates that to produce 1,900 CY from this area will require a cut of approximately 3 feet. Cut slopes may be as steep as 1h:1v (.Dwg 5-7E-1, General Note 2). All exposed slopes will be seeded with an interim mix (Plate 5-7E-1, Note 9 and General Note 5). e

In addition, this amendment corrects the disturbed acreage tally and removes it from MRP Plate 2-3a and places it on Plate 2-3. The new table on Plate 2-3 states 6.12 acres of undisturbed land (5.14 acres after this proposal). (Plate 2-3 and 2-3a now agree on the remaining undisturbed being 6.12 acres, mostly associated with the BLM ROW #UTU-91789).

MRP Plate 2-3 accounts for the site acreage as follows:

TOTAL DISTURBED AREA BOUNDARY	40.11 ACRES
TOTAL UNDISTURBED AREA	6.12 ACRES
TOTAL Proposed new DISTURBED AREA	0.98 ACRES
AREA DISTURBED TO DATE	33.99 ACRES

This new tally on Plate 2-3 is based on aerial surveys (Incoming document 11102020.6233.pdf, page 4). The Area Disturbed To Date tally indicates that 2.65 acres were disturbed in 2019 with construction of the new storage yard, expansion of the new shop area, and associated access roads (described in Chap 5, Sec. 520, p. 23). This revised acreage supersedes the acreage information presented in the 2019 Annual Report Plate 2-3a. A comparison of the revised Plate 2-3a and the current MRP plate 2-3a shows that much of the land formerly within the Upper & Middle pad is now accounted for in the new shop pad polygon, directly North of the topsoil storage pile.

Section 232.100 Available Soil Resources Table also accounts for 33.99 acres and a volume of 78,700 loose CY in storage (Chap. 2, pp. 9 and 10). This table and the tables on Plates 2-3a and Plate 2-3 bring the information current (with the reported soil storage volume in the 2019 annual report). As stated on Plate 2-3, the table in Section 232.100 and those on Plates 2-3a and 2-3 will be revised with as-built information.

Section 232.600 states that topsoil will be removed in two Phases. The first phase removed topsoil in an area large

enough to allow for mining of diligence tons. The second phase will “remove the remainder of the approved topsoil.” In reality, the second phase has been completed in increments over a number of years.

Annual Reports have tracked the total disturbed area and topsoil storage volumes. At the end of 2010, 29.48 acres were disturbed. By the end of 2014, the disturbed area was increased to 31.02 acres to widen the upper warehouse pad. In 2015, the disturbed area was reported to be 31.88 acres after a temporary storage yard was created west of the parking area. Construction of an additional 1.09 acres for drainage control and 3.02 acres for the upper storage pad in 2018 brought the total disturbed area to 40.11 acres in 2018, with topsoil salvaged from 33.39 acres. The 2019 Annual Report Plate 2-3a reported a total disturbed area boundary of 40.26 acres, with the total expected disturbed area of 36.31 acres, with 35.22 acres disturbed to date (Dec. 2019). As previously stated, this amendment supersedes the acreage information provided in the 2019 annual report, but supports the salvage volume reported in the 2019 annual report.

Deficiencies Details:

The application does not meet the State of Utah R645 requirements for Soils Operation Plan. The following deficiency must be addressed prior to final approval:

R645-301-232.710, MRP Section 232.710 currently describes the ROM coal stockpile area as one of minimal disturbance. Chapter 2, Section 232.710 must be updated to acknowledge the protection of soil *in situ* with geotextile beneath the culvert and refer to further information in Chap 5, Section 520, p. 26 and Plate 5-7E-1. In addition, the statement found in Section 232.710, regarding 5.95 acres, may no longer be accurate.

R645-301-232.600, Plate 5-7E-1 shows two potential work access locations that are described in Note 1. However, in Notes 7 & 8, topsoil salvage is described after the culvert is installed. This is not practical, since the fill is coming from the slopes and because access will likely trample existing topsoil. Topsoil must be removed before culvert installation, in accordance with R645-301-232.600.

pburton

Hydrologic General

Analysis:

This application meets the State of Utah R645 requirements for Hydrologic General.

The application satisfies the requirements of R645-301-731.720 because Plate 7-2 has been updated to correctly include all watersheds and the disturbed boundary correlates with plate 5-2. The proposed borrow area south of Sediment Pond 1 from previous task #6187 has been removed. Ditch DD-28 was removed from the plate, and the correct acres have been posted for DD-16b and DD-16c.

khinton

Hydrologic Diversion General

Analysis:

This application meets the State of Utah R645 requirements for Hydrologic Diversion General.

The permittee is amending their disturbed drainage plan to include 3 culverts: UC 5, UC6 and UC7. Appendix 7-4 has been updated correctly to reflect the addition of these culverts including updates to the Undisturbed Watershed Summary (Table 1), Disturbed Watershed Summary (Table 2), and the Watershed Parameters (Table 3).

khinton

Hydrologic Sediment Control Measures

Analysis:

This application meets the State of Utah R645 requirements for Hydrologic Sediment Control Measures.

The application satisfies the requirements of R645-301-732 because Plate 7-5 Sediment Control has been updated to clearly show only the new culverts to be installed that are included within this amendment.

The Permittee has updated and included the design criteria for the disturbed ditches, and the disturbed culverts including UC 5, UC 6, and UC 7 within appendix 7-4.

Hydrologic Discharge Structures

Analysis:

This application meets the State of Utah R645 requirements for Hydrologic Discharge Structures.

The application satisfies the requirements of R645-301-744 because the Permittee added text within Appendix 7-4 to include a description of the rip rap installation parameters in addition to rip rap sizing in Table 8 for ditches and Table 9 for culverts. Riprap will be installed within DD-15, DD-16 and UD-7 and will extend across each ditch cross-section to the anticipated depth of flow and will be extended a minimum of 10 culvert diameters.

khinton

Hydrologic Impoundments

Analysis:

This application does not meet the State of Utah R645 requirements for Hydrologic Impoundments.

The application does not satisfy the requirements of R645-301-733 because the Permittee did not update the Sediment Yield Calculations for Sediment Pond 1 correctly. The permittee will need to update the Sediment yield calculations total, table 11a to correlate with Table 5 and Table 12a and the sediment pond summary in appendix 7-4.

Deficiencies Details:

The application does not meet the State of Utah R645 requirements for Hydrologic Impoundments. The following deficiency must be addressed prior to final approval:

R645-301-733: The Permittee must update the Sediment Yield Calculations for Sediment Pond 1, Table 11a to correlate with Tables 5 and Table 12a and update Appendix 7-4 section 3.4 Sediment Pond Summary. The summary must be updated to match the changes made in Table 11a Sediment Pond #1 Design.

khinton

Maps Facilities

Analysis:

The application does not meet the State of Utah R645 requirements for Facilities Maps.

The application contains the following facilities maps:

- Plate 5-2 - As-Built Surface Facilities - contains the locations of all current surface facilities within the permit area as well as the location of the proposed culvert channel disturbance and proposed borrow area north of Pond 1. The disturbed area and BLM R.O.W. boundaries are clearly shown.
- Plate 5-7E-1 - Upper Pad Expansion Plan and Typical Details - contains the plan view of the entire length of incised culvert ditch along with a typical cross-sectional view showing how the culvert will be bedded and installed. Details regarding the culvert installation are included in the General Notes at the top of the page. A Legend describes the topographical details as well as the color scheme for the proposed cut and fill areas.
- Plate 5-7E-2 - contains the profiles and section views for culverts UC-5 and UC-6. Also depicted are the areas of proposed cut and fill within the channel. The Plate title claims UC-7 is also depicted but this Plate only contains UC-5 and UC-6 views. A Longitudinal view at the top claims the section is looking northwesterly, but it is really looking southeasterly.
- Plate 5-7E-3 - contains section views for culvert UC-7. The locations of the sections within the channel are depicted on Plate 5-7E-1. Also depicted are the areas of proposed cut and fill within the channel. The Plate title claims UC-6 is also depicted but this Plate only contains UC-7 views.
- Plate 5-7E-4 - contains section views for culvert UC-7. The locations of the sections within the channel are depicted on Plate 5-7E-1. Also depicted are the areas of proposed cut and fill within the channel. The Plate title

claims UC-6 is also depicted but this Plate only contains UC-7 views.

- Plate 5-7E-5 - contains the profile and section views for culverts UC-5, UC-6, and UC-7. The locations of the sections within the channel are depicted on Plate 5-7E-1. Also depicted are the areas of proposed cut and fill within the channel.
- Plate 5-7E-6 - contains section views for culvert UC-5, UC-6, and UC-7. The locations of the sections within the channel are depicted on Plate 5-7E-1. Also depicted are the areas of proposed cut and fill within the channel. Included in this Plate are cut/fill tabulations for each section of the channel. According to the volume calculations, 1951.91 cubic yards of borrow material will be required to install the proposed culvert. This material is to be harvested from the north flank of Pond 1.
- Plate 5-7E-7 - New Culvert Disturbance Area Reclamation Plan - contains the plan view of the entire length of reclaimed culvert along with a cross-sectional view showing how a typical sediment log will be bedded and installed. Details regarding the culvert reclamation plan are included in a lengthy section of notes in the top left corner of the page. A Legend describes the topographical details as well as the color scheme for the proposed cut and fill areas.

All 5-7E series Plates are missing from the List of Plates in Chapter 5 Table of Contents.

Since the proposals in this amendment will disturb previously undisturbed locations within the Permit, the following Plates will require updating: Plate 5-6, 5-7b-1, 5-7A-2 through 5-7A4, Plates 5-7B-2 through 5-7B6, and 7-7.

Deficiencies Details:

The application does not meet the State of Utah R645 requirements for Facilities Maps. The following deficiency must be addressed prior to final approval:

R645-301-521.161 thru -521.163, R645-301-121.200 - The Permittee must address the following issues in regards to Facilities Maps:

- The Longitudinal view in Plate 5-7E-2 should be changed to a southeasterly from northwesterly view.
- The List of Plates in Chapter 5 Table of Contents should be updated to include all 5-7E series Plates.
- The following Plates within the MRP require updates to the profiles and disturbed area locations: Plate 5-6, 5-7b-1, 5-7A-2 through 5-7A4, Plates 5-7B-2 through 5-7B6, and 7-7.

jeatchel

Reclamation Plan

General Requirements

Analysis:

The application does not meet the State of Utah R645 General Reclamation Requirements.

The application does not satisfy the requirements of R645-301-541 and R645-301-121.200 because the application lacks an engineering narrative that describes how the proposed culvert channel will be reclaimed in accordance with the R645 regulations. The application contains several Plates that contain notes and explanations along with the design illustrations. A narrative at the top left corner of Plate 5-7E-7 provides a detailed description of how the culvert will be reclaimed although the format of the text is cumbersome and difficult to follow. This information should be removed from the Plate and placed in an Appendix (such as Appendix 5-8 Reclamation and Enhancement Plan) with reference to that appendix in the MRP narrative and the Plate.

Deficiencies Details:

The application does not meet the State of Utah R645 General Reclamation Requirements. The following deficiency

must be addressed prior to final approval:

R645-301-541 and R645-301-121.200: The Permittee must include a reclamation narrative for the proposed culvert in Appendix 5-8.

jeatchel

Topsoil and Subsoil

Analysis:

The Mining and Reclamation Plan does not meet the Utah R645 requirements for Soil: Reclamation Plan.

Chap 2, Section 242 and Section 244 must refer to the plans for re-exposing and stabilizing the buried soil in the ephemeral wash and refer to Chap. 5, Section 520, p. 26- 27 and Plate 5-7E-7 and Appendix 5-8 for further information.

The final reclamation plan for the UC culvert system is described in a note on Plate 5-7E-7. I

After the culvert installation, assume 35 acres will be disturbed (Plate 2-3). Assume 79,500 CY of topsoil and subsoil stockpiled. This storage volume represents 2,271 CY/disturbed acre or approximately 16 inches of topsoil cover over the entire site (not accounting for large rocks taking up volume in the stockpile).

Chapter 2 Section 242.100 (p. 18) states that efforts will be taken to replace varying depths of topsoil to resemble the original soil depths. Plate 2-3 shows the original soil depths by soil type. They vary from 8 inches to 18 inches. A quick assessment of this map indicates that the lower half of the site was designated to receive 18 inches at final reclamation and the upper half, 12 inches at final reclamation.

Final topography and variable replacement depths are shown for the culvert installation area on Plate 5-7E-7. The plan involves re-exposing the buried ephemeral channel and treating with PAM 12 Plus or best technology (Chap 5, Sec. 520, p. 26). Topsoil application will follow plans outlined in Chapter 2, Section 240.

Final reclamation topography for the borrow area has not changed from that shown on Plates 5-6 and Plate 7-7 (pond 1). However both these plates require updates for disturbed area, as mentioned in a General Contents deficiency.

The rock slope material described in Chap 5, Sec. 520 (p. 21) will require three feet of subsoil and one foot of topsoil cover for final reclamation. Appendix 5-7 refers to Plate 5-7A for final placement of the waste. Plate 5-7A shows that the shale rock waste will be redistributed over 300 feet length (shown on from x-sec station 14+50 to 17+75) and a width of 200 feet (shown on x-sec 16 & 17 on Plates 5-7B-5). Approximately 6,766 CY of subsoil will achieve three feet of cover over the 330 x 200 ft area or 1.4 acres. Some of this cover could come from the 2,215 CY of subsoil stored in the adjacent pad over UC 5, UC6, & UC7 (Plate 5-7E-6 Cut/Fill Comparison table).

Deficiencies Details:

The application does not meet the State of Utah R645 requirements for Soil Reclamation Plan. The following deficiency must be addressed prior to final approval:

R645-301-240, Chap 2, Section 242 and Section 244 must mention the plans for re-exposing and stabilizing the buried soil in the ephemeral wash and refer to Chap. 5, Section 520, p. 26- 27 and Plate 5-7E-7 and Appendix 5-8 for further information.

pburton

Stabilization of Surface Areas

Analysis:

The Mining and Reclamation Plan meets the Utah R645 requirements for Soil: Stabilization.

Pocking and seeding and mulch are described in App. 5-8 Reclamation Plan.

Chapter 5, Section 521, p. 26 describes the use of PAM 12, terra fiber on soils buried in situ, and sediment logs on the adjacent slopes. These reclamation treatments are further described on Plate 5-7E-7 Final Reclamation Plan Notes.

pburton

Bonding Determination of Amount

Analysis:

The application does not meet the State of Utah R645 requirements for Determination of Bonding Amount.

The application does not satisfy the requirements of R645-301-830 because the bond cost summary is missing revegetation costs for containerized plantings. The general notes on Plate 5-7E-1 propose additional plans that address the reclamation of the culvert channel proposed in this amendment. These additional reclamation items include the addition of soil amendments such as Polyacrylamide and inoculum, the removal of the geotextile fabric beneath the proposed culvert, and the application of fertilizer and soil tackifier. The notes further state that topsoil samples will be taken to determine how many nutrients and soil amendments will need to be added to the soil. Most of the additional reclamation items have been addressed in the reclamation bond with the exception of planting containerized stock as proposed in the revegetation procedures (Item #8) listed in the notes on Plate 5-7E-7.

Deficiencies Details:

The application does not meet the State of Utah R645 requirements for Determination of Bonding Amount. The following deficiency must be addressed prior to final approval:

R645-301-830: The Permittee must address the costs to plant containerized stock in the reclamation bond.

jeatchel