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DEPARTMENT OF NATURAL RESOURCES

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October 1, 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 #6187

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. The plans as submitted are denied. Please resubmit the entire application by no later than November 2, 2020.

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: 6187
Mine Name: HORSE CANYON MINE
Title: UPPER PAD EXTENSION

Summary

Right of Entry to 42.6 acres is provided by BLM ROW # UTU-91789 and #UTU-77122.

This amendment would expand the disturbed area by 0.84 acres (Section 232.100) to install UC 5, UC 6 and UC 7 culverts as shown on Plate 5-7E-1. The information included in this application does not inform or illustrate an upper pad expansion.

pburton

General Contents

Right of Entry

Analysis:

The application does not satisfy 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 sources of fill are two borrow areas that reside adjacent to Pond 1.

The larger of the two proposed borrow areas straddle two different BLM R.O.W. areas: #UTU-91789 on the south and #UTU-77122 on the north. The R.O.W. #UTU-91789 consists of approximately 2.5 acres and was granted in October 2017 for the purpose of improving the existing dam on the west side of Pond 1. The language within R.O.W. #UTU-91789 states that no excavation of borrow areas for fill material is permitted on the site (Page 4, Item 7j - Construction/Maintenance). Further, the permit states that any excavations must be backfilled upon reclamation (Page 5, Item 8c - Reclamation/Rehabilitation).

Since the terms of BLM R.O.W. #UTU-91789 explicitly prohibit the excavation of borrow areas for fill material, the Permittee must consult with the BLM to modify the terms of the Right-of-Way.

Deficiencies Details:

The application does not satisfy the R645 requirements for Right of Entry. The following deficiency must be addressed prior to final approval:

R645-301-114: The Permittee must consult with the BLM to modify the current terms of R.O.W. #UTU-91789 to

accommodate the excavation of borrow fill material. Once written approval from the BLM has been secured then the Division may grant approval.

jeatchel

Environmental Resource Information

Historic and Archeological Resource Information

Analysis:

The amendment does not meet the State of Utah R645-301-411 requirements for Historic and Archeological Resource Information.

No cultural resource information is included in the amendment and, as such, it is difficult to determine what, if any, impact the proposal may have on cultural resources within the permit area.

Deficiencies Details:

The amendment does not meet the State of Utah R645-301-411 requirements for Historic and Archeological Resource Information. The following deficiency must be addressed prior to final approval:

R645-301-411: The Permittee must identify the location and boundary of any cultural resource sites within or adjacent to the proposed disturbed area, or state that there are none, and refer to the cultural resource report upon which that statement is based. A single map, located in the confidential section, showing the location and boundaries of all cultural resource sites in relation to permit, disturbance, and potential subsidence boundaries should also be included.

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 R645-301-511, R645-301-521, and R645-301-526 because there is no engineering narrative describing how the proposed culvert channel will be designed, constructed, maintained, and reclaimed in accordance with the MRP. The application contains several maps that contain notes and brief explanations but lacks a supporting narrative in regards to an operation plan that would ordinarily belong in the Engineering section. The Permittee must include a description of the proposed culvert channel and address how it will be operated, maintained, and eventually reclaimed.

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:

R645-301-511, -521, -526: The Permittee must include a description of the proposed culvert channel and address how it will be operated, maintained, and eventually reclaimed.

jeatchel

Topsoil and Subsoil

Analysis:

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

The Division records state a total permit area of 42.6 acres in the Inspection Report database which agrees with the total permit area stated on Plate 2-3, but not on Plate 2-3a.

The application provides a new table on Plate 2-3 showing 5.16 acres of undisturbed land in nine undisturbed areas. This remaining undisturbed area does not agree with the accounting found on either MRP Plate 2-3a or 2019 Annual

Report Plate 2-3a.

The MRP Plate 2-3a accounts for 66,746 CY in the topsoil stockpile outlines the following areas:

TOTAL PERMIT AREA	42.6 ACRES
UNDISTURBED AREA	8.7 ACRES
TOTAL DISTURBED AREA	33.9 ACRES
AREA DISTURBED TO DATE	31.88 ACRES
AREA STILL TO BE DISTURBED	2.02 ACRES

The 2019 Annual Report Plate 2-3a was revised to state 78,700 CY in the topsoil stockpile and to indicate the following acreage.

TOTAL DISTURBED AREA BOUNDARY	40.26 ACRES
TOTAL UNDISTURBED AREA	5.04 ACRES
TOTAL EXPECTED DISTURBED AREA	36.31 ACRES
AREA DISTURBED TO DATE	35.22 ACRES
AREA STILL TO BE DISTURBED	0.34 ACRES

Section 232.100 describes an increase of 0.84 acres in the disturbed area, from 33.99 to 34.83 acres(Chap. 2, pp. 9 and 10). This figure does not agree with Plate 2-3a.

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, as follows.

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). This application will add 0.84 acres of new disturbance. According to 2019 Plate 2-3a, that would make a total of 36.06 acres.

The upper pad will expand into XBS and RBG soils on the SE slope adjacent to the upper pad. This 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 (Section 232.710). The 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. A differentiation between the two salvage depths is shown on Plate 5-7E. 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).

The anticipated volume to be recovered is 358 CY to create a total stockpile volume of 72,345 CY (Available Soil Resources Table, Section 232.100). However, the topsoil stockpile volume is already 78,700 CY (2019 Annual Report, Plate 2-3a).

The cut area is shown on Plates 5-7E-2 through Plate 5-7E6. The area of salvage is approximately 500 ft x 70 ft wide. Topsoil salvaged to an eight inch depth over 0.64 acres would result in 684 CY of topsoil recovery. Salvage of twelve inches from the remaining 0.2 acre would recover 322 CY, for a potential total of 1,000 CY. However, boulders larger than three feet in diameter will be excluded from the topsoil stockpile (Section 232.100, p. 10). Therefore the estimate of 358 CY assumes large boulders are present in large amounts, limiting the soil salvage. Since this estimate is uncertain, the application should state that the Available Resources Table in Section 232.100 will be updated with as-built information.

Salvaged topsoil will be placed on the SW side of the topsoil stockpile (Plate 2-3).

The culvert will be buried with subsoil from disturbed and undisturbed locations identified on Plate 2-3.

Deficiencies Details:

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

R645-301-121.100, The application should state that the Available Resources Table in Section 232.100 will be updated with as-built information.

R645-301-121.200, The application must bring Plate 2.3, Plate 2-3a, and Section 232.100 into agreement with regard to the total permit area, the undisturbed area, the total disturbed area, the area disturbed to date, the undisturbed area remaining, the area to be disturbed by the upper pad expansion, and the current topsoil stockpile volume.

R645-310-121.200, The application must bring Plate 7-2 into agreement with 2.3, Plate 2-3a, and Section 232.100 with regard to topsoil volume.

R645-301-234, Please clarify the current stockpile volume and the anticipated stockpile volume stated in Section 232.100 using the 2019 Annual Report Dwg 2-3a numbers as a starting point.

pburton

Hydrologic General

Analysis:

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

The application does not satisfy the requirements of R645-301-731.720 because Plate 7-2 does not include all labeled watersheds or include all of the permit/disturbed area as shown on Plate 5-2.

Deficiencies Details:

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

R645-301-731.720: The Permittee must update Plate 7-2 to include the complete permit/disturbed area shown on Plate 5-2; the area south of Sediment Pond 1 which is proposed for borrow area. The Permittee must also update the map and label all additional watershed areas including DA-30, DA-31 and DD-28 on plates 7-2 and 7-5. Changes in acres to areas DA-16b and DA-16c also need to be added.

khinton

Hydrologic Diversion General

Analysis:

This application does not meet 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 to reflect the addition of these culverts but there are several errors within the tables that do not coincide with data presented in other parts of the amendment.

Table 1 Undisturbed Watershed Summary needs to be updated to include UA-10 and UA-11. UA-10 and UA-11 are

present in Table 3 Watershed Parameters-Undisturbed Watersheds.

Table 2 Disturbed Watershed Summary includes watersheds DA-30 and DA-31 that drain to DD-28. Update Table3 to include watershed parameters for DA-30 and DA-31.

Deficiencies Details:

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

R645-301-742.300 :The Permittee must update tables within Appendix 7-4 to include all watershed data and summaries.

khinton

Hydrologic Sediment Control Measures

Analysis:

This application does not meet the State of Utah R645 requirements for Hydrologic Sediment Control Measures.

The application does not satisfy the requirements of R645-301-732 because Plate 7-5 Sediment Control includes several new culvert locations on the map that is misleading of where the culverts from this amendment are being installed.

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.

Deficiencies Details:

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

R645-301-732: The Permittee must update Plate 7-5 to make it clear what new culverts are being installed with the application of this amendment.

khinton

Hydrologic Discharge Structures

Analysis:

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

The application does not satisfy the requirements of R645-301-744 because the Permittee did not include the design criteria for the rip rap structure that is to be placed at the end of UC 7 and within UD-7.

Deficiencies Details:

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

R645-301-744: The Permittee must include design criteria for the rip rap that will be installed within UD-7 and at the end of UC 7.

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 then need to update Table 11a, 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, Table 12a and 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 areas south of Pond 1. The disturbed area and BLM R.O.W. boundaries are clearly shown. The proposed culvert disturbance and borrow areas are referred to as "Pad Expansion" areas, but that text is misleading since the culvert disturbance area is not intended to be a pad. The annotations in these areas should omit the reference to a pad expansion.
- 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 and a brief description of reclamation activities 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. Text throughout this Plate continually refers to the newly proposed disturbance as a "New Pad Expansion" even though the new disturbance is not intended to be a new pad. This confusing text should be changed since the proposed disturbance will not be a pad.
- Plate 5-7E-2 - contains the profiles and section views for culverts UC-6 and UC-7. Also depicted are the areas of proposed cut and fill within the channel.
- Plate 5-7E-3 - contains section views for culverts 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-4 - contains section views for culverts 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-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-4 - contains section views for culvert UC-5. 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 BLM R.O.W. within the existing disturbed area boundary.

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 remove the text within Plates 5-2 and 5-7E-1 that makes reference to a "Pad Expansion." Since there are no plans for pad expansion, labeling new disturbance beside the Upper ROM Coal Stockpile Pad as a "Pad Expansion Area" is misleading. Instead of "Pad Expansion Area", perhaps a more accurate descriptor might be "Incised Culvert Channel" or "Culvert Disturbance Area."

jeatchel

Reclamation Plan

General Requirements

Analysis:

The application does not meet the State of Utah R645 requirements for General Reclamation Plans.

The application does not satisfy the requirements of R645-301-542.100 thru -542.620 because there is no engineering narrative describing how the proposed culvert channel and borrow areas will be reclaimed in accordance with the MRP. The application contains several maps that contain notes and brief explanations but lacks a supporting narrative in regards to a reclamation plan that would ordinarily belong in the Engineering section. The Permittee must include a description of the proposed reclamation activities and address how these activities may impact the approved reclamation timeline.

Deficiencies Details:

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

R645-301-542.100 thru -542.620: The Permittee must describe how the culvert channel and borrow areas will be reclaimed and address how these activities may impact the approved reclamation timeline.

jeatchel

Topsoil and Subsoil

Analysis:

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

Assume 36.06 acres will have been disturbed. Assume 79,000 CY of topsoil and subsoil stockpiled. After utilizing 6,500 for cover over the 1 acre of waste, there will be 72,500 CY remaining for 35 acres. That is an average of 2,071 CY/acre which is an average depth of 14 inches. However, this accounting does not include reclamation of borrow areas or soil salvage from borrow areas that are shown on Plate 2-3.

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. At present, there is not adequate amount of soil in the stockpile to meet this commitment. There is however adequate soil to replace a fourteen inch depth of topsoil over 35 disturbed acres, but this does not include borrow areas.

The total required fill material is 2,215 CY of which 1,952 CY will be imported from a borrow location (Plate 5-7E-6 table of cut/fill). Borrow locations are shown on Plate 5-2.

A topsoil salvage and replacement for the borrow areas must be stated.

Deficiencies Details:

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

R645-301-240, A topsoil salvage plan and soil redistribution plan must be stated for the borrow areas shown on Plate 5-2.

pburton

Hydrological Information Reclamation Plan

Analysis:

This application meets the State of Utah R645 requirements for Hydrological Information Reclamation Plan.

This application satisfies the requirements of R645-301-760 because Appendix 7-4 Reclamation Hydrology states that all drainage controls will be removed and as undisturbed drainage culverts are removed, a minimum of two straw bales

or silt fence barriers will be installed downstream of each location for sediment control purposes.

khinton

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 several items have been omitted from the bond cost summary. 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. The application of the fertilizers and soil amendments will depend upon the results of the soil samples. Most of the additional reclamation items have been addressed in the reclamation bond with the exception of the proposed topsoil sampling and the application of the soil tackifier. Please address the costs of these additional items in the reclamation bond.

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 for topsoil sampling and the application of soil tackifier in the reclamation bond.

jeatchel