

**UtahAmerican Energy, Inc.**

March 1, 2005

Pam Grubaugh-Littig
1594 West North Temple, Suite 1210
P.O. Box 145801
Salt Lake City, Utah 84114-5801

Re: Response to the Letter of Deficiency -Lila Canyon Extension, UtahAmerican Energy, Inc., Horse Canyon Mine, C/007/013 Task ID#2055

Dear Ms. Grubaugh-Littig:

Pam please replace the cover letter I submitted to DOGM on Friday the 25th with the ones included. The cover letter I submitted on the 25th had the wrong date on it. It was dated February 24, 2004. It should have been 2005.

Sincerely,

R. Jay Marshall
Project Manager

RECEIVED

MAR 04 2005

DIV. OF OIL, GAS & MINING

SUMMARY OF DEFICIENCIES

The Technical analysis of the proposed permit changes cannot be completed at this time. Additional information is requested of UEI to address deficiencies in the proposal. A summary of deficiencies is provided below. Additional comments and concerns may also be found within the analysis and findings made in this Draft Technical Analysis. Upon finalization of this review, any deficiencies will be evaluated for compliance with the regulatory requirements. Such deficiencies may be conditioned to the requirements of the permit issued by the division, result in denial of the proposed permit changes, or may result in other executive or enforcement action and deemed necessary by the Division at that time to achieve compliance with the Utah Coal Regulatory Program.

Accordingly, UEI must address those deficiencies as found within this Draft Technical Analysis and provide the following, prior to approval, in accordance with the requirements of:

Chapter 1 (Legal - Administration)

Regulations

R645-301-112, UEI must update the ownership and control information, including a statement from the Secretary of the corporation that the information is current. 17

Appendix 1-1 (Ownership and Control) has been updated a Letter from the Secretary of the Corporation that the information is correct is also included.

R645-301-113.300, UEI must provide violation information for the three-year period preceding the application date. 18

Appendix 1-3 (Violations) has been updated to the three-year period preceding the application date of February 2004. Information has been added to include violations from February 2001 to at least February 2004.

R645-301-117.200, UEI must provide the Division with an affidavit of publication for each public notice necessary to satisfy the public notice requirements. 20

Affidavits of publication for both the Sun Advocate and the Emery County Progress which satisfy the public notice requirements have been added to Appendix 1-5.

R645-301-150, UEI must provide the Division with all information required to constitute a technically complete permit by addressing the deficiencies mentioned in this TA. 27

All deficiencies mentioned have been addressed in one way or another providing the Division with all information required to constitute a technically complete permit.

Chapter 2 (Soils)

R645-301-232.100, (1)The plan should indicate that the condition of the slope between the coal pile road and the portal access road (shown on Plates 2-3 and 5-2) must be evaluated after road construction and must be labeled either disturbed or undisturbed, as appropriate, on an As-Built site map.

Page 9 of Chapter 5 has been revised to state "Coal pile Road (Slope between the coal pile road and the portal access road will be evaluated after road construction and be labeled either disturbed or undisturbed, as appropriate, on an As-Built site map."

(2) The vacuuming procedure described in Section 232.710 should be removed from the narrative.

The following text has been removed from Section 232.710. "The area on either side of the conveyor for 20', will be periodically cleaned if accumulation of coal fines exceed one inch. Upon final reclamation this area will again be cleaned."

3) UEI must gather enough cryptogamic soil prior to topsoil salvage to have a minimum of 1% by volume to add to the hydrospray of the topsoil stockpile.

Section 232.100 has been revised to state "eight five gallon buckets of screened 1/4" cryptobiotic soil will be recovered and stored in a cool dry place for redistribution on the topsoil pile." Section 234.230 states "Up to 1% by volume of the sifted soil crusts will be added to . . . "

4) The concept of rock barriers and incidental rock distribution along the boundaries of undisturbed ground (illustrated on Plate 5-2) should be expanded to provide protection for all undisturbed areas within the permit area. 105

Plate 5-2 has been revised and Section 232.100 states "Boulders of approximately three feet in diameter and larger will be separated from the topsoil and piled or placed at appropriate locations such as adjacent to roads, pads etc."

R645-301-234.100, UEI must clarify the apparent discrepancy between the projections in the Mass Balance Table 1 of Appendix 5-4 that indicate approximately 14,000 CY of fill in the topsoil stockpile between cross-sections 4+00 and 6+00, and estimates in Section 232.100 Available Soils Resources Table that project the salvage of 59,000 CY of topsoil. 106

The apparent discrepancy between the projections in the Mass Balance Table 1 of Appendix 5-4 and estimates in Section 232.100 is the result of cross sections being done on 200' centers. The actual construction drawings will be done at a closer interval.. Note on Plate 5-2 that the 4+00 and the 6+00 cross-sections just clip the corners of the stockpile at a depth of approximately 5 feet. The actual maximum stockpile depth is 26 feet. If consideration is given to the material between 4+00 and 6+00 then the volume would more closely compare with the 59,000 CY of actual topsoil to be reclaimed and stored.

R645-301-234.230, Section 231.100 and Section 231.400 must indicate that if seeding does not immediately follow topsoil pile construction, the pile will be roughened again immediately prior to seeding. 105

Text has been revised in Sections 231.100 and 231.400 to state ". If seeding does not immediately follow topsoil pile construction, the pile will be roughened again immediately prior to seeding. "

R645-301-234.230, UEI must clarify that the percentage of cryptogamic soil to be added to the hydromulch should be on the order of 1% by volume, rather than 2 ounces as stated in Section 234.230. 105

Section 232.100 has been revised to state "eight five gallon buckets of screened 1/4" cryptobiotic soil will be recovered and stored in a cool dry place for redistribution on the topsoil pile."

R645-301-242.200 and R645-301.121.200 UEI must submit a consistent plan for the distribution and preparation of all topsoil and growth medium. UEI states that they will rip the topsoil and subsoil in Section 341.200 but they also state in other sections the pocking (gouging) will be used. UEI must also remove from Section 341.200 reference to gouge on the contour. Pocking or gouging must be done in a random pattern to be effective. 132

Section 341.200 has been revised stating either gouging or ripping. References to gouging on the contour has been removed.

R645-301-243, The MRP-Part B indicate that grab samples will be collected from the topsoil stockpile after its height is reduced to 10 feet at the deepest end (Section 243). Four or five grab samples should be sufficient to determine what the effects of darkness, compaction, and sterility have been on the fertility of the topsoil stockpile. 143

Text in Section 243 has been revised to state "Grab samples will be collected from the stockpile after its height is reduced to 10 feet at the deepest end. Four or five grab samples should be sufficient to determine what the effects of darkness, compaction, and sterility have been on the fertility of the topsoil"

Chapter 3 (Biology)

R645-301-121.100, UEI must be consistent in reference to Plate 1-1. UEI labeled the map as Permit Area Map but in Section 321.100 they refer to the map as Permit and Lease Area Map.

75

Text in Section 321.100 has been revised from "Plate 1-1 Permit and Lease Areas" to read "Plate 1-1 Permit Area Map"

R645-301-121.200, (1) Update the paragraph in Sec 321.200 with the current productivity results provided by Dean Stacy.

Section (321.200) was revised to reflect the results provided by Dean Stacy of the NRCS. EIS letters dated 3/1/2000 and 7/26/99 as well as Cook letter dated 7/8/1998 has been removed from Appendix 3-2 to remove confusion.

(2) Use wording in Section 322.220 that correlates to the vegetation maps.

Section 322.220 page 5 of chapter 3 has been changed to read "The dominate Vegetation communities within the proposed disturbed area are pinyon-juniper and grass-shrub. Community types surrounding the proposed disturbed area are primarily pinyon-juniper, mixed conifer, spruce-fir, grass, and sagebrush-grass." The revised statement now correlates to the vegetation maps.

(3) Provide a corrected table for Appendix 5 of Appendix 3-1

It appears that Appendix 5 of Dr. Kings report is correct. If a species exists in either the Reference area or in the Disturbance area, but not in both then a blank will appear in the adjacent column. If a species is found in both areas then they do line up. Appendix 5 of Appendix 3-1 has been revised to eliminate any confusion.

(4) Clarify in the legend on Plate 3-2 that the points are water monitoring locations.

The legend on Plate 3-2 has been revised changing Spring Number to "Water Monitoring Location".

(5) Make the map points on Plate 3-2 legible by increasing the font size.

The font size for map points has been increased so they are easier to read.

(6) Provide an explanatory letter and place it in App. 3-4, just before the Biological Assessment (August 2000). (This letter must either make it clear that the reader should disregard the Assessment's references to the May 1999 results for certain species, or that the results of the May 1999 survey will be provided for the listed species).

The 1999 Coonrod letter has been replaced by a 2004 letter in Appendix 3-4.

(7) Eliminate the discrepancy in Appendix 3.4 concerning suitable habitat for San Rafael and Wright fishhook cactus by either removing the 1999 Coonrod letter or including another letter from Mel Coonrod that clarifies his statements.

The 1999 Coonrod letter has been replaced by a 2004 letter in Appendix 3-4.

(8) In Sec. 322.220, clearly state that the elk winter range is not within the proposed disturbed area (vs. permit area).

*Text on Page 6 of chapter 3 Section 322.220 has been revised. The word permit has been changed to disturbed. The section now reads "Elk winter range is located at higher elevations than that of the **disturbed** area and is not a factor in the disturbed site."*

(9) Specify the area mentioned in the following statement written in Appendix 3-4: "Since the mine site and a 1 mile buffer zone has been determined not to be suitable MSO habitat, therefore, no additional inventories are warranted." (Although the Division assumes "mine site" to refer to the surface facilities area, this sentence is not thoroughly clear.)

The MSO plan found in Appendix 3-4 has been revised to state "Since the surface facility area and a 1 mile buffer zone around the surface facility area has been determined not to be suitable MSO habitat, no additional inventories are warranted."

(10) Clarify the timing of planting seedlings in Table 3-3.

Table 3-3, Page 16 of Chapter 3 has been revised to reflect planting of seedlings in 2027, two years after seeding.

(11) Be consistent in describing the details of mulch and tackifier in Appendix 5-8 and in Chapter 3

Text in Appendix 5-8 and Section 341.230 has been revised.

(12) Make the legend on Map 6-2 legible and include all map symbols. 23

Plate 6-2 has been revised.

R645-301-121.300 and UCA 63-2-304 (26), UEI must move all maps illustrating raptor nest locations from the MRP-Parts A & B to the Confidential File.

41

Move Appendix 3-5 to the confidential File. Plate 3-1 has been moved to the Confidential File.

R645-301-322.100, (1) Survey all suitable raptor habitat including Section 26, T.16 S., R. 14 E.

All suitable raptor habitat will be surveyed including Section 26, T.16 S, R. 14 E.

(2) Conduct raptor surveys at least two years immediately prior to and one year following facilities construction. (There was no survey conducted in 2004.)

Text in Section 323.300 has been revised to state "Raptor surveys will be conducted 1-years prior and one year following all purposed new construction or potentially disruptive mining activity."

(3) Coordinate efforts with the Division and DWR to monitor raptors and Mexican spotted owl two years immediately prior to undermining potential cliff habitat.

DWR performs the raptor surveys of which the division is fully aware of. Text in Section 323.300 has been revised to state "Raptor surveys will be conducted 2-years prior and one year following all purposed new construction or potentially disruptive mining activity."

(4) The MRP- Part B must include a mine map overlaid with potential raptor and Mexican spotted owl cliff habitat, so that the impact of subsidence and subsidence-related events on cliff habitat can be interpreted. 41

Plate 5-3 Confidential has been added to the Confidential Binder to show the MSO habitat area identified by the 2000 model and areas to be flown for raptor surveys.

R645-301-322.100, R645-301-322.200, (1) Remove the second condition concerning overburden for the formal MSO calling survey plan.

The second condition concerning overburden has been removed from the MSO survey.

(2) Include or reference in section 322.210 the information in UEI's MSO summary letter in Appendix 3-4 and reference the action-item list in Section 333. Action-items listed include the commitment to conduct a "formal" MSO calling survey and submit survey results to the Division, UDWR, and USFWS.

Section 322.210 now references the MSO inventory found in Appendix 3-4. Section 333 references the MSO calling survey and the reporting of results.

((3) Conduct a field survey for canyon sweetvetch, Cliff's blazing star and creutzfeldt-flower at least the year construction begins or one year prior to construction. 42

Section 321.100 has been revised to state: "As requested by the Division Canyon sweetvetch, Cliffs blazing star and creutzfeldt-flower will be surveyed for at least the year construction begins or one year prior to construction."

R645-301-323.100, UEI must provide another plate that details the reference and proposed disturbed areas. For this additional map, UEI must include the location and boundary of the newly assigned reference and proposed disturbed areas. UEI should follow DOGM Vegetation Information Guidelines (page 3) and draw this additional map in more detail, such as a scale of 1"=400'. 75

Maps meeting the requirements found on page 3 of the DOGM Vegetation Guidelines can be found in Appendix 3-1 between pages 17 and 18. The maps are drawn to the scale of 1" = 250'.

R645-301-332, UEI must provide additional information on the impacts of subsidence to snakes in areas with less than 1000 feet of cover in the MRP - Part B. 100

The Operator spoke with George Oliver from DWR on 01/03/05. I inquired about the above deficiency. Mr. Oliver told me that this was the first time he has heard the questions asked about effects of subsidence on snakes and snake dens. Mr. Oliver said that he was unaware of any studies or research done on effects to snake dens. George informed me that the only two snakes of concern that might possible be in the Lila Canyon area are the Rat Snake or Corn Snake, and the Smooth Green Snake. The Rat Snake is rare in Utah but has been found in the South Western part of the state to the Green River. The Smooth Green Snake has been found in the Wasatch and Uintah Mountains. The Green Snake is found along streams and swamps in quaky-aspen type vegetation not the PJ type vegetation found at Lila. George said that due to location and vegetation type, existence to both the Rat Snake and the Green Snake could be all but ruled out. Mr. Oliver said that he was not overall concerned for snakes at Lila Canyon, that effects would be minimal in his opinion.

R645-301-332, UEI provides a brief plan for repairing subsidence cracks near springs, seeps, and drainages. UEI should include repair techniques, but must also state to use the best available techniques available at the time of repair. The plan must also include the possibility for the need to seed the repaired area and that UEI will notify the Division prior to any repair of seeps, springs, or drainages. 101

Text in appendix 7-7 has been added to state "UEI will use the best available techniques available at the time of repair. Significant repairs may require seeding. UEI will notify the Division prior to any repair of seeps, springs, or drainages."

R645-301-333, UEI must include additional details of the EA mitigation plan, including implementation dates, project location, and overseeing agency. 100

The implementation dates, project locations, and overseeing agency for the mitigation plan for the EA has yet to be determined. That determination will more then likely be made at the project initiating and notice to proceed meeting which will be held after the permit has been issued. As personal conversation with Mark Mackiewicz Price BLM 1/3/05. The overseeing agency will definitely be the BLM.. Section 333.100 has been revised to state "The implementation dates, and project locations will not be determined until the BLM notice to proceed is given, after permit approval. The overseeing agency for the EA mitigation will be the BLM. Details will be reported to DOGM in the Annual Report immediately following the notice to proceed."

R645-301-333, UEI must remove the combined application of seed with fertilizers from Section 341.220, page 22 and Appendix 5-8, page 3. 132

Appendix 5-8 Page 3 and Sections 341.220 and 230 have been revised state "Fertilizer and seed will not be mixed during hydroseeding operations."

R645-301-333, UEI provided the mass balance equation-parameters and total expected water loss from mining operations. UEI must also include the volume of water consumed for dust suppression, even though the total consumption value may not change drastically. An incorrect value for coal moisture must also be corrected. 101

Appendix 7-3 has been revised to reflect water consumption for dust suppression on the surface. The water loss from the fan evaporation calculation has been corrected.

R645-301-341.210; R353; R356.210; R356.231, UEI must provide a tentative list of species and ratios for the transplants and submit in Chapter 3 of the MRP-Part B as requested during the previous TA. 148

Until the ocular estimates are completed in year 3, a list for transplanted seedlings cannot be determined. Neither the species or ratios for transplants can be determined until the ocular estimates are completed. Appendix 5-8 has been revised to state: "The species and numbers will be determined from the evaluation of the ocular estimates and with consultation with the Division and DWR. The operator will follow R645-301-357.31"

R645-301-342.230; R353.120, UEI must modify the mix to increase diversity and reduce the seed rate. 148

The new seed mix can be found on Table 3.4 / 3.5. This is the same seed mix that was used approved for the Horse Canyon Post Mine Land Use change.

R645-301-357, UEI must include some information in the MRP – Part B narrative for the following coal rules: R645-301- 357.302, -357.303, and -357.304. 148

Sections 357.302-304 have been addressed.

R645-301-358.510, UEI must submit the power pole design plan for the proposed disturbed site for inclusion in the MRP - Part B. 100

No power poles or above ground power lines are being proposed for the disturbed site. Sections 322.220, 520 and Plate 5-2 have been revised to reflect underground power lines within the disturbed area.

Chapter 4 (Land Use & Air Quality)

R645-300-124.330, Place all information concerning the nature and location of archeological resources on public land in the Confidential File. 34

Pages 11-15, Appendix 4-1 and Plate 4-3 have been moved to the Confidential File.

R645-301-121.200, 1) The disturbed acreage of 42.6 acres must be consistently stated in the MRP- Part B. For Example, Section 411.110 indicates 40.77 acres and the Available Soil Resources Table Section 232.100 suggests a potential disturbance of 48.23 acres.

Section 411.110 has been revised to indicate 42.6 acres of disturbed area. A note has been added to the bottom of the Table in Section 232.100 to state "(2) The 48.23 acres was taken from a soil survey and does not accurately reflect the operators intention to include 42.6 acres of disturbance within the disturbed area boundary." This should clarify the confusion.

2) Correctly label the legend of Plate 5-2 to indicate the un-disturbed areas within the disturbed area. 105

Plate 5-2 Has been revised correctly labeling the undisturbed within the disturbed areas.

R645-301-411.140, R645-301-411.141, Include site 42EM1342 in the narrative and on Plate 4-3. 34

Site EM1342 is found in NW1/4, SE1/4 Section 9 T17S R13E which is off the map area, over seven miles off the permit area, at the confluence of the Price River and Grassy Trial or Cottonwood creek. Site 42EM1342 is beyond any influence from Lila Canyon and does not need to be discussed in the MRP.

R645-301-411.141, UEI must include 42EM1342 on Plate 4-3. (see Historical Resource Information for details). 75

Site EM1342 is found in NW1/4, SE1/4 Section 9 T17S R13E which is off the map area, over seven miles off the permit area, at the confluence of the Price River and Grassy Trial or Cottonwood creek. Site 42EM1342 is beyond any influence from Lila Canyon and does not need to be discussed in the MRP.

R645-301-411.142, Provide the permit number for the 1991 Miller Report before the Division can consult with SHPO. 34

The Operator met with Blaine Miller on 1/6/05. Mr. Miller informed the Operator that he had spoken with DOGM and with SHIPO about the Miller Report informing them on what they needed to do to obtain the information that he felt they needed. The Miller Report does contain the Report NO: U-91BL-656 which can be found on Line #6 of the IMACS Site Form found in Appendix 4-1. Mr. Miller reported to the Operator that since the inventory is over 6 years old that the BLM nor SHIPO would have report files. The BLM only keeps the files for 3 years and SHIPO for 5.

R645-301-411.143, UEI must include information of the data recovery plan for 42EM2517 in Chapter 4 - include expected implementation date and overseeing agency. 81

Section 411.14 has been revised to state "A data recovery plan has been prepared by Montgomery Archaeological Consultants. The data recovery plan will be implemented once the Notice to Proceed is given by the BLM which will occur after Permit approval. The BLM will be the overseeing agency." Section 411.140 has been revised to state: "The implementation dates, and project locations will not be determined until the BLM notice to proceed is given, after permit approval. The overseeing

agency for the EA mitigation will be the BLM. Details will be reported to DOGM in the Annual Report immediately following the notice to proceed.

R645-301-420, (1) In accordance with the approved Air Quality Order DAQE-702-99 General Conditions # 10 – 17, the MRP-Part B should indicate that the haul road will be paved and that all unpaved roads and pad areas used by mobile equipment will be treated with water or dust suppressant and that open stockpiles will be watered as conditions warrant. 84

Text in Section 520 has been added to state “As per the approved Air Quality Order haul roads will be paved and unpaved roads and pad areas used by mobile equipment will be treated with water or dust suppressant, open stockpiles will be watered as conditions warrant.”

Chapter 5 (Engineering)

R645-301-121.200, -731.311, According to Appendix 5-7, page 3, Refuse Testing, the parameters to be determined for the materials to be placed in the refuse pile are in Table 2, but there is no Table 2 in either Chapter 2 or 5 or Appendix 5-7. The Permittee needs to identify the parameters and update Appendix 5-7 to correctly identify where they are listed in the MRP.

124

Table 2 has been added to the end of Appendix 5-7. Table 2 lists the parameters to be tested for the rock slope and refuse material.

R645-301-121.300, UEI must remove all information from Sections 537.200 – 537.250 of the MRP-Part B that do not apply directly to settled and revegetated fill that will be allowed to remain in place at final reclamation. 141

Sections 537.200 to 537.250 have been removed from the MRP since they are not applicable.

R645-301-512.250, UEI must have all the plans, maps, cross sections, and profiles for each primary road certified by a registered professional engineer. 110

Appendices 5-4, 5-5 as well as Plate 5-2 are certified by a Professional Engineer.

R645-301-521.120 and R645-301-121.200, The information on Plate 5-1A, Pre Mining Contours is not consistent with the information in the text. UEI shows a 48" and a 24" culvert on Plate 5-1A and in Section 521.120 but refers to only one 36" culvert in Section 526.110. UEI must clearly state the number, size, and type of culverts in the Lila Canyon Extension disturbed area boundaries.

Plate 5-1A, Section 521.120 & 122, 526-110, has been revised to reflect the correct sizes of 48" and 60".

In addition, UEI states in Section 526.110 that Little Park Road can be found on Plate 5-1. UEI did not label Little Park Road on Plate 5-1, nor did they show the line type for a road in the legend. UEI must also properly label the Little Park Road on Plate 5-1 and label it as a pre-existing structure.

Plate 5-1 has been revised labeling Little Park Road and adding the existing road linetype in the legend.

In Section 120.120 UEI must state the Little Park Road is also an existing structure.

Little Park Road has been added to Section 521-120. 75

R645-301-521.141 and R645-301-121.200, • UEI must be consistent when describing the life-of-mine and the affected area boundaries in Plate 5-5, Table 3-3, and Sec 116.100. • UEI must state that the life-of-mine is 14 years or discuss the location of additional reserves.

31

Text in Section 116.100 has been revised to state: "The life of the mine will vary depending upon coal demand. The mine can produce between 1 to 4.5 million tons per year. The 14 year life of mine is assumed using the maximum production rate of 4.5 million tons per

year. If the rate of mining is less than the 4.5 million the life of mine will be longer than 14 year. Table 3-3, and Plate 5-5 reflect a 14 year mine life.

R645-301-521.141 and R645-301-121.200, UEI must not refer to Plate 5-2 as an affected area boundary map in Section 521.141 of the MRP-MRP - PART B. UEI stated that Plate 5-2 shows the affected area boundaries. Plate 5-2 does not show the potential affected area boundaries, rather it shows the disturbed area boundaries. 74

Section 521.141 has been revised to refer to "disturbed area boundaries" not potential affected area boundaries.

R645-301-522, UEI must discuss the potential for expanding the mine. Rules require future mining plans. It is understood that UEI has submitted a lease by application to the BLM for additional leases in the area. 85

R645-301-522 refers to Coal Recovery, not future mining plans., However, currently UEI has no plans for expanding the Lila Canyon Mine beyond what is addressed in this application. The Division is mistaken in assuming that there are areas within the LMU not being addressed. If the Division still believes that coal reserves are not addressed with the LMU they should contact Jim Kohler of the BLM and discuss UEI's approve R2P2.

R645-301-525.110 and R645-301-121.200, UEI must

1) either draw the maximum subsidence boundaries on Plate 5-3 and Plate 5-5 at a constant 21.5 degree angle-of-draw, or state why the angle-of-draw varies, and

The angle of draw is consistent at 21.5 degrees. The maximum extent of subsidence line has been calculated using the boundaries of the mining areas that will cause subsidence. Areas designed not to subside are not considered when plotting the maximum extent of mining. Plate 5-3 and 5-5 have been modified slightly. Plates 5-3 and 5-5 have been modified slightly to reflect slight changes in the extent of maximum subsidence.

2) show in the legends what the different line types represent, particularly the symbols for roads and stream channels. 94

The legend on Plate 5-3 has been revised to reflect the line type for roads and ephemeral channels.

R645-301-525.130, UEI must demonstrate in the MRP-Part B that all property owners in, and around, the Lila Canyon Extension received copies of the water rights survey. 94

Text in Section 525.130 has been revised to state: "All State Appropriated water rights within the maximum limit of subsidence, that could be effected, is either owned by the Operator or by the BLM. The BLM has been notified of the water rights survey by means of the submittal of the permit application."

R645-301-525.300, R645-301-525.490, UEI must describe how they will mitigate subsidence fractures and other impacts to the surface water channels, even those that act ephemerally. Information should include a monitoring plan to identify cracks and other effects on channels, as well as what type of equipment and methods they plan to use in mitigation. The Division recommends that BTCA at the time be used 75

Section 525.120 currently states "A small portion of Little Park Wash, which is ephemeral, has less than 1,000 feet of cover in the southwest corner of the permit area. The portion with less than 1,000 feet of cover runs diagonally across one longwall panel and then parallel to the bleeder system in the second longwall panel. In the unlikely event that cracks, fissures or sink holes are observed as a result of subsidence the channel will be regraded, filling in the cracks, fissures or sinkholes. Since this stream channel is accessible and is traversed by 4 wheel drive, access for repairs would not be a problem. If any subsidence repairs cannot be fixed using hand methods, a small pieces of earth moving equipment could be used." Text in appendix 7-7 has been added to state "UEI will use the best available techniques available at the time of repair. Significant repairs may require seeding. UEI will notify the Division prior to any repair of seeps, springs, or drainages."

R645-301-525.430, In Section 525.120 of the MRP-Part B, UEI stated that the depth of cover ranges from 1,500 feet to approximately 2,000 feet. Plate 5-5 shows that the minimum cover is 500 feet. UEI must clearly state the depth of cover in the subsidence section of the MRP-Part B.

93

Section 525.430 has been revised to state "and the depth of cover ranges from 0' to approximately 2,300'."

R645-301-525.440, UEI must submit a subsidence monitoring plan that includes a ground survey for panels no earlier than six months after mining was completed and not later than twelve months after mining was completed. 94

Section 525.440 has been revised to state "A ground survey will be performed, beginning no earlier than six months after mining in the panel has ceased but no more than twelve months after mining ended, in conjunction with the quarterly water monitoring program."

R645-301-526.115.4 and R645-301-526.116.1, Regarding the culvert under the county road; UEI must show:

1) What section of the culvert Emery County will install and what part UEI will install,

Plate 7-6 describes what work will be done by Emery County and what part will be done by the Operator

2) What work will be done by Emery County regarding modification of the culvert during reclamation, and

Appendix 7-4 addresses the reclamation of the sediment pond and culvert. The inlet design is contained within Appendix 7-4.

3) How the culvert north of the sediment pond will be modified when Emery County modifies the road. The Division assumes that when the undisturbed bypass culvert is removed, modifications to the culvert will include a fluted inlet and riprap placement on the surrounding slope. 80

Appendix 7-4 addresses the reclamation of the sediment pond and culvert. The inlet design is contained within Appendix 7-4.

R645-301-526.222, To protect islands of undisturbed areas within the permit area, UEI must include in the MRP-MRP - PART B a commitment to visually monitor undisturbed ground within

the permit area for coal fine deposition. If monitoring reveals coal fine deposition, then water sprays on the open stockpile will be warranted as per August 27, 1999 Approval Order (DAQE-702-99) General Condition #16. 127

Section 526.222 has been revised to state: Islands of undisturbed areas within the permit area will be visually monitored for coal fines deposition. If monitoring reveals coal fine deposition, then water sprays on the area from which the fines are originating will be warranted as per August 27, 1999 Approval Order.

R645-301-534.140, UEI must clarify the remarks in Section 542.600 that references part of the Emery County Road being left after final reclamation. The Emery County Road is outside of the disturbed/permit area and UEI has no jurisdiction over the road. 109

Section 542.600 has been revised to state; "All roads within the disturbed area will be reclaimed immediately after they are no longer needed for mining and reclamation operations."

R645-301-542, UEI must delineate the same disturbed area boundaries on Plate 5-6 as they do on all other maps. 151

Plate 5-6 has been revised to show the same disturbed area boundaries.

R645-301-542, UEI must submit reclamation maps that show the postmining contours at the topsoil storage site and at the sediment pond. In addition, UEI must submit cross-sections that show final reclamation of the sediment pond. The topography on Plates 5-1A and 5-6 are the same for the topsoil storage area and the sediment pond. Plate 5-6 shows the sediment pond will be removed at final reclamation, but cross section 4+00 on Plate 5-7A-2 shows the pond will remain. 151

Current Cross Section 4+00 on Plate 5-7A-2 correctly shows the pond being reclaimed and has not been modified. Plate 5-6 has been revised to show reclaimed contours on the topsoil pile and the sediment pond.

R645-301-542.100 and R645-301-553, UEI must submit a detailed reclamation plan for the fan portal site. The plan must show how UEI will reclaim the 17-foot highwall. If UEI plans to bring the equipment in and out of the portal, they must develop a plan to reclaim the highwall without sealing off the portal. In addition, UEI must describe the type of equipment that they will use given the limitations of the mine. If UEI plans to airlift the equipment in and out, they must also describe the type of equipment that will be used. 137

Text in Section 553.120 has been added to state: A Cat model 216/226 or equivalent will be used to complete the final grading of the fan portal. After final grading the 216/226 will be airlifted out using a KMAX helicopter or equivalent

R645-301-542.200, UEI must submit reclamation maps that show the reclaimed contours at the topsoil stockpile area, and at the sediment pond. The pre-mining topography on Plate 5-1A and the postmining topography shown on Plate 5-6 are the same. Restoring the site to the exact original contours is all but impossible. In addition, the postmining contours on Plate 5-6 are not consistent with cross sections 4+00 on Plate 5-7A-2. On the map, UEI showed that they would

remove the sediment pond while on the cross section UEI showed that the sediment pond would remain after final reclamation. UEI must correct this deficiency. 138

Current Cross Section 4+00 on Plate 5-7A-2 correctly shows the pond being reclaimed and has not been modified. Plate 5-6 has been revised to show reclaimed contours on the topsoil pile and the sediment pond.

R645-301-553.130 and R645-301-121.200, UEI must show that all reclaimed areas and cut slopes will be in soil only or they must do safety factor calculations with a bedrock/soil interface. The profiles in Appendix 5-5 show that the slopes consist only of soil. The Division saw that the slopes in Lila Canyon consist of bedrock with a few feet of soil cover. While circular failure is unlikely in bedrock, noncircular failure can occur along the bedrock/soil interface. Therefore, UEI must submit additional failure analysis based on noncircular failures. 140

A non-circular failure analysis was run on the road cut-slope, saturated condition, with a 1H:1V, which is the worse case scenario. The results can be found on page 5 and 7A of Appendix 5-5.

R645-301-553.130 and R645-301-122, UEI must show how the interior friction angle and the cohesion for the soils were determined from the direct shear test results or reference the source for the soil properties. 140

The interior friction angle and the cohesion for the soils were determined by (AGEC) Applied Geotechnical Engineering Consultants, Inc. The lab tests have been added to the end of Appendix 5-5.

Chapter 6 (Geology)**Chapter 7 (Hydrology)**

R645-301-527.200 and R645-301-527.210, UEI must show

1) The location of each culvert and ditch on Plate 5-2,

All ditches and culverts with flow paths are shown on Plate 7-5, and in Appendix 5-4. To show all of the ditches and culverts on Plate 5-2 would make an already cluttered Plate 5-2 to confusing.

2) Show the flow path for all culverts and ditches on Plate 7-5, and

All ditches and culverts with flow paths are shown on Plate 7-5 (sediment Control Map). And in Appendix 5-4.

3) Show each ditch on the cross-sections in Appendix 5-4. 110

Ditches are shown on the typical for the Mine Access Road and are shown on each cross-section for the Facility Access/Loadout Road. Once detailed design has been completed on the Mine Access Road more detailed cross-section will be submitted to the Division.

R645-301-527.210, R645-301-527.220 and R645-301-527.230, UEI must submit detailed maps and cross-sections that show how the South Fork of the Lila Wash will be protected from mining activities, especially from the Main Facility Road, which is located 20 feet from the drainage.

110

New cross Section A-A' found in Appendix 5-4 shows how the South Fork of the Lila Wash will be protected from the Main Facility Road, which is 50' from the drainage. Cross Section A-A' is at the location of the smallest buffer.

R645-301-121, The Permittee describes boreholes used to measure water levels (IPA-1, IPA-2 and IPA-3) as piezometers in some parts of Chapter 7, and as wells in other parts. The Permittee must decide if the boreholes are wells or piezometers and describe them consistently throughout the MRP - Part B. 67

The MRP has been revised to refer to piezometers where applicable.

R645-301-121, The Permittee describes the surface water resources in Chapter 7 as intermittent, and describes the same channels as ephemeral in Appendix 7-7. The Permittee must decide what stream types really exist on the permit area, ephemeral or intermittent and describe them consistently throughout the MRP - Part B. 67

Collected data has shown that all channels within the MRP defined by regulation as intermittent have been found to be ephemeral acting. References to intermittent channels have been revised to refer to them as ephemeral acting.

R645-301-121.200, The PHC refers to Table 1 for hydraulic conductivity values; there is no Table 1 in the PHC, nor a table of hydraulic conductivity values anywhere in the MRP - Part B; this apparently refers to a table in some referenced material. The Permittee needs to identify the

source of the hydraulic conductivity information, and either include a Table 1 or revise the text of the PHC. 66

Table 1 has been included at the end of Appendix 7-3.

R645-301-121.200, It states in Section 724.100, p. 17: "The water monitoring wells show water levels above the lower zone containing the coal seam in area of the mine; however, the zones recorded are not connected to the lower groundwater zone. As reported in the Castlegate Sandstone section, no springs or water bearing zones were identified in the spring and seep inventories or in the drilling of the water monitoring wells in the formation. Therefore, indicating that the monitored zones are perched and are isolated from the lower groundwater zone." This seems to be indicating that the IPA piezometers were either completed in a third saturated zone between the Upper and Lower zones or completed in the Upper zone. The statements in this paragraph need to be clarified. 67

Tom Suchosky: Text in Chapter 7 was revised to clarify the completion of the piezometers in the Sunnyside Sandstone.

R645-301-121.300, • Name the figures in Volumes 6 & 7 in a clear and concise manner, place them in the plan in a logical order, and include all of them in the Table of Contents. • Be consistent when stating the name of the mine (i.e. Horse Canyon Mine) and the extension (i.e. Lila Canyon Extension). The page headings should read, "Horse Canyon Mine - Lila Canyon Extension." 24

Figures have been revised and clarified. Figure 7-1 is the stratigraphic cross section, Figure 7-2A is the Water Level Map, Figure 7-2B is the Piezometer water depths. All have been added to the TOC. All chapter headings have been revised to read "Horse Canyon Mine - Lila Canyon Extension."

R645-301-232, -722.200, -742.123, Ditch DD-7 and Culvert DC-7 carry water to the edge of undisturbed area UA-6, but the flow path across this undisturbed area to Ditch DD-12 isn't indicated on maps or plans. Maps and plans need to show a continuous flow path from Ditch DD-7 and Culvert DC-7 to Ditch DD-12, along with the associated disturbed corridor. 124

Various plates have been revised to show the continuous flow path from Culvert DC-7 to Ditch DD-12 to the sediment pond.

R645-301-624.100, -721, The Stinky Seeps are at an elevation of approximately 6,000 ft, close to the elevation of the potentiometric surface (Plate 7-1), so the source for the water flowing from these seeps could be connected to the saturated zone that will be intercepted by the proposed mine. In Appendix 7-3 (p. 10), the Permittee states, "...being 500 to 600 ft below the coal seam, there is no potential for Lila Canyon Mine to negatively impact this spring or recharge sources." Because they are below the coal seam, subsidence should not impact these springs, but recharge or flow to these seeps could be impacted more directly by mine operations. The Permittee needs to more fully evaluate the hydrogeology of these seeps, whether their source is regional, intermediate, or local in extent, and what impacts the proposed coal mining might have on them. 67

Tom Suchosky: Text in the PHC - Groundwater and Surface Water Availability was revised to include a description of the anticipated hydro geology of the central graben block.

R645-301-624.100, Reference is made in Section 724.100 (p. 19) to Appendix 7-7 for information on the relationship of the Stinky Seeps to faulting, but Appendix 7-7 contains no discussion of this subject. The Permittee needs to either clarify the reference in Section 724.100 (p. 19) or include in Appendix 7-7 information on the relationship of these seeps to faulting.

66

The reference to Appendix 7-7 has been removed.

R645-301-722, The applicant must submit a map identifying the characterization of stream reaches showing where mining will take place within 100 feet (horizontal) of a stream channel.

75

UEI has addressed mining activity in stream buffer zones by indicating that all surface water channels within 100 feet of the proposed mining activity act ephemeral. UEI states in Sections R645-300-731.600 and 731.612 of the MRP - Part B that no mining activities will take place within 100 feet of a perennial or intermittent stream. In addition Appendix 7-7 contains a map showing all the stream reaches and characterizations. Portions of all stream reaches could be mined within 100 feet (horizontal).

R645-301-722.100, The condition of Horse Canyon Well is briefly described in the supplemental information accompanying the December 6, 2002 submittal, but the Permittee needs to include this information in the description of the well in the MRP. 66

The following text has been added to Section 724.100 "The well was investigated and it was determined that it would not be useful as a Piezometer. The pump is sitting on the top of a concrete cap encapsulating the top of the well. The site could not be used as a piezometer without removing the pump. This well will be donated to the College of Eastern Utah as part of the Post Mine Land Use Change." Section 731.400 has also been modified to state "The Horse Canyon Well will be donated to the College of Eastern Utah as part of the Post Mine Land Use Change."

R645-301-722.300, 731.700, The Permittee must show all Lila Canyon Mine surface- and ground-water monitoring points on Plate 7-1A to make Plate 7-1A accurate and consistent with statements in the MRP and with the legend on the plate itself. 75

Plate 7-1A has been revised to show all Lila Canyon Mine surface and ground water monitoring points.

R645-301-724.100, 724.200, UEI must show water rights 91-4959 (Redden Spring), 91-183 (Horse Canyon Creek), and 91-185 (MDC) on Plate 7-3. 75

All water rights are currently shown on Plate 7-3. However, 91-4959, 91-183, and 91-185 were behind the hatching. Plate 7-3 has been revised.

R645-301-724.100, The Permittee must update the Lila Canyon Extension MRP to include the postmining land use change, including the future transfer of the Horse Canyon Well to CEU.

66

Sections 724.100 and 731.400 have been revised to reflect the Horse Canyon Well being donated.

R645-301-724.100, The Permittee must update the MRP – Part B, Lila Canyon Extension to include the approved postmining land use change. 134

Section 724.100 has nothing to do with postmining land use. The postmining land use approved for Horse Canyon - Part A has no affect, other than the well transfer that has been addressed, on the post mine land use of Part B, Lila Canyon Extension.

R645-301-728, (1) UEI must recheck the angle of draw on the east side of the proposed permit area. If changes to the potential subsidence result, UEI must make specific findings for the PHC, which identify potential impacts to all ground water sources. UEI shall use this information to summarize the potential for mitigation and hydrologic impacts on and off the permit area in the PHC. The PHC must describe all probable hydrologic consequences from subsidence, and other impacts to springs.

The angle of draw is consistent at 21.5 degrees. The maximum extent of subsidence line has been calculated using the boundaries of the mining areas that will cause subsidence. Areas designed not to subside are not considered when plotting the maximum extent of mining. Plates 5-3 and 5-5 have been modified slightly to reflect slight changes in the extent of maximum subsidence.

(2) UEI must discuss in the PHC what impacts will take place from increased salinity to the Colorado River by discharging water from the mine. 68

Tom Suchosky: A statement was inserted in the PHC under Acidity, Total Suspended Solids, and Total Dissolved Solids sections.

R645-301-728.333, Sediment-control devices will retain sediment on site. Reducing the amount of sediment, while the sediment carrying capacity remains the same, can result in increased streambed and stream bank erosion. This needs to be discussed in the MRP. 66

Tom Suchosky: A statement was inserted into the PHC text under Sediment yield section.

R645-301-728.334, In the estimates of water consumption in the PHC, the Permittee must consider the amount of water that will be needed for dust control on coal piles, conveyors, and roads and for other operational uses. The application must be updated to include this information.

66

Appendix 7-3 has been revised to reflect water consumption for dust suppression on the surface. The water loss from the fan evaporation calculation has been corrected.

R645-301-731.200, The MRP - Part B states (Section 731.211) that there are 13 ground-water monitoring sites proposed for the Lila Canyon Extension, but that number includes sites L-6-G and L-10-G that have been abandoned since the Lila Canyon Extension MRP was first written. There are currently only 11 sites proposed for operational monitoring (Table 7-3). The Permittee must update the MRP to indicate the correct number of ground-water sites to be monitored.

124

Section 731.211 has been modified to reflect 11 sites proposed for operational monitoring.

R645-301-741 The Permittee must clarify drainage and sediment control designs for undisturbed drainage UA-5. This drainage is not shown in either Table 4 or Table 5 of Appendix 7-4, and it

isn't clear whether it will report to the sedimentation pond or directly to the Right Fork of Lila Canyon. 66

UA-5 does not drain to the sediment pond. UA-5 has been added to Table 4 of Appendix 7-4.

R645-301-742.333, The Permittee must to clarify what precipitation events are used in the designing of diversions. Section 742.333 states peak runoff of a 2 year - 6-hour precipitation event was used; designs in Appendix 7-4 are based on a 10-yr, 6-hr event. The designs in Appendix 7-4, are therefore, more robust than indicated in Section 742.333, but the discrepancy in the text of Chapter 7 (and anywhere else in the MRP - Part B a similar statement appears) must be corrected. 124

Section 742.333 has been revised to state: "All temporary diversions are designed to safely pass the peak runoff of a 10-year 6-hour event, resulting in a more robust design than the required 2 year - 6 hour precipitation event. See Appendix 7-4 for details.

R645-301-751, The Permittee needs to clarify the following statement in the PHC: "The TDS standard for class 4 water is 1,200 mg/l. Hence, if discharges occur from the Lila Canyon Extension to the Right Fork of Lila Canyon, the data indicate that the TDS concentration of these discharges will not exceed the applicable water-quality standard." Expected TDS concentration in the discharge is 2,000 mg/L; why does this not exceed a standard of 1,200 mg/L?

67

Tom Suchosky: Text in the PHC was modified under Acidity, Total Suspended Solids, and Total Dissolved Solids sections to indicate slight exceedance of agricultural standards. to address.

Chapter 8 (Bonding and Insurance)

R645-301-830.140, UEI must either include the cost of disposing asphalt off site or modify the MRP-Part B by including an on-site asphalt disposal site. 153

The cost of disposing asphalt off site has been added to Worksheet Asphalt No 13in Appendix 8-1.

R645-301-830.140, UEI must either include the cost of disposing asphalt off-site or modify the MRP-Part B by including an on-site asphalt disposal site. 143

The cost of disposing asphalt off site has been added to Worksheet Asphalt No 13in Appendix 8-1.

R645-301-830.140, UEI must have documentation showing that they are properly insured before the Division will approve the Lila Canyon Extension. 153

UEI is and will continue to be properly insured.