

0007

INCOMING  
C0070013



## UtahAmerican Energy, Inc.

May 1, 2005

Pam Grubaugh-Littig  
Permit Supervisor  
Utah Division of Oil, Gas & Mining  
Coal Program  
1594 West North Temple, Suite 1210  
P.O. Box 145801  
Salt Lake City, Utah 84114-5801

Re: #2022 UEI # 05-001 HORSE CANYON REVEGATION STANDARDS  
CLAIRIFICATION.

Dear Ms. Grubaugh-Littig,

Enclosed you will find (4) copies of changes UEI would like to make in the Horse Canyon Permit C/007/013. Completed C1 and C2 forms are also included.

UEI has been working very closely with Jerriann while addressing the deficiencies.

Should you have any questions please call.

Sincerely,

A handwritten signature in cursive script that reads "R. Jay Marshall".

R. Jay Marshall  
Project Manager

RECEIVED

MAY 03 2005

DIV. OF OIL, GAS & MINING

# APPLICATION FOR COAL PERMIT PROCESSING

Permit Change  New Permit  Renewal  Exploration  Bond Release  Transfer

**Permittee:** UtahAmerican Energy, Inc.

**Mine:** Horse Canyon

**Permit Number:** C/007/013

**Title:** Horse Canyon Revegetation Standards

**Description,** Include reason for application and timing required to implement:

**Items needed to be cleaned up prior to Phase III bond release application.**

**Instructions:** If you answer yes to any of the first eight (gray) questions, this application may require Public Notice publication.

- Yes  No 1. Change in the size of the Permit Area? Acres: \_\_\_\_\_ Disturbed Area: \_\_\_\_\_  increase  decrease.
- Yes  No 2. Is the application submitted as a result of a Division Order? DO# \_\_\_\_\_
- Yes  No 3. Does the application include operations outside a previously identified Cumulative Hydrologic Impact Area?
- Yes  No 4. Does the application include operations in hydrologic basins other than as currently approved?
- Yes  No 5. Does the application result from cancellation, reduction or increase of insurance or reclamation bond?
- Yes  No 6. Does the application require or include public notice publication?
- Yes  No 7. Does the application require or include ownership, control, right-of-entry, or compliance information?
- Yes  No 8. Is proposed activity within 100 feet of a public road or cemetery or 300 feet of an occupied dwelling?
- Yes  No 9. Is the application submitted as a result of a Violation? NOV # \_\_\_\_\_
- Yes  No 10. Is the application submitted as a result of other laws or regulations or policies?  
*Explain:* Addresses Phase II bond release comments.
- Yes  No 11. Does the application affect the surface landowner or change the post mining land use?
- Yes  No 12. Does the application require or include underground design or mine sequence and timing? (Modification of R2P2)
- Yes  No 13. Does the application require or include collection and reporting of any baseline information?
- Yes  No 14. Could the application have any effect on wildlife or vegetation outside the current disturbed area?
- Yes  No 15. Does the application require or include soil removal, storage or placement?
- Yes  No 16. Does the application require or include vegetation monitoring, removal or revegetation activities?
- Yes  No 17. Does the application require or include construction, modification, or removal of surface facilities?
- Yes  No 18. Does the application require or include water monitoring, sediment or drainage control measures?
- Yes  No 19. Does the application require or include certified designs, maps or calculation?
- Yes  No 20. Does the application require or include subsidence control or monitoring?
- Yes  No 21. Have reclamation costs for bonding been provided?
- Yes  No 22. Does the application involve a perennial stream, a stream buffer zone or discharges to a stream?
- Yes  No 23. Does the application affect permits issued by other agencies or permits issued to other entities?

**Please attach four (4) review copies of the application. If the mine is on or adjacent to Forest Service land please submit five (5) copies, thank you.** (These numbers include a copy for the Price Field Office)

I hereby certify that I am a responsible official of the applicant and that the information contained in this application is true and correct to the best of my information and belief in all respects with the laws of Utah in reference to commitments, undertakings, and obligations, herein.

R. Jay Marshall  
Print Name

R. Jay Marshall  
Sign Name, Position, Date

Subscribed and sworn to before me this 29<sup>th</sup> day of APRIL, 2005

Delia Paletta  
Notary Public

My commission Expires: 7-6, 2006  
Attest: State of UTAH } ss:  
County of CARBON



<p><b>For Office Use Only:</b></p>	<p><b>Assigned Tracking Number:</b></p>	<p><b>Received by Oil, Gas &amp; Mining</b></p> <p style="font-size: 1.5em; font-weight: bold;">RECEIVED</p> <p style="font-size: 1.2em; font-weight: bold;">MAY 03 2005</p> <p>DIV. OF OIL, GAS &amp; MINING</p>
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#### **8.4.2.6 Revegetation Standards**

The post-mining land use is wildlife habitat. The objective is to achieve a plant cover sufficient to control erosion and provide a plant community useful as wildlife habitat. The perennial grasses and forbs growing under the moderating influence of the shrubs will stabilize the soil surface. The shrubs, especially the large rubber rabbitbrush, will provide cover for small animals. Additional wildlife enhancement features include planted pinyon pine and juniper trees and rock piles. All of the plants will provide forage for wildlife, especially in a terrain that is sparsely covered with forage species.

The standard for the revegetation will be the reference site. This site was evaluated in 1985, a normal precipitation year by Susan Hasenyager of Kaiser Coal Corporation. The reference site is a Pinyon-Jupiter Woodland and has ground cover of 26.3% and a diversity of 2 shrubs, 1 forb, and 3 grasses (over 5% relative cover). The composition of the present cover is 83% grasses, 9.7% trees and shrubs, and 6.8% fobs. In the summer of 1991 the reference site will again be sampled by methods found in the DOGM Vegetation Guidelines.

The revegetation will be considered a success when the following conditions are met:

- The plant cover is 90% of the present range site cover at the 90% confidence level.

- When similarity indices are greater or equal to 70% between reclaimed and reference areas. The similarity index (SI) will be determined using the Jaccard equation.

$$SI = \frac{\text{Cover (\%)} \text{ for LifeForms}}{\text{Total Vegetation Cover (\%)}}$$

*SI = Similarity Index*

The revegetation sampling methods are those used to identify the undisturbed plant communities in the Permit Area. The continuity of the sampling method will allow for the ease of comparison of data from the communities and revegetation sites.

The qualitative sampling will take place annually in the summer months. The first year will require monthly visits from April to September to closely follow the progress of the seedlings and plantings. The second year will require visits in the spring and late summer to continue tracking the progress of the seedlings and plantings. The visits in years three (3) through ten (10) will occur annually in the summer or be coordinated with the quantitative sampling schedule.

The qualitative sampling will consist of visiting each reclamation treatment area and recording growth, species success, soil conditions, erosion, livestock or wildlife use, insect damage, and other special conditions. The qualitative sampling will incorporate needs identified under the DOGM inspection program.

The quantitative sampling will take place in years two (2), three (3), five (5), nine (9) and ten (10) in the undisturbed communities and the revegetated sites. All of the measurements for cover, diversity, and woody stem densities will be taken in each year scheduled for quantitative sampling. Eighty percent of the measurements for woody stem density at bond release will be taken only from shrubs and trees that have existed for eight consecutive growing seasons. The productive measurements will be taken in years nine (9) and ten (10). The qualitative and quantitative data will be included in the annual reports.

Bi-directional random placement of sampling plots is designed to provide unbiased accuracy of the data compiled. Cover estimates used the Point Intercept method. Transects were run at each revegetation site to determine percent cover. At each sample location, the percent slope, aspect, soil texture and depth, animal use, and other environmental conditions will be recorded.

The density of woody plant species will be sampled by tabulating plants and stems in 100 ft., 10 feet- wide belt transects. This method would be used both in the undisturbed communities and the revegetated sites.

The productivity of each site will be measured by clipping plots along the belt transect. All of the growth for graminoids and forbs and the annual growth of the shrubs would be clipped.

Sampling adequacy on the revegetated sites and woodland communities would be maintained at 90% of the samples within 10% of the mean. All the revegetated sites would

be sampled individually as defined on the reclamation treatments maps and compared with the results of the undisturbed communities and for sample adequacy. The comparisons will use the one-tailed t-test. Because the post-mining use is wildlife, the revegetation will be considered successful when ground cover and woody plant density are within 90% of the undisturbed communities at a 90% statistical confidence. The stem density on the revegetated sites must meet the goal of 2,000 stems/acre at a 90% statistical confidence in order to be considered successful.

**Table 8.4.2.6-1**

**Reclamation Monitoring Schedule**

Sampling	Years									
	1	2	3	4	5	6	7	8	9	10
Qualitative	x	x	x	x	x	x	x	x	x	x
Quantitative										
Cover		x	x		x				x	x
Frequency		x	x		x				x	x
Woody Plant Density		x	x		x				x	x
Transplant Survival	x	x	x		x					
Productivity										