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State of Utah
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

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October 19, 1999

Jim Fulton, Chief
Denver Field Division
Office of Surface Mining
1999 Broadway, Suite 3320
Denver, Colorado 80202

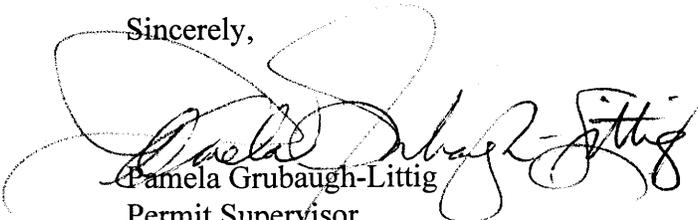
Re: OSM Concurrence Requested for Phase II Bond Release, Horse Canyon Mine,
UtahAmerican Energy, Inc., ACT/007/013-BR97, Folder #2, Carbon County, Utah

Dear Mr. Fulton:

I am enclosing the Division's Decision Document for phase II bond release at the Horse Canyon Mine. This bond release represents reclamation for 51.56 acres of private land and a release of \$191,672 with \$946,054 of the bond amount remaining. Your timely concurrence is requested because the reclamation bond is made payable to OSM and the Division.

If you have any questions, please call me.

Sincerely,


Pamela Grubaugh-Littig
Permit Supervisor

Enclosure

cc: Jay Marshall, UtahAmerican Energy, Inc.
Mary Ann Wright
Susan White (w/o)

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DECISION DOCUMENT

PHASE II BOND RELEASE HORSE CANYON MINE ACT/007/013-97BR

BACKGROUND

Horse Canyon Mine is an underground coal mine located in Emery and Carbon Counties, Utah, within the Book Cliffs Coal Field, about 30 southeast of Price, Utah. The mine was initially opened by the Defense Plant Corporation in 1942 as the source of metallurgical grade coal for the Geneva Steel Works in Ore, Utah. The mine was sold to U.S. Steel in 1946, who operated the mine until January 1984, when all mining was permanently suspended.

U.S. Steel submitted a permanent program mining and reclamation permit application on March 17, 1981 for the operations existing at that time consisting of 3, 120 acres of underground mine workings and approximately 64 acres of surface disturbances. On October 15, 1982, U.S. Steel informed the Division of Oil, Gas and Mining that it was temporarily suspending mining operations at the Horse Canyon (Geneva) Mine. U.S. Steel informed the Division of its plans to permanently suspend mining operations in January 1984.

On November 11, 1984, Kaiser Steel Corporation purchased the Horse Canyon Mine property from U.S. Steel, and submitted a permanent program reclamation bond in the amount of \$918,649, and indicated to the Division that it would maintain the operations in a temporary suspension status pending further corporation decision as to the future use of the facilities.

However, on February 13, 1987, Kaiser Coal (successor in interest to Kaiser Steel) filed a petition for bankruptcy under Chapter 11, Title 11, of the U.S. Bankruptcy Code. Intermountain Power Agency (IPA) acquired the Horse Canyon Mine and the permit was transferred from Kaiser Coal to IPA on August 10, 1990. Intermountain Power Agency was issued a mining and reclamation permit for the Horse Canyon Mine on May 6, 1991. A reclamation bond in the amount of \$1,950,000 was issued in the form of a letter of credit.

Reclamation work proceeded on 51.56 acres of the 74.26 acres in 1990 and 1991. Phase I bond release was granted on February 5, 1997 for \$812,276. The current bond in place is \$1,137,276.

The phase II bond release application was submitted on December 19, 1997. The initial request was for \$299,175, but UtahAmerican Energy reduced the request to \$280,164 on July 19, 1999.

CHRONOLOGY AND SUMMARY

December 19, 1997 IPA requested Phase II bond release for the applicable portions of the Horse Canyon Mine.

February 12, 29, 26 and

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March 5, 1998 Publication notice for the Phase II bond release in the Sun Advocate.

April 28, 1998 Division deficiency review sent to IPA.

May 27, 1998 Field visit conducted and concerns relayed to IPA.

June 5, 1998 End of 30-day comment period. No comments were received.

September 14, 1998 Field visit conducted and concerns relayed to IPA.

October 13, 1998 IPA responds to technical concerns that were identified.

December 21, 1998 Horse Canyon Mine is transferred from IPA to UtahAmerican Energy, Inc.

January 19, 1999 A complete set of maps were requested by Division.

June 4, 1999 A complete set of maps were submitted to the Division.

July 28, 1999 Phase II bond release inspection conducted. In attendance were:

Jay Marshall, UtahAmerican Energy, Inc.
Bill Engels, IPA
Paul Clark, Mayor of East Carbon
Jim Fulton, OSM
Wayne Western, DOGM
Robert Davidson, DOGM
Susan White, DOGM
Daron Haddock, DOGM
Dave Darby, DOGM
Pamela Grubaugh-Littig, DOGM

August 19, 1999 Change to June 4, 1999 set of maps to retain a culvert which inadvertently was shown as removed.

ANALYSIS AND FINDINGS FOR BOND RELEASE

Regulatory Reference: R645-301-880 - 880.330

Administrative Analysis

The application for Phase II bond release for the Horse Canyon Mine was made on December 19, 1997 and the notification published on February 12, 19, 26 and March 5, 1998 in the Sun Advocate. The

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comment period ended and there were no comments.

Letters were sent to the landowners by IPA advising them of this bond release action. Invitations to the bond release inspection were sent to Emery County Planning, OSM, BLM - Price Field Office and the State Office, as well as Intermountain Power Agency, Josiah Eardley, and Robert Pepper (as listed in the mining and reclamation plan) on July 6, , 1999. The bond release inspection was conducted on July 28 , 1999. In attendance were:

OSM:	Jim Fulton
Division:	Bob Davidson, Wayne Western, Susan White, Dave Darby, Daron Haddock and Pamela Grubaugh-Littig
UtahAmerican Energy, Inc.:	Jay Marshall
Intermountain Power Agency:	Bill Engels
Consultant :	Paul Clark

The reclaimed area that had received the Phase I bond release was observed during the inspection. There were two culverts identified to be removed, and it was recommended that one should be retained. A change to the bond release application was received on August 19, 1999 to retain that culvert and was incorporated as part of the bond release application to be approved. No other problems were identified during this bond release inspection.

Administrative Findings for Phase II Bond Release:

UtahAmerican Energy, Inc. has met the minimum requirements for Phase II bond release for the Horse Canyon Mine.

VEGETATION

Regulatory Reference: 30 CFR Sec. 785.18, 817.111, 817.113, 817.114, 817.116; R645-301-244, -301-353, -301-354, -301-355, -301-356, -302-280, -302-281, -302-282, -302-283, -302-284.

Analysis:

Standards for Success.

The regulatory requirements for Phase II bond release is described in R645-301-880.320. The requirement for the vegetation portion of Phase II release is that successful vegetation must be established. The Division has considered on previous Phase II bond releases that vegetation is successfully established if it meets the regulatory and permit requirements for vegetative cover and that vegetation is adequate to reduce erosion similar to off site levels. The cover requirements in this instance are that the reclaimed site needs to meet 90 percent of the reference area cover at 90 percent statistical confidence. Maps of the proposed 55 acres to be released are presented in Attachment D of the application.

Cover

The Phase II Bond Release application presented information from vegetation sampling in August 1996. Vegetative cover, and shrub densities were sampled as required by the Division's Vegetation Information Guidelines. The permit committed to an ocular sampling method. The Operator used the point intercept method for sampling vegetative cover. This discrepancy is of no consequence, however, prior to Phase III Bond Release the permit or sampling methods should be changed. Minimum samples size were met when sampling for vegetative cover.

The Operator used the point intercept method for sampling vegetative cover. Fifty points along a 100 foot length were averaged to produce one sample (n=1). The average cover on the reclaimed site was 51 percent vegetative cover (n=90). The median was 52 percent vegetative cover.

The reference area is a pinyon-juniper woodland and approved by the Division as a reference site in 1985. Total average vegetative cover of the reference site in August 1996 was 37 percent (n=31). The Division requires total cover to include the canopy cover of the trees and cover may not exceed 100 percent. The median cover was 36 percent.

No statistics are required to demonstrate that the reclaimed site exceeds the reference area standard.

The Division has traditionally performed it own vegetation sampling at the time of Phase II Bond Release. This reviewer sampled the reclaimed areas and the reference area in August 1996. An ocular sampling method using a meter square quadrat was used to assess vegetative cover. The average vegetative cover on the reclaimed site was 28 percent (n=183). The median vegetative cover was 27 percent.

The Division measured 25 percent vegetative cover on the pinyon juniper reference area in August 1996 (n=60). The median vegetative cover was 17 percent. The large discrepancy in the average verses the median percent cover is probably due to sampling canopy cover with a relatively small quadrat.

The vegetative cover data from both the Operator and the Division is summarized below.

	<u>Reclaimed</u>		<u>Reference</u>	
	Average Cover	Median Cover	Average Cover	Median Cover
Operator	51%	52%	37%	36%
Division	28%	27%	26%	17%

Both the Division's and the Operator's data indicate that vegetation establishment cover requirements for Phase II bond release have been met. The vegetation of the reclaimed area is at

least equal to the reference area. No statistical tests are required if the reclaimed is greater than the reference area. However, a t-test, Mann-Whitney test, and Kolmogorov-Smirnov test were run on various parameters of the cover data and all tests found either no difference or that the reclaimed has greater vegetative cover than the reference.

The discrepancy between the Division's data and the Operator's data can probably be accounted for in sampling dormant vegetation. 1996 was very dry in the spring and summer, most all grass growth was dormant at the time of sampling. The season was so dry that very little seed was produced from the shrubs or grasses. The Operator counted all current year production as living cover even if it was dead at the time of sampling. (This is an accepted method for sampling vegetation.) The Division could not assume that the current years production was still living and that the dormant vegetation was still living. Only vegetative growth with some green was counted by the Division as living. This often allowed only a basal cover count on the grasses.

Shrub density is not a requirement for Phase II Bond Release. Shrub density was reported in 1996 for the reclaimed area by the Operator at 4773 shrubs per acre. The success standard for Phase III Bond Release is 3000 shrubs per acre.

Erosion

Pages II-34 and II-35 refer to early reclamation erosion problems and an erosion identification program instigated in 1993. The program was to identify, monitor and if needed correct erosion problems. This program was documented and then submitted annually to the Division in the annual report. The erosion monitoring program concludes "that as the vegetation and the reclaimed surface matured, the erosion potential decreased." Pictures submitted with the report and on the ground observations indicate that no erosion problems exist.

Vegetation Findings for Phase II Bond Release

Information provided in the bond release application meets the minimum regulatory and permit requirements for Phase II bond release.

HYDROLOGY

The Utah Coal Rules for reclamation standards, R 645-301-760, requires the operator to ensure that all temporary structures are removed and reclaimed; that all permanent sedimentation ponds, diversions, impoundments and treatment facilities meet the requirements of R645-301 and R645-302; unapproved roads be reclaimed immediately and natural drainages be restored; siltation structures be maintained until removed by permission of DOGM; wells will be permanently sealed.

The evaluation conducted on July 28, 1999 observed that these requirements had been met. During

the oversight inspection, the areas designated for reclamation, in accordance with the reclamation timetable, were noted and discussed. The applicant plans to remove the culvert on the landfill upon notification by the Division to remove prior to Phase II bond release. A trackhoe or backhoe will be used to excavate the culvert then recontour and stabilize the channel. The channel will drain into Horse Canyon Creek.

The applicant will also reclaim the #1 Sedimentation Pond upon notification by the Division prior to Phase II bond release. The spillways will be removed and the embankments will be pulled back to fill in the pond. The riprap channel which currently drains into the pond will remain. The pond area will be recontoured with a low area through the center to direct any flow to the west into the undisturbed drainage. Temporary silt fences may be placed on the reclaimed pond area as need dictates. The drop from the sedimentation pond discharge to the undisturbed drainage is riprapped and may not need to be reconstructed.

The applicant submitted a summary report of the erosion monitoring program conducted at the Horse Canyon Mine from 1993 to 1998. Thirteen representative sites were selected across the mine site to monitor development of erosion features. The report shows that the sites incurred some erosion in the past, but has been greatly reduced as vegetation has flourished in response to two years of above normal precipitation. Vegetation growth is a major factor in controlling erosion both by stabilizing the soil with root growth and reducing energy impacts from rain and runoff.

The sediment contribution to runoff of disturbed and revegetated areas versus undisturbed areas using the Civil Software Design SEDCAD + Program, Version 3 (1992). It was found that sediment loading calculated for drainages under reclaimed conditions are substantially lower than the sediment loading for drainages in premining (undisturbed) condition.

The applicant submitted maps depicting 13 acres of excluded area (not included in Phase I or II Bond release). Drainage controls are shown in Drawings III 1A-III through III 1G. The drainage controls that currently exist in the excluded area will continue to be used. They include a system of berms, ditches and silt fences, which will be removed. Berms and ditches will route flows through and around the South Portal and the large pad area encompassing the buildings. At the powder magazine and water tank, berms treat all discharges.

Site visits were conducted on May 27, 1998 and September 14, 1998 to assess the status and function of the diversion ditches above the reclaimed disturbed areas. The diversions are functioning to transport runoff away from disturbed areas and are stable to control runoff.

All wells have been permanently sealed according to regulations.

Hydrology/Erosion Findings for Phase II Bond Release:

The applicant has met reclamation compliance for Phase II Bond release.

CONCLUSIONS AND RECOMMENDATION

Based on the Division findings, UtahAmerican Energy, Inc. has met the requirements for approval

of the Phase II bond release for the Horse Canyon Mine. It is recommended that this phase II bond release be approved for 51.56 acres of disturbance at the Horse Canyon Mine in the amount of \$191, 672. (This is \$88,492 less than the \$280,164 amount requested i.e. the amount to revegetate the 51.56 acres.) An amount of \$946,054 would remain in the bond amount for vegetation of this area as well as reclamation on other parts of the disturbed area.

OSM concurrence on this phase II bond release is requested because the reclamation bond is payable to both OSM and DOGM. However, all of the reclaimed area for this phase II bond release is on private land.

Prior to final phase II bond release approval, UtahAmerican Energy, Inc. must remove the culverts and sedimentation pond.