

0022

UtahAmerican Energy, Inc.



**COPY**

*C/007/013 Incoming*  
cc: Dave  
OK  
#3268  
Lila Canyon Project  
P. O. Box 910  
East Carbon, Utah 84501  
Phone: (435) 888-4000  
(435) 650-3157  
Fax: (435) 888-4002

April 08, 2009

Daron Haddock  
Permit Supervisor  
1594 West North Temple, Suite 1210  
P.O. Box 145801  
Salt Lake City, Utah 84114-5801

Re: UtahAmerican Energy, Inc. Horse Canyon Mine 09-001 C/007/013. Response to Deficiencies Phase III Bond Release Application Letter dated January 20, 2009

Dear Mr. Haddock,

Attached you will find three (3) copies of revision 09-001 which addresses the Phase III deficiencies identified in your January 20, 2009 letter.

Three copies of redline strike are also included.

C1 and C2 forms are included.

Should you have any questions please call.

Sincerely,

*R. Jay Marshall*  
R. Jay Marshall  
Chief Engineer/Project Manager

RECEIVED  
APR 20 2009  
DIV. OF OIL, GAS & MINING

File in:  
C/0070013, 2009, Incoming  
Refer to:  
 Confidential  
 Shelf  
 Expandable  
Date 4/8/09 For additional information

**COPY**

### APPLICATION FOR PERMIT PROCESSING

Permit Change <input type="checkbox"/>	New Permit <input type="checkbox"/>	Renewal <input type="checkbox"/>	Transfer <input type="checkbox"/>	Exploration <input type="checkbox"/>	Bond Release <input type="checkbox"/>	Permit Number: ACT/007/013
Title of Proposal: 09-001 Phase III deficiency response						Mine: Horse Canyon
						Permittee: UtahAmerican Energy, Inc.

Description, include reason for application and timing required to implement:

**Instructions:** If you answer yes to any of the first 8 questions (gray), submit the application to the Salt Lake Office. Otherwise, you may submit it to your reclamation

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

**X Attach 3 complete copies of the application.**

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 Mankiewicz*  
Signed - Name - Position - Date *Chief Engineer 4/19/09*

Subscribed and sworn to before me this 8 day of April, 2009

*Mary V. Kava*  
Notary Public  
Attest: May 16 2012  
STATE OF UTAH  
COUNTY OF Carbon



Received by Oil, Gas & Mining  
**RECEIVED**  
**APR 20 2009**  
DIV. OF OIL, GAS & MINING  
ASSIGNED TRACKING NUMBER





United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Utah State Office  
P.O. Box 45155  
Salt Lake City, UT 84145-0155  
<http://www.blm.gov/>



*Sandino  
9-22-09  
[Signature]  
22 Sept. 2008*

SEP 25 2008

IN REPLY REFER TO:  
SL-066145  
SL-066490  
U-014218  
U-0126947  
SL-069291  
U-014217  
UTU 73516 (LMU)  
(UT-923)

Mr. Jay Marshall  
Chief Engineer and Project Manager  
UtahAmerican Energy, Inc.  
Lila Canyon Project  
P. O. Box 986  
Price, UT 84501

**RE: Design for Portal Closures of the Geneva Mine in Lila Canyon**

Dear Mr. Marshall:

**Background:** On July 31, 2000 UtahAmerican Energy (UEI) acquired the Federal coal leases which encompass the Geneva Mine (Horse Canyon Mine). Two mine portals located in Lila Canyon previously used for ventilating the Geneva Mine (Horse Canyon Mine) had been sealed upon the completion of mining operations as late as 1993. Due to the location of these permanent seals, which are some 50 to 80 feet in by the brow of the entries into the mountainside, inspections were made and it was determined that a potential safety hazard exists for the public. In order to eliminate the hazard, it was concluded that the portals should be backfilled at the access points to the seal locations to prevent entrance into the entries.

**Proposal:** In order to preclude entry, UEI is proposing to secure the entries by installing reinforced screening on one entry (old fan/return entry) and barring down and adding loose surface materials to form an MSHA backfill in the second (old intake) entry. The approved screening plan for the old fan/return entry is attached. This design replaces the prior approved UEI submittal. The effectiveness of these barriers will be considered in the BLM review of the future proposed final permanent sealing of these entries.

**Affected Leases & LMUs:** Although the portals are located on Federal lease SL-066145 this approval also affects the Logical Mining Unit UTU- 73516 which was approved on January 27, 1999.

File in:

Confidential

Shelf

Expandable

Refer to Record No. 0023 Date 04082009

In C10070013 2008 incoming

For additional information

**Inspection:** The portals were inspected on two different occasions (May 2, 2006 and June 16, 2006) by representatives from UEI, the Utah Division of Oil, Gas and Mining (UDOGM) and the BLM. It appeared as though there had been no visitation or vandalism since the permanent seals had been installed.

**Approval:** The BLM approves the construction of the reinforced screening in the old fan/return entry and the backfill method in the old intake entry as temporary mine access barriers.

**Conditions of Approval:** This approval is subject to the following conditions:

- Annual monitoring and reporting of the reinforced screening and backfill verifying stability and to check for possible vandalism. The reports shall contain a dated photo and is due by May 1 of each subsequent year following construction of the temporary barrier.
- In the event of vandalism to or destruction of the reinforced screening and backfill, a review will be conducted and a plan for corrective action will be made and submitted to BLM for approval within 30 days after the vandalism/destruction is discovered.

This approval does not constitute authorizations as required by other governmental agencies or any other permits necessary to proceed with the project.

If you have any questions, please contact Steve Rigby of the Price Field Office at (435) 636-3604 or Jeff McKenzie of the BLM State Office at (801) 539-4038.

Sincerely,

*JAMES F KOHLER*

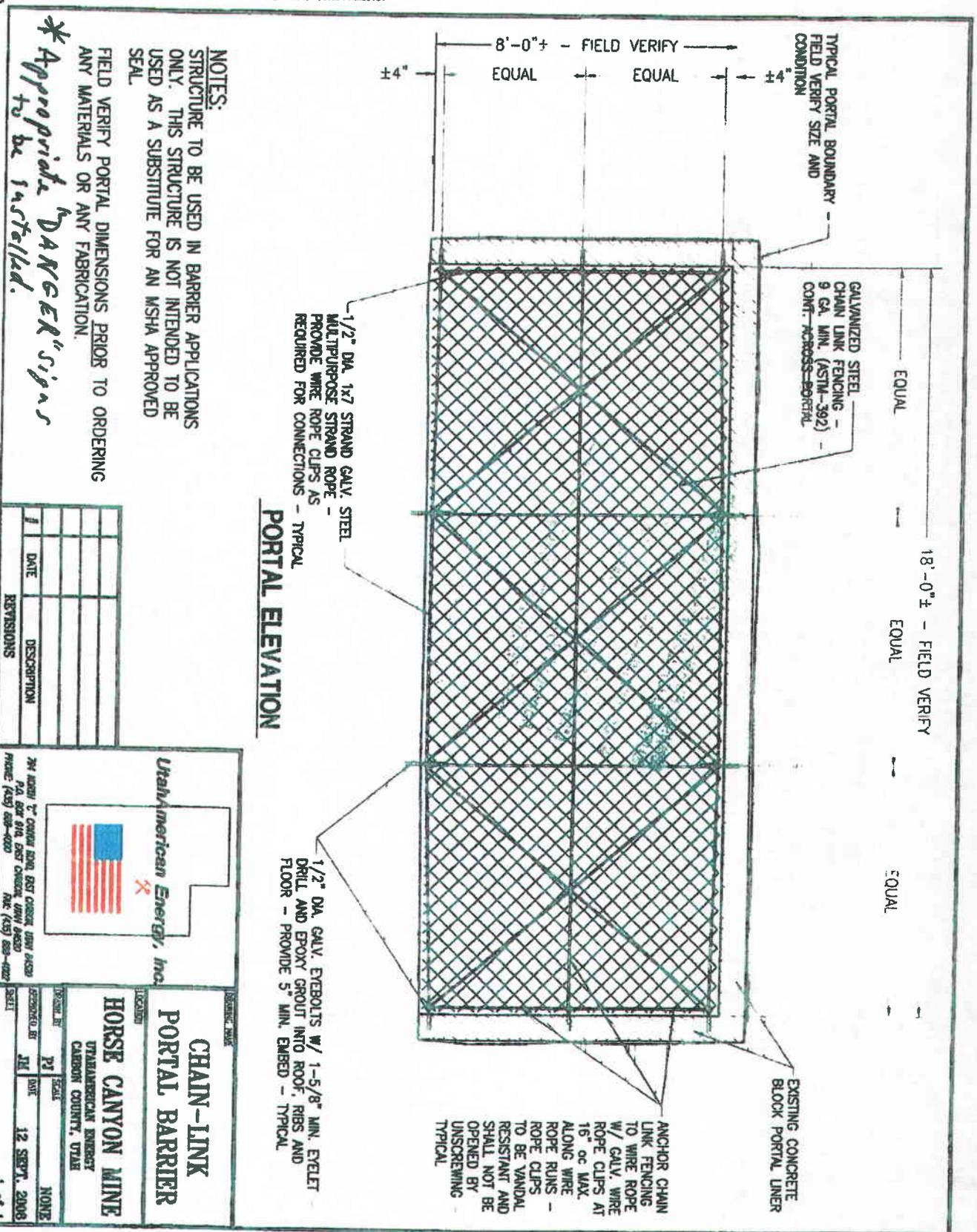
James F. Kohler  
Chief, Branch of Solid Minerals

**Enclosures:**

Approved Construction Design (UEI 12-27-06, rev. 9-12-08)

cc: UT-070, Price Field Office (w/ Enclosure)  
Utah Division of Oil Gas and Mining (w/ Enclosure)  
Attn: Daron Haddock  
1594 West North Temple, Suite 1210  
Salt Lake City, Utah 84414-5801

Lila Cyn Portal Closure ApprovalJM-SA-9-22-08



**NOTES:**  
 STRUCTURE TO BE USED IN BARRIER APPLICATIONS ONLY. THIS STRUCTURE IS NOT INTENDED TO BE USED AS A SUBSTITUTE FOR AN MSHA APPROVED SEAL.  
 FIELD VERIFY PORTAL DIMENSIONS PRIOR TO ORDERING ANY MATERIALS OR ANY FABRICATION.  
 \* Appropriate "DANGER" signs to be installed.

NO.	DATE	DESCRIPTION

UtahAmerican Energy, Inc.

2400 W. 2000 S. CANYON ROAD, SALT LAKE CITY, UT 84119  
 P.O. BOX 610, EAST CANYON, UTAH 84002  
 Phone: (435) 589-4000 Fax: (435) 589-4002

**CHAIN-LINK PORTAL BARRIER**

**HORSE CANYON MINE**  
 UTAH-AMERICAN ENERGY  
 CARBON COUNTY, UTAH

DESIGNED BY	SCALE	DATE
PI		12 SEPT. 2006
CHECKED BY		
JL		

1 of 1

**NOTE:** (Approval on reverse.)  
 sign will be: "Possible Explosive Atmosphere" may exist Behind  
 and/or "Possible ... no Explosive Atmosphere" ...

RECEIVED BY: 2-25-08  
BUREAU OF LAND MANAGEMENT

Received By: [Signature]  
District Engineer (Date)

Approved By: [Signature] 9/22/2008  
Manager (Date)

\*Please add/del note.

Portal Closures  
Geneva Mine in Lila Canyon  
Additional Commitments

- 1) As determined by DOGM a sign will be installed on the barriers that states:

**Possible Explosive Atmosphere  
and/or  
Possible Oxygen Deficient Atmosphere  
May Exist Behind This Barricade**

- 2) Signs installed at the barriers will be maintained as per 521.210 and 521.230.
- 3) The responsibility for the maintenance and monitoring of the Geneva Mine / Lila Canyon fan portal seal barriers lies with UEI or other subsequent C/007/013 permit holders.
- 4) The barrier will be installed and annual monitoring initiated by the third quarter of 2010. The monitoring will continue for the life of the mine at which time assuming that no vandalism has occurred, the barriers will be considered "permanent" and annual monitoring will be suspended.
- 5) A copy of each annual inspection of the Geneva Mine Portals in Lila Canyon will be provided to the USDO/BLM/Price Field Office and the Utah Division of Oil, Gas and Mining no later than thirty days after said inspection. The inspections shall include photo documentation of the barrier condition with date documented exposures.
- 6) Damage to the cable/chain links barriers will be adequately repaired as soon as practicable.
- 7) A bond line item will be added to the Lila Canyon bond to include the Geneva fan portal closure in the amount of \$5,000..

**APPENDIX III-1**

**Phase III Bond Release Application  
Horse Canyon Mine**

**April 17, 2009**

sampling report included as Appendix III-1-5, Horse Canyon Vegetation Study - 2003. The vegetation meets the requirements of the standards as follows:

Summary of the 2003 study report:

A vegetation inventory was conducted on 6 revegetation sites on the Horse Canyon Mine property between June and August, 2003. Data were collected regarding percent cover, percent cover by species, and woody plant density at each site. Data were also collected from a reference site located on Bureau of Land Management property adjacent to mine property. Revegetation sites were compared to the reference area with respect to cover and woody plant density to determine similarity. All sites cover averages exceed the cover average for the reference site and should be judged to have satisfactorily exceeded minimum requirements with respect to cover. Woody plant density in all revegetated sites exceeded woody plant density in the reference area. Species diversity was also higher in all revegetated areas when compared to the reference area. The site exceeds the requirements for Phase II bond release.

The following tables summarize the results from the 2003 vegetation study.

2003	Area						
	Ref	3	6	7	11,13,14	15,17	16
Vegetation Cover Average	32.83	86.13	89.07	77.33	72.53	77.33	66.27
Average Woody Plant Densities	659.21	1957.30	3891.36	5180.74	1771.41	2625.22	2883.67
# of Species with Greater Than 5% Cover	2	5	5	4	4	4	4

Summary of the 2004 study report:

A vegetation inventory was conducted on 6 revegetation sites on the Horse Canyon Mine property between June and August, 2003. Data were collected regarding percent cover, percent cover by species, and woody plant density at each site. Data were also collected from a reference site located on Bureau of Land Management property adjacent to mine property. Revegetation sites were compared to the reference area with respect to cover and woody plant density to determine similarity.

The following tables summarize the results from the 2004 vegetation study.

2004	Area						
	Ref	3	6	7	11,13,14	15,17	16
<b>Vegetation Cover Average</b>	43.20	88.53	85.33	83.73	80.93	70.80	74.13
<b>Average Woody Plant Densities</b>	1112.23	1794.67	3905.88	4817.74	1542.02	2247.7	2572.94
<b># of Species with Greater Than 5% Cover</b>	2	5	4	4	4	4	4

The larger percentages of vegetation cover in the revegetated sites provide evidence that the revegetated sites have as much or more vegetation than the reference area. Greater woody plant densities in the revegetated sites than in the reference area show that the requirements of woody plant densities have been met. All revegetated sites have a greater number of species with more than five percent cover than the reference area. Percent cover, woody density, and species diversity in the revegetated areas exceed those found in the reference area and the revegetated areas should be found to have equaled or surpassed the requirements for revegetation.

Vegetation data that demonstrates that 80% of the woody vegetation in the revegetated areas has been in place for 60% of the liability period has not been recorded. The following table displays the woody plant density averages for years 1996, 2003, and 2004.

#### Woody Plant Density Averages

Year	Area						
	Ref	3	6	7	11,13,14	15,17	16
<b>1996</b>		2744	6181		4144	5248	5116
<b>2003</b>	659.21	1957.3	3891.36	5180.74	1771.41	2625.22	2883.67
<b>2004</b>	1112.23	1794.67	3905.88	4817.74	1542.02	2247.7	2572.94

Densities shown as Plants per Acre

Dominant Woody Plant Species

Year	Area						
	Ref	3	6	7	11,13,14	15,17	16
1996		ARTR, ATCA, CHVI	ARTR, ATCA, CELA	ARTR, CHVI	ARTR, ATCA	ARTR, ATCA	ARTR, ATCA
2003	GUSA, JUOS	ARTR, ATCA, CHVI	ARTR, ATCA, CHVI	ARTR, ATCA	ARTR, ATCA	ARTR, ATCA	ARTR, ATCA
2004	GUSA, JUOS	ARTR, ATCA, CHNA	ARTR, ATCA, CHVI	ARTR, ATCA	ARTR, ATCA	ARTR, ATCA	ARTR, ATCA, CHNA, ATCO

ARTR – *Artemisia tridentata*  
 ATCA – *Atriplex canescens*  
 ATCO - *Atriplex confertifolia*  
 CELA – *Ceratoides lanata*  
 CHNA – *Chrysothamnus nauseosus*  
 CHVI – *Chrysothamnus viscidiflorus*

The dominant species in each revegetated area have been recorded with each vegetation survey. The dominant species in each area recorded in the 2003 and 2004 surveys are consistent with the vegetation survey results of 1996. This would lead to the conclusion that the majority of woody plants recorded in the 2003 and 2004 surveys have survived since 1996 and would demonstrate that the dominant species in each area have established themselves into a healthy and sustained population.

Slope Area Surveys:

Surveys of five additional sloped areas were surveyed for the purposes of precipitation runoff estimates and erosion indication. These five areas were not surveyed for the purpose of documenting the Phase III vegetation survey requirement and therefore do not require woody plant density and species composition surveys.

Purple Plant:

The purple plant listed in Appendix 3: Diversity and Similarity Data of the 2003 vegetation survey is assumed to be *Euphorbia fendleri*, Small Fendler's sandmat. This was deduced by comparing the species list found in the Similarity section of the results (page 13) and the similarity list found in Appendix 3. Twelve species are listed in both lists, and all are analogous species names with the exception of *Euphorbia fendleri* (in the Similarity section of the results) and the "purple" (found in the appendix list). Fendler's sandmat is a web like low growing plant with spade to oval shaped leaves and the stems are maroon or purple-red colored.

**Fifteen transects:**

The logic for conducting 15 surveys instead of the recommended 16 was to “keep sampling consistent and avoid excessive disturbance to sites” so a minimum of 15 transects was selected.

**Greasewood:**

*Sarcobatus vermiculatus*, greasewood, was identified in the 2004 vegetation survey. It was only found at one point on one transect in the reference area 2004 survey. This would place the specie’s population at less than one percent of the total vegetation cover within the reference area. The 2004 survey resulted in greasewood cover of 0.14% in Area 6, 0.4% in Area 11/13/14, and 1.4% in Area 15/17. With a cover percentage this low, it is possible that the random transects of the 2003 survey did not cross one of these plants. However, a coverage of 2.1% was found in Area 15/17 during the 2003 survey.

**Cheat Grass:**

In order to meet success standards of 90% vegetation of the undisturbed reference area, the required vegetation cover for each revegetated area should be greater than 24.90% in 2003 and greater than 38.88% in 2004. If the percentage of cheat grass cover is omitted from the total grass and vegetation cover percentages, the total vegetation cover of each area meets the required 90% cover of the reference area. The following tables shows cover percentages for the revegetated areas. The total cheat grass cover, grass cover and vegetation cover are included.

**2003 Cover Data**

Cover Type	Area						
	Ref	3	6	7	11,13,14	15,17	16
Cheat Grass %	2	4.1	27.1	22.1	15.7	19.1	6.5
Total Grass %	10.53	46.53	54.53	25.87	42.8	41.87	42.13
Total Vegetation %	32.83	86.13	89.07	77.33	72.53	77.33	66.27
Grass % w/out Cheat	8.53	42.43	27.43	3.77	27.1	22.77	35.63
Veg % w/out Cheat	30.83	82.03	61.97	55.23	56.83	58.23	59.77

2004 Cover Data

Cover Type	Area						
	Ref	3	6	7	11,13,14	15,17	16
Cheat Grass %	0.4	0.14	12.8	16.94	18.94	9.74	13.2
Total Grass %	15.6	33.73	44	25.47	50.13	33.6	42
Total Vegetation %	43.2	88.53	85.33	83.73	80.93	70.8	74.1 3
Grass % w/out Cheat	15.2	33.59	31.2	8.53	31.19	23.86	28.8
Veg % w/out Cheat	42.8	88.39	72.53	66.79	61.99	61.06	60.9 3

**II.A.4. Reclamation treatments, areas and work accomplished**

The following MRP Chapters address the information required:

Reclamation areas and plan .....	Chapter 3, Volume I
Postmining Topography .....	Chapter 3, Volume I
Drainage Control .....	Chapter 3, Volume I
Vegetation .....	Chapter VIII, Volume IV
Land Use .....	Chapter X, Volume IV

\*\*\* The Post Mine Land Use Change including the CEU donation area is included in Appendix X-4.

Roads

All roads were reclaimed except for the Horse Canyon (Range Creek) public road. All reclaimed roads are included on the maps in the areas designated "Phase III Reclaimed Areas." The roads were reclaimed according to the approved MRP. A short road will be needed to access the Road Junction Refuse Pile channel that sustained storm damage as shown on Map III-2A. This road will be opened up to access the channel for repairs and will be immediately reclaimed and seeded during the first available reclamation season according to the approved MRP.

**II.A.5. Mining history and reclamation activities**

The Horse Canyon Mine was initially opened by the Defense Plant Corporation in 1942 as a source for coal for the Geneva Steel Works in Orem, Utah. The mine was sold to U.S. Steel in 1946, who operated it until January 1984, when mining was permanently suspended. U.S. Steel submitted a mining and reclamation permit application in March, 1981. In October 1982, U.S. Steel informed the Division that it was temporarily suspending mining operations, and in January 1984 permanent suspension was announced.

In November 1984, Kaiser Steel Corporation purchased the mine property and submitted a reclamation bond in the amount of \$918,649, and indicated to the Division that it would maintain the operations in a temporary suspension status until further corporate decisions were made. In February 1987, Kaiser Coal, successor 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 mine and the permit was transferred to IPA in August 1990. IPA was issued a mining and reclamation plan on May 6, 1991, and 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. Phase II bond release application was submitted on December 19, 1997.

UtahAmerican Energy, Inc. acquired the mine from IPA on December 21, 1998. Phase II bond release was granted on April 11, 2002.

#### ***II.A.6. Extended Responsibility***

One area of extended responsibility period for the Horse Canyon Mine is shown on Map III-2A consisting of a short access road to the channel that sustained storm runoff damage, and the channel repair area. This area and road consist of 0.49 acres.

#### ***II.A.7. Remaining sediment control structures***

There are no remaining sediment control structures that need to be removed.

#### ***II.A.8. Schedule and cost estimate for remaining reclamation***

Phase II Bond release has been granted; this application is for Phase III bond release, completing the reclamation process, except for the 0.49 acre area on the Road Junction Refuse Pile where the channel will be repaired.

With the post mine land use change for the CEU donation, all un-reclaimed facilities and land have been removed from permit responsibility.

**II.A.9. Summary of bond acreages, dates of bond releases**

<b>Date</b>	<b>Status</b>	<b>Amount</b>	<b>Acreages</b>
11 Nov 84	Initial Kaiser Bond	\$ 918,649	74.26 Disturbed
6 May 91	IPA Bond	\$ 1,950,000	74.26 Disturbed
5 Feb 97	Phase I Bond Release (IPA)	\$ 812,726	74.26 - 51.56 = 22.7 Balance
15 Sept 98	Intital Horse Canyon Bond (UAE)	\$ 1,137,726	22.7 Disturbed Remaining
24 Jan 01	Adjustment at permit renewal by \$115,274	\$ 1,253,000	22.7 Disturbed Remaining
11 Apr 02	Phase II Bond Released \$191,672	\$ 1,061,328	22.7 Disturbed Remaining
25 Feb 04	Post Mine Land Use Change Approved including 16.18 acres	No Change	22.7 -16.18 = 6.52 Remaining
	<b>Phase III Bond Release Application</b>	<b>\$1,053,328</b>	<b>91..48 = 91..48 Ph III</b>
	<b>Road Junction Refuse Pile Channel &amp; Access Road (.49 Ac)</b>	<b>\$8,000</b>	<b>0.49 Remaining</b>

<sup>A</sup> Refer to Section II.A.1 on page 2 of this application for an explanation of the 6.5 acres.

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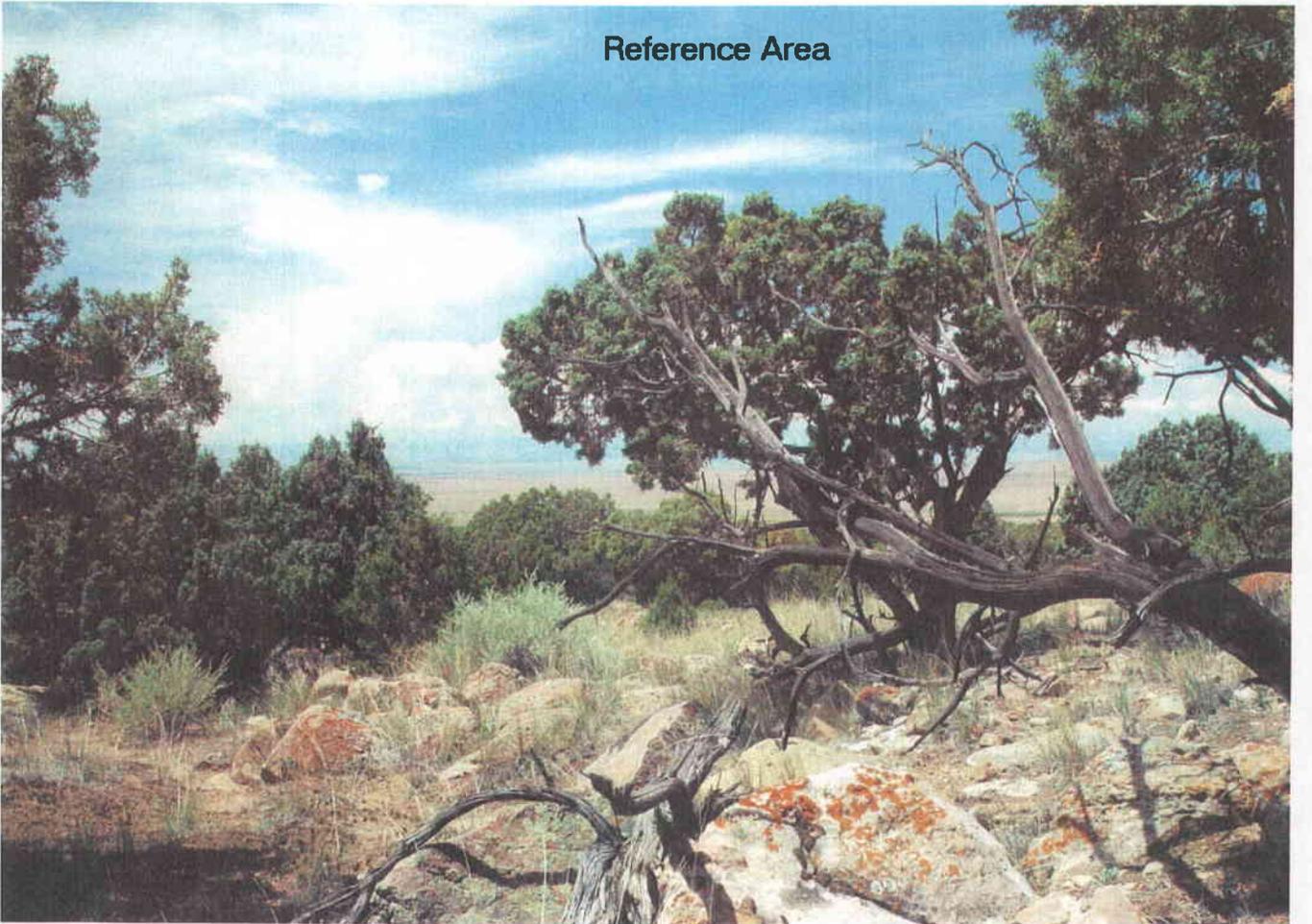
## **Appendix 4**

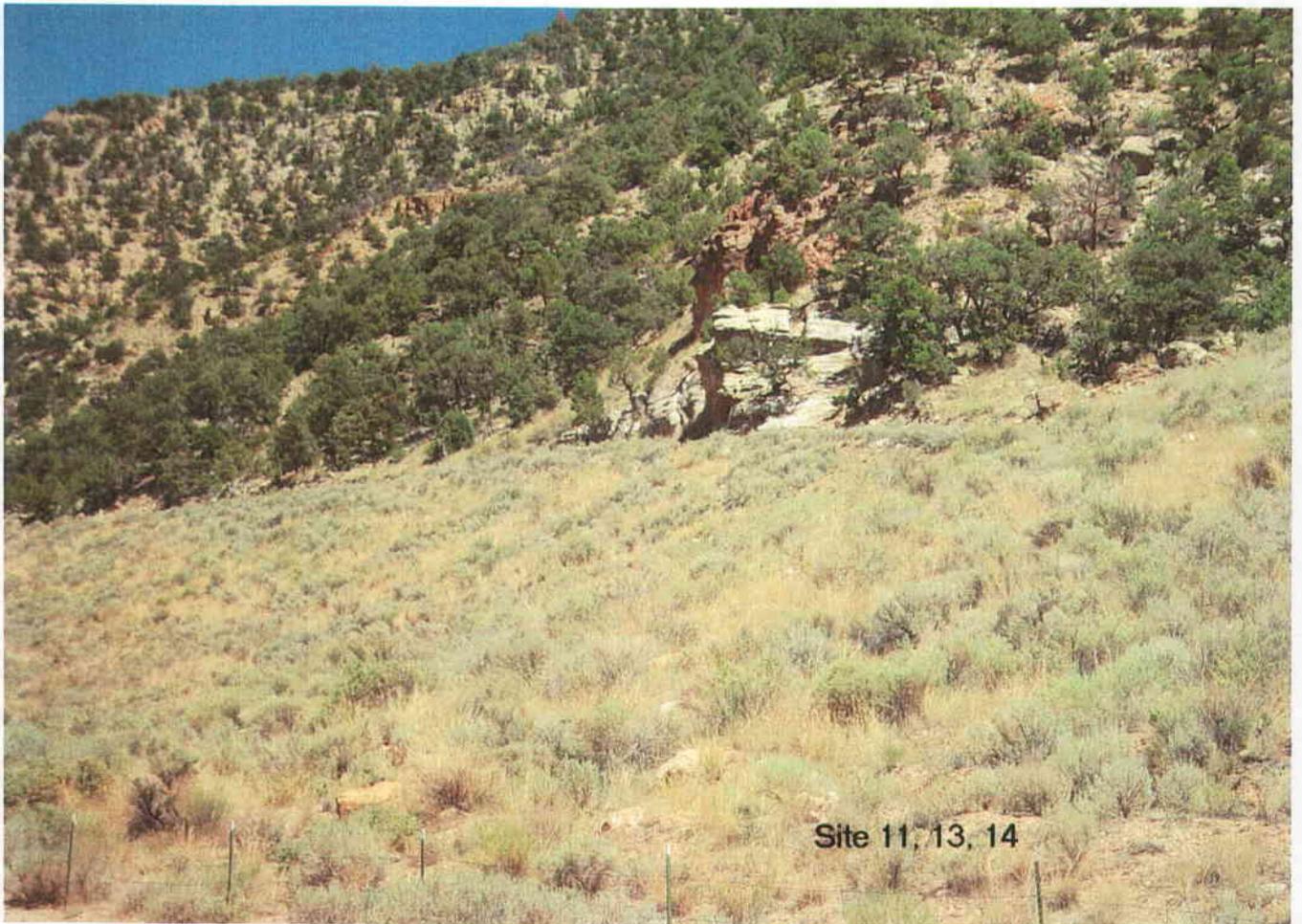
### **Site Photographs**

Reference Area



Reference Area





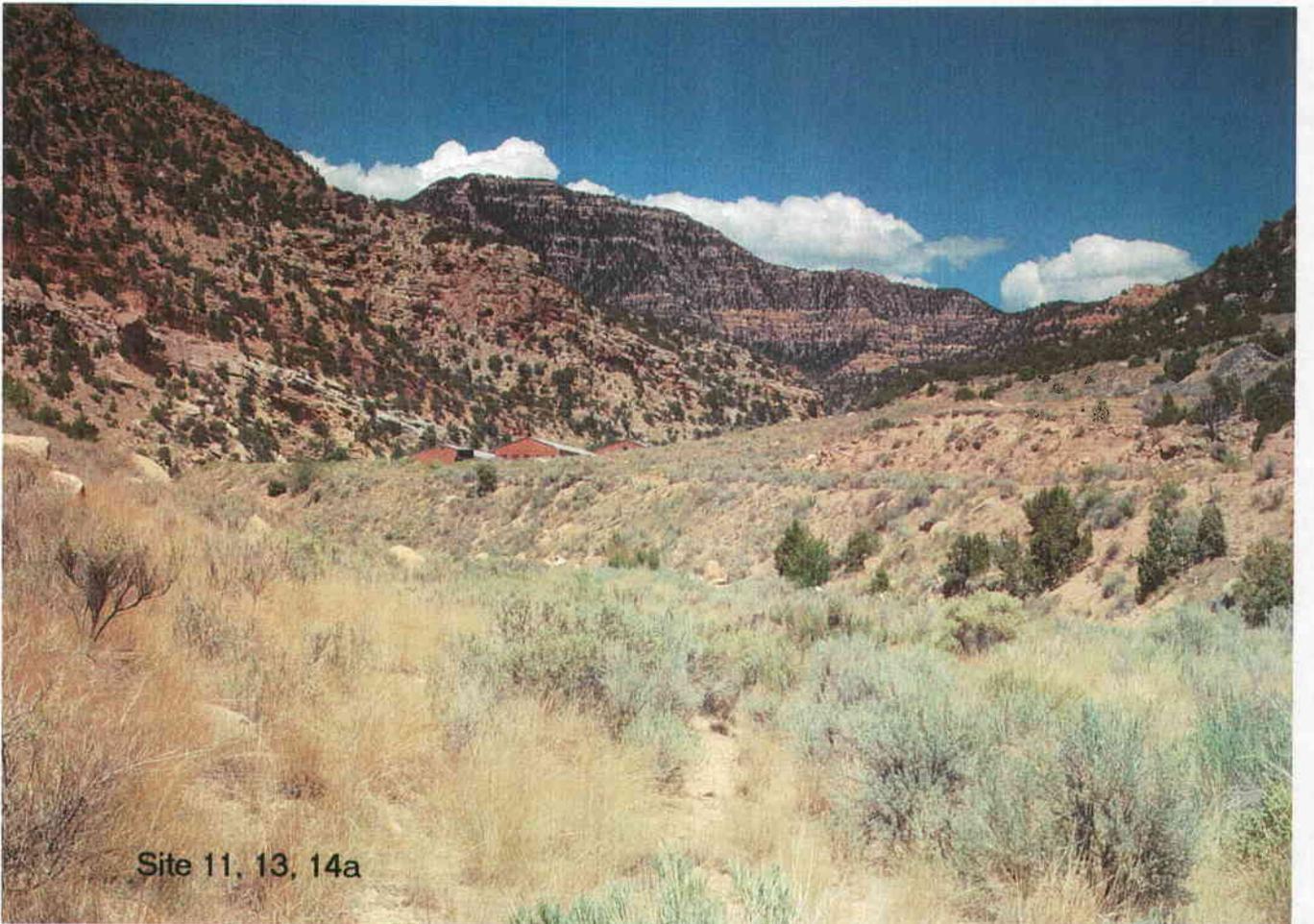
Site 11, 13, 14



Bighorn Ewe Site 11, 13, 14



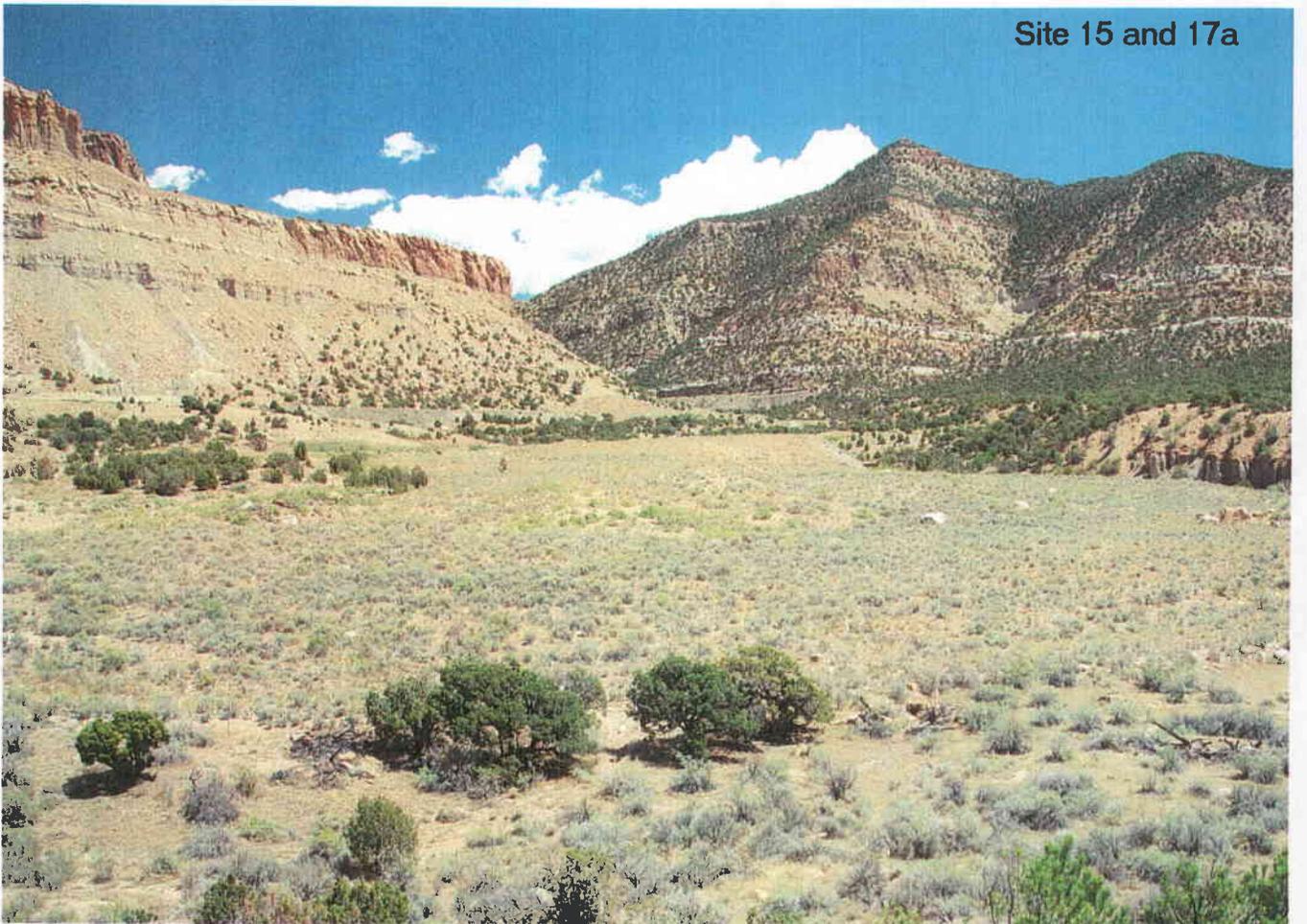
Site 15, 17b



Site 11, 13, 14a



Leopard Lizard Site 15, 17



Site 15 and 17a

## WordPerfect Document Compare Summary

Original document: C:\Lila\Correspondance\2009\Submittals\09-001 Phase III  
Response\Deficiencies again\Bond Release Application Text 08-010.wpd

Revised document:

@PFDesktop\MyComputer\C:\Lila\Correspondance\2009\Submittals\09-001 Phase III  
Response\Deficiencies again\Bond Release Application Text 09-001.wpd

Deletions are shown with the following attributes and color:

~~Strikeout~~, **Blue** RGB(0,0,255).

Deleted text is shown as full text.

Insertions are shown with the following attributes and color:

Double Underline, Redline, **Red** RGB(255,0,0).

The document was marked with 10 Deletions, 10 Insertions, 0 Moves.

## **APPENDIX III-1**

### **Phase III Bond Release Application Horse Canyon Mine**

~~January 25~~ April 17, 20089

sampling report included as Appendix III-1-5, Horse Canyon Vegetation Study - 2003. The vegetation meets the requirements of the standards as follows:

Quoting from Summary of the 2003 study report:

A vegetation inventory was conducted on 6 revegetation sites on the Horse Canyon Mine property between June and August, 2003. Data were collected regarding percent cover, percent cover by species, and woody plant density at each site. Data were also collected from a reference site located on Bureau of Land Management property adjacent to mine property. Revegetation sites were compared to the reference area with respect to cover and woody plant density to determine similarity. All sites cover averages exceed the cover average for the reference site and should be judged to have satisfactorily exceeded minimum requirements with respect to cover. Woody plant density in all revegetated sites exceeded woody plant density in the reference area. Species diversity was also higher in all revegetated areas when compared to the reference area.

Quoting from The site exceeds the requirements for Phase II bond release.

The following tables summarize the results from the 2003 vegetation study.

<u>2003</u>	<u>Area</u>						
	<u>Ref</u>	<u>3</u>	<u>6</u>	<u>7</u>	<u>11,13,14</u>	<u>15,17</u>	<u>16</u>
<u>Vegetation Cover Average</u>	<u>32.83</u>	<u>86.13</u>	<u>89.07</u>	<u>77.33</u>	<u>72.53</u>	<u>77.33</u>	<u>66.27</u>
<u>Average Woody Plant Densities</u>	<u>659.2</u> <u>1</u>	<u>1957.30</u>	<u>3891.36</u>	<u>5180.74</u>	<u>1771.41</u>	<u>2625.22</u>	<u>2883.67</u>
<u># of Species with Greater Than 5% Cover</u>	<u>2</u>	<u>5</u>	<u>5</u>	<u>4</u>	<u>4</u>	<u>4</u>	<u>4</u>

Summary of the 2004 study report:

A vegetation inventory was conducted on 6 revegetation sites on the Horse Canyon Mine property between June and August, 2003. Data were collected regarding percent cover, percent cover by species, and woody plant density at each site. Data were also collected from a reference site located on Bureau of Land Management property adjacent to mine property. Revegetation sites were compared to the reference area with respect to cover and woody plant density to determine similarity. ~~All sites~~

The following tables summarize the results from the 2004 vegetation study.

<u>2004</u>	<u>Area</u>						
	<u>Ref</u>	<u>3</u>	<u>6</u>	<u>7</u>	<u>11,13,14</u>	<u>15,17</u>	<u>16</u>
<u>Vegetation Cover Average</u>	<u>43.20</u>	<u>88.53</u>	<u>85.33</u>	<u>83.73</u>	<u>80.93</u>	<u>70.80</u>	<u>74.13</u>
<u>Average Woody Plant Densities</u>	<u>1112.23</u>	<u>1794.67</u>	<u>3905.88</u>	<u>4817.74</u>	<u>1542.02</u>	<u>2247.7</u>	<u>2572.94</u>
<u># of Species with Greater Than 5% Cover</u>	<u>2</u>	<u>5</u>	<u>4</u>	<u>4</u>	<u>4</u>	<u>4</u>	<u>4</u>

The larger percentages of vegetation cover averages exceed the cover average for the reference site and should be judged to have satisfactorily exceeded minimum requirements with respect to cover. Woody plant density in all in the revegetated sites exceeded woody plant density in provide evidence that the revegetated sites have as much or more vegetation than the reference area. Species diversity was also higher in all revegetated areas when compared to Greater woody plant densities in the revegetated sites than in the reference area show that the requirements of woody plant densities have been met. All revegetated sites have a greater number of species with more than five percent cover than the reference area. Life form similarity comparisons indicated that in almost every case, Percent cover, woody density, and species diversity in the revegetated areas exceeded the 70% standard with respect to percent cover. exceed those found in the reference area and the revegetated areas should be found to have equaled or surpassed the requirements for revegetation.

Vegetation data that demonstrates that 80% of the woody vegetation in the revegetated areas has been in place for 60% of the liability period has not been recorded. The following table displays the woody plant density averages for years 1996, 2003, and 2004.

### Woody Plant Density Averages

<u>Year</u>	<u>Area</u>						
	<u>Ref</u>	<u>3</u>	<u>6</u>	<u>7</u>	<u>11,13,14</u>	<u>15,17</u>	<u>16</u>
<u>1996</u>		<u>2744</u>	<u>6181</u>		<u>4144</u>	<u>5248</u>	<u>5116</u>
<u>2003</u>	<u>659.21</u>	<u>1957.3</u>	<u>3891.36</u>	<u>5180.74</u>	<u>1771.41</u>	<u>2625.22</u>	<u>2883.67</u>
<u>2004</u>	<u>1112.23</u>	<u>1794.67</u>	<u>3905.88</u>	<u>4817.74</u>	<u>1542.02</u>	<u>2247.7</u>	<u>2572.94</u>

Densities shown as Plants per Acre

Dominant Woody Plant Species

<u>Year</u>	<u>Area</u>						
	<u>Ref</u>	<u>3</u>	<u>6</u>	<u>7</u>	<u>11,13,14</u>	<u>15,17</u>	<u>16</u>
<u>1996</u>		<u>ARTR,</u> <u>ATCA,</u> <u>CHVI</u>	<u>ARTR,</u> <u>ATCA,</u> <u>CELA</u>	<u>ARTR,</u> <u>CHVI</u>	<u>ARTR,</u> <u>ATCA</u>	<u>ARTR,</u> <u>ATCA</u>	<u>ARTR,</u> <u>ATCA</u>
<u>2003</u>	<u>GUSA,</u> <u>JUOS</u>	<u>ARTR,</u> <u>ATCA,</u> <u>CHVI</u>	<u>ARTR,</u> <u>ATCA,</u> <u>CHVI</u>	<u>ARTR,</u> <u>ATCA</u>	<u>ARTR,</u> <u>ATCA</u>	<u>ARTR,</u> <u>ATCA</u>	<u>ARTR,</u> <u>ATCA</u>
<u>2004</u>	<u>GUSA,</u> <u>JUOS</u>	<u>ARTR,</u> <u>ATCA,</u> <u>CHNA</u>	<u>ARTR,</u> <u>ATCA,</u> <u>CHVI</u>	<u>ARTR,</u> <u>ATCA</u>	<u>ARTR,</u> <u>ATCA</u>	<u>ARTR,</u> <u>ATCA</u>	<u>ARTR,</u> <u>ATCA,</u> <u>CHNA,</u> <u>ATCO</u>

ARTR – *Artemisia tridentata*

ATCA – *Atriplex canescens*

ATCO - *Atriplex confertifolia*

CELA – *Ceratoides lanata*

CHNA – *Chrysothamnus nauseosus*

CHVI – *Chrysothamnus viscidiflorus*

The dominant species in each revegetated area have been recorded with each vegetation survey. The dominant species in each area recorded in the 2003 and 2004 surveys are consistent with the vegetation survey results of 1996. This would lead to the conclusion that the majority of woody plants recorded in the 2003 and 2004 surveys have survived since 1996 and would demonstrate that the dominant species in each area have established themselves into a healthy and sustained population.

Slope Area Surveys:

Surveys of five additional sloped areas were surveyed for the purposes of precipitation runoff estimates and erosion indication. These five areas were not surveyed for the purpose of documenting the Phase III vegetation survey requirement and therefore do not require woody plant density and species composition surveys.

Purple Plant:

The purple plant listed in Appendix 3: Diversity and Similarity Data of the 2003 vegetation survey is assumed to be *Euphorbia fendleri*, Small Fendler's sandmat. This was deduced by comparing the species list found in the Similarity section of the results

(page 13) and the similarity list found in Appendix 3. Twelve species are listed in both lists, and all are analogous species names with the exception of *Euphorbia fendleri* (in the Similarity section of the results) and the "purple" (found in the appendix list). Fendler's sandmat is a web like low growing plant with spade to oval shaped leaves and the stems are maroon or purple-red colored.

Fifteen transects:

The logic for conducting 15 surveys instead of the recommended 16 was to "keep sampling consistent and avoid excessive disturbance to sites" so a minimum of 15 transects was selected.

Greasewood:

*Sarcobatus vermiculatus*, greasewood, was identified in the 2004 vegetation survey. It was only found at one point on one transect in the reference area 2004 survey. This would place the specie's population at less than one percent of the total vegetation cover within the reference area. The 2004 survey resulted in greasewood cover of 0.14% in Area 6, 0.4% in Area 11/13/14, and 1.4% in Area 15/17. With a cover percentage this low, it is possible that the random transects of the 2003 survey did not cross one of these plants. However, a coverage of 2.1% was found in Area 15/17 during the 2003 survey.

Cheat Grass:

In order to meet success standards of 90% vegetation of the undisturbed reference area, the required vegetation cover for each revegetated area should be greater than 24.90% in 2003 and greater than 38.88% in 2004. If the percentage of cheat grass cover is omitted from the total grass and vegetation cover percentages, the total vegetation cover of each area meets the required 90% cover of the reference area. The following tables shows cover percentages for the revegetated areas. The total cheat grass cover, grass cover and vegetation cover are included.

2003 Cover Data

<u>Cover Type</u>	<u>Area</u>						
	<u>Ref</u>	<u>3</u>	<u>6</u>	<u>7</u>	<u>11,13,14</u>	<u>15,17</u>	<u>16</u>
<u>Cheat Grass %</u>	<u>2</u>	<u>4.1</u>	<u>27.1</u>	<u>22.1</u>	<u>15.7</u>	<u>19.1</u>	<u>6.5</u>
<u>Total Grass %</u>	<u>10.53</u>	<u>46.53</u>	<u>54.53</u>	<u>25.87</u>	<u>42.8</u>	<u>41.87</u>	<u>42.13</u>
<u>Total Vegetation %</u>	<u>32.83</u>	<u>86.13</u>	<u>89.07</u>	<u>77.33</u>	<u>72.53</u>	<u>77.33</u>	<u>66.27</u>
<u>Grass % w/out Cheat</u>	<u>8.53</u>	<u>42.43</u>	<u>27.43</u>	<u>3.77</u>	<u>27.1</u>	<u>22.77</u>	<u>35.63</u>
<u>Veg % w/out Cheat</u>	<u>30.83</u>	<u>82.03</u>	<u>61.97</u>	<u>55.23</u>	<u>56.83</u>	<u>58.23</u>	<u>59.77</u>

2004 Cover Data

<u>Cover Type</u>	<u>Area</u>						
	<u>Ref</u>	<u>3</u>	<u>6</u>	<u>7</u>	<u>11,13,14</u>	<u>15,17</u>	<u>16</u>
<u>Cheat Grass %</u>	<u>0.4</u>	<u>0.14</u>	<u>12.8</u>	<u>16.94</u>	<u>18.94</u>	<u>9.74</u>	<u>13.2</u>
<u>Total Grass %</u>	<u>15.6</u>	<u>33.73</u>	<u>44</u>	<u>25.47</u>	<u>50.13</u>	<u>33.6</u>	<u>42</u>
<u>Total Vegetation %</u>	<u>43.2</u>	<u>88.53</u>	<u>85.33</u>	<u>83.73</u>	<u>80.93</u>	<u>70.8</u>	<u>74.1</u> <u>3</u>
<u>Grass % w/out Cheat</u>	<u>15.2</u>	<u>33.59</u>	<u>31.2</u>	<u>8.53</u>	<u>31.19</u>	<u>23.86</u>	<u>28.8</u>
<u>Veg % w/out Cheat</u>	<u>42.8</u>	<u>88.39</u>	<u>72.53</u>	<u>66.79</u>	<u>61.99</u>	<u>61.06</u>	<u>60.9</u> <u>3</u>

**II.A.4. Reclamation treatments, areas and work accomplished**

The following MRP Chapters address the information required:

Reclamation areas and plan .....	Chapter 3, Volume I
Postmining Topography .....	Chapter 3, Volume I
Drainage Control .....	Chapter 3, Volume I
Vegetation .....	Chapter VIII, Volume IV
Land Use .....	Chapter X, Volume IV

\*\*\* The Post Mine Land Use Change including the CEU donation area is included in Appendix X-4.

Roads

All roads were reclaimed except for the Horse Canyon (Range Creek) public road. All reclaimed roads are included on the maps in the areas designated "Phase III Reclaimed Areas." The roads were reclaimed according to the approved MRP. A short road will be needed to access the Road Junction Refuse Pile channel that sustained storm damage as shown on Map III-2A. This road will be opened up to access the