

May 13, 2003

TO: Internal File

THRU: Wayne H. Western, Environmental Scientist III/Engineering, Team Lead

FROM: Jerriann Ernstsens, Environmental Scientist II/Biology

RE: Leach Field Area-Phase III Bond Release Application, Plateau Mining Corporation, Willow Creek Mine, C/007/038-BR03A

**SUMMARY:**

The permittee submitted an application for Phase III bond release of that area of Crandall Canyon located above the surface facilities known as the leach field area on March 6, 2003. The area involved is 7.51 acres.

**TECHNICAL ANALYSIS:**

**RECLAMATION PLAN**

**REVEGETATION**

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:**

Plateau Mining Corporation submitted an application for phase III bond release on an area that served as a leach field for Crandall Canyon. The leach field was used for wastewater that was piped ¾ mile further up the canyon.



**TECHNICAL MEMO**

(%)						
<b>Shrub (%)</b>	10	23	13	0.42	0.42	0

The results show that there was a decrease in vegetative cover between survey years for both the reference and leach field areas. Decreases in cover may be due to low precipitation rates in the area for those years.

The primary species contributing to vegetative cover for the leach field, during 2001 and 2002, included alfalfa (16% cover) and mountain brome (13% cover). Other species representing over 5% cover included: Crested wheatgrass, Great Basin wildrye, Blue bunch wheatgrass, and Western wheatgrass. No single forb species measured over 5% cover in the leach field for 2002.

The primary species for the reference site differed from the leach field. The lack of correlation between the leach field and reference area should be expected given that the leach field was never seeded with the final seed mix.

The Willow Creek mine plan, dated September 1995, states there are no “high value” wildlife habitat within the access road or leach field area. The plan also states that the area has the potential of supporting wildlife. On a field visit, April 23, 2003, there were signs of grazing and significant amounts of elk droppings on the road and in the leach field.

**Figure 2: Diversity and similarity data for 2001 and 2002**

	<b>Reference area 2001</b>	<b>Leach field 2001</b>	<b>Reference area 2002</b>	<b>Leach field 2002</b>
<b>Diversity Index*</b>	5	10	5	7
<b>Similarity (%)*</b>	65		49	

The MacArthur index compared vegetation diversity between reference and leach field areas for years 2001 and 2002. The Motyka index compared the similarity between reference and leach field areas for years 2001 and 2002. In both analyses, the Division must consider that comparisons between the reference area and leach field are confounded because the reference area had been selected before the change in the post-mine landuse and the leach field was never seeded with the final seed mix. The similarity values, therefore, are unreasonable comparisons. Although the diversity comparisons are also irrelevant, it is interesting to note that plant diversity was higher for the leach field than the reference site.

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**TECHNICAL MEMO**

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Even though the survey data is confounded, the primary consideration is that the current landowner wants the land left with the existing contour and cover. The leach field was seeded over 12 years ago. The site appears stable at this time and suitable for the landowner's post-land use.

**Findings:**

Information provided in the application is considered adequate to meet the minimum Revegetation section of the Reclamation regulations.

**RECOMMENDATION**

The application may be approved in its current form.