



STATE OF UTAH  
NATURAL RESOURCES  
Oil, Gas & Mining

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April 12, 1985

Mr. Allen Klein, Administrator  
Office of Surface Mining  
Brooks Towers  
1020 15th Street  
Denver, Colorado 80202

Dear Mr. Klein:

RE: Permit Condition Response Review, Valley Camp of Utah, Belina  
Complex, ACT/007/001, Folder No. 2 & 4, Carbon County, Utah

The Division has reviewed the Valley Camp of Utah's responses to final permit conditions, submitted on October 3, 1984, and January 4, 1985. The attached review document contains the Division's comments regarding the applicant's response. Since OSM took the lead review role for this mine we submit these comments to you. Please pass them along to the company as you see fit.

Feel free to contact me or Susan C. Linner if you have any questions.

Sincerely,

A handwritten signature in cursive script that reads "L. P. Braxton".

L. P. Braxton  
Administrator  
Mineral Resource Development  
and Reclamation Program

SCL:jvb  
cc: R. Naten  
S. Linner  
0028R

PERMIT CONDITION RESPONSE REVIEW

Valley Camp of Utah  
Belina Complex  
ACT/007/001  
Carbon County, Utah

April 12, 1985

Condition 1 and 3 - RS

The operator states in the response section of condition 3 that the annual report will not include any previously submitted information. The annual report must contain a summary of the years data, including a compiled listing of previously submitted data. Additionally, a mass balance table of the major cations and anions should be included for each analysis.

The operator also states that monthly sampling of in-mine flows will recur until the flow stabilizes. What will be the criteria for determination of a stabilized flow (i.e. number of consecutive consistent samples)?

Condition 3 - DD

The applicant's request for deletion of parameters is not granted at this time. The Division of Oil, Gas, and Mining (DOGGM) has reviewed and revised in-mine monitoring requirements since this condition was adopted. The new in-mine monitoring requirements would benefit the applicant by relaxing frequencies and deleting some chemical parameters. It is recommended that the applicant contact DOGGM so a formal modification request can be submitted.

Condition 4 - DD

Since the applicant is responsible for maintaining the prevailing hydrologic balance along the intermittent streams, the applicant should address concerns such as: What will be the monitoring methods used over the stream channel? How much subsidence can occur under the stream channels?

Will the slope of the stream channel change?

Will ponding occur along the stream channels as subsidence takes place?

The applicant should also commit to notifying the regulatory authority of any subsidence that occurs along the stream channels within a 30 day time period.

Condition 5 - TLP

If substitute soil is already in place how will it be manipulated to allow for the required redistribution to a uniform thickness?

Suitability of the topsoil substitute materials has not been established.

The volume is never established as required.

What effect has covering alleged viable materials with contaminated material, time, and compaction had on the physical and chemical qualities of such material?

Nothing is found to indicate that the 14 acres currently covered with 6 inches of topsoil (allegedly reclaimed) is at the final approved contour.

The indication that a 3 inch topsoil cover will be implemented unless other wise approved is ambiguous.

Condition 6 - LK

As suggested in the 3rd paragraph of the response section, a meeting is in order to discuss the test plot design and rationale. It is unclear as to what the test plots are to accomplish (other than fulfilling a permit condition) and whether the proposed design will achieve the end goal (as seen by DOGM). It is suggested that this meeting be held "on-site" thus allowing the DOGM to view actual conditions of the proposed sites.

Considering the acreage involved with reclamation, it may be possible to reduce the number of seed mixes to two or three at the Belina Site and one at the Utah #2 site. This would require a permit revision and thus should be considered immediately since this would result in a reduction of the number of test plots needed.

Condition 6 - TLP

Where would topsoil to be used in the test plots come from?

Would it be representative of the substitute material available at reclamation?

What if optimum soil depth is in excess of 6 inches? If more is required the test plots as designed will have failed in their purpose.

What value is there in comparing an arbitrary condition to another arbitrary condition? Either a no soil treatment or a reference area needs to be employed. Even a reference area would have problems since the comparison between established, mature plants and early stage plant growth would have to be made.

Soil testing as proposed should be promptly performed so as to allow the RA input into the recommendations.

#### Condition 7 - DD

##### Part 3

In describing the source of water which supports spring or wetlands the applicant should describe whether the source emanates from a fault, fracture, perched aquifer or regional aquifer.

##### Part 4

The plan for water rights replacement needs more definition with respect to the springs which flow into upper Huntington Creek.

Not all of the applicants mitigation proposals are practical if subsidence should cause interception to the springs that flow into upper Huntington Creek.

Using a private contractor to haul replacement water could be very costly.

The applicant's proposal to buy the affected water rights may not be compatible to all concerned parties and does not necessarily ensure protection of the existing hydrologic regime. The applicant's proposal to replace the water from wells or reservoir water means transferring these shares to a different drainage which would need approval from the Utah Division of Water Rights.

This water rights issue must be addressed to satisfy Condition 7.

#### Condition 9 - RS

The Division agrees with the operator that previously revegetated slopes should have minimum disturbance during reclamation (p.4), however, what will be used to determine if a slope is sufficiently revegetated and stable?

The use of salvaged concrete cannot be used for reclamation of a permanent stream channel diversion (UMC 817.44). The concrete will need to be salvaged and disposed of in a correct manner.

Detail design plans for each stream channel crossing need to be submitted. This information must include determination of expected peak flow event, channel cross-sections, and design of stable channel bed. Page 7 states that:

1. The final road surface will be constructed such that the slope is not so steep as to create erosion; and
2. that drainage crossovers will be used to shorten slope length. How is this slope determined and what spacing pattern will be used for the cross-drains? Again, design of riprap for these areas needs to be submitted.

Plans for the overland flow channels discussed on page 7 need to be clarified and more detailed. The design for the stream crossing at the junction of the Belina Haul road and Eccles Canyon Road must additionally demonstrate adequate fish passage.

The second paragraph on page 7 discusses the large fill located near the midpoint of the haul road. This fill consists of blast rock on the bottom and soil fill on top. More complete plans for the reclamation of this area must be submitted. Plans must include determination of peakflow, channel cross-sections, demonstration that the rock fill is indeed competent and sized correctly for the expected peak flow. The CMP will need to be removed unless sufficient demonstration is presented to document there exist no other alternatives. Preliminary locations and designs for the required energy dissipators should also be included.

Plans should also address interim sediment control measures (strawbales, windrow slash, silt fences or pitted surfaces) to be implemented during reclamation.

Paragraph 2 of page 10 discusses reestablishing natural drainage patterns. It is felt that the determination and plans for these patterns can be completed during this stage of the permitting process. Final detailed estimates of cut and fill material required to achieve these patterns can be determined prior to reclamation.

#### Condition 9 - JRH

Plan has no design (sizing) criteria for riprapped ephemeral channels. Drawings and quantities of material required should be provided.

Other areas appear adequate, except for potential surface and gully erosion on slopes left at greater than 2:1. The revegetation plan and maintenance plan should include information pertaining to this potential problem.

Condition 9 - TLP

How was the relative stability of slopes determined? What criteria were employed to consider a slope stable? Unstable?

Nothing regarding the acceptability of previous reclamation or its success is provided in the way of support for the approach proposed by Valley Camp.

Elaborate on what constitutes the placement of asphaltic concrete in an "engineered manner".

The largest fill will consist of blasted rock covered over with topsoil. What is the expected size of the blasted rock and how will soil loss into voids be prevented?

The suitability of substitute materials have not been established. (see Condition #5 deficiency comment). Thus the satisfaction of condition #5 is a prerequisite to review of the response to condition #9.

It is doubtful that only six inches of topsoil will be adequate for reclamation of an area underlain by fill which has not been established as suitable and has an unknown capacity to support plant growth.

What criteria will be employed in making prescriptions for soil fertility amendments? If this is presented elsewhere it should be referenced here.

The volume and suitability of the fill is not established.

Condition 9 - LK

It appears that the amount of vegetation was a major factor in determining slope stability. Using this criteria, one would have identified most of the recent mudslide activity areas in Utah as stable just prior to the event. Outslopes were seeded with an interim mix and may or may not meet permanent performance standards (UMC 817.111-.117). Valley Camp must provide data that demonstrates interim revegetated areas meet success criteria or provide plans for interseeding, transplanting, or etc. that will bring interim areas up to standard.

The proposed seeding rate is insufficient. For grass and forb species combined, the drill rate should be between 40 to 80 seeds per square foot (80-150 seeds/ft<sup>2</sup> for broadcast or hydroseeding). Shrub/tree seeding and/or transplants need to be increased dramatically to meet success criteria. The proposed plan is expected to produce only about 135 - 150 woody plants/acre.

Valley Camp did not provide a depth of fill material to be used to cover the asphalt. Sufficient material must be used to provide an adequate rooting zone for reclamation. In other areas, it appears that fill material or other "apparently lesser quality" material will be used as fill or a substitute topsoil material. Valley Camp must demonstrate that these materials as well as a 6 inch cover of topsoil over blasted rock is sufficient for reclamation (See condition #6).

The disposal plan for the "blasted rock" fill at the Eccles Creek Crossing is unacceptable. Disturbance to Eccles creek or the riparian zone must be kept to a minimum (UMC 817.57 and 817.97(d)).

In general, the road reclamation plan does little to reduce the aesthetic impacts of the road (fig 4 & 5). The highwall and outslope areas should be reduced so that the recontoured slope blends in with the surrounding landscape. It is also suggested that snags and/or large boulders be placed to enhance wildlife use and prevent access by off-road vehicles.

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