SCOTT M. MATHESON
Governor

TEMPLE A. REYNOLDS
Executive Director,
NATURAL RESOURCES

CLEON B. FEIGHT
Director

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING
1588 West North Temple
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OIL, GAS, AND MINING BOARD

CHARLES R. HENDERSON
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MARGARET BIRD
HERM OLSEN

August 20, 1981

Mr. Trevor G. Whiteside
Valley Camp of Utah, Inc.
P.O. Box 507
Clear Creek, Utah 84517

RE: Apparent Completeness Review
Belina #1 and #2 Mines
ACT/007/001
Carbon County, Utah

Dear Mr. Whiteside:

Enclosed please find one (1) copy of a Draft Apparent Completeness Review for the Belina #1 and #2 Mines.

Sincerely,

for JAMES W. SMITH, JR.
COORDINATOR OF MINED LAND RECLAMATION

JWS/LCS:te

Enclosure

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August 20, 1981

Mr. Donald A. Crane
Regional Director
Office of Surface Mining
Brooks Towers
1020 15th Street
Denver, Colorado 80202

RE: Apparent Completeness Review
Valley Camp of Utah, Inc.
Belina #1 and #2 Mines
ACT/007/001
Carbon County, Utah

Dear Don:

Please find attached the consolidated comments for the Apparent Completeness Review for the above mine. Your review and concurrence or comments within 10 days would be appreciated. We will finalize the draft and send the Apparent Completeness Review to Valley Camp as soon as you respond.

Sincerely,

for JAMES W. SMITH, JR.
COORDINATOR OF MINED LAND DEVELOPMENT

JWS/LCS:te

Enclosure

APPARENT COMPLETNESS REVIEW

DRAFT

VALLEY CAMP OF UTAH, INC.
BELINA #1 & #2

UMC 782.13 IDENTIFICATION OF INTERESTS

Pursuant to 782.239(b)(2), the applicant must submit thje address of Quaker State Oil Corporation. The applicant should state the title for Mr. Haynes. Pursuant to 782.13(e), the applicant shall include all addresses of surface owners of property affected aqnd contiguous to the permit area. Missing are addresses for:

Voyle and Emma Bagley
Louis and Anna Kosec
Larry O. and Ira Baer
Skyline Land Co
LDS Church
Utah Natural Gas

The applicant shall include addresses of coal owners contiguous to the permit area. Missing is the address of:

George Telonis

UMC 782.14 COMPLIANCE INFORMATION

Valley Camp Coal Company and subsidaries are listed as the operators of operations in West Virgina (Appendix B), however, no violations are listed. If Valley Camp, Inc. is the permittee (page 4), it is necessary to address violations received for the other West Virgina operations during the period approximately) February 1978-February 1981.

UMC 782.17 PERMIT TERM INFORMATION

Editorial comment: It is noted that the schedule for mine sections for Belina #1 is duplicated on pages 26, 26a, and 26b. Is there a reason for this duplication?

UMC 782.18 PERSONAL INJURY AND PROPERTY DAMAGE INFORMATION

The liability insurance expires on April 1, 1981 (Figure 1-7). The applicant must show at the time of application that the policy is in force for the underground coal mining activities for which the permit is sought. The applicant must show that the policy has a rider requiring the insurer notify the Division whenever substantive changes are made in the policy, including any termination or failure to renew (UMC 806.14).

UMC 782.19 IDENTIFICATION OF OTHER LICENSES AND PERMITS

Figure 1-7 lists some permits for which no information is provided regarding license number, approval, or submittals (i.e., status). These include: "Crossing of State 96;" county right-of-ways; and sewage disposal system. What approval has been obtained from MSHA regarding the underground waste structure noted on page 41a?

Volume 3 page 4 states there are 2 wells and an agreement with the Alpine School System to supply culinary water. There is no indication under the listing of other licences and permits that water rights have been obtained for the ground water systems or that an agreement has been worked out with the Alpine School System. The applicant must show evidence of water rights for all water used.

Pursuant to USGS comments per attached letter the applicant must submit the Roof Control and Ventilation System and Methane and Dust Control Plans approved by MSHA as part of the mining and reclamation plan.

UMC 782.21 NEWSPAPER ADVERTISEMENT AND PROOF OF PUBLICATION

The applicant must revise the error in the description contained in the advertisment.

T 14 S, R 7 E
Section 7-NW1/4 and "NW1/4 of NE1/4.
T 13 S, R 7 E.
Section 16-W1/2 of W1/2,"NE1/4 of NW1/4" and "NW1/4 of NE1/4".
Section 8-E1/2 of SE1/4 and "a portion of SW1/4 of SE1/4".

The applicant will be required to readvertise pursuant to UMC 786.11(d) after a complete application has been received by the Division. The applicant should refrain from advertisement until the Division with concurrence from the Office of Surface Mining has deemed the application complete pursuant to UMC 786.11(b).

UMC 783.12 GENERAL ENVIRONMENTAL RESOURCES INFORMATION

Pursuant to 783.12(a), the applicant must provide the size, sequence, and timing of subareas of the mine plan area, in five year increments, of the subareas for the life of each mine. The U.S. Geological Survey also requires the mine layout and forecast of production in 5 year increments for the life of the mine. (see attached letter)

Pursuant to UMC 783.12(b) the Division of State History needs one major area of concern cleared up. The seven sites located were determined not to be eligible. However, the problem that our office sees is that seven cultural

resource sites were located by this survey, and informal determinations of eligibility were made by the contractor. The seven sites located were determined not to be eligible. However, in the report there are mitigation plans outlined. The point of clarification here is that, if sites are not eligible, there is no need for mitigation. The cultural resource contractor appears to have not clarified this. We have problems with the determinations of eleigibility, effect, and mitigation programs as outlined by this report.

A detailed, item-by-item analysis of the plan is attached. A summary of the additional requirements follows:

1. Unable to determine exact boundaries of the areas surveyed. Do not know whether all areas of proposed surface disturbance were surveyed for cultural resources. Provide specific legal descriptions and acreage involved in areas surveyed.

2. Maps included in cultural resource report are of poor quality and inappropriate scale. Recorded sites, survey area, and disturbance areas should be plotted on a life-of-mine map. Old mines in the area should also be plotted.

3. Site descriptions for all sites encountered are needed within the report. Site forms and descriptions complement one another to give a detailed description of a cultural resource site.

4. A sample cultural resource survey will be needed for areas potentially affected by subsidence. Since a large portion of the mine plan is situated within the Manti-LaSal National Forest, a survey permit will have to be obtained. Sampling strategy should be presented and should be reviewed by the regulatory authority.

5. Site evaluations of eligibility and significance are confusing. Use of the CRRS system seems to confuse rather than help the issue.

*See previous note.

Unless information to the contrary is presented, OSM considers the S2 and S3 sites to have potential to yield information important in history and prehistory, and are, therefore, eligible for nomination to the National Register. Information to clarify these inconsistencies needs to be supplied.

6. A short discussion addressing the absence of prehistoric remains (including isolated finds) should be presented within the cultural resource section of the mine plan.

7. A more detailed survey methodology action is needed. Ground visibility, slope steepness, problems, areas not surveyed (and why) are among the things that should be included in the discussion.

8. Several of the sites have been cleared (AERC 270U/1 and /2) by OSM and the SHPO for another project (Skyline). This documentation should be added to this mine plan submission.

9. What is the current status of 38IN/4, 38IN/1, 38IN/3, 38IN/2? Are they in the mine plan area? What will be the impacts of mining. (see 5)

UMC 783.14 GEOLOGY DESCRIPTION

The waiver is not appropriate with respect to the geology of the surface-disturbed areas nor with regard to coal recovery and associated engineering analyses related to subsidence and groundwater analyses. The geologic information for surface disturbed areas (portals, roads, loadout, conveyor, right-of-way, waste disposal, and sediment control areas) is considered necessary to support analyses of compliance with stability projections. It is also requested that all flowing springs be related to the stratigraphy and geologic structures (fractures and faults) of the area. A site specific geologic map would satisfy most of those considerations.

Drill logs for all holes used in construction of the cross sections shown on maps F-1 and F-2 must be made available. Only two logs are provided (B-1a and B-1b). Location of these holes (75-30-3 and 76-7-1) on map H indicate that "as more information becomes available, cross sections will be updated." Will the source of this additional information be mining, or drilling, or both? Does this statement relate to hydrology and geological information? What type of new information is expected.

In order for the mining plan submitted to be complete with regard to the USGS 211 plan it should contain all the information contained in earlier submittals and/or approvals.

The applicant must provide an updated estimate of recoverable reserves as referenced in the General Mining Order No. 1. Send confidential Material to the USGS -Conservation Division except for the actual tonnage which is required pursuant to the permanent program regulations.

The applicant must provide a narrative or maps showing and explaining the specifics of maximum practicable recovery of the mineral resource. In addition the applicant must provide coal thickness isopachs for each mineable seam, structural contours of beds to be mined, overburden (250 ft max) and interburden (10 ft. max) isopachs and delineation of the areal extent of mining for each seam. The above information is required by the USGS (see attached letter) and the permanent program regulations.

The application relies on the Skyline plan for information regarding sulfur and alkalinity of the roof (and floor) strata (page 12). However, no information is provided to demonstrate that geologic conditions support extrapolation of the Skyline data. Nor are the specific data referred to in the Skyline plan identified. Please include the information you wish to be used from the Skyline Plan and justify the correlation of that data to the Valley Camp permit area. It is required that the physical and chemical nature of the underground development wastes be included.

UMC 783.15 GROUND WATER INFORMATION

Figure 2-9 provides water quality for wells and mines. Since no information is provided on the completion of the wells, it is not possible to determine whether the variations in water quality are correct. Please provide a better estimate of how wells were completed and sampled. Also, with the logs requested above, it will be easier to evaluate the ground water system to determine if additional information is required. Are the four wells the only ones sampled? Are there periodic depth to water measurements available?

How were the water table surfaces constructed in Figures F-1 and F-2? What data was used and what assumptions were made? As noted above, information on the completion of these wells is required. The cross sections appear to have ignored the hydrologic effects of the faults.

As also noted above (#10), what are the stratigraphic and structural relationships of the springs? From what strata do they issue? Are the discharges related to the fracture system? Do the relative flow rates and water quality identify the extent of recharge?

How was the average annual ground water discharge to Eccles Creek calculated (Figure 2-10)?

On page 24, selected water quality analyses for ground water are reported for four wells. Only three of these wells appear to be located on Map F. Where is the other located? These wells do not appear to overlap the mine area. Please explain the basis for conclusions regarding the ground water system overlaying the mine workings.

It is observed that the application presents only a very general description of the ground water system over the mine area. Thus, it is nearly impossible to assess the effects of mining and the efficiency of monitoring. A hydrologic survey report was submitted to the Forest Service but has not been provided with this plan. It is possible that incorporation of that report with this plan would provide a sound basis for the regulatory authority to evaluate the mining and reclamation proposal.

Probably one of the most efficient ways of determining the effects of mining on the ground water system is to document the existing mine discharges. This includes quantity and quality of total mine discharge, location in the mine where ground water is encountered (i.e., from the floor, roof, faulted areas), variations in flows (i.e., water flow terminates 500 feet from face, water flow increased, or water flow remains constant over time), and quantity of water encountered. The applicant should document the existing effects of mining on the ground water system and provide this information to the regulatory authority.

Please note that Map B-3 incorrectly identifies Section 26 as Section 2 in the section corner with Section 25 and that this map has no legend.

The mine plan would have us believe that water measurements were terminated in 1979. It is our informal understanding that the measurements have not been terminated and additional data exists. Please clarify and, if additional data are available, provide them and indicate how these data affect the values reported.

UMC 817.52 HYDROLOGIC BALANCE: SURFACE AND GROUND WATER MONITORING

Figure 3-13 states that composite samples will be obtained for surface and ground water points. Define the composite method to be used. Has the water quality at each point been defined during baseline monitoring?

(b) The Belina mine water discharge treatment has not been adequately addressed in the plan. It is understood that this treatment system will be reviewed as a minor modification to the permit plan. Describe minimum and maximum flow characteristics specifically observed in the Belina mines. If an NPDES is obtained for this discharge, the applicant must commit to reporting excessive mine water discharges and emergency flow situations to the Division.

The sample point UC-5 located at the confluence of Whiskey Creek and Eccles Creek is excessively high in suspended solid and total iron concentrations throughout the spring.

Snowmelt period. While this is an indication of natural erosion processes it may also indicated sediment contributions to the creek due to surface disturbance. The reason for this assumption is the strategic downstream location of the sampling point below the disturbance and the fact that Whiskey creek is a receiving stream or the discharge from the sedimentation structures at the Belina mines.

UMC 817.46 HYDROLOGIC BALANCE: SEDIMENTATION PONDS

(a) The applicant states that a temporary increase in suspended sediments will occur due to future construction and tht temporary sedimentation ponds will be required to treat disturbed area runoff. Any future construction within the permit area will require a technical review by the Division and will be considered a modification to the permit. At such a time the use of sedimentation structures will be evaluated on a case by case basis, since sedimentation ponds are not necessary for all types of construction (VII-page 35).

The applicant states that sediment pond removal will involve "dozing the dam material over the sediment". The applicant must justify that this settled sediment material is nontoxic and will not hinder reclamation of this area.

UMC 817.47 HYDROLOGIC BALANCE: DISCHARGE STRUCTURES

The applicant states that the emergency spillway for pond #4 will be left intact to receive drainage from the surface thereby preventing downslope erosion of the dam and providing for mine drainage. Is this considered a permanent structure? If so, postmining maintenance must be discussed for the discharge structure as well as the dam embankment. (VIII-28).

UMC 817.48 HYDROLOGIC BALANCE: ACID FORMING AND TOXIC FORMING MATERIALS

(a) Volume III, page 14 states that sediments removed during maintenance and cleaning of the ponds will be placed in a landfill. Where is this and fill? Has the owner agreed to acdepting this material?

UMC 783.16 SURFACE WATER INFORMATION

The lack of correlation between the topography, surface water hydrology, and the surface facilities maps (c-series) makes it impossible to calculate runoff volumes and associated velocities for the disturbed area drainages. A topographic map which delineates the disturved area watersheds for the sedimentation ponds with direction of surface water flow should be provided. The direction of surface water flow should include natural drainage diversions from as well as runoff within the disturbed areas.

UMC 783.18 CLIMATOLOGICAL INFORMATION

Please identify location of new precipitation gauge in Eccles Canyon and provide all available monthly records. It is presumed that the value of 29.8 inches of rainfall reported for this station in 1980 is precipitation including snowfall. Please confirm. The reference to USGS, 1978 is expected to be USGS, 1979 (page 37). Is that correct? Are any site data for wind speed and direction available? Please submit if available, or if not available, discuss basis for air quality analyses and any determinations of need for dust control.

UMC 783.19 VEGETATION INFORMATION

The MRP must identify the acreages of each vegetation community type that are to be (or have been) disturbed. The areas of disturbance must also be related to the vegetation communities.

The MRP must provide a vegetation map of the conveyor corridor with the specific areas of disturbance being delineated.

The MRP should provide an analysis of the selected reference areas with the corresponding "affected" area or premining conditions for each vegetation type in the area to be distrubed or previously disturbed area.

The applicant needs to provide a clearer description, accompanied by measurements, of premining vegetation communities in areas to be disturbed, and of reference areas. The sampling methods must be clearly described and the means and standard deviations for the individual measurements clearly stated, along with the derivation procedures. Sampling adequacy needs to be met at the 90 percent confidence level with a 10 percent change using a two-tailed t value for cover and density (80 percent/10 percent for shrublands). The present condition of the areas to be disturbed should be described as well as management procedures for the reference areas.

It is highly recommended that a meeting be held to discuss the sampling, sample adequacy and reclamation plan.

There are several minor discrepancies between the text (page 39 et seq), Figure 2-14 and apendicies F and H. While differences are are small, it is recommended that the applicant re-evaluate these figures and eliminate the discrepancies. A list of these discrepancies can be provided if the applicant wishes to correct them.

UMC 817.97 PROTECTION OF FISH, WILDLIFE, AND RELATED ENVIRONMENTAL VALUES

The application lacks a drawing (map) showing the key wildlife areas which relate wildlife activities to the proposed and existing mining operations. Such a map should show locations of raptor nests, winter range for moose and the general direction of ungulate migration in relationship to the proposed conveyor route. The applicant should make firm commitments to mitigating measures for fish and wildlife values--simply isting DWR's recommendations will not suffice.

The riparian habitat should be indicated on the vegetation map *UMC 783.19[a]). Due to the extremely high value of riparian habitats, the applicant must discuss how much of this wildlife habitat will be disturbed. The applicant must also detail plans to restore this riparian habaitat, wherever it is disturbed (UMC 817.97(d)(4, 5 and 6).

The application should explain the methods used to survey passerines. The applicatn is requested to provide referecnes to support the claims on page 86 (Volume III) that "currently no roost trees are known and no bald eagles nest in Utah," and the claim on page 87 that goshawks and Cooper's hawks can withstand considerable human impact.

It is noted with respect to raptors (page 72) that "prior to the drawing of any final conclusions, that autumn time period will be examined." We concur that this information is necessary prior to completing the analysis.

*This information is required pursuant to the Federal Land Management Policy Act, the National Environmental Policy Act, the Mineral Leasing Act, and Fish and Wildlife coordination requirements.

UMC 783.22 LAND-USE INFORMATION

The discussion of postmining land-use appears to omit wildlife as planned for use. Was this intentional? It would appear that it was an unintentional omission.

UMC 783.27 PRIME FARMLAND INVESTIGATION

The applicant is requested to obtain confirmation from the Soil Conservation Service that no prime farmland is present within the proposed permit area.

UMC 784.11 OPERATION PLAN: GENERAL REQUIREMENTS

Please identify the size of trucks currently used (and indicate, for 784.26 the methods of covering or otherwise controlling spillage).

The conveyor system is assumed to have no cuts or fills associated with it and, therefore, no drainage modifications. The provisioons considered for passage under the conveyor by wildlife should be discussed in specific terms.

UMC 784.12

As stated above in UMC 783.12 and as required by UMC 784.23(a) the applicant must include a layout and forecast a five year increments for the life of the mine. The forecast should include tonnage in increments for each five years and pursuant to U.S. Geologic Survey requirements, the plan must show the mining of all reserves in logical mining units in 40 years or less for leases issued or readjusted after August 4, 1976.

In order to ensure that existing structures, specifically roads (UMC 784.24) and associated culverts, drains and diversions, are in compliance with the relevant performance standards, their location and characteristics, along

with monitoring data (observations) must be submitted. This will include location of all diversions, drainage controls and drainage associated with roads on detailed maps showing "as-built" conditions (per Belina #2 approval stipulations), profiles and dimensions of diversions, culverts, drains, trash racks, locations, types, and methods of installing any other erosion controls, and other features of the facilities that are pertinent to compliance with applicable performance standards, including stability of fills and enbankments.

Please note that the specified plans, cross-sections and profiles of engineering facilities such as roads and sedimentation ponds must be certified by a registered professional engineer. Mr. Phillips, a RPE, has provided a general certification of the application and the hydrologic and waste disposal in particular (pages 41 and 41a). However, one cannot be assured all engineering structures are properly certified. If possible, Mr. Phillips could specifically list those drawings that he certified to satisfy the requirements.

UMC 784.13 RECLAMATION PLAN: GENERAL REQUIREMENTS

(784.13[a][2]) The total bond has been estimated to be $77,572. Appendix A shows that a "salvage value" has been subtracted from the costs of reclamation. Salvage value cannot be subtracted since the regulatory authority, who must be able to perform the reclamation using a third party, cannot assume it will have first lien on the material to be salvaged. The bond amount must, therefore, be re-estimated to include the total costs of removal with no credits for salvage. In the recalculation, the source of the units and unit costs contained in Appendix A, do not relate the volumes of material to be moved, areas to be seeded, amounts of materials to be used, or the unit costs for these activities, to any drawings which in turn identify the assumptions that went into the calculations. Please provide more information on the nature of the calculations. The unit volumes or amounts should be related to maps and cross-sections used to calculate the numbers.

Since salvage cannot be taken into account, the cost of hauling and complete disposal of buildings, concrete, and other debris must be taken into account.

Pursuant to the U.S.G.S. (211 plan) and UMC 784.13(b)(6) the applicant must include a narrative with maps describing the specifics of recovery to show conservation of the coal resource as required in UMC 817.59. In any situations for not recovering any coal that may be precluded from future recovery, the applicant must provide in the plan a rationale which will justify such non recovery. In addition, prior to abandoning any underground operations or portals, the applicant must notify the U.S.G.S.

UMC 784.13 SOILS

Pursuant to UMC 817.21 the applicant must provide data on sodium absorption ratio and percent moisture saturation for the soil map units "r", "t" and "u" (vol. II, Appendix D). Is there any reason for omitting this data?

The applicant must evaluate those materials which have been removed and stockpiled for growth medium attributes. The applicant must delineate the disturbed areas within the permit area where soils were removed or were not removed. Provide the volumes of materials which have been segregated or stockpiled. (Vol III pg 24).and discuss those areas from which soil will be removed.

The soil survey description and discussion in Vol III p.3a indicates soil removal would occur in all areas where disturbance would occur, however with respect to the conveyor belt corridor soil removal should be implimented only in cases where disturbance would impact on soil characteristics such as structure, fertility, potential productivity, contamination, etc. Therefore, the applicant should provide a description of the construction of the conveyor with an assessment of disturbance incurred on soils and vegetation.

Pursuant to UMC 817.23: Topsoil Storage, the appliant should describe soil stockpile protection measures such as (1) diversion of overland flow away from the stockpile (2) methods and configuations used for final grading such as terracing to prevent erosion (3) species used for temporary revegetation.

Pursuant to 817.24: Topsoil Redistribution, the applicant must provide a plan for redistribution of topsoil consistent with the volumes and types of soils stockpiled. The plan should include site preparation and redistribution depths.

In the discussion of soils, three soils with unstable (soil creep) characteristics are described (page 87). The applicant should describe any landslide features in the mine plan area. Please describe the method used to determine whether there are, and how these, taken into account, will be incorporated in the designs for new facilities or remedies of unstable conditions in the future.

UMC 784.13 REVEGETATION

UMC 784.13(b)(5). A detailed plan of revegetation is required (UMC 817.111-.116) for both temporary and permanent revegetation. This plan should include:

A. A schedule of when each step will be completed including topsoil replacement, seedbed preparation, seeding, planting, mulching, etc.

B. Species (by common and scientific name) and amount/acre of seeds (in terms of Pure Live Seed) and seedlings.

C. A description of methods to be used in plnating and seeding.

D. Mulching techniques including a type of mulch, rate of application and how applied (hydromulch seeding, described on page 26, Volume 4, is usually inappropriate in semi-arid climates and should not be used unless demonstrated to be appropriate for the specific area).

E. A discussion of whether or not irrigation and well and pest control measures will be used.

F. Standards and procedures which will be used to determine success of revegetation.

G. All areas to be temporarily revegetated as indicated on a map.

Seeding mixtures for permanent revegetation fall short of approximating the diverse communities present piror to mining and must be upgraded (UMC 817.117[c][3][ii]).

It is presumed tht topsoil replacement will occur as soon after disturbance is complete as the topsoil can be safely moved. We presume this would usually be within days of grading overburden and the only delays would be (1) weather, including freezing of soil; and (2) inablity to seed or plant or otherwise stablize immediately after replacement. Please confirm.

Those areas which have been or will be disturbed during operations as well as those areas in which all disturbance is completed require either temporary or permanent seeding or planting. In the discussion of earlier revegetation efforts (pages 42-42b), it would appear that the revegetation procedures employed were either incompletely described (e.g., tree and shrub plantings, "basin" plantings on steep slopes, erosion pin use, criteria for mulching, monitoring of vegetated areas) or were incomplete in themselves (weed control, standards and procedures for evaluating revegetation success) Since no data are provided to indicate progress toward successful revegetation of either a temporary or permanent nature, we solicit more information on: (1) the suitability of seed mixes used for both short-term stabilization (temporary) and long-term stability (permanent); (2) the methods used to ensure covering of seed; (3) the methods used to mulch or otherwise stabilize and retain soil moisture during the germination and early growth stages; (4) the nature of the chemical binder used (page 42a). The plan should clearly identify all areas that will be temporarily stabilized with vegetation and the nature of the seed mix.

The seeding mixes should be described in terms of Pure Live Seed. The hydromulch seeding referred to on page 26 is considered generally inappropriate for the semi-arid climate of the area. Broadcast seeding, raking, and hydromulch may suffice. However, steep slopes will likely need additional stabilization procedures. The applicant is requested to revise the plan to eliminate hydromulch seeding unless demonstrated to be appropriate for the specific area.

The permanent vegetation mixes identified for the various communities do not appear to have been analyzed in terms of their suitability in terms of approximating the natural vegetation (Appendix B). The mix proposed for the north-facing slopes consists of two grasses and two forbs. The diversity of species indicated by the baseline data is much higher than that represented by the seed mix. The proposed riparian mix does not include forbs. The thought that went into the development of the change in species, or rather rates, for the different aspects is appreciated, but these mixes appear to fall short of approximating the diverse communities present prior to mining.

UMC 784.13 (3) BACKFILLING AND GRADING

On page 22, it is stated that "the graded slopes in the portal area have been designed within the guidelines of geotechnical engineering practices (Golder 1980)." The reference is to a "Surface Facilities Grading Plan for Belina Mine Area." Please provide the report if it covers the geotechnical analysis as implied. Apparently there is no grading of roads proposed (pages 24 and 30). This appears to be based on the proposal to change to a postming land-use which differs from the premining land-use (see 784.15). A thorough description of the regrading proposal is necessary. It is our understanding that two roads to the Utah #2 site and the road to the Belina portals are to be kept in place after operations (pages 28 and 30) to "support" the proposed postmining land-use. If the postmining land-use is not approved (see 784.15), these roads will have to be removed and factored into the reclamatin procedures and the bond.

Pursuant to UMC 784.23(b)(11), the applicant is requested to provide a postmining contour map in order to enable a perspective of how much grading is proposed and what will happen to natural drainage systems that have been disturbed.

UMC 784.14 RECLAMATION PLAN: PROTECTION OF HYDROLOGIC BALANCE

Pursuant to UMC 784.14(b), please advise if it is expected that the Utah #2 mine will have gravity drainage.

According to Figure 3-5, the pond #4 embankment is 20 feet high and, therefore, meets the criterion of 30 CFR 77.216(a)(2). Thus, the information required for rock structures must be submitted, including the appropriate geotechnical information. A copy of the MSHA approval per the appropriate MSHA regulations must be properly addressed before sedimentation pond #4 can be approved by the Division.

Pursuant to UMC 784.14(b)(1), the "inlet configuration for culvert" shown in Figure 3-31 shows the inlet "flush with fill line" and no erosion controls are shown. What measures will be taken to stabilize the fill when, as is indicated on page 79, the head water elevation exceeds the culvert diameter?

Pursuant to UMC 784.14(c) the application contends that since mines act as interceptors of ground water, TDS concentrations are decreased and thus slightly beneficial impacts may result. The applicant must verify this contention by providing water quality analysis of the ground water and mine discharges to support this allegation. The ground water data provided in Figure 2-9 might suggest this trend, but the data do not represent ground water located over the mine area. The spring water quality data presented in the plan suggest that shallow ground water quality is better than mine discharge. Thus, no data presented in the plan supports the hypothesis tendered in the plan. Further, no page 40, it is essentially concluded that there will be no impact on beneficial use of water because there will be no discharge. If there is no discharge, the question of the applicability of the hypothesis is moot.

The mine discharge has not been adequately addressed in terms of monitoring and treatment. It is understood that this treatment system approval will fall under a minor modification.

On page 39 (paragraph 1), it is indicated that the bentonite shale layers tend to swell and become impervious, thereby creating springs. On page 36 (paragraph 1), it is implied that water moves through the shale layer as it does through the sandstones, picking up dissolved solids. Please clarify this apparent contradiction for the site-specific case of the Belina Mines.

UMC 784.15 RECLAMATION PLAN: POSTMINING LAND-USES

The proposal for postmining land-use is generally for a return to forest, shrub, brush, rangeland (page 48). In both the premining land-use discussion and the postmining land-use discussion, use of the land for wildlife is neglected. This neglect is also addressed in 784.21 and should be corrected by addressing wildlife habitat loctions, vegetation needs of wildlife, and any effects on migration routes of the facilities proposed to be left after mining.

The application proposes to lease the road to the Belina portals and two roads to the rail loadout facilities. The buildings, parking lot and flat area around the portals are proposed to be retained. On page 31, it is suggested that the general office-warehouse area have potential value as a campsite while on page 48 it is stated that the owner will want to use the portal area for a cattle-holding facility. (There is some minor degree of conflict with the statement, also on page 48, to the effect that UCI proposed to return the loadout ara and general office areas to original premining uses.)

The application does not support these changes in land use. The provisions of UMC 817.133 must be satisfied. Otherwise, the areas shall be regraded and revegetated. The resubmission must both show the need and support for the change and must address continued maintenance of the features of the drainage system necessary to maintain the land use. "Specific and feasible" plans must be submitted.

Map I-1 (premining land-use map) shows the land uses in the Belina Portal Area and the loadout area to be industrial. It is not clear that these are premining uses and, therefore, the application should more clearly relate those premining uses to the proposed postmining uses. If the area of the loadout was industrial use prior to any mining, then no land use change would be involved to encompass the proposed activities and only the Belina portal road and "recreational land" to be established would involve a land use change. Please provide additional information.

UMC 784.16 RECLAMATION PLAN: PONDS, IMPOUNDMENTS, BANKS, DAMS, AND EMBANKMENTS

On page 28, the reclamatin plan for the sediementation pond is not clear. The text appears to say that the #4 dam will be cut to drain but that the emergency spillway will remain intact "to receive drainage from the surface." Please clarify exact steps and show results on longitudinal profile requested earlier (#26).

(a) The following information is required for sedimentation ponds 1, 2, 3 and 4.

1. Supporting calculations and design consideration for:

a. Runoff volumes,
b. Flow velocities,
c. Sediment delivery
d. Detention times,
e. Any material testing data collected during construction (i.e., soil mechaniecs),
f. Construction specifications with as-constructed plans or drawings.

The design data for pond #4 given on figure 3-5 is calculated from a 25-year, 24 hour hydrograph with a precipitation value of 2.92 inches. The design given calls for an 11.2 acre-feet capacity which includes .1 acre-foot per acre sediment storage volume. Apparently there is an error in this calculation as the Division finds 12.4 acre-feet to be required for the 36 acres drained which includes a 3.6 acre feet sediment storage volume. This should be re-evaluated for the existing structure (pond #4). From where does the "constant outflow" originate? Where is the design data that supports a .94 cfs constant rate of outflow?

UMC 784.19 UNDERGROUND DEVELOPMENT WASTE

On page 56, the discussion on underground development wastes references a Golder Associates Report completed in 1979. The description of the analysis gives the impression that the analyses may have been conducted correctly, but the discussion gives no specific evidence of the method used to obtain foundation characteristics utilized in the analysis. Please provide copies of the referenced report. Please also ensure that proper certification of the engineering drawings are provided.

The potential toxicity of the fill material has not been discussed. At a minimum, please provide analysis of material as a plant growth medium.

UMC 784.20 SUBSIDENCE CONTROL PLAN

Pursuant to UMC 784.20 the applicant states that no renewable resource lands exist within the proposed permit area where subsidence if it did occur would reasonably cause material damage or diminution of reasonably foreseeable use in the event of such subsidence.

The applicant must have a letter from surface manageing authorities and owners to verify this claim. Due to the presence of rangeland and springs, the regulatory authority doubts this to be the case.

Structures do exist which if subsidence occurred could damage; piplines and powerlines. Map B-3 does not show pillar recovery or partial extraction based on angles of draw to meet the requirements of UM,C 784.20(a) and (b). The applicant must provide the regulatory authority with a subsidence control plan which justifies partial extraction where no subsidence is planned, i.e., underneath the pipeline. The angle-of-draw should be chosen based on what data is available surrounding areas or from past monitoring so that it is conservative for protection of the pipeline and not excessive to the detriment of coal recovery. The U.S. Geologic Survey points out that 20° appears to be typical in this coal field.

The applicant should provide the basis of the self sealing characteristics of the strata referenced to (Hansen 1980) on page 82 of the plan.

The applicant must provide a detailed description pursuant to UMC 784.20(c) and UMC 817.124 for measures to be taken to litigate material damage to pipelines and powerlines or springs. The applicant must then provide a letter from the structure owner or surface owner that this plan is sufficient to protect his interests.

The monitoring plan negotiated with the U.S. Forest Service must be included in the plan and meet the requirements of UMC 784.20(v). The monitoring must be aimed at verifying the angle-of-draw and that the applicants projection of subsidence measures is adequate through the life of the mine.

A representative area for more detailed monitoring is often an option the applicants can choose to verify early in operations if the strata is behaving as predicted. This can be used to demonstrate that monitoring of the entire property is or is not needed.

UMC 784.21 FISH AND WILDLIFE PLAN

The applicant has submitted an excellent generic fish and wildlife protection plan developed by the Utah Division of Wildlife Resources. The plan appeas to contain several outstanding suggestions applicable to the Belina operations. However, there are no indications in the plan that the applicant intends to adopt any of the plan. The applicant is requested to develop a thorough analysis of the feasibility of implementing the suggestions of the Division and adopting the appropriate mitigating measures. Undoubtedly, further consultation with the Division would result in identification of appropriate mitigation measures. Without this further analysis, plan does not provide for the necessary mitigation of wildlife impacts.

The applicant is requested to provide a reference to support the claim on page 87 that goshawks and Cooper's hawks can withstand considerable human impact.

Due to the extremely high value of the riparian habitat, the applicant must discuss how much of this wildlife habitat will be disturbed. The applicant must also detail plans to restore ths riparian habitat, wherever it is disturbed.

UMC 784.22 DIVERSIONS

As noted previously, Whiskey Springs Creek is diverted. A postmining and premining longitudinal profile requested UMC 784.23(11). Also required are flow (and flood) sizing calculations indicating the postmining channel is adequate to maintain or improve upon the premining erosional equilibrium. We presume the culvert is to be removed. Please confirm and ensure bonding costs cover removal.

UMC 784.24 TRANSPORTATION FACILITIES

The applicant must submit information as required above under 784.12 for roads and conveyors.

UMC 784.26 AIR POLLUTION CONTROL PLAN

The applicant has approval from the Utah State Bureau of Air Quality for the Belina #1 and #2 mines. The applicant must provide the plans for dust control practices, air quality monitoring and fugitive dust control as specified in plans and correspondence from this agency.

With respect to the waivers obtained for air quality monitoring, please provide the letters of May 7, 1980, and May 23, 1975, noted on page 93. These are not included in Appendix G of Volume II.

The applicant is requested to provide specific descriptions of the fugitive dust control measures employed on coal stockpiles. The schedule for paving the Eccles Canyon Road should also be incorporated in the plan.

UMC 785.19 UNDERGROUND COAL MINING ACTIVITIES ON AREAS OR ADJACENT TO AREAS INCLUDING ALLUVIAL VALLEY FLOORS IN THE ARID OR SEMI-ARID AREAS OF UTAH

The stream channel of Pleasant Valley Creek appears to be composed of unconsolidated, streamland material and appears to have water available for agricultural irrigation activities. However, the plan does not address alluvial valley floors. We are aware that Eccles Creek within Eccles Canyon has been determined not to be an alluvial valley floor. (AVF) Therefore, this and tributary drainages, are not expected to be AVF's. But the plan must address Pleasant Valley Creek in terms of an AVF. We would suggest that the stream and associated lands should be minimal. In other words, if the applicant wishes to agree that for the purpose of the permit the Pleasant Valley Creek is an AVF, the only further analysis likely required will be one of consumptive use of waste and effects on downstream agricultural activities (if any). We would be pleased to meet to discuss this issue further.

SOCIO-ECONOMICS

If the applicant has any reports which identify past, present or future assistance provided communities or counties surrounding the mine in order to plan for the effects of employment, this information would be most helpful to complete responsibilities of the Federal Government under the National Environmental Policy Act.

Review of the EIS for Central Utah (e.g., page BO-III-S) indicates that the information regarding employment is not clearly correlated with the Belina #1 and #2 Mines. We would also be interested in the applicant's identification of mitigating measures listed in the EIS that have been considered in the mining and reclamation plan.