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August 4, 1992

TO: Daron Haddock, Permit Supervisor

FROM: Sharon Falvey, Reclamation Specialist SKF

RE: Belina Midterm Review, Belina Complex, Valley Camp of Utah, ACT/007/001. Folder #2, Carbon County, Utah.

Summary:

This review is focused on the stipulation requirements of the issued permit as outlined in the Technical Deficiency review dated May 11, 1990 and the Forest Service Requests per the June 8, 1990 memo.

R645-301-112.500

Proposal:

Operator presents ownership and property boundaries on map R645-301-112.500.

Analysis:

The June 8, 1990 Forest Service letter the identifies errors in map R645-301-112.500. The lands in Section 6, T24S,R7E shown as private are located within the Forest Boundary. This boundary is not clearly identified on the map. Additionally the Forest Service identifies Section 26, T13S, R.6E. shown as State Lands are actually National Forest Systems Lands.

Deficiency:

1. Provide a clear Forest Boundary on map R645-301-112.500, so land within the boundary are discernable. Correct ownership of Section 26, T31S, R6E.

R645-301-120. Permit Application Format and Contents.

Proposal:

Pg. 80, Section 3 the operator indicates the food fiber and grazing lands are classified as non-renewable resource lands. On that same page the forest land is classified as a renewable resource.

The operator has provided an appendix of hydrologic calculations.

Pg.13 of the Geology section indicates the principal use of hydrologic resources is for livestock. Pg. 2 of the hydrology sections indicates the headwaters provide most of the domestic water needs of downstream users.

Analysis:

Identification of renewable resources do not match the resources identified by the Forest Service in the June 8, 1990 memo.

The appendix does not provide ease in locating designs. The operator should provide dividers separating the calculations to aid in locating designs for specific structures and number all pages within the appendix for ease of reference and use in discussion.

Deficiency:

1. The operator must revise applicable paragraphs to indicate the food fiber and grazing lands are classified as renewable resource lands and update the resource map as identified by the Forest Service.

2. To facilitate review and correspondence, the operator is requested to provide logical dividers for the hydrologic calculations and consecutive page numbering through the appendix.

3. All pertinent references to hydrologic water uses and effects should include the needs of downstream users.

R645-301-713 Inspections

Proposal:

On pg. 1 of the hydrology section the operator indicates sedimentation ponds will be inspected quarterly.

Analysis:

The operator is also required to provide annual inspections.

Deficiency:

1. Provide a statement clarifying that annual inspections will also be completed as required by R645-301-514.

R614-301-742 General

Subsidence Control Plan:

Proposal:

The operator submitted appendix R614-301-742.600 revised April 1992.

Analysis:

The submitted appendix title does not reference an existing regulation.

The Forest Service identified that a study must be completed to predict trans-basin impacts. A mitigation plan as well as a method to measure and monitor trans-basin flows and effects must be developed and included by the operator.

The BLM Moab District conducted review of the R2P2 mining sequence modifications proposed on September 26, 1991 by Valley Camp. A copy of their comments dated October 26, 1991, was received on March 16,1992 at the Division. Their analysis indicated a 250 ft buffer zone is required on both sides of the creek where bottom coal recovery is not appropriate. This distance allows for a 30 degree angle of draw according to the BLM letter. Approval for coal removal was granted with the 250 ft. stream buffer zone condition. The April proposal indicates no pillars will be pulled within a 35 degree angle of draw from vertical under any perennial stream.

The Forest Service indicated in a letter to the BLM dated February 6, 1992, that the buffer zone and no bottom coal recovery be clarified. The Forest Service also indicated plug type subsidence was not addressed. Mining operations resulting in sinkhole or plug-type subsidence are not consistent with the Lease Stipulations. " The Forest Service will not consent to any mining below perennial streams ... unless it can be demonstrated that mining will not induce subsidence ...".(Forest Service Memo June 8, 1990.

In an earlier meeting with the Division on February 21, 1991 discussion of the items necessary for subsidence protection included:

1) Restoring commitment to protect perennial and intermittent streams as was indicated in the 7/84 permit Attachment "A" Condition #4. Commit to restore the original stream channels of intermittent and perennial streams within the permit area that may be disturbed by underground coal mining activities, including surface subsidence effects.

2) Clarify the mining methods to be used within the regions indicated on the maps. The paragraph under prevention of subsidence indicates pillars will not be pulled within the buffer zones defined as a 35 degree angle of draw from vertical.

Map R614-301-728.100b shows the fault influenced angle of draw to cross the Boarding House Creek. The map also shows an area titled Belina 2 within the influence of the Boarding House Creek. The operator has not identified the type of mining to be done in this shaded area although, the text indicates no pillars will be pulled under Boarding House Creek.

The applicant indicates room and pillar mining is the only method to be used. The operator also shows buffer zones. Information on size of pillars, for the location, proposed full seam extraction v.s. single pass with no pillar recovery or areas of no mining must be specific.

One spring of three potentially impacted springs is proposed to be monitored in Section 31. Because the springs have the potential to be impacted, all 3 springs should be monitored to determine if water is diverted from one spring to another or, to determine whether all or one of the three springs are affected. Monitoring of all three springs could occur from the date mining reaches the zone of potential subsidence until such time it is determined unnecessary due to the lack of potential to subside or the lack of the potential for subsidence to effect the springs.

Deficiency:

1) A study must be completed to predict trans-basin impacts. A mitigation plan as well as a method to measure and monitor trans-basin flows and effects must be developed and included by the operator.

2) Restore commitment to protect perennial and intermittent streams as was indicated in the 7/84 permit Attachment "A" Condition #4. Commit to restore the original stream channels of intermittent as well as perennial streams within the permit area that may be disturbed by underground coal mining activities, including surface subsidence effects.

3) Provide a clarification of the potential fault influenced angle of draw over the Boarding House Creek area. How does this influence the proposed 35 degree angle of draw currently used?

4) Provide information specific to the measures used to protect the zones of no subsidence. The applicant indicates room and pillar mining is the only method to be used. The operator must provide specific non-subsidence zones for the perennial stream and with supporting information identifiable on the map and in text .

5) Provide an increased monitoring plan during the period which the 3 springs located in Section 31 could be potentially impacted, or justify why one spring will accurately measure all

potential impacts of the springs.

R645-301-724.320 Climatology

Proposal:

The national weather service precipitation gage in Eccles Creek is mentioned.

Analysis:

The operator has not identified the precipitation gage requested by the Forest Service to be installed at the mine site in 1981. Information from the gage may be useful to assist in determining local precipitation patterns.

Deficiency:

1. Provide the location of the Forest Service gage and available data to provide information on local climatologic data.

R645-301-750 Performance Standards

Proposal:

All performance standards required have been previously addressed. Pg. 45 of Appendix R614-301-500, indicates that at conclusion of reclamation activities, runoff will be slowed by the proper placing of straw bales filter fabric riprap or mulch in potential problem areas. For channels in excess of 9 inches the most applicable erosion control technique will be selected.

Analysis:

The operator is required to meet the performance standards of R645-301-750 and may be required to provide other erosion control methods for channels less than 9".

Deficiency:

1. Remove the 9" criteria as the operator may be required to provide other erosion control techniques in erosion gullies less than 9 ".

R645-301-722.300

Proposal:

Table R645-301-722.300b shows stations dropped from monitoring program.

Analysis:

Table R645-301-722.300b does not provide a reason for removal of sampling point W19-1.

Deficiency:

1. Include reason for removal of sampling point W19-1 in table R645-301-722.300 b.

R645-301-731-521 Gravity Discharges

Proposal:

None

Analysis:

The May 11, 1990 Technical Deficiency Document requests the operator to discuss and summarize the mine discharge data collected to date to demonstrate the untreated or treated discharge complies with the performance standards of R614-301-302 and any additional NPDES permit requirements.

The operator should include the data from the 6" pipe and bypass water that is not treated and is directly discharged to Whiskey Creek.

Deficiency:

1. Discuss and summarize data collected to date for the mine discharge to demonstrate that the untreated or treated discharge complies with the performance standards of R645-301 and R645-302 and any additional NPDES permit requirements.

R645-301-742.240 Exemptions

Proposal:

Pg. 81 indicates the 6 Alternate Sediment Control Areas (ASCA) as Exemptions. Appendix designs for ditch 44b describes SAE (small area exemption) 7.

Analysis:

The actual classification of the ASCA's are not as Exempt areas. These areas use Sediment Control Measures therefore are not categorically exempt and should be addressed under R645-301-742. These areas are also required to meet the effluent limitations of R645-301-751(see pg 85 of the MRP).

The ASCA's are not exempt because the areas have not been granted exempt status by the Division.

On map R614-301-731.720a the operator shows ASCA 1 is treated by a silt fence. Table R614-301-742.240d does not indicate the ASC used is a silt fence.

The undisturbed bypass channel for ASCA 2 could not be located on map R614-301-731.720a. Riprap as well as the sediment basin locations, and paved areas could not be identified on the map.

Paved areas for ASCA 3 were not identified on the map, as well. The table does not include straw bales as indicated on the map. Revegetated areas should be identified from natural area vegetation. Riprap

Map R645-301-731.720d does not show the sediment basin for ASCA 4. Riprap, straw bales, revegetated areas are not identified for ASCA 5. Revegetation, riprap and straw bales are not identified for ASCA 6.

Deficiencies:

1. Provide the text of the ASCA's under R645-301-751 for Sediment Control Measures.

2. The operator must change the text on pg. 85 to commit to collect samples from alternate sediment control areas and sample for total suspended solids and settleable solids in order to demonstrate that the alternate sediment controls meet water quality criteria.

3. Correct Table R614-301-742.240d and maps R645-301-742 a through d so treatment measures correspond and correctly describe the sediment control measures provided.

4. Provide discussion of SAE 7 identified in design for ditch 44B.

R645-301-724.240 Diversions

Proposal:

Calculations for ditches and culverts are presented in Appendix R645-301-742.310.

Analysis:

The designs for road ditches are used as a "relative guide". The operator must change the information to provide the minimum ditch designs identified for the area in order to demonstrate the ditches meet the design and performance standards at the site. If the ditch is shown not to meet the identified criteria i.e. design flow, then enforcement actions may result.

Design for C-20B-24 could not be found.

The operator frequently identifies the riprap found at discharge points to be undersized but, does not propose to meet the protection design criteria unless erosion is noted.

Deficiency:

1. Provide minimum design, depth, velocity and ditch geometries for the road ditches indicated as general designs, to demonstrate compliance with performance standards. Change the text indicating a general design to provide for the minimum design criteria including freeboard.

2. Throughout the text and calculation Appendix, the operator states that existing, installed riprap and energy dissipators are undersized and that the channels will be monitored and repaired as necessary. The application must demonstrate that the structures meet the design requirements of R645-301-724.240. The applicant must provide revised designs to demonstrate the existing stabilization is adequate or install the design specification riprap. The language referring to monitoring and repairing of channels must be clarified to refer to an ongoing maintenance program and not as justification for undersized structures.

R645-301-760-764 Reclamation

Proposal:

The operator indicates Figure R614-301-760a shows culverts that will remain for railroad right of way drainage.

The rip rap pad design will be similar in nature to other adjacent railroad culverts.

The operator provides preliminary channel designs for removal of C21-48 at Eccles Creek and the haul road. The operator states the culvert will be retained unless removal is requested from UDOT.

C-19-48 and C-20-48 are proposed to be retained for adjacent property owner. C-21-48 is proposed to be retained unless removal is requested by UDOT.

Analysis:

Figure R614-301-760a does not indicate which culverts will remain through reclamation.

As a permanent structure Culverts 19-48, and 20-48 require sizing for the 100 yr. 6hr. event for intermittent streams. The operator states Q allowed is greater than Q total for the 100 year event yet, calculations show the inlet control discharge will not pass the 100 yr - 6 hr event.

Deficiency:

1. The operator must commit to removal of all culverts unless the operator receives approval from the Division that their retention meets postmining land use. The operator must demonstrate that the culverts to be retained are commensurate

with post mining land use per R645-301-412. The culvert at the "bowl" along the proposed reclaimed haul road must be removed or properly backstowed.

2. Identify the culverts proposed to remain through reclamation on an appropriate map (e.g. Figures R614-301-760).

3. All proposed permanent structures that are in intermittent drainages (greater than 1 square mile), such as C-20-48, and C-19-48 must be demonstrated to meet the 100 yr, 6 hr event. The discrepancy in Appendix R614-301-742.310 calculations for C-20-48 and C-19-48 must be clarified.

cc: Rick Summers