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Norman H. Bangerter
Governor
Dee C. Hansen
Executive Director
Dianne R. Nielson, Ph.D.
Division Director

State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203
801-538-5340

September 30, 1992

Mr. Rick Olsen
Soldier Creek Coal Company
P. O. Box I
Price Utah 84501

Dear Mr. Olsen:

Re: Approval of #3 Fan As-Builts, Soldier Creek Coal Company, Soldier Canyon Mine, ACT/007/018-92A, Folder #3, Carbon County, Utah

The Division has completed a review of your as-built designs and subsequent supplemental information and has determined that the submittals are adequate for approval. The Division hereby approves the plan to delay until 1994 the decision on whether or not to develop the #3 fan site. However, Soldier Creek is required to immediately take steps to establish vegetation and control sediment at the site. Other issues of concern are discussed in the attached technical memos. Please review them and make sure the concerns are adequately addressed. You must also submit 12 additional copies of the as-built designs for distribution to other agencies by no later than October 28, 1992.

Please call me or the appropriate member of my staff if you have any questions.

Sincerely,

Daron R. Haddock
Permit Supervisor

cc: P. Baker
S. Falvey
W. Western
J. Helfrich

FAN#3.APP

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September 22, 1992

TO: Daron Haddock, Permit Supervisor

FROM: Sharon Falvey, Reclamation Specialist SRF

RE: #3 Fan Site Deficiency Response #2, Soldier CreeK Coal Company, Soldier Canyon Mine, ACT/007/018, Folder #2, Carbon County, Utah.

Summary and Recommendation

The applicant has responded to the June 5, 1992 deficiency on July 31, 1992. The operator indicated in the text of the plan that the actual plan implemented will be dependant on the capabilities of the available contractors. This is acceptable if the operator is referring to the option in section 3.31 of the MRP and refers to revegetation only (i.e. other sediment control measures will be followed. It is important that the operator proceed with interim vegetation therefore, I recommend approval of the proposal. However, the operator should be aware of the following concerns.

The operator is required to provide erosion control which is the best technology available. The operator has eliminated silt fences and straw bales as a viable sediment control measure at the fan site road outslope. Frequently, both siltation devices and soil treatments are prescribed for sediment control. Long fiber mulch (at 2 tons/acre) crimped into the soil, and Erosion control blankets are considered (in available literature) to be more effective in controlling erosion than the wood fiber mulch proposed in the interim revegetation. However, in the case of the steeper cut slopes crimping is not a viable alternative. The outslope of the fan site road where perennial vegetation is not present and the disturbed area south of the sediment trap (see analysis 3c) should be closely analyzed for the effectiveness of the proposed erosion control measures.

ANALYSIS:

The analysis is correlated to the number corresponding to the June 5, 1992 memo.

1 a. Commit to proper closure of the bore hole by 1993 in text of the amendment if the fan site amendment is not received and approved by fall of 1993.

Proposal:

The operator has included test hole B-1 to remain open for water monitoring. The hole was completed with 1-1/2" PVC pipe randomly slotted to a depth of 45 ft. A formal water monitoring plan is not proposed. The purpose of the open bore hole was for determination of stability for the fan site. On pg. 7-115d the operator changes the reference of the monitoring test hole to a soil test hole, and commits to provide for proper closure in accordance with the State of Utah rules for water well drillers. The operator proposes final reclamation to occur by the fall of 1994 if the fan site is not going to be installed.

Analysis:

The operator did not commit to closure of the monitoring hole in 1993. The operator changed the reference from water monitoring bore hole to a soil test hole. Information submitted to date indicates water was not found in the bore hole. However, should water be found here the operator will be required to sample for the minimum required water monitoring parameters and correct the reference of the hole data from a "soil" test hole to a water monitoring hole.

2 a. Commit to final reclamation in the fall of 1993 if the complete fan site amendment is not submitted to the Division by that time. Provide commitment to be inserted into the text of the document.

Proposal:

The operator has proposed an interim revegetation and stabilization plan. The operator has changed the previous commitment to provide for a complete permit amendment or proceed with final reclamation of the fan site by fall of 1994, pg.7-115d.

Analysis:

The commitment to the Division for full reclamation in the fall of 1993 was not submitted as requested. The operator proposes to increase the idle term for the fan site to approximately 3 yrs of non use from the date of disturbance. The operator indicates with expected sale of the mine the reclamation in the fall of 1993 would not allow the potential new owner time to evaluate ventilation modifications. The operator therefore proposes reclamation in the fall of 1994, and implementation of interim reclamation.

3 a. Provide mapping and a commitment for silt fencing along the toe of the fill slope of the exploration road.

Proposal:

Drawing D-344 shows placement of straw bales and the sediment trap. The operator states in the cover letter that straw bales and silt fences proposed for placement within

the county road shoulder drainage would be destroyed by snow removal practices.

Analysis:

Because the operator removed the previously proposed treatment for the outslope of the fan site road, the operator should reassess whether adequate sediment control over the outslope of the road is provided. As is noted on the drawing D-344 the drainage flows over the outslope, into the county road drainage. The drainage is not shown to travel to the sediment basin and is intended to follow the road drainage. The operator proposes to, pock mark and seed the area then provide a wood fiber mulch at the rate of one ton/acre. Although the soil treatment may be adequate for vegetation establishment, it may not meet performance standards for erosion control. Available literature indicates erosion control blankets are more efficient in controlling erosion. Because there are no secondary filters the operator should consider the potential for more effective sediment control measures.

3 b. Provide a detail of a typical silt fence installation: map their locations. Include the referenced design calculations for the sediment trap by Edward A. Hansen.

Proposal:

The operator has submitted the design drawing for a typical straw bale and silt fence installation on Drawing A-248. The referenced design by Edward A Hansen was not included.

Analysis:

The referenced design by Edward A. Hansen was suggested by a staff hydrologist and is available at the Division. However, the reference was not available at the time of this review therefore it is assumed the operator has met the criteria for design of the structure.

3 c. Provide the as-built height of the berm on maps, include design depth of flow and velocity for road ditch. Provide the design information from maps, and place in the text of the amendment.

Proposal:

The operator provided the as-built height of the road berm on drawing D-334.
The design depth of flow and velocity for the road ditch was provided on pg 7-115.c.
The sizing of the sediment basin was included in the text.

Analysis:

The curve number used to determine flow off the site is based on proposed gouging and mulching of the disturbed site. The ditch is designed to carry flow from watershed "A" and the road and road up-slope disturbed area. Designs were submitted for a small sediment basin. The basin is sized to

handle 900 ft^3, approximately 0.021 acre feet. The runoff from a 10 year-24 hour event for watershed "A" and the disturbed road and up-slope is 0.141 acre feet for the 10 year-24 hour event according to the operators calculations. Water from Watershed "B" flowing over the disturbed area south of the sediment basin appears to be untreated. However, this area will be seeded and over sprayed with a wood fiber mulch according to the interim revegetation plan. The operator should reassess this area and consider use of erosion control blankets. The operator indicates the sediment basin design as detailed by Edward A. Hansen, will remove 100% of particles 0.125 mm or larger. The outlet of the basin will be treated with a notched silt fence.

3 d. Provide direction of flow for the pad area.

Proposal:

The direction of flow for the pad area was provided on drawing D-344.

Analysis:

The operator provided the flow direction. However the flow details for water off the fill slope are not included. According to the design information available water flowing into the road ditch passes the catchment basin, and therefore is solely treated by mulching techniques.

cc: Rick Summers

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TO: Daron Haddock, Permit Supervisor

FROM: Paul Baker, Reclamation Biologist

DATE: August 6, 1992

RE: Fan #3 Exploration Interim Reclamation Plan, Soldier Creek Coal Company, Soldier Canyon Mine, Folder #2, ACT/007/018, Carbon County, Utah

SUMMARY

Soldier Creek has submitted a revised interim reclamation plan for the #3 fan exploration site. They propose that interim reclamation be performed in 1992 and that the decision to perform final reclamation on the site be delayed until 1994.

ANALYSIS

R645-301-331 **Interim Revegetation**

Proposal:

A trackhoe will be used to pock mark the entire road surface and road outslope where practicable. 16-16-8 fertilizer will be hand broadcast and raked into the seedbed, or the fertilizer may be broadcast before pock marking. Seed will then be hand broadcast or hydroseeded followed by a light hand raking. Seeded areas will be oversprayed with a wood fiber mulch at a rate of 2000 lbs. per acre and tackifier at a rate of 60 lbs. per acre.

Final reclamation is proposed for the fall of 1994 if the site is not developed. This would allow a potential buyer adequate time to evaluate mining plans and ventilation requirements.

Analysis:

The proposal has incorporated all of the requirements from my original deficiency review dated April 15, 1992.

The Operator does not propose that the road cut slope be pock marked (gouged). This slope is very steep, and the Operator feels that gouging this slope would disturb a larger area with little benefit for interim stabilization. Although gouging is a very useful technique, its benefits compared with disturbing a larger area at this site are highly questionable. Despite the steepness, the area should still be seeded and mulched.

The proposal states that some vegetation has become established on the outslope and that this vegetation will not be disturbed when the area is gouged. This proposal is acceptable for perennial vegetation but not for annuals. All areas of the road surface and outslope not containing perennial vegetation should be gouged.

The plan also proposes that the decision for whether or not the site will be developed be delayed until 1994. Other than the native species requirements, there are few differences between requirements for interim vegetation and final reclamation vegetation. Disturbed areas are required to be stabilized to minimize surface erosion, and the species contained in Soldier Creek's interim revegetation mixture should be adequate to provide long-term stabilization of areas that will receive final reclamation treatments later. Therefore, it is felt that, despite the commitments that Soldier Creek has made in the past, approval can be given to delay final reclamation until 1994.

Deficiencies:

None.

RECOMMENDATIONS

It is recommended that Soldier Creek be allowed to delay until 1994 the decision on whether or not to develop the #3 fan site if they take necessary steps to promptly establish vegetation and control erosion and sediment.