

Document Information Form

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Explanation:

Administrative Completeness Review Work Sheet

cc:

File in: C/007, 016, Internal

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ADMINISTRATIVE COMPLETENESS REVIEW WORKSHEET
(R645-301-150)

02-02/03

Reclamation Only

DATE: February 1, 1993 REVIEWER(S): _____
 APPLICANT: Mountain Coal Company
 MINE NAME: Gordon Creek #2, #7, #8 FILE NO. 007/016

"Administratively Complete Application" means an application for permit approval or approval for coal exploration, where required, which the Division determines to contain information addressing each application requirement of the State Program and to contain all information necessary to initiate processing and public review.

Susan
Due 3/5

Directions: The categories listed below correspond to the minimum requirements for information necessary to initiate processing and public review. If a category is checked the Applicant has met the Completeness requirement for that category. If a category is not checked, the Completeness requirements have not been met. The comments column will identify the deficiency and what is necessary to correct it.

1993 files folder #2
Comments

301-112	Identification of Interests	<u>SW</u>	
100	Applicant's Business Structure	<u>SW</u>	<i>pg. 2-3,</i>
210	Applicant's Name/Address/Phone	<u>SW</u>	<i>pg. 2-1</i>
220	Resident Agent's Name/Address/Phone	<u>SW</u>	<i>pg. 2-3</i>
230	Name/Address/Phone of AML Fees Payer	<u>SW</u>	<i>NONE Paid</i> <i>pg. 2-1</i>
300	Corporate Structure & Ownership	<u>SW</u>	<i>2-4</i> <i>no SS #'s on directors</i>
400	Identify Other Mining Operations in US	<u>S</u>	<i>pg. 2-5</i>
500	Surface & Mineral Ownership	<u>S</u>	
600	Ownership Contiguous to Permit	<u>S</u>	
700	MSHA Numbers		<i>2-4</i>
800	Interest in Contiguous Lands	<u>SW</u>	<i>pg. 2-2, 2-3</i>

File in:
 Confidential
 Shelf
 Expandable
 Refer to Record No. 0013 Date _____
 In C/ 007, 016, Internal _____
 For additional information

ADMINISTRATIVE COMPLETENESS REVIEW WORKSHEET
(R645-301-150)

cc - DR/DB

Reclamation Only

DATE: February 1, 1993 REVIEWER(S): _____
 APPLICANT: Mountain Coal Company
 MINE NAME: Gordon Creek #2, #7, & #8 FILE NO. 007/016

"Administratively Complete Application" means an application for permit approval or approval for coal exploration, where required, which the Division determines to contain information addressing each application requirement of the State Program and to contain all information necessary to initiate processing and public review. *Susan*

Directions: The categories listed below correspond to the minimum requirements for information necessary to initiate processing and public review. If a category is checked the Applicant has met the Completeness requirement for that category. If a category is not checked, the Completeness requirements have not been met. The comments column will identify the deficiency and what is necessary to correct it.

1993 files folder #2
Comments

301-112	Identification of Interests	<u>SW</u>	
100	Applicant's Business Structure	<u>SW</u>	pg. 2-3, <i>yes</i>
210	Applicant's Name/Address/Phone	<u>SW</u>	pg. 2-1
220	Resident Agent's Name/Address/Phone	<u>SW</u>	pg. 2-3
230	Name/Address/Phone of AML Fees Payer	<u>SW</u>	NONE Paid pg. 2-1
300	Corporate Structure & Ownership	<u>SW</u>	2-4 no SS #'s on directors
400	Identify Other Mining Operations in US	<u>SW</u>	pg. 2-5 Appendix 2
500	Surface & Mineral Ownership	<u>SW</u>	2-1, 2-2 2-5, 2-6
600	Ownership Contiguous to Permit	<u>SW</u>	2-6, 2-7
700	MSHA Numbers	<u>SW</u>	2-4
800	Interest in Contiguous Lands	<u>SW</u>	pg. 2-2, 2-3

Comments

301-113	Violation Information	<u>SN</u>	O.K
100	Suspension or Revocation Information	<u>SN</u>	O.K
300	List of Violations - 3 Previous Years	<u>SN</u>	

301-114	Right of Entry	<u>N/A</u>	O.K.
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301-115	Status of Unsuitability Claims	<u>N/A</u>	O.K.
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301-116	Permit Term	<u>-</u>	
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301-117Insurance	<u>SN</u>	Shouldn't the advertisement say reclamation only. *
Proof of Publication	<u>SN</u>	
Facilities and Structures Used in Common	<u>N/A</u>	

301-118	Filing Fee	<u>done</u>	
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Comments

301-123	Notarized Signature of Responsible Official <u>SW</u>	Are we going to accept D. Coffey's as official. ?
301-130	Information Collection: Technical Data Accompanied by Names of Persons or Organizations that Collected and Analyzed the Data - Dates of Collections - and Analysis of the Data and Description of the Methodology Used to Collect and Analyze Data <u>all</u>	
301-200	Soils <u>Henry</u>	—
211	Description of Premining Soil Resources <u>Henry</u> <u>N/A</u>	—
221	Prime Farmland Investigation <u>Henry</u>	—
222	Soil Survey <u>Henry</u> <u>(or N/A)</u>	—
224	Substitute Topsoil Info (When Proposed) <u>Henry</u>	—
230	Operation Plan: Topsoil Handling/Removal/Storage <u>N/A</u>	
240	Reclamation Plan: Soil Redistribution/Stabilization <u>Henry</u>	see technical deficiency

Comments

301-300	Biology	<u>SW</u>	
320	Vegetation Information	<u>?</u>	<i>There, but unclear</i>
322	Fish and Wildlife Information	<u>?</u>	
323	Maps/Photos: Vegetation-Fish-Wildlife Areas	<u>?</u>	
330	Operation Plan: Vegetation-Fish-Wildlife Protection	<u>N/A</u>	
341	Reclamation Plan for Revegetation	<u>SW</u>	
342	Fish & Wildlife Plan for Reclamation Phase	<u>SW</u>	

301-400	Land Use and Air Quality	<u>SW</u>	
411	Pre-Mining Land Use Information (Includes Cultural Resources)	<u>N/A</u>	<i>Does not show coordination with SHPO. OK</i>
412	Post-Mining Land Use Information	<u>SW</u>	<i>Needs more for AOC (tech deficiency)</i>

Comments

301-500	Engineering <i>Jesse</i>	
510 and 520	General Description of Operation Plan: (Maps, Locations, Cross-Sections, Narrative, Descriptions & Calculations) <u>N/A</u>	
522	Coal Recovery Description <u>N/A</u>	
523	Mining Methods <u>N/A</u>	
524	Blasting and Explosives Plan <u>N/A</u>	
525	Subsidence Control Plan <i>Jesse - okay</i>	
526	Mine Facilities Description (Narrative, Plans, Maps) Including Existing Structures & Support Facilities <u>N/A</u>	
527	Transportation Facilities (Including Plans & Maps) <u>N/A</u>	
528	Coal Mine Waste Plans (Description & Designs) <i>Jesse (?)</i> N/A	
529	Management of Mine Openings (Design) <u>N/A</u>	
531	General Plans for Structures <u>N/A</u>	
532	Sediment Control <i>Jesse - if applicable</i>	
533	Impoundments <i>Jesse - if applicable</i>	<i>permanent? land use</i>

Comments

301-534	Roads (Plans, Drawings, Designs, & Specifications)	<u>Pass</u>	
535	Spoil	<u>?</u>	
536	Coal Mine Waste	<u>?</u>	
537	Regraded Slopes	<u>Pass</u>	
540 541-542	Reclamation Narrative, Maps and Plans	<u>Pass</u>	Inaccuracies of disturbed areas.
551	Casing and Sealing: Underground Openings	<u>Pass</u>	
553	Backfilling and Grading Description	<u>Pass</u>	Information there, but need more. See backfilling & grading format.

301-600	Geology	High	
621	Description of Geology (Permit & Adjacent Area)	<u>N/A</u>	
622	Geologic Cross-Sections, Maps, and Plans	<u>N/A</u>	
630	Plans for Casing and Sealing Holes	High 22 Feb, 1993	is just fine. Not complete but will need to commit to

complying with 30 CFR 75.174 and water well rules

Comments

301-700	Hydrology <i>Rev: <u>Tom</u></i>	
721	Description of Hydrologic Resources: (Permit and Adjacent Area) <i>Rev: <u>Tom</u></i>	Presented in early part of chap 7. pages 7-2 - to 7-24
722	Cross-Sections and Maps: Subsurface Water - Surface Water - Monitoring Stations - Wells <i>Rev: <u>Tom</u> (?)</i>	has cross sections, No groundwater contours * but do we really need this
723	Sampling and Analysis <i>Rev: <u>Tom</u></i>	Present (Page 7-61 for schedule)
724	Baseline Information: Ground Water - Surface Water - Geology - Climatological & Supplemental; If Needed <i>(?)</i>	12 years of data are present in old permit.
728	PHC Determination <i>done? please check</i>	we could use the revised one (CHIA) from Blue Blage. nothing else has changed since then
730	General Operation Plan: Minimize Disturbance to Hydrologic Balance & Compliance with Clean Water Act <i>N/A</i>	NOT APPLICABLE
731	Ground and Surface Water Protection <i>Rev: <u>Tom</u></i>	monitoring to continue through bond release!
732	Ground and Surface Water Monitoring <i>Rev: <u>Tom</u></i>	Page 7-61 has monitoring schedule, parameter list page 7-29, frequency page 7-28 +

Comments

<p>301-740</p> <p><i>Permanent design plate</i></p> <p><i>Access to Pond *</i></p>	<p>Plans and Designs: Operation and Reclamation Plan Sediment Control Measures</p> <p><i>Kevin Jones</i></p> <p>....Siltation Structures</p> <p>....Sediment Ponds</p> <p>....Other Treatment Facilities <i>page 7-34 indicates that they will use Plus 1.2 and rock, design slope ≤ 9 inch</i></p> <p>....Diversions <i>Page 7-35 says dimensions road designed for 100 yr 6 hr.</i></p> <p>....Road Drainage</p> <p>....Impoundments</p> <p>....Discharge Structures</p> <p>....Disposal of Excess Spoil</p> <p>....Coal Mine Waste</p> <p>....Disposal of Non-Coal Mine Waste</p> <p>....Casing and Sealing of Wells</p>	<p>Basically use small dimensions & one permanent pond.</p> <p>Some problems w/ permanent Pond Proposed. <i>ie. sediment line on Plate, clean out nearby, maintenance access</i></p> <p>& no other treatments</p> <p>Present, but some question exists on storm design used to design. <i>See TM memo</i></p> <p>Road to be taken out. This could be bad due to need for access to Pond?</p> <p>one permanent pond proposed + the Sweets pond -</p> <p>design ok for storm events used</p> <p>Question type b vs. Type II</p> <p>proposed to place in area approved by DORM</p> <p>" " "</p> <p>" " "</p> <p>Need to check on these. They mention stunder geo. see HK memo.</p>
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Comments

301-800	Bonding and Insurance <i>Jose: SW</i>	<i>okay see deficiency Disturbed area (?)</i>
820	Applicant: Have Adequate Bond at Permit Issuance _____	
830	Bond Estimate and Calculations Provided <i>Jose</i>	<i>see deficiency</i>
890	Certificate of Insurance Provided <i>SW</i>	

302-200	Special Categories of Mining _____	
210	Experimental Practices Mining _____	
220	Mountaintop Removal Mining _____	
230	Steep Slope Mining _____	
240	Auger Mining _____	
250	In Situ Processing Activities _____	

Comments

302-260	Coal Processing Plants (Not Located Within Permit Area of Mine) _____	
270	Variances From Approximate Original Contour Restoration Requirements <i>Jose</i>	<i>Not addressed and must be.</i> ★
280	Variances for Delay in Contemporaneous Reclamation Requirement in Combined Surface and Underground Coal Mining Activities _____	
290	Small Operator Assistance Program (SOAP) _____	

302-300	Special Areas of Mining _____	
301	Prime Farmland <i>Henry</i>	
302	Alluvial Valley Floors <i>Henry</i>	

Comments

302-260	Coal Processing Plants (Not Located Within Permit Area of Mine)	
270	Variances From Approximate Original Contour Restoration Requirements <i>Jose</i>	
280	Variances for Delay in Contemporaneous Reclamation Requirement in Combined Surface and Underground Coal Mining Activities	
290	Small Operator Assistance Program (SOAP)	

302-300	Special Areas of Mining	
301	Prime Farmland <i>Henry</i>	
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State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

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Dee C. Hansen
Executive Director

Dianne R. Nielson, Ph.D.
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March 17, 1993

TO: Pamela Grubaugh-Littig, Permit Supervisor ✓

FROM: Henry Sauer, Senior Reclamation Soils Specialist *HS*

RE: Technical Deficiencies in Revised Reclamation Plan, Mountain Coal Company, Gordon Creek #2, #7 & #8 Mine, ACT/007/016, Folder #2, Carbon County, Utah

SYNOPSIS

On February 1, 1993, the permittee submitted, for Division approval, a revised reclamation plan. The revision of the reclamation plan was required by Division Order DO-91A.

Technical deficiencies exist which must be rectified prior to approval of the proposed reclamation plan.

Many of the comments below and the operator's response are contingent upon the decisions made between the Division and the permittee with regard to the backfilling and grading plans, approximate original contour (AOC) and highwall/cut slope stability requirements.

ANALYSIS

R645-301-233.100 - Topsoil Substitute and Supplements

Division Order DO-92A, Regulation R645-301-233.100 required the permittee to "... submit a plan (other than the approved plan outlined in the PAP) to demonstrate the suitability of the proposed substitute topsoil material in the event that the No. 2 Mine highwalls require complete reclamation." The permittee responded to the Division Order by submitting a backfilling and grading plan which proposes the retention of highwalls/cut slopes with only partial backfilling of these

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features in an around the No. 2 Mine (reclamation designs for the access road to the No. 2 Mine were not discussed in the PAP). The permittee did not submit a proposal to revise the substitute topsoil sampling plan as directed and instead submitted the results form a soil/spoil sampling effort that was not reviewed or approved by the Division. Therefore, a revised plan must be submitted to the Division for review. This plan must be designed in accordance with the final decision regarding AOC requirements and highwall/cut slope retention (see Mr. Jesse Kelley's technical comments under section #3). Or the soil sampling plan described in the approved plan must be implemented immediately.

The laboratory results from the No. 2 Mine pad are not adequate to demonstrate the suitability of the proposed substitute topsoil. The forthcoming is a critical review (given the limited procedural information provided) of the unapproved soil/spoil sampling. This is included to prevent the same mistakes from being included in the implementation of the approved sampling plan or the design of the revised sampling plan for the No. 2 Mine.

The sampling methods employed are not clear or complete. The identification of the depth increments and the type of sample is difficult to interpret (Example: Soil Sample Site GC2-10: 16" RB, 36" Coal/Soil, 72" Clay Rock 8-14"). Would the example listed above mean the profile consisted of 0-16" of RB (this abbreviation is not identified, but is assumed to mean road base), 16-36" inches of coal/soil and 36-72" gravel and cobble sized claystone of a medium diameter of 8-14"? Or is there 36" of coal/soil overlaid by 16" of RB and underlaid by 72" of claystone equating to 10 feet of profile. Did the composite sample include all of these increments or just the "... 72" Clay Rock 8"-14"...?" Sample GC2-9 indicates that an A and B horizon was encounter in the fill of the access road, this appears to be a misidentification and must be clarified. GC2-12 is identified as being drilled through an "8' Sandstone Ledge" and when comparing Plate 3-7 to 3-1 the area surrounding the sample site will remain at the same elevation. Bed rock is not an acceptable plant growth medium for final reclamation. Composite samples of the soil/spoil profiles are not acceptable and do not characterize the potential variability of the material in question. Especial when one considers the highly variable "horizons" in the examples mentioned above. Soil/spoil material which remains below a cut area and acts as the plant growth medium for final reclamation must be sampled and analyzed.

The soil/spoil sample results provided cannot be considered adequate characterization of the proposed substitute topsoil material given the current backfilling and grading plan. Therefore, a new proposal for demonstrating the

suitability of said material (including material in the vicinity of the access road) must be made whether or not the grading plan is approved as designed in the current submission.

In addition, the intensive sampling described on page 8-28.1 of the PAP for sampling of the spoil material around the No. 3 sample site (No. 2 Mine area) location has not been accomplished and must be a part of any new sampling proposal. The aforementioned demonstration of suitability must be reviewed, approved and implemented prior to the onset of reclamation activities.

The nutrient and amendment soil sampling plan described on pages 3-48 and 3-48a defers sampling until after grading activities. This sampling procedure should occur in areas receiving stockpiled topsoil and subsoil. If the sampling plan described below is acceptable to the operator, then fertilizer recommendations can be ascertain from the results of the sampling of the areas not receiving topsoil (i.e., No. 2 Mine yard and access road).

Based on the review of the reclamation cross-sections (Plates 3-8, A through C) and the post mining topography maps it appears that large areas (of various slope percentages), predominantly on the north side of the disturbed area, from the No. 7 mine portals down to the east side of the Right Fork of Bryner Canyon, will not be backfilled and will not receive topsoil. The suitability of the spoil/soil material in these areas has not be demonstrate and must be prior to backfilling and grading operations. In order to do this, the operator must sample the proposed substitute topsoil at a frequency of one sample site per acre. At each sample site depth segregated samples at 0-6", 6-12" and 12-24" must be collected and analyzed for the parameters in the Division Guidelines for the Management of Topsoil and Overburden, Table 1 (Nitrate-Nitrogen should be substituted for Total-Nitrogen). The following constituents from Table 1 may be omitted from the analysis: Alkalinity; and available water capacity. Where coal and/or shale is encountered, selenium and boron must be analyzed in addition to the constituents found in Table 1, as amended.

The commitment (page 3-19) to sample slope of greater than 70% to determine the suitability of the proposed substitute topsoil material requires some refinement. First, would the proposed sample interval (150 feet) be on the basis of linear cut slope length. Second, where there is a substantial length of 70% or greater slope, would there be sampling at various heights above the reclaimed grade? Third, the laboratory analyses must follow that outlined in the paragraph above. The operator must propose a contingency plan in the event that the

proposed substitute topsoil is unsuitable. In addition, the material in question, upon approval, must receive appropriate seedbed preparation to facilitate water percolation and sustained seed contact to the surface (i.e., surface roughening with hand tools).

General Comments

Page 8-28.1 mentions "All material found to be unsuitable will be disposed of in an approved landfill." This statement, and others like it, must be removed. It directly contradicts R645-301-528.320 which states that "Disposal of mine waste must be placed in a new or existing disposal site within a permit area approved by the Division." The operator then goes on to say (page 8-32) that "Waste materials (i.e., oil, grease) and other potentially toxic materials and fill surrounding them, will be identified visually and taken to an approved landfill prior to reclamation. Also these materials will be covered with a sufficient amount of fill material to prevent contamination of the plant growth zone." The permittee must specify the disposal location, techniques and cover depth (similar to the four foot cover depth commitment made on page 3-17), for the disposal of "unsuitable material."

On page 3-48, the operator states that the spoil material "may" be ripped. Please state whether or not the spoil will be ripped. The intention of the DO was to scarify spoil to a depth of at least 12 inches. Integrating spoil and soil (first six inch lift) by scarification will prevent abrupt interfaces. If the operator chooses to take this approach then ripping will be a minimum of 18 inches. Regardless, the spoil material must be ripped to a depth of no less than 12 inches.

Numerous errors exist on Plates 3-8A through 3-8C. The extent of backfilling in many chases extends outside the present disturbed area boundaries and are not depicted as such on Plate 3-7. Highwalls/cut slopes are depicted on the cross-sections but are omitted on the postmining topography map. The cut slope on the south side of the No. 2 Mine yard east of the No. 7 sediment pond is not depicted as being reclaimed and in fact is proposed to be excavated. These anomalies must be clarified and consistently represent throughout the PAP.

The operator discusses the maximization of surface roughness utilizing "grousers, rippers or other mechanical means." The Division's criteria for surface roughness is a surface which is very difficult to walk over which has large (2-3 foot diameter) irregularly positioned depressions. Similar to that which would be

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March 17, 1993

created by a 3 cubic yard backhoe bucket. An example of achieving this standard would be the original reclamation grade on the upper access road at the Huntington No. 4 Mine.

RECOMMENDATION

The aforementioned deficiencies must be adequately addressed prior to permit approval.

jbe
GC.REC



State of Utah

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March 5, 1993

TO: Pamela Grubaugh-Littig, Permit Supervisor

FROM: Jess Kelley, Reclamation Engineer *JK*

RE: Deficiencies in Revised Reclamation Plan, Mountain Coal Company, Gordon Creek #2, #7 & #8 Mine, ACT/007/016, Folder #2, Carbon County, Utah

SYNOPSIS

On February 1, 1993, the permittee submitted, for Division approval, a revised reclamation plan. The revision of the reclamation plan was mandated by Division Order DO-91A. This writer has reviewed the revised plan and has found a number of deficiencies.

ANALYSIS

Deficiencies in the revised reclamation plan are as follows:

- 1) Paragraphs 4 and 6 of page 3-18 should refer to Plate 3-1, and not Plate 3-1a. Also, the last paragraph of page 3-26 should refer to Plate 3-9 rather than to Figure 3-2.
- 2) Page 3-10 of the revised plan states that the premining land use of wildlife habitat will be retained. But the new pond and the stock watering basin are clearly meant for livestock use, so the postmining land use will be wildlife habitat and livestock. The permittee must change the designated postmining land use. It must be remembered that such a change constitutes a significant permit revision (see R645-301-414.200).
- 3) Nowhere in the plan is there any demonstration that the anticipated variances from Approximate Original Contour (AOC) have met the

requirements for such variances which are found in R645-302-270. It must be remembered that any variance from AOC constitutes a significant permit revision (see R645-301-414.200) since it involves a change in the postmining land use. The anticipated variances are:

- a) The #7 Mine highwall--The stability analysis which the permittee has done of this area is necessary, but not sufficient, to allow for the retention of the #7 highwall.
 - b) The #2 Area cutslopes--As with the #7 Mine, the stability analysis is necessary, but not sufficient, to allow for the retention of these cutslopes.
 - c) The New Pond--On page 3-34 of the revised reclamation plan, the permittee states that the new pond is to be retained as a permanent feature after final reclamation. Since the new pond constitutes a variance from AOC, it is necessary to show that it meets the requirements of R645-302-270.
 - d) Sweets Pond--On page 3-35 of the revised plan, the permittee states that Sweets Pond is to be retained as a permanent feature after final reclamation. As with the new pond, Sweets Pond constitutes a variance from AOC. And the landowner's written request that it be retained, which is found in the revised plan, is necessary, but not sufficient, to allow for its retention.
- 4) There are deficiencies in the maps:
- a) Maps 3-1 and 3-7 do not show the entire disturbed area. These maps do not show the lower road from the #2 sediment pond to the main gate or the area of Sweets Pond.
 - b) The disturbed area boundaries as shown on Plates 3-1 and 3-7 are incorrect. The disturbed area boundary does not include the #7 highwall on either map. The disturbed area boundary appears to exclude the full extent of potential disturbance along the restored main channel. Plate 3-7 even shows a riprap channel going outside of the disturbed area near the #2 sediment pond.

- 5) The mass balance table found on page 3-47 of the revised plan contains a number of discrepancies:
 - a) The fill subtotal should be 177,762; not 117,762.
 - b) Where do the volumes for the lower road come from? The lower road is not shown on any of the permit maps and there are, therefore, no cross sections for it anywhere in the plan.
 - c) Page 3-18 of the plan says that 8000 yd³ of topsoil were saved from the #7 area. Where does this figure come from?
 - d) Page 3-45 of the plan says that 6451 yd³ and 8000 yd³ of substitute topsoil are available. This is obviously the source of the "Plus 7/8 Topsoil" figure of 14,451 yd³ shown on page 3-47. Where does the figure of 6451 yd³ come from? Where is it stored?
 - e) Page 3-19 of the plan says that 1425 yd³ of topsoil were saved from the #8 area. The difference between 1425 and 6451 (see d above) is 5026 yd³. Where is this material stored and where did the figure come from?
 - f) Where does the "Plus #2 Topsoil Sub." figure of 14,842 shown on page 3-47 come from?
- 6) The problem of the seep in the #8 area is not addressed in the plan. If covered over with earth material, as shown in the plan, this seep could destabilize the fill.
- 7) The old fan portal near the main gate is a postlaw structure, and yet the plan does not mention it. The reclamation of the old fan portal and its access road must be addressed in the plan.
- 8) Figure 3-9, page 3-41 of the plan shows a very general, typical cross section of a reclaimed road. This, however, is not specific enough. Using relevant stability data, the permittee must determine the maximum fill slope which will attain the required stability and commit to reclaiming the roads to that slope.

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- 9) The reclamation cost estimate on pages 3-61 and 3-62 of the plan is not adequate. This cost estimate is a summary, but nowhere in the plan is it shown how the time and cost estimate figures in that summary were calculated.

RECOMMENDATIONS

It is recommended that the permittee correct the above deficiencies before the revised reclamation plan can be approved.

jbe
GCREC.MEM



State of Utah

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DIVISION OF OIL, GAS AND MINING

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March 10, 1993

TO: Pamela Grubaugh-Littig, Permit Supervisor ✓

FROM: Susan M. White, Senior Reclamation Biologist *SMW*

RE: Technical Deficiency, Mountain Coal Company, Gordon Creek #2, #7 & #8 Mines, ACT/007/016, Folder #2, Carbon County, Utah

Synopsis

The reclamation plan received by the Division on February 1, 1993 was reviewed for technical adequacy. The reclamation plan was found to be deficient as described below.

Analysis

Deficiencies are as follow:

General Contents

R645-301-142. The operator must distinguish on the reclamation map, plate 3-7, those areas in which the operations occurred prior to August 3, 1977.

Biology

R645-301-341. The permit continues to discuss the use of shrub seedling stock but fails to give details as to planting and species. Please detail.

R645-301-341.220. Numerous cut slopes are proposed to be left. These slopes are required to be seeded and meet the vegetation success standards. Please detail the seedbed preparation method, seed mixtures and success standards if different than as stated in the plan.

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Technical Deficiency
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R645-301-341. Please commit to installing the erosion control mat as per the manufactures specifications.

R645-301-355. Please commit to using erosion control matting on slopes 2:1 or steeper not steeper than 2:1.

R645-301-342.100. Several seeps, springs, and drainages will occur within the reclaimed area. The permit does not describe any revegetation enhancement measures for these sites. Plant species with high moisture requirements should be planted along these corridors. Large containerized plants of species such as Salix, Elderberry, Serviceberry and Chokecherry besides providing rapid growth for wildlife cover will also help stabilize the channels in these areas. Please detail a revegetation plan specific for these areas as described above.

R645-301-342.200. "Hobble Creek" big sagebrush is a newly released sagebrush that is very robust and palatable. Sagebrush has been documented to vary widely in it nutritive content and palatability to wildlife. If the permittee does not wish to use "Hobble Creek" big sagebrush, please propose another genotype with related data as to its proven nutritional value for wildlife.

R645-301-353.240. The permittee states that all coarse fragments greater than 18 inches will be removed. Coarse fragments on the reclaimed site will aid in providing niches to increase diversity in plant and animal species. Please delete the comment regarding removal of rocks in topsoil.

R645-301-354. All seeding will be done after September 1, please remove the statement "except in those areas where earthmoving activities preclude access."

R645-301-356.100. The proposed success standards are very confusing. Please review the entire permit including tables and maps for clarity and consistency. The reference areas for the No. 7 and No. 8 mines are base line data from the disturbed sites. Additionally, no standards have been proposed for the fan portal area, near the gate which was reclaimed in the early 1980's. Please correct.

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Technical Deficiency
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R645-301-356.110. The Oak Shrubland Reference Area of the #2 mine was sampled prior to the Division's current Vegetation Information Guidelines. Based on the previous studies of that area, the vegetative cover was 48 percent. The Division requires the permittee to sample the site in July 1993. Based on these studies, this reference area maybe used as the vegetative standard.

R645-301-356.230. The permittee continues to use production as a success criteria. Please explain this as it relates to the postmining land use.

R645-301-357.300. The permit contains the section 3.5.5.4 Reclamation Management. The permittee should be reminded that as yet Utah's coal program has no allowances for maintenance once the bond period has begun. Maintenance practices, as described in this section, will restart the bond period of extended liability. The permittee is encouraged to use good techniques and materials in order to avoid maintenance.

Land Use

R645-301-413.220. The permittee continues to describe the postmining land use throughout the permit as wildlife habitat. Yet stock watering ponds and sediment ponds are to be left. Please clarify.

Bonding and Insurance

R645-301-880.320. Where a silt dam is to be retained as a permanent impoundment, bond may not be released until provisions for sound future maintenance by the operator or the landowner have been made with the Division. Permanent Pond 2/7/8 may not be allowed to fill in. Please provide the necessary maintenance documents.

Recommendation

The deficiencies must be corrected prior to permit approval.

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State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

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March 12, 1993

TO: Pamela Grubaugh-Littig, Permit Supervisor ✓

FROM: Thomas Munson, Senior Reclamation Hydrologist *TM*

RE: Deficiencies for the Gordon Creek #2, #7 & #8 Mining and Reclamation Plan, Mountain Coal Company, ACT/007/016, Folder #2, Carbon County, Utah

Synopsis

The operator submitted on February 1, 1993 a reclamation plan for the Gordon Creek #2, #7 and #8 property. This memo will outline the deficiencies identified during the completeness review to date.

Analysis

- 732.210.** *Sedimentation ponds whether temporary or permanent, will be designed in compliance with the requirements of R645-301-356.300, R645-301-356.400, R645-301-513.200, R645-301-742.200 through R645-301-742.240, and R645-301-763. Any sedimentation pond or earthen structure which will remain on the proposed permit area as a permanent water impoundment will also be constructed and maintained to comply with the requirements of R645-301-743, R645-301-533.100 through R645-301-533.600, R645-301-512.240, R645-301-514.310 through R645-301-514.321 and R645-301-515.200.*
- 356.300.** *Siltation structures will be maintained until removal is authorized by the Division and the disturbed area has been stabilized and revegetated. In no case will the structure be removed sooner than two years after the last augmented seeding.*

The requirements for providing for an adequate pond maintenance plan are spelled out above. The operator has failed to provide for any long term maintenance for the permanent sediment pond, the stock watering pond, or the Sweet's Pond per the requirements of **R645-301-880-320** and Phase II bond release. This maintenance requirement is also asked for under **R645-301-732-210**. The operator has to state specifically how he will comply with the requirement for permanent maintenance including sediment removal.

The sediment clean out levels for the sediment pond are shown on the stage capacity curve but have not been transposed to Plate 7-14. In addition to showing these elevations on Plate 7-14, the operator must identify how the clean out elevations will be marked in the pond (i.e., sediment markers).

The Stock Water Basin must also be included in the maintenance plan to meet all regulatory requirements.

Sweet's Canyon Pond and Permanent Sediment Pond

733.200 Permanent and Temporary Impoundments

The operator must provide stability comparable to a 1.3 minimum static safety factor in lieu of engineering tests to establish compliance with the minimum static safety factor of 1.3 specified in **R645-301-533.100**.

Diversions

732.300. *Diversions. All diversions will be constructed and maintained to comply with the requirements of **R645-301-742.100** and **R645-301-742.300**.*

742.312. *The diversion and its appurtenant structures will be designed, located, constructed, maintained and used to:*

742.312.1. *Be stable;*

742.313. *Temporary diversions will be removed when no longer needed to achieve the purpose for which they were authorized. The land disturbed by the removal process will be restored in accordance with **R645-301** and **R645-302**. Before diversions are removed, downstream water-treatment facilities previously protected by the*

diversion will be modified or removed, as necessary, to prevent overtopping or failure of the facilities. This requirement will not relieve the operator from maintaining water-treatment facilities as otherwise required. A permanent diversion or a stream channel reclaimed after the removal of a temporary diversion will be designed and constructed so as to restore or approximate the premining characteristics of the original stream channel including the natural riparian vegetation to promote the recovery and the enhancement of the aquatic habitat.

The operator has failed to adequately address the following stability issues:

- 1) Stability issues associated with the location of the main channel which runs through the #2 mine site. This review will also involve the outcome of the "A.O.C. considerations."
- 2) Stability issues associated with diverting seeps across reclaimed fills with no consideration of infiltration into the fills (Page 3-3, PAP). An underdrain or french drain might be the appropriate solution versus proof of fill stability under saturated conditions.
- 3) Restoration of the Right Fork of Bryner Canyon to restore premining characteristics of the original stream channel where it meets the old pad fill. Ponding in what is considered a natural depression appears to be caused by the presence of the pad and failure to reestablish original grade for the channel.
- 4) The stability of all channels and the riprap protection proposed for these channels is questioned. It is very apparent that the operator has decreased the size of riprap protection by almost a factor of three for the lower pad area (D50 of 18 inches to a D50 of 6 inches). The peak flow values have been recalculated and were dropped from 195.1 cfs for the lower mine site to 28.21 cfs. Although this is a product of regulatory changes, the operator has chosen to use liberal peak flow methodology [100-year/24-hour storm (type II storm, TR-55 model) changed to the 100-year/6-hour storm (type B storm distribution, SCS program used by Earthfax, Inc.)] The type of storm used and the means of distributing that storm over 6 hours versus 24 hours has a large bearing on the peak flows generated. The Division feels that the operator has chosen the least conservative

method for estimating peak flows and must be made aware of the liability associated with using these less conservative numbers to generate designs. Any failure of riprap or channel caused by greater than the design storm will have to be documented by **1) having a raingage on the reclaimed site; and 2) using a known channel cross-section with staff gage (floating cork in a perforated PVC pipe) to calculate flows.**

Please note a conflict exists on page 7-34 regarding the use of "plus-18 inch rock" where as the plan calls for much smaller rock. Please correct or clarify. Certainly distributing 18 inch rock randomly isn't considered prudent when specific gradations of riprap are spelled out in the plan.

Filter Blanket Under Riprap

The plan states that a "properly graded coarse grained soil" will be used. The operator has not provided any characteristics of the base material to evaluate the need for a filter layer. The proper test must be carried out for determination and selection of an appropriate filter layer.

Riprap Selection

A rock durability test must be carried out in the field for evaluating suitable riprap material. Such characteristics must be observed:

- 1) " Rings" when hit with a hammer.
- 2) Knife scratch with difficulty.
- 3) Breaks with difficulty.
- 4) No earthy odor.

A slake durability test is in order when sandstones, clay-rich siltstones or limestone is selected.

The type of riprap selected must be angular and be placed by end dumping versus rolling down the hill. **The operator must include these commitments in his plan.**

Sediment Control Measures

742. *Sediment Control Measures.*

- 742.100. *General Requirements.*
- 742.110. *Appropriate sediment control measures will be designed, constructed and maintained using the best technology currently available to:*
- 742.111. *Prevent, to the extent possible, additional contributions of sediment to stream flow or to runoff outside the permit area;*
- 742.112. *Meet the effluent limitations under R645-301-751; and*
- 742.113. *Minimize erosion to the extent possible.*
- 742.120. *Sediment control measures include practices carried out within and adjacent to the disturbed area. The sedimentation storage capacity of practices in and downstream from the disturbed areas will reflect the degree to which successful mining and reclamation techniques are applied to reduce erosion and control sediment. Sediment control measures consist of the utilization of proper mining and reclamation methods and sediment control practices, singly or in combination. Sediment control methods include, but are not limited to:*
- 742.121. *Retaining sediment within disturbed areas;*
- 742.122. *Diverting runoff away from disturbed areas;*
- 742.123. *Diverting runoff using protected channels or pipes through disturbed areas so as not to cause additional erosion;*
- 742.124. *Using straw dikes, riprap, check dams, mulches, vegetative sediment filters, dugout ponds and other measures that reduce overland flow velocities, reduce runoff volumes or trap sediment;*

The operator has not provided enough detail to delineate exactly how the treatment of erosion will take place during reclamation or following reclamation. Mulching rates, hydromulch application rates and tackifier amounts and types, erosion control matting specifications, and surface roughness are provided in some detail (page 3-53, PAP). The operator will provide the following details to verify compliance with R645-301-742.

- 1.) A detailed maintenance plan addressing how rills and gullies will be assessed and when maintenance will be required.
- 2.) The maintenance treatments proposed to be used in addressing problem erosion areas during the bonding period will be spelled out in the PAP.
- 3.) The operator must also present a plan which delineates how the operator will monitor soil surface stability and how water quality data will be collected to demonstrate compliance with the applicable rules.

Roads

762. *Roads. A road not to be retained for use under an approved postmining land use will be reclaimed immediately after it is no longer needed for coal mining and reclamation operations, including:*
- 762.100. *Restoring the natural drainage patterns;*
- 762.200. *Reshaping all cut and fill slopes to be compatible with the postmining land use and to complement the drainage pattern of the surrounding terrain.*

The operator has failed to provide the necessary information for this portion of the reclamation plan involving the removal of the access road below the #2 mine site. This information must be included in the plan.

Recommendations

The operator must look closely at the level of design stability and decide if he feels comfortable with the liability of using the least conservative design parameters for sizing riprap and channels. The operator must also address what the Division considers major channel stability and A.O.C. questions in a reasonable and realistic fashion. The operator must not take lightly the question of Erosion Control during the reclamation process following regrading and reclamation because it is a liability which is considered on going and must be planned for.



State of Utah

DEPARTMENT OF NATURAL RESOURCES
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March 11, 1993

TO: Pamela Grubaugh-Littig, Permit Supervisor

FROM: Ken Wyatt, Reclamation Hydrologist *KW*

RE: Administrative Completeness Review, Mountain Coal Company, Gordon Creek 2, 7, & 8 Mines, ACT\007\016, Folder #3, Carbon County, Utah

SYNOPSIS

On February 1, 1993, Mountain Coal Company submitted the long awaited final reclamation plan for the Gordon Creek 2, 7 and 8 mines. Attached is a copy of the administrative completeness review of this plan. I would like to provide you with some of the concerns that have been uncovered in the process of reviewing this document.

ANALYSIS

The hydrology section of the permit application is mostly complete. There are some issues that will need to be dealt with prior to commencement of reclamation activity. These are listed below and this list is not all inclusive as additional concerns could arise with further technical review.

The applicant has used Earthfax consultants to produce much of the hydrology design. Earthfax has selected type "b" storm event to design peak flows and runoff volumes. The numbers generated from this are well below the numbers that were originally used in the approved MRP. Original reclamation design used peak flows over 50 cubic feet per second and these flows are now well below this. The point is that the operator can arrive at a much more economical reclamation project in that ditches, rip rap and other designed structures are now constructed to a smaller degree. This may become a point of discussion.

The applicant has proposed to construct a permanent sediment pond and take out the access road from the gate up to the site. No statements from the landowner regarding his/her desire to keep the pond was provided. The consultants have estimated that the pond will have a 2.3 year sediment storage

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capacity. This means that over the ten year bond period the applicant will need to clean the pond about 4-5 times. With no access road the reclaimed site will need to be re-disturbed to allow equipment in to the sediment pond. The plate associated with the pond does not contain adequate detail. No design line for sediment is shown. The text does not describe how sediment markers will be used to define when the pond should be cleaned.

The alignment of the main reclaimed channel may need some attention. Similar to JB King, the applicant has proposed a diversion that flows relatively level (3.6%0 and the turns abruptly to the left. This may cause problems in a large precipitation event. Also the alignment in relation to the overall canyon needs to be examined. I think that a better channel design and alignment could be designed.

Additionally, the flow from the Right Fork of Bryner Canyon is shown to pond in a depression adjacent to the permit area where a culvert previously collected undisturbed flow from this canyon. The applicant will need to address why the culvert will be removed but the channel will not be constructed to allow flow to cross the reclaimed area without first ponding and filling this depression.

RECOMMENDATION

These are some of the concerns that have been discussed between the technical staff. Additional technical review will be required prior to approval.