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STATE OF UTAH
NATURAL RESOURCES & ENERGY
Oil, Gas & Mining

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March 24, 1982

Mr. Dave Schouweiler
Permit Coordinator
Consolidation Coal Company
Western Region
2 Inverness Drive East
Englewood, Colorado 80112

RE: Preparation Plant/Loadout
Facility
Determination of Completeness
ACT/015/015
Emery County, Utah

Dear Dave:

The Division of Oil, Gas and Mining has completed a cursory review of the Preparation Plant and Loadout Facility at the Emery Deep Mine and has determined the application to be complete. Please note that there are a few items listed on the DOC document which must be addressed during the technical analysis portion of the review. The Division's intent is to issue a permit free of stipulations. I think that you would agree with this position since it prevents the necessity of meeting future deadlines for permit information and avoids the possibility of having to face violations.

Please review the DOC document for the outstanding items, as a timely response will further expedite the completion of the technical analysis.

If you should have any concerns, please contact Sally Kefer of the Division staff regarding this review.

Sincerely,

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

JWS/SK:btb

DETERMINATION OF COMPLETENESS

Consolidation Coal Company Preparation Plant and Loadout Facility

783.12 General Environmental Resources Information

(b) The applicant must submit the following before the cultural resource investigation and plan may be determined complete.

Need site forms for all sites included within the Emery Deep Mine plan area.

Need site-specific eligibility recommendations and potential impact for all sites documented in the 1980 survey report.

Proposed surface modifications and disturbances should be drawn on the cultural resources map (plate 5-1).

A compendium chart consolidating information on all sites in the Emery Deep Mine plan area should be prepared as an appendix to the mine plan cultural resource submissions. The chart should minimally include site numbers, site type, eligibility recommendations and impact statements.

DETERMINATION OF COMPLETENESS

Applicant has submitted all of the requested materials.

783.19 Vegetation Information

A map that overlaps the vegetation types over the disturbed and proposed disturbance areas.

DETERMINATION OF COMPLETENESS

A revised vegetation map meeting this criteria was submitted.

The mine plan is contradictory in relation to additional disturbance of vegetation. Page 3-50 states that there will be no additional impact or disturbance within the mine permit, however, Table 9-2 indicates an additional 409.2 acres will be affected.

DETERMINATION OF COMPLETENESS

The applicant has indicated that the statement on page 3-50 refers only to the "deep mine." The new disturbance associated with the preparation plant is 206.4 acres.

On March 5, 1982, DOGM received a revised plate of the disturbed vegetation area which eliminated four acres which could potentially be classified as Prime Farmland. These acres were included in the revised plate delineating disturbance which was submitted with the ACR response. This new plate is recognized as the permit area disturbance.

The species list for the annual forb community (Table 9-8) should include the perennial grasses encountered during cover sampling (Table 9-9).

The species list for the riparian meadow community (Table 9-33) should include Scirpus americanus, S. paludosus and Carex sp., which were encountered during cover sampling (Table 9-34) and production sampling (9-35).

DETERMINATION OF COMPLETENESS

The applicant has revised the species lists for the annual forb and riparian meadow communities to include and above-mentioned species.

There are some minor discrepancies between figures in the text and corresponding tables. A list of these discrepancies will be supplied to Consol if the applicant wishes to correct them.

DETERMINATION OF COMPLETENESS

The applicant has requested the list of minor discrepancies. The list will be supplied to the operator under a separate cover.

784.11 Operation Plan: General Requirements

(a) The production values used to determine the quantity of coal refuse which will be produced as presented on pages 15-18 and 15-58 do not match the production values on page 3-44. This apparent discrepancy should be clarified with any implications to current facilities described.

DETERMINATION OF COMPLETENESS

Applicant has clarified the discrepancy by substantiating production from both the underground and surface mines.

(b)(1) Applicant states that the sedimentation pond will be removed and the site regraded approximately three years after seeding has been established on the preparation plant site (Vol. II, 15.3.5.3). The reclamation time-table (Vol. I, 3.5.6.1) shows removal and reclamation of ponds two years after termination of mining. Applicant should correct this discrepancy.

What is the anticipated time frame for the slurry pond to dry so backfilling and grading can commence? Applicant should include reclamation of slurry pond in the reclamation time-table (Vol. I, 3.5.6.1).

DETERMINATION OF COMPLETENESS

Applicant has discussed the situation and proposes to remove the sediment pond two-four years after initial reclamation as timing will depend on success of revegetation.

(b)(2 and 4) Refer to ACR comments under Section 784.19 and 817.21-.25 concerning underground development waste and topsoil storage area.

(b)(3 and 5) Discuss the removal of all structures; including disposal of building materials and removal of foundations.

DETERMINATION OF COMPLETENESS

Applicant has adequately addressed removal and disposal methods of structures and foundations.

784.13 Reclamation Plan: General Requirements

(b)(2) The bond estimate provided in Table 15-2, Chapter 3 must be substantiated. The applicant should provide volumes, areas and unit costs for all categories shown in the estimate. The applicability of area and unit costs for each specific facility as listed in 15.3.2.1 must be described.

DETERMINATION OF COMPLETENESS

Applicant has provided a detailed reclamation bond.

(b)(3) The applicant must include contour maps or cross sections that show the anticipated final configuration of all proposed preparation plant and loadout facilities within the permit area.

DETERMINATION OF COMPLETENESS

Applicant has submitted a map of proposed final contours.

(b)(4) The applicant should clarify whether or not vegetation cover will be removed prior to topsoil stockpiling. The location of topsoil stockpiles must be depicted more precisely than on Maps 15-1A and B and the seed mix to be used to stabilize the stockpiles should be given. The applicant must include a soil testing plan as required in UMC 817.25.

DETERMINATION OF COMPLETENESS

Applicant has addressed stockpiling methods adequately.

(b)(5) The applicant should provide justification for the use of introduced plant species as per the requirements of UMC 817.112.

DETERMINATION OF COMPLETENESS

The applicant has provided the justification for introduced species pursuant to UMC 817.112 on page 15 of the ACR response.

Shrub/tree transplanting as mentioned on page 3-58 should be done according to the density of woody plants in the reference areas rather than a general density of 6' x 6' centers for the entire area.

DETERMINATION OF COMPLETENESS

Shrub seedlings will be planted in addition to seeds. Efforts will be made to meet the shrub density levels of the related reference areas.

Although several seed mixes are proposed for different plant associations, the applicant needs to indicate which mix will be used for each vegetation type that is or will be disturbed.

Alternative species are listed with each mix. Specifically, what species will be used? What species will they replace?

It is suggested that the applicant develop new seed mixes, giving consideration to the native species in each vegetation type (as indicated in the vegetation study) and local conditions.

DETERMINATION OF COMPLETENESS

The applicant has developed two new seed mixes to be used for the disturbance associated with the preparation plant and related facilities. On page 12 of the ACR response, they provided reasons for combining various communities for reclamation using only the two seed mixes.

The applicant should commit to mulching all areas that are reseeded or provide justification for not mulching, i.e., successful stand establishment and erosion control on previous revegetated areas or test plots (UMC 817.114[a]).

The applicant should indicate the rate of application of the mulch to be used.

DETERMINATION OF COMPLETENESS

All revegetated areas will be mulched using a straw mulch that is crimped into the soil. The rate of application will be either 1,000 lbs/ac or 2,000 lbs/ac, depending on the degree of erosion potential.

The methods proposed to be used to determine the success of the vegetation as required in UMC 817.116 should be described.

DETERMINATION OF COMPLETENESS

The applicant proposes to monitor cover, productivity and on occasion, shrub density. Actual measurement techniques were not proposed, however, the applicant states on page 17 of the ACR response that they will submit the techniques to the appropriate regulatory authorities for approval prior to their use.

The applicant should describe the proposed methods for weed control in the revegetated areas.

DETERMINATION OF COMPLETENESS

On page 17 of the ACR response, the applicant states that "weed control will probably be by selective spraying . . . by hand with approved herbicides. Since reclamation of this area is not planned to begin for at least 30 years methods will depend on the technology that exists then. Methods will be submitted to the regulatory authority for approval before implementation."

Temporary and contemporaneous reclamation should be addressed by the applicant, including: methods to be employed for seeding and mulching; seed mix(es) to be used for topsoil stockpile stabilization; and outslopes on dams, embankments, road cuts, etc., and irrigation and pest (weed) control measures (if used) UMC 817.100.

DETERMINATION OF COMPLETENESS

The applicant has stated that disturbed areas will be reclaimed as contemporaneously as possible. They have submitted a seed mix that they propose to use on all temporary reclamation areas, including topsoil stockpiles.

784.14 Reclamation Plan: Protection of Hydrologic Balance

(b)(1) The plant diversion ditch (plate 15-1 and 15-10) has no apparent outlet point. Applicant must specify outlet for diversion.

It is not clear how the ground water swell occurring from irrigation flows will be diverted. Please clarify.

DETERMINATION OF COMPLETENESS

Applicant has provided a revised plate indicating the diversion outlet structure location. The diversion proposed will divert flood irrigation flows from adjacent agricultural lands.

(c) Describe the means utilized to estimate TDS at 5,000 to 10,000 mg/l for the slurry cell seepage. Upon commencement of operations, a toxicity report should be supplied for the slurry refuse and coarse refuse to justify minimal impact to the ground water regime.

DETERMINATION OF COMPLETENESS

The assumption for TDS concentration in seepage flow has been substantiated.

Consol will submit an EP toxicity analysis for the slurry cell and coarse refuse upon commencement of operations.

On page 15-36, it states that initial samples from slurry cell monitoring wells will be submitted for complete major and minor components. Has ground water monitoring begun in the six wells designated? Seasonal variation in baseline data must be submitted prior to commencement of surface operations. A list of water monitoring parameters should be submitted as part of the permit application.

DETERMINATION OF COMPLETENESS

Baseline monitoring of ground water has not been initiated. A list of the parameters to be evaluated has been submitted.

784.16 Reclamation Plan: Ponds, Impoundments, Banks, Dams and Embankments

(e) The applicant must demonstrate that sufficient material is available to line the slurry cells with two feet of compacted shale. If a borrow area is utilized, the applicant must address the disturbance and reclamation of these areas in terms of the appropriate regulations. A materials balance should be provided showing the volume of material to be excavated, placed as a liner and liner protector, stockpiled and used in the embankment.

DETERMINATION OF COMPLETENESS

Consol has provided a cut and fill materials balance for soil excavation and borrow area material.

(e)(1) Information, such as drill logs, used to determine the ground water levels in the alluvium and Ferron Sandstone and the top of the Blue Gate Shale should be provided. Field work and/or analyses used to determine the permeabilities of material underlying the refuse area (page 15-29, 0.06 ft/day to 2.70 ft/day) and information on how the void ratios and volumetric water content were determined should be provided.

(e)(3) The assumption that the pore-size distribution is between one and three must be verified (page 15-32). McWhorter and Nelson (1979) state only that the equation is viable for strata with a pore-size distribution between one and three not that this situation is always true.

The information used for the determination of porosity and the basis of the assumption of the value of specific retention stated on pages 15-32, 15-33 and 15-34 should be provided.

How was the value for the water level of 2.7 feet in the fine refuse determined? It appears that from the cell bottom to the top of the dewatering pipe is 2.25 ft.

DETERMINATION OF COMPLETENESS

Applicant has provided an explanation for use of the various values in the equations for defining pore size distribution, permeability, void ratios and volumetric water content.

The value for the proposed maximum water level in the slurry cell has been discussed. An assurance is provided that the dewatering pipe will be extended as operation of the cell requires.

784.19 Underground Development Waste

Applicant must provide plans for the disposal area-material stockpile area shown on plate 15-1B. Pursuant to 784.11(b)(2)(4) submit a narrative explaining the construction, use, maintenance and removal of the stockpile. Submit maps and cross sections of the stockpile in accordance with 784.23(b)(5). The stockpile is considered an underground development waste disposal area and should comply with the requirements under 784.19 and 817.71-.74 (underground development waste is defined as mixtures of materials that are excavated, moved and disposed of during development and preparation of areas incident to underground coal mining activities). Plate 15-13 portrays the excess waste disposal area off the earth embankment dike (noted from cross-section). Applicant must clarify extent of this waste disposal area.

DETERMINATION OF COMPLETENESS

Applicant has clarified the fact that the stockpile indicated on Plate 15-1B is a soil stockpile. All soil stockpiles and the coarse refuse waste disposal area are clearly delineated on new plates.

784.20 Subsidence Control Plan

The subsidence analysis presented by the applicant for the area around the slurry pond and refuse pile did not include an analysis of the effects of retreat mining. Overlaying plates 15-16 and 21-1 indicate that retreat mining will occur in this area in the mid-1980's. Subsidence from this operation and its potential effects on the refuse pile and slurry pond should be carefully analyzed by the applicant.

DETERMINATION OF COMPLETENESS

Applicant has revised a plate to more clearly indicate that retreat mining will not occur beneath the slurry cells.

784.24 Transportation Facilities

The following information should be submitted to show compliance with the designated regulation:

784.11(b)(3) Pursuant to UMC 817.155, .165 discuss general road maintenance. Include sections of 817.95(b)(1-8) as applicable.

Pursuant to UMC 817.156, .166(a)(2) discuss plans for restoration of natural drainage patterns upon final reclamation of roads (submit a postmining topographical map).

784.13(b)(1) Applicant discusses reclamation of roads in 15.3.5.3, page 15-24; however, the detailed time-table for reclamation (Vol. I, 3.5.6.1, page 3-59) does not include removal and reclamation of roads.

784.24(a) Pursuant to UMC 817.153, .163 submit drainage ditch design and flow calculations for drainage ditches parallel to proposed roads.

Applicant shows cross section and profile of 3-120" culverts for Quitchupah Creek crossing. Submit design criteria and calculations used for culvert design. Pursuant to 817.153(c)(1)(i)-.163, culverts should be sized to safely pass the 10-year, 24-hour precipitation event. Plans for compliance with 817.153(c)(1)(ii-v)-.163 must be submitted.

817.152, .162 The applicant must provide plans for replacement of topsoil and vegetation on cut and fill slopes on the entrance road in compliance with 817.152, .162(c)(2) and d(14).

The applicant must provide plans for placement of fill material on the main entrance road in lifts in compliance with parts 817.152(d)(3) or (4) and (5) through (9).

817.163(c) The applicant must provide plans to install culverts along the coal refuse haulage road that meet the requirements of part (2)(i). Culvert design must incorporate the requirements of Parts (2)(iv) through (vi).

DETERMINATION OF COMPLETENESS

Consol has provided plans for the drainage structures associated with the roads, the stabilization of the road embankments and the maintenance procedures to be used on the roads.

UMC 817.21-.25 Topsoil: General Requirements

Applicants must supply a soils map of the permit area with an overlay of the proposed area of disturbance for the prep plant and supporting facilities.

Applicant must provide chemical and physical analysis for the Rafael silty clay loam to justify its use as a growth medium.

The applicant's mine plan proposes to remove two different depths and volumes of topsoil from the same area. Table 15-1 states one removal depth and volume while Table 8-7 indicates a different removal depth and volume. Applicant must indicate which proposed depth of topsoil is to be removed as well as total volume to be removed.

Applicant must provide a map outlining the exact location and dimensions of the topsoil stockpile. Pursuant to UMC 784.23(b)(5), a cross section map of each topsoil stockpile must also be provided.

Pursuant to UMC 783.24 Prime Farmland Investigation, the applicant must provide a letter from Theron B. Hutchings, State Soil Scientist, indicating concurrence or nonconcurrence with applicant's findings.

The applicant should clarify whether or not vegetation cover will be removed prior to topsoil stockpiling. The applicant must commit to a soil testing plan if shown to be necessary for reclamation pursuant to UMC 817.25.

Applicant must address the method to be used for final reclamation of topsoil stockpile areas.

DETERMINATION OF COMPLETENESS

Applicant has submitted an appropriate map with soils overlaying the disturbed area. Further review of the mine plan will be delayed until the analytical data are received.

Applicant has not submitted chemical and physical data on the Rafael silty clay loam.

Applicant has clarified proposed depth of topsoil and subsoil removal.

A new plate with clear delineations and a typical cross section of a soil stockpile has been submitted.

A letter from the SCS is included.

Applicant has discussed methods to be utilized for soil stockpiling and revegetation. A soil monitoring plan will be instituted as required.

817.93 Coal Processing Waste: Dams and Embankments: Design and Construction

The performance standards listed in this section must be addressed for the coarse refuse dike. The earth embankment has been adequately addressed for this section.

DETERMINATION OF COMPLETENESS

Consol has stated that the coarse refuse dike will actually be within the slurry cells for use as a filtering dike. It will serve no structural purpose and, therefore, is not required to meet the performance standards.

817.97 Wildlife Resources

Further description of field procedures used to supplement existing data should be submitted (UMC 771.23[c and d]). Specifically:

1. The names of the individuals who collected and analyzed the data.
2. Specific dates and time for all study periods rather than the time ranges provided (i.e., dates and time of aerial surveys, aquatic surveys, etc.).

3. Descriptions of the methodology used to collect and analyze the data; including sample sizes, techniques used for determining density and diversity of benthic invertebrates (i.e., sample size, site of collection, method used in collecting, etc) the number of times each habitat was traversed to determine habitat preference, etc.

DETERMINATION OF COMPLETENESS

The applicant has provided the further descriptions of the field procedures for obtaining wildlife data on pages 38-41 of the ACR response.

817.101-.103 Backfilling and Grading

Applicant has submitted a backfilling and grading reclamation plan: Vol. 1.0, 3.5.4 and Vol. 11.0 - 15.3.5.3. Pursuant to 784.13(b)(3) and 784.23(b)(11), submit contour maps or cross sections which show the anticipated final surface configuration of all facilities within the proposed permit area which will assure proper drainage and stability of land surfaces.

Pursuant to 817.85(d), applicant must specify that the coal processing waste will be covered with four feet of the best available nontoxic material. The availability of this material in sufficient quantities must be demonstrated or chemical analysis of the material should be provided to demonstrate that it is nontoxic. 15.3.5.4 addresses topsoil depths to be replaced for reclamation of the coarse refuse and slurry disposal areas. However, there is no justification based on a toxicity analysis.

DETERMINATION OF COMPLETENESS

A new plate on postmining topography has been submitted.

An estimated volume of available materials is given with a depth of cover of about five feet provided over the refuse disposal area. The applicant should clarify whether this applies to both the coarse waste and the slurry cell.