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State of Utah  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

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October 12, 1994

Mr. Val Payne, Sr. Environmental Engineer  
PacifiCorp  
P. O. Box 1005  
Huntington, Utah 84528

Re: Deficiencies in Overland Conveyor Submittal, PacifiCorp, Cottonwood/Wilberg Mine, ACT/015/019-94G, Folder #3, Emery County, Utah

Dear Mr. Payne:

The Division has completed a review of your plans for an overland connection conveyor at the Cottonwood/ Wilberg Mine. Your proposal cannot be approved at this time due to the number of deficiencies in your plan. A copy of the technical review is enclosed for your information. Items discussed in the review will need to be adequately addressed before your application can be approved.

Please call me, if you have any questions.

Sincerely,

A handwritten signature in cursive script that reads "Daron R. Haddock".

Daron R. Haddock  
Permit Supervisor

cc: P. Grubaugh-Littig  
S. Johnson  
J. Kelley  
H. Sauer  
S. White

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# TECHNICAL REVIEW

OVERLAND CONVEYOR AMENDMENT 94G  
PACIFICORP  
Cottonwood Mine  
ACT/015/019

October 11, 1994

## ANALYSIS

### ***Rule Citation: R645-301-116.100. & R645-301-521.141.***

Each permit application will state the anticipated or actual starting and termination date of each phase of the coal mining and reclamation operation and the anticipated number of acres of land to be affected during each phase of mining over the life of the mine.

Mine maps and permit area maps must clearly indicate the boundaries of all areas proposed to be affected over the estimated total life of the coal mining and reclamation operations, with a description of size, sequence and timing of the mining of subareas for which it is anticipated that additional permits will be sought; the coal mining and reclamation operations to be conducted, the lands to be affected throughout the operation, and any change in a facility or feature to be caused by the proposed operations.

### ***Findings:***

The permittee has not provided a disturbed area boundary map. The map must include the areas which are anticipated to be disturbed during construction, operations and reclamation.

### ***Rule Citation: R645-301-222.400.***

Present and potential productivity of existing soils.

### ***Findings:***

The permittee must provide present and potential productivity statements for the soils identified in the Order I Soil Survey report (Nyenhuis Feb, 1993).

### ***Rule Citation: R645-301-231.400.***

Narrative that describes the construction, modification, use and maintenance of topsoil handling and storage areas.

### ***Findings:***

The permittee has proposed the removal of subsoil material from the Cottonwood Fan Portal (CFP) Subsoil Pile and underlying lithologic material which will be encountered during portal excavation operations. The material, as proposed, will be used as a plant

growth medium for the reclamation of the CFP. The material which remains within the CFP Subsoil Pile will then be use as the plant growth medium for the reclamation of the conveyor and portal area.

The permittee must submit mass balance calculations and material handling plans which demonstrate that ample quantities of material exists to attain the aforementioned soil handling proposal and reclamation of the CFP and the disturbance created by Overland Conveyor and associated portals.

***Rule Citation: 232. Topsoil and Subsoil Removal.***

232.100. All topsoil will be removed as a separate layer from the area to be disturbed, and segregated.

**Findings:**

The topsoil/subsoil/lithologic removal plan as described in the soil survey report greatly differs from that which is described and depicted in the design drawings submitted. The permittee must describe the soil/subsoil/lithologic removal plan.

The current submittal does not provide information about the new storage location for this soil. PacifiCorp has spoken in the past about using this material in reclaiming the fan portal to the south of these proposed facilities, but have not included official documentation about this plan or any other soil storage plan. Specific information about the removal and storage of topsoil and subsoil materials must be provided.

***Rule Citation: R645-301-232.200.***

Where the topsoil is of insufficient quantity or poor quality for sustaining vegetation, the materials approved by the Division in accordance with R645-301-233.100 will be removed as a separate layer from the area to be disturbed, and segregated.

**Findings:**

In accordance with R645-301-233.100 the permittee must demonstrate the suitability of the lithologic material underlying the CFP Subsoils Pile.

**Rule Citation: R645-301-234.200. thru 234.230 Stockpiled materials will:**

- 234.210. Be selectively placed on a stable site within the permit area;
- 234.220. Be protected from contaminants and unnecessary compaction that would interfere with revegetation;
- 234.230. Be protected from wind and water erosion through prompt establishment and maintenance of an effective, quick growing vegetative cover or through other measures approved by the Division.

**Findings:**

The permittee must demonstrate that the aforementioned regulations will be fulfilled in reference to the stockpiled subsoil material that is to remain and be used as a plant growth medium for the reclamation of the disturbance associated with the overland conveyor and portals.

**Rule Citation: R645-301-240. Reclamation Plan.**

241. General Requirements. Each permit application will include plans for redistribution of soils, use of soil nutrients and amendments and stabilization of soils.

**Findings:**

The permittee must address the aforementioned regulation with regard to the reclamation of the overland conveyor and portals.

**Rule Citation: R645-301-300. Biology.**

- 320. Environmental Description.
- 321. Vegetation Information.

**Findings:**

R645-301-321.200. The productivity of the land before mining (reference area) has not been described. Usually the SCS will provide a site evaluation of the reference area production and a provide a condition classification.

**Rule Citation: 340. Reclamation Plan.**

Findings:

R645-301-342.100. The plan fails to describe the enhancement measures that will be used during the reclamation and postmining phase of operation to develop aquatic and terrestrial habitat. Enhancement measures must be developed and described for the reclamation of the conveyor area.

Findings:

R645-301-353.120. The proposed final reclamation seed mixture should be amended to include shrub and tree species which are native to the area and compatible with the post mining land use. The proposed Mormon tea, rabbitbrush, and blue spruce should be deleted and species such as winterfat, mountain mahogany, and skunk bush added. Mormon tea is found in the reference area however mined land reclamation in the area has have very limited success with this species.

**Rule Citation: 356. Revegetation: Standards for Success.**

Findings:

R645-301-356.110. The Division's Vegetation Information Guidelines, identifies ground cover as total aerial projection covered by vegetation, rock and/or bare ground. The ground cover cannot exceed 100%. The vegetation description of the conveyor area separates out the overstory cover from the understory cover and compares only the understory cover to total vegetative cover of the reference area. When comparing the total vegetative cover of the conveyor site to total vegetative cover on the reference area, the conveyor site has statistically (Student's t-test) greater vegetative cover than the reference area. This contradicts the conclusion in the vegetation report of equal cover on the conveyor site and reference area. While the proposed reference area is approved as a standard for the reclamation success, the sampling and comparison methods are not. Therefore, the plan must discuss and describe the vegetation sampling and success standards to be used for bond release as approved in the Division's Vegetation Information Guidelines.

R645-301-356.210. The permit states that the general permit area is used for livestock grazing, however grazing is limited on the steep slopes. The permit is unclear as to the exact post mining land use of the conveyor area. The plan must describe the post mining land use so that the Division can determine if the success standards for production of living plants on the revegetated area is applicable for this site.

R645-301-356.230. The Division is suggesting a success standard of 1000 tree or shrubs per acre for the conveyor site. The operator must commit to this standard while approval from other agencies is obtained.

***Rule Citation R645-301-400. Land Use.***

410. Land Use.

411. Environmental Description.

**Findings:**

R645-301-411.100. The plan must provide a statement concerning the condition and capability of the land which will be affected by mining. This description will also satisfy the deficiency identified in R645-301-321.200.

R645-301-411.140. The plan must provide the extent of the area which is associated with the Old Johnson Mine, which is of historic significance and has the potential for nomination to the National Register. The report in the permit concludes that the site as an integral unit is significant. The site includes two walled-in portals, a mine terrace associated with the portals, the remnants of a coal slide or shoot, a storage area under a rock walled boulder, an outhouse, and the old weigh house structure. This area must be shown on the construction drawing in order to determine if the proposed work will impact this area. The plan must also state any appropriate mitigation, treatment or avoidance measures taken to protect the site.

***Rule Citation R645-301-521.160***

**Findings:**

The graphic portion of the amendment submittal consists only of construction drawings which are not suitable for inclusion in the mine plan. The amendment submittal must include properly-formatted maps and plans which show buildings and surface facilities, disturbed area boundaries, permit area boundaries, topsoil stockpiles, etc..

***Rule Citation R645-301-526***

***Findings:***

The amendment submittal must contain a commitment to provide the required photographs of the new surface facilities.

***Rule Citation R645-301-527***

***Findings:***

The amendment submittal must classify the crane access road as either 'primary' or 'ancillary.' Also, the submittal must make clear the disposition of the road. The road is labeled 'temporary,' but the submittal does not explain whether it is to be reclaimed immediately after the conveyor is complete or retained until final reclamation.

***Rule Citation R645-301-534***

***Findings:***

See R645-301-527.

***Rule Citation R645-301-542.200***

***Findings:***

The amendment submittal must contain maps and cross sections which show the anticipated final surface configuration. The cover letter which accompanies the submittal says that reclamation cross sections are found in Appendix III, but no such cross sections exist.

The submittal also needs intelligible volume estimates. The cut-and-fill tables on the construction drawings are very confusing. Those tables include cross sections which are not shown on the corresponding maps and the numbers they present do not match the volume estimate presented in the reclamation cost estimate.

Most of the material stored in the vicinity of the proposed facilities will be used to reclaim the Old Fan Portal site. Since this proposal is thus tied to the reclamation of the Old Fan Portal site, the submittal must show where that material will be stored and contain a

demonstration that the volume of stored material is adequate.

***Rule Citation R645-301-542.600***

***Findings:***

The crane access road and pad are shown mostly unreclaimed in the cross sections of Drawing L-7. The submittal must provide for a more complete reclamation of this road and pad.

***Rule Citation R645-301-542.800***

***Findings:***

Most of the reclamation cost calculations are found in the cover letter which accompanies the amendment submittal. These calculations must be incorporated into the text of the mine plan.

***Rule Citation R645-301-553.130***

***Findings:***

The submittal must include a demonstration that the reclaimed slopes will achieve a stability safety factor of at least 1.3.

***Rule Citation R645-301-742***

**Sediment Control Measures. Appropriate sediment control measures will be designed, constructed and maintained using the best technology currently available.**

PacifiCorp describes the Conveyor Pad area and the Diesel Portal Apron as having some type of filtering sediment control at an outlet point on each pad. This point will be the lowest point on the pad and the flow off of each pad will be routed to the respective filtration device. It is assumed that the sediment control measure will be a conventional filtering device such as a silt fence or straw bales. The flow from these areas will go into one of two new culverts: across the road in an existing 36-inch culvert or into an existing 66-inch culvert which routes undisturbed flow around the Trail Mountain Mine facilities.

Two bents will be constructed with this project. The Bent #2 will be located on the Cottonwood/Wilberg Mine side of the county road. Water off of the disturbed area for this bent will flow through a road drainage into an existing sediment trap which will act as an alternate sediment control. The Bent #1 will be located within the disturbed area of the Trail Mountain Mine facilities. This area already reports to a sediment pond and no drainage changes are planned. A temporary crane pad will be built below the conveyer portal; drainage from this area will also report to the sediment trap, via the road drainage.

***Findings:***

PacifiCorp has provided some information about sediment control on the conveyer portal pad and the diesel apron, but have given no specific details about the type of filtering device that will be used (i.e. silt fence). All other facilities on the Cottonwood/Wilberg side appear to be treated in a sediment trap that is already in use; however, there are no statements in the proposal that clarify this. The new facilities on the Trail Mountain side will be located within an area that is treated by an existing pond; therefore, no new sediment control considerations need to be made at the operational stage.

***Deficiencies:***

1. PacifiCorp must provide specific information on the type of sediment control proposed for the conveyer pad and diesel apron.
2. Information clarifying the drainage of water from the crane pad and Bent #2 into the sediment trap must be supplied.
3. PacifiCorp has not included plans showing the sediment control for the reclamation phase of the facilities. Information on reclamation sediment control measures must be supplied.

***Rule Citation R645-301-742.300  
Diversions.***

PacifiCorp has designed two culverts to route flow from the new pad created at the openings of the proposed portals. They have designed a 6-inch culvert to route the 100-year, 6-hour storm event from the conveyer pad into the undisturbed drainage. The water will pass through a sediment control method prior to entering the culvert. PacifiCorp has proposed an 18-inch culvert to run under the concrete apron at the diesel portal. This culvert will route water from the 100-year, 6-hour storm event off of the hillside and roadway by the apron.

Treated water from the apron will flow through a drop inlet into the culvert. All newly proposed culverts are to carry undisturbed or treated water only.

**Rule Citation R645-301-764**

**Structure Removal. The application will include the timetable and plans to remove each structure, if appropriate.**

Reclamation plans for the facilities have been included as cost estimates for bonding proposes.

**Findings:**

The reclamation time table for the temporary crane pad, portals, concrete apron, conveyer, and bents is not included in the plan. There are no designs for post reclamation drainage and interim sediment control for the reclaimed disturbed areas. There is no mention in the plan about reclamation of the culverts.

**Deficiency:**

1. Reclamation time tables and information on the reclamation of drainages and culverts must be submitted.