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

Michael O. Leavitt
Governor
Kathleen Clarke
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December 17, 1998

Tim Kirschbaum, Environmental Engineer
Consolidation Coal Company
P. O. Box 566
Sesser, Illinois 62884

Re: Remaining Deficiencies from Midterm Permit Review, Consolidation Coal Company, Emery Deep Mine, ACT/015/015, File #3, Emery County, Utah

Dear Mr. Kirschbaum:

The Division has reviewed the reclamation cost information you provided as a response to the Midterm permit review for the Emery Deep Mine. While the provided information was helpful, it is still not considered adequate to allow the Division to produce an accurate reclamation cost estimate. Additional information will need to be supplied. Enclosed you will find a technical memo which discusses the deficiencies in your cost estimate. Please review it carefully and provide a complete response to the deficiencies by no later than February 1, 1999. You may find it useful to contact Wayne Western of my staff at (801) 538-5263 to further discuss the requirements.

Thank you for your help in completing this review. If you have any questions regarding these requirements or the Midterm Review please don't hesitate to call.

Sincerely,

A handwritten signature in black ink that reads "Daron R. Haddock".

Daron R. Haddock
Permit Supervisor

tam
enclosure

cc: Wayne Western
Dave Darby
Price Field Office

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December 15, 1998

TO: File

THRU: Daron Haddock, Permit Supervisor

DRH

FROM: Wayne H. Western, Senior Reclamation Specialist

WHW

RE: Midterm Review of the Reclamation Cost Estimate, Consolidation Coal Company, Emery Deep Mine, ACT/015/015-98MT, Emery County, Utah

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SUMMARY:

The Division reviewed the reclamation cost estimates received from the Permittee on Nov. 24, 1998. The Division found that the reclamation cost estimates are deficient. Those deficiencies are listed in the analysis section of this technical analysis.

Technical Analysis:

BONDING AND INSURANCE REQUIREMENTS

Regulatory Reference: 30 CFR Sec. 800; R645-301-800, et seq.

Determination of bond amount.

Analysis:

The reclamation cost estimate was received on Nov. 24, 1998. The cost estimate is divided into six sections: Structure Demolition and Removal, Backfilling and Grading, Topsoil Preparation and Distribution, Revegetation, Erosion Control and Incidental Disturbance. The Division's analysis of each reclamation cost estimate section is as follows:

Structure Demolition and Removal

The Division reviewed the demolition cost estimate for each structure listed in the reclamation cost estimate. The Division uses Means to determine the demolition cost for most structures. Means cost for demolition is based on the building type and size. The Permittee did not state what types of materials were used to construct the buildings, i.e., steel, concrete, masonry, or mixed. Without that information the Division is unable to verify the demolition cost.

The Permittee did not state how they will dispose of building debris. The Means costs for demolition do not include debris disposal. The demolition costs do include demolition and transporting the debris 20 miles. Disposal costs are localized items. Therefore, Means does not include disposal cost in the demolition unit costs. The Division uses fee schedules from local disposal facilities to determine the unit

cost for debris disposal.

The Division does not consider salvage value when estimating reclamation costs. However, the Division will allow a permittee to assume that steel can be disposed of at a scrap facility. The only cost associated with sending steel to a scrap facility is transportation. Therefore, the Division recommends that all steel be shipped to a scrap facility for disposal.

The concrete demolition costs in Means are based crews and equipment that are usually found at small demolition sites. Therefore, the Means unit costs for concrete demolition are not what the Division would expect for large demolition projects. The Division developed unit costs for concrete demolition based on an excavator equipped with a hydraulic hammer. The Division's unit cost for concrete demolition is \$60 per cubic yard. The Means unit cost for concrete demolition ranges between \$77 to \$107 per cubic yard.

The Permittee did not include the disposal cost for concrete. The Division usually allows the Permittee to dispose of concrete on site.

The following is a list of deficiencies for each structure.

- Tipple (including Stacker & Reclaim Tunnel)

The building type (steel, concrete, masonry, or mixed types) must be identified.

The disposal cost for the building debris must be included. The disposal cost includes dump fees and transportation cost more than 20 miles.

The disposal fee for conveyor must be identified. Steel may be shipped to scrap dealers. The cost to dispose of steel scrap is usually assumed to be the transportation cost to send the steel scrap to a remelt facility.

The volume of all heavy concrete structures and the volume of concrete in the reclaim tunnel must be given. The Permittee must also describe the disposal method for concrete.

- Tipple Control Station

The building type (steel, concrete, masonry, or mixed types) must be identified.

The disposal cost for the building debris must be included. The disposal cost includes dump fees and transportation cost more than 20 miles.

The volume of the heavy concrete flooring must be given. The Permittee must also describe the disposal method for concrete.

- Tipple Transformer Building

The building type (steel, concrete, masonry, or mixed types) must be identified.

The disposal cost for the building debris must be included. The disposal cost includes dump fees

and transportation cost more than 20 miles.

The volume of the light concrete must be given. The Permittee must also describe the disposal method for concrete.

- Steam Cleaner Building

The building type (steel, concrete, masonry, or mixed types) must be identified.

The disposal cost for the building debris must be included. The disposal cost includes dump fees and transportation cost more than 20 miles.

The volume of the light concrete must be given. The Permittee must also describe the disposal method for concrete.

- Transformer Storage Pad

The building type (steel, concrete, masonry, or mixed types) must be identified.

The disposal cost for the building debris must be included. The disposal cost includes dump fees and transportation cost more than 20 miles.

The volume of the heavy concrete must be given. The Permittee must also describe the disposal method for concrete.

- Mine Substation

The volume of the light concrete must be given. The Permittee must also describe the disposal method for concrete. Usually concrete is disposed at the site.

The equipment demolition (transformer) must be included.

The type of earthwork must be described.

- Rockdust Silo

The building type (steel, concrete, masonry, or mixed types) must be identified.

The disposal cost for the building debris must be included. The disposal cost includes dump fees and transportation cost more than 20 miles.

- Mine Fan Building

The building type (steel, concrete, masonry, or mixed types) must be identified.

The disposal cost for the building debris must be included. The disposal cost includes dump fees and transportation cost more than 20 miles.

The volume of the heavy concrete must be given. The Permittee must also describe the disposal method for concrete.

- Foreman's Office Trailer

The building type (steel, concrete, masonry, or mixed types) must be identified.

The disposal cost for the building debris must be included. The disposal cost includes dump fees and transportation cost more than 20 miles.

- Warehouse/Office Building

The building type (steel, concrete, masonry, or mixed types) must be identified.

The disposal cost for the building debris must be included. The disposal cost includes dump fees and transportation cost more than 20 miles.

The volume of the concrete must be given. The Permittee must also describe the disposal method for concrete.

- Fresh Water Treatment Building

The building type (steel, concrete, masonry, or mixed types) must be identified.

The disposal cost for the building debris must be included. The disposal cost includes dump fees and transportation cost more than 20 miles.

The volume of the concrete must be given. The Permittee must also describe the disposal method for concrete.

- Explosives Storage Building

The building type (steel, concrete, masonry, or mixed types) must be identified.

The disposal cost for the building debris must be included. The disposal cost includes dump fees and transportation cost more than 20 miles.

- Bathhouse (3 modular trailers)

The building type (steel, concrete, masonry, or mixed types) must be identified.

The disposal cost for the building debris must be included. The disposal cost includes dump fees and transportation cost more than 20 miles.

- Truck Scale - New

The building type (steel, concrete, masonry, or mixed types) must be identified.

The disposal cost for the building debris must be included. The disposal cost includes dump fees and transportation cost more than 20 miles.

The volume of the concrete must be given. The Permittee must also describe the disposal method for concrete.

Identify the scrap disposal facility.

- Bridge Quitchupah Creek

The Permittee must also describe the disposal method for concrete.

- Sewage Pumping Station

The building type (steel, concrete, masonry, or mixed types) must be identified.

The disposal cost for the building debris must be included. The disposal cost includes dump fees and transportation cost more than 20 miles.

The volume of the concrete must be given. The Permittee must also describe the disposal method for concrete.

- Borehole Pump Facilities

The volume of the concrete must be given. The Permittee must also describe the disposal method for concrete.

- Remove Powerline

The information is considered adequate.

- Metal Storage Building

The building type (steel, concrete, masonry, or mixed types) must be identified.

The disposal cost for the building debris must be included. The disposal cost includes dump fees and transportation cost more than 20 miles.

The volume of the concrete must be given. The Permittee must also describe the disposal method for concrete.

- Surface Storage Tank Containment Area

The disposal cost for the building debris must be included. The disposal cost includes dump fees and transportation cost more than 20 miles.

The volume of the concrete must be given. The Permittee must also describe the disposal method

- for concrete. Usually concrete is disposed at the site.
100,000 Gallon Water Tank

The disposal cost for the building debris must be included. The disposal cost includes dump fees and transportation cost more than 20 miles.

The volume of the concrete must be given. The Permittee must also describe the disposal method for concrete.

- Stoker Oil Heater Enclosure

The building type (steel, concrete, masonry, or mixed types) must be identified.

The disposal cost for the building debris must be included. The disposal cost includes dump fees and transportation cost more than 20 miles.

- NPDES Outfalls

The volume of the concrete must be given. The Permittee must also describe the disposal method for concrete.

- Storage Trailers (3)

The building type (steel, concrete, masonry, or mixed types) must be identified.

The disposal cost for the building debris must be included. The disposal cost includes dump fees and transportation cost more than 20 miles.

Backfilling and Grading

The Permittee listed 15 backfilling and grading steps. The Permittee listed the volume of material to be moved and assumed a unit cost of \$2.50 per cubic yard. The Division needs to have detailed earthwork calculations. Those calculations must include, the volume of material to be moved, the equipment that will be used, the haul distance and grade. See the worksheet in the OSM Handbook for Calculation of Reclamation Bond Amounts for details.

Topsoil Preparation and Distribution

The Permittee listed the volume of topsoil to be placed and assumed a unit cost of \$2.50 per cubic yard. The Division needs to have detailed earthwork calculations. Those calculations must include, the volume of material to be moved, the equipment that will be used, the haul distance and grade. See the worksheet in the OSM Handbook for Calculation of Reclamation Bond Amounts for details.

Revegetation

The Permittee stated that the average cost to seed an acre will be \$425/acres. The unit cost is an average of the different application rates for areas less than 10% slope and greater than 10% slope.

The Permittee must reference the sources for unit costs and state how many acres have slopes greater than 10%. The Division usually uses the Means unit costs for vegetation work.

Erosion Control

The Permittee stated that the average cost for sediment control would be \$500/acres. The Permittee did not state how the cost was calculated. The Permittee must provide the Division with references for the unit costs.

Findings:

The information provided in the response to the midterm review is not considered adequate to meet the requirements of this section. Prior to approval, the Permittee must provide the following in accordance with:

R645-301-830 and R645-301-122, The reclamation cost estimate must include detailed cost estimates and reference for the unit costs. The complete list of deficiencies is listed in the analysis section. The following is a summary of the deficiencies:

- **Structure Demolition and Removal**

The Permittee must give the Division the type of material used to construct the buildings, how the debris will be disposed, the volume of all concrete structures and how the concrete rubble will be disposed. The volumes of the concrete structures are needed to calculate the rubble volume.

- **Backfilling and Grading**

The Permittee must give the Division detailed cost estimates for all earthwork. The cost estimate must include the volume of material to be moved, the equipment to be used, the haul distances and grades.

The Division requests that the Permittee give the Division all reclamation cross section that are compatible with AutoCad 14. The Division can use the AutoCad files to verify volumes, haul distances, grades and centroids.

- **Topsoil Preparation and Distribution**

The Permittee must give the Division detailed cost estimates for all earthwork. The cost estimate must include the volume of material to be moved, the equipment to be used, the haul distances and grades.

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The Division requests that the Permittee give the Division all reclamation cross section that are compatible with AutoCad 14. The Division uses the AutoCad files to verify volumes, haul distances, grades and centroids.

- **Revegetation**

The Permittee must give the Division the references used to calculate the unit costs. The Permittee must state how many acres have slopes greater than 10%.

- **Erosion Control**

The Permittee must give the Division the references used to calculate the unit costs.