

2019



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

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July 28, 1997

TO: File

THRU: Daron Haddock, Permit Supervisor 

FROM: Robert Davidson, Soils Reclamation Specialist 

RE: Response to Deficiencies - Technical Analysis of the Mining and Reclamation, Coastal States Energy Company, Dugout Canyon, ACT/007/039, Folder #2, Carbon County, Utah

SUMMARY:

The Mining and Reclamation Permit Application Package (M&RP) was received from Coastal States Energy Company on March 15, 1996 for the proposed Dugout Canyon Mine. A Technical Analysis (TA) review was completed in August 1996. Canyon Fuel Company responded to the TA deficiencies on May 19, 1997. This TA reviews the responses made in the soils section.

TECHNICAL ANALYSIS:

ENVIRONMENTAL RESOURCE INFORMATION

SOILS RESOURCE INFORMATION

Regulatory Reference: 30 CFR Sec. 783.21, 817.200(c); R645-301-220, -301-411.

Analysis:

The Response to Deficiency submittal did not satisfactorily address the following deficiencies:

- Soil Survey - Additional soil-test pits are needed in the water tank and pump house area.

Soil Survey - Additional soil-test pits are needed in the water tank and pump house area.

Additional soil-test pits are needed in the water tank area, to sample both the OB and TS soils. In addition, if disturbance is going to occur in the Rock outcrop-Rubbleland-Travessilla #96-soils on hillsides immediately northwest of the facilities area, then the specific soil survey needs to include soil-test pits in these currently undisturbed areas. These additional sample pits are needed to more accurately assess and optimize soil salvage supplying background data for soil depth and characteristics.

Findings:

The permittee must provide the following, prior to approval, in accordance with the requirements of:

R645-301-220, Additional soil pits are needed to more accurately assess and optimize soil salvage. These include: (1) Additional soil-test pits are needed in the water tank area, and (2) if disturbance is going to occur in the Rock outcrop-Rubbleland-Travessilla #96-soils on hillsides immediately northwest of the facilities area, then the specific soil survey needs to include soil-test pits in these currently undisturbed areas.

OPERATION PLAN

TOPSOIL AND SUBSOIL

Regulatory Reference: 30 CFR Sec. 817.22; R645-301-230.

Analysis:

The Response to Deficiency submittal did not satisfactorily address the following deficiencies:

- Soil Removal - Salvage all undisturbed and appropriate disturbed soils.
- Soil Salvage - Provide a Soil Scientist during salvage to optimize soil salvage.
- Appendix 2-5 - All calculations need surface area and soil depth amounts.

Soil Removal - Salvage all undisturbed and appropriate disturbed soils.

Since topsoil is of insufficient quantity, soil salvage will not only include the undisturbed soils (TS and #96), but also previously disturbed soils, overburden material and subsoils. All topsoil will be salvaged, including all subsoil. The SOIL RESOURCE SECTION provides adequate information on the excellent quality of the TS subsoil, B and C horizons. The undisturbed TS soils are deep rich mollisols, with deep subsoils of excellent quality material available for salvage. In addition, it is unclear if any undisturbed soils marked #96 will sustain new disturbance since these areas are within the disturbed boundary. These southwest facing, undisturbed soils need to be identified for salvage if disturbance will occur in these buffer zones.

Soil salvage will include much of the appropriate overburden as identified in the soil survey. Although much of the mine area is considered disturbed, the two test pits (TP2 & TP3) show that much of the overburden material is an acceptable substitute topsoil and suitable growth medium for reclamation, with the exception of the percentage of rock fragments. The Division recognizes that native soils and disturbed soils contain high percentages of rock fragments, is inevitable and does not present a reclamation hazard. Indeed, to reclaim and restore the land to pre-mining conditions will require soils with indigenous rock fragment volumes and contents. Therefore, it is not only desirable to salvage soils containing intrinsic rock fragments, but the Division now requires that soils be salvaged containing natural rock and no longer accepts the rationale that high rock-content soils not be salvaged.

Soil Salvage - Provide a Soil Scientist during salvage to optimize soil salvage.

The Division requests that a non-biased, third party, professional soil scientist be on-site during soil salvage to monitor and supervise soil salvage operations for the purpose of maximizing soil salvage volumes and quality.

Appendix 2-5 - All calculations need surface area and soil depth amounts.

Appendix 2-5 includes soil recovery calculations. However, not all calculations include surface area and soil depth amounts. In order to correctly appraise soil recovery calculations, all calculations need surface area and soil depth amounts.

Findings:

The permittee must provide the following, prior to approval, in accordance with the requirements of:

R645-301-232, All topsoil and subsoil will be removed from the area to be disturbed and where topsoil is of insufficient quantity, materials approved by the Division in accordance with R645-301-233.100 will be removed and salvaged from the area. Since topsoil is of insufficient quantity, soil salvage will not only include undisturbed soils (TS and #96), but also previously disturbed soils, overburden material and subsoils.

The Division requests that a non-biased, third party, professional soil scientist be on-site during soil salvage to monitor and supervise soil salvage operations for the purpose of maximizing soil salvage volumes and quality.

R645-301-120 and R645-301-130, Appendix 2-5 includes soil recovery calculations. However, not all calculations include surface area and soil depth amounts. In order to correctly appraise soil recovery calculations, all calculations need surface area and soil depth amounts.

RECLAMATION PLAN

TOPSOIL AND SUBSOIL

Regulatory Reference: 30 CFR Sec. 817.22; R645-301-240.

Analysis:

The Response to Deficiency submittal did not satisfactorily address the following deficiencies:

- Soil Borrow - Alleviate soil deficit volumes by importing soil.

Soil Borrow - Alleviate soil deficit volumes by importing soil.

Since most of the mine surface area is disturbed, the MRP shows a deficit of soil

material will exist during reclamation as explained in Section 242.100 with a projected average soil replacement depth of 3.6 inches. Therefore, the MRP must identify soil borrow for making up the soil deficit. Soil replacement volumes need to be much greater than 3.6 inches and should approach an average 16 to 18 inches. Soil borrow will require locating a soil borrow area and providing all the regulatory information associated with soil borrow, including soil resource information.

Findings:

The permittee must provide the following, prior to approval, in accordance with the requirements of:

R645-301-232.720, The MRP shows a deficit of soil material will exist during reclamation and therefore, the MRP must identify soil borrow for making up the soil deficit. Soil replacement volumes need to be much greater than 3.6 inches and should approach an average 16 to 18 inches. Soil borrow will require locating a soil borrow area and providing all the regulatory information associated with soil borrow, including soil resource information.

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cc: Joe Helfrich