



# State of Utah

DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

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November 13, 1992

TO: Daron Haddock, Permit Supervisor

FROM: Priscilla Burton, Senior Reclamation Soils Specialist 

RE: Response to Division Order 92C. Skyline Mine. Utah Fuel Co.  
ACT/007/005-92K. Carbon Co. Utah. Folder #2.

## SUMMARY:

Coastal States Energy was issued a permit renewal on 5/5/92 for the Skyline Mine. The renewal included a Division Order to address deficiencies with the Skyline Plan. Responses received (10/5/92) are discussed below. The deficiency is re-iterated in italics as written in the Order, followed by a summation of information presented and/or compliance with the stated regulation. An itemized list deficiencies requiring further information is provided in the conclusion section.

## TECHNICAL ANALYSIS:

R645-301-221 Prime Farmland

### Deficiency #1

*Skyline must submit the map referred to in the SCS letter of prime farmland determination written on August 29, 1979.*

### Analysis:

Although not included with this submittal, in a subsequent conversation with K. Zobell (Utah Fuel) on 11/13/92, I learned that the original map has been found. Mr. Zobell indicated that the map would be included in the submittal.

### Compliance:

The requirement of this regulation has been addressed. The Permittee is in compliance with this regulation.

R645-301-222 Soil Survey

Deficiency #1

*Skyline must revise Plate 2.11-1 to reflect the most accurate information in the consultant's reports and include cartographic information such as scale, contour lines, streams, and roads.*

Analysis:

A revision of Plate 2.11-1 was submitted. This plate shows contours, previously disturbed areas, roads, streams and soil taxonomic units on a scale of 1" = 100'. The plate is referred to on revised page 2-114, Sec 2.11, but the plate is not identified by Plate number. Page 2-114 indicates that the plate is available only at the mine site.

R645-301-222 requires that within the limits of the surface disturbance of an underground mine site, the soils will be surveyed and mapped according to the standards of the National Cooperative Soil Survey. Included on Plate 2.11-1 is a taxonomic great group which is not recognized by the "Keys to Soil Taxonomy." This great group is listed as Cryocrept. This soil was described in the 1979 EPS study conducted for the Skyline Mine. The soil survey information was updated (1980) in response to a technical deficiency review. The 1980 information does not include Cryocrepts as a soil great group at the portal site. The great groups included at the portal site are Argic Pachic Cryoborolls, Argic Cryoborolls, Mollic Cryoboralfs

Compliance:

An Administrative review of prior technical deficiencies declared that information on soils at the Rail Road Load Out, Conveyor, and South Fork Breakout was past history and the deficiencies #2 and 5 under this regulation should be dropped. Plate 2.11-1 is no more or less significant than soil survey information for the Rail Road Load Out, the South Fork Breakout, the Conveyor and the Water Tank areas. I suggest that revision of the soil survey map of the mine portals is also deleted. In place of the present Plate 2.11-1 which is inaccurate, I believe that the information provided in the 1980 Supplemental Soils Report of Vol A-2 should replace Plate 2.11-1 and that the 1980 Supplement Soils Report should be referred to rather than Plate 2.11-1 on page 2-114.

Deficiency #2

*Skyline must search their files for existing information to add to the narrative of Chapter 2.11 of the MRP which will expand the description and mapping of the South Fork Break Out and Water Tank Area Soils.*

Compliance:

Information on the soils of the South Fork breakout and the Water Tank area were determined to be unnecessary and the deficiency was deleted as stated in an Administrative Review letter on 8/6/92.

Deficiency #3

*Skyline must provide for a soils map for the Waste Rock Disposal Site in the MRP and reference this map in Chapter 2.11 of the MRP.*

Analysis:

Page 2-120 and Drawing 2-120(b) were submitted for soil survey information at the waste rock site. The soil map is based upon a 1981 EPS study of the waste rock site (found in Vol A-2). The map scale is 1:6000. Contour intervals are not specified. Information such as pit locations and sampling points are not projected.

Compliance:

The map submitted is sufficient for the presently permitted disturbance at the Scofield Waste Rock Site.

An amendment for waste rock site expansion should include a modification of Drwg 2-120 (b) to delineate site-specific profile information gathered by Mr. Leland Sasser (SCS-Price) on 7/28/92 and laboratory information from samples taken by Utah Fuel Co. on the same date. Copies of the National Cooperative Soil Survey Handbook and Keys to Soil Taxonomy are available at the Division for reference when compiling the survey and map.

R645-301-231.400. Topsoil handling and storage areas.

Deficiency #1

*Skyline must edit Table 2.11-1 and Table 2.11-2 for accuracy in computations and resubmit a corrected copy of each Table.*

Analysis:

Tables 2.11-1 and 2.11-2 have been deleted. Information on stored topsoil quantities is provided in Vol 1, pg 2-114 and Vol 3, Sec 4.6-4.

Cover requirements and amounts of topsoil stockpiled is restated below as listed on pg 2-114, Vol 1, and the redistribution requirements as listed in Table 4.6-4, Section 4.6-4.

PORTAL YARD

Stockpile = 91,586  
- 15,295 of non Forest topsoil  
= 76,291 yd<sup>3</sup> of replacement topsoil available for National Forest lands

Redistribution requirements = 74,883 yd<sup>3</sup>, over 36.40 acres (reclamation Plate 4.4.2-1A states the disturbance is 31.1 acres)

RAIL ROAD LOAD OUT

Stockpile = 27,690 yd<sup>3</sup>  
+ 15,295 from Portal yard  
= 42,985 yd<sup>3</sup> of replacement topsoil available for the private lands

Redist. requirements for RRLO ..... = 30,782 yd<sup>3</sup>, over 13.82 acres  
for Waste Rock Site ..... + 2,694 yd<sup>3</sup>, over 1.67 acres  
for water tanks & well pads ..... + 419 yd<sup>3</sup>, over 0.26 acre  
for overland conveyor route ..... + 629 yd<sup>3</sup>, over 0.39 acre  
for conveyor bench ..... + omitted  
= 33,597 yd<sup>3</sup> Total required on private lands

SOUTH FORK

Stockpile = 2,990 yd<sup>3</sup> to be used at the So Fk. disturbance.  
Redist. requirements = 2,275 yd<sup>3</sup>, over 0.96 acres

This accounting does not include the conveyor bench. The reclamation plan for this area does not include replacement of topsoil (as outlined on pages 4-45, 4-45a, and 4-45b). Seeding will occur over 8.97 acres of this area (Table 4.7-7, pg 4-58).

Compliance:

Cover requirements for waste rock are not addressed in these calculations. Approximately 9,000 yd<sup>3</sup> remain from the RRLO topsoil stockpile which could be used for additional cover over waste rock. Cover material must be dedicated to meet the requirements of R645-301-553.250 until test plots substantiate lesser cover. I recommend that Table 4.6-4 reflect cover requirements for the waste rock site.

Deficiency #2

*Skyline must include in the MRP the analyses of the topsoil samples taken during construction of the topsoil piles at the Portal and Railroad Load Out areas, which are referenced on page 4-48 of the MRP.*

Compliance:

Topsoil micro and macro nutrient characteristics were determined to be unnecessary and the deficiency was deleted as stated in an Administrative Review letter on 8/6/92.

Deficiency #3

*Skyline must revise Plate 3.2.1-3 to show the boundaries of the topsoil storage pile.*

Compliance:

Portrayal of the topsoil pile configuration on a surface facilities map was determined

to be unnecessary and the deficiency was deleted as stated in an Administrative Review letter on 8/6/92.

R645-301-240.  
R645-301-242.

Reclamation Plan.  
Soil Redistribution.

Deficiency #1

*Skyline must edit Table 2.11-2, Topsoil Volumes; Table 4.3-1, Bonding Calculations; all reclamation contour maps; and the narrative to agree on the acreage of surface disturbance for all locations. The estimated values of topsoil recovery (Table 2.11-2) must be checked for accuracy and revised accordingly.*

Compliance:

A contradiction remains between Plate 4.4.2-1A and Table 4.6.4 concerning the acreage of disturbance at the portal mine site. See discussion under deficiency #1 R645-301-231.400, Portal Yard.

Deficiency #2

*Redistribution depths reported by Skyline in Table 4.3-1 must be shown on the appropriate reclamation maps to enable field verification of topsoil depth during redistribution.*

Compliance:

Topsoil redistribution depths are specified in Table 4.6-4, variations in redistribution depths between north and south facing slopes are portrayed on reclamation Plates 4.4.2-1A and 4.4.2-1C for the mine surface facilities and the load out. The Permittee is in compliance.

Deficiency #3

*Skyline must relate in more certain terms the depth of ripping prior to topsoiling and the time which will elapse between topsoiling and seeding as described on page 4-36 of Section 4.6 of the MRP.*

Analysis:

Page 4-36 describes the treatment of regraded land by a ripper-equipped tractor just prior to topsoil replacement. Ripping will be conducted to a suitable depth. The Permittee has estimated that one to two weeks may elapse between topsoil distribution and seeding. Prior to seeding the topsoil will be ripped to a suitable depth for preparation of the seed bed (pg 4-36a). Page 4-77 indicates that "steep slope areas which remain after abandonment will receive special ripping to create ledges, crevices, pockets, and screens."

Compliance:

The term "suitable" was determined to be acceptable in an Administrative review and the deficiency was deleted as stated in letter form on 8/6/92.

Deficiency #4

*Skyline must clarify what is meant by the progressive reclamation (pg. 4-38 and 4-49) at the Scofield Waste Rock Site and revise Map 4.16.1-1B if necessary.*

Analysis:

The reclamation map for the Scofield site (Map 4.16.1-1B) shows reclamation of the entire site at the same time. Reference to progressive reclamation of the site seems contrary to what this reclamation map illustrates. A statement in the plan on page 4-38a indicates that the site has reached its design capacity (pg 4-38a). Although the term progressive reclamation is used, the plan calls for reclamation of the Scofield Waste Rock site as a single unit (within the boundaries as they are presently shown on Map 4.16.1-1B). Map 4.16.1-1B has not been revised with this submittal.

Compliance:

The Permittee is in compliance.

Deficiency #5

*Skyline must revise Section 4.6 of the MRP to include the protection of regraded topsoil with mulch at all locations. (Please also refer to deficiency #1 under R645-301-341.100.)*

Analysis:

Surface roughness will protect redistributed topsoil from wind and water erosion for a maximum of 2 weeks, at which time a mulch will be applied during the seeding stage in a hydro-slurry at a rate of 1 Ton/acre. The permittee will "exercise care to guard against erosion... and will employ the necessary measures to ensure the stability of all redistributed topsoil by mulching."

Compliance:

The Permittee is in compliance.

Deficiency #6

*Skyline must revise Map 4.4.2-1C to show topsoil storage during Phase I reclamation excluded from livestock access.*

Compliance:

The livestock corral has been removed from the topsoil stockpile area on Map 4.4.2-1C. Revegetation of the stockpile is now more likely to succeed. The Permittee is in compliance with R645-301-234.

Deficiency #7

*Skyline must provide more information in the reclamation plan, backfilling Section 4.4, concerning fracturing and backfilling of blacktop.*

Compliance:

"All asphalt will be broken up and will be used as backfill in the mine portals." (pg 4-27a). The Permittee is in compliance.

R645-301-521.160.

Maps and Cross-Sections.

Deficiency #1

*Skyline must show the location of the underground development waste stored during operations on Map 3.2.1-3 and final disposal on Map 4.4.2-1C at the Railroad Load Out.*

Analysis:

The Permittee, in compliance with R645-301-521.165 and R645-301-521.143, has indicated that the 35,000 yd<sup>3</sup> of waste rock will be buried in the fill at the toe of the cutslope (Map 4.4.2-1D and 3.2.1-3). Section 4.16 provides a commitment to provide four feet of cover over waste rock permanently stored at the Rail Road Load Out (pg 4-88).

Compliance:

The Permittee is in compliance with R645-301-521.160.

Deficiency #2

*Skyline must provide a cross-sectional, certified map of the Railroad Load Out operations pad and update the narrative to detail the construction of the temporary waste disposal site.*

Analysis:

A discussion of the waste rock and french drain construction is included on page 3-27.

Compliance:

The Permittee is in compliance.

Deficiency #3

*Skyline must provide in the MRP a map of operations and surface facilities for the Scofield Waste Rock site, showing sediment control and present configuration.*

Compliance:

Map 3.2.8-2A has been included with the plan to comply with the requirements of

R645-301-521.165.

R645-301-536.

Coal Mine Waste.

*Deficiency #1*

*The analyses of the Skyline waste rock material (in storage at the Railroad Load Out) must be included in the MRP and its location within the MRP must be referred to on page 4-87.*

Compliance:

Sample analyses from 8/11/92 were found with the submittal. The analytical report should be referred to on page 4-87 of the MRP. Acid/base accounting results should be included with these reports.

*Deficiency #2*

*The text must be revised to include current analysis of the waste rock deposited at the Scofield Waste Rock Site and remove conflicting statements regarding the nature of that material.*

Analysis:

No further information was provided with the submittal. The latest sample information included in the permit is from July 1991. Statements in Section 2 of the plan suggest the material is non-toxic. Statements in Section 4 suggest the material could be acidic. These statements appeared to be contradictory and for this reason, the deficiency was written. A single sample taken in 1987 was determined to be acidic. Sampling since then has not produced any negative acid/base potentials. The terms non-toxic and acidic can be mutually exclusive. Therefore description of acidic material as nontoxic may be acceptable.

Compliance:

The Permittee is in compliance with this deficiency, however a recent (1992) analysis is requested for inclusion in Exhibit 4.4.5..

R645-301-540.

Reclamation Plan.

*Deficiency #1*

*Skyline must commit to a minimum of 3 feet of non-toxic, non-combustible cover placed on top of waste rock in permanent storage at both the Railroad Load Out and the Scofield Waste Rock sites. This cover will be overlain with the one foot of topsoil (at both sites), for a total of four feet of non-toxic, non-combustible cover material. The Division may waive this requirement based on sampling of the waste at final reclamation, but not before sampling results are known.*

Analysis:

A test plot for determining depth of cover has been proposed with this submittal (pg 4-38a). The test plots will compare 1 foot of topsoil over coal mine waste with 0 - 3 feet of intervening nontoxic, nonacidic material. Page 4-38(b) describes sampling the cover and topsoil material to be used for the parameters in Table 1 of the Division's "Guidelines for Management of Topsoil and Overburden ..."

Compliance:

For the purpose of determining the non-toxic, non-acidic nature of the material, the following analyses (described in Table 6 of the "Guidelines for Management of topsoil and Overburden...") should be added to Table 1: acid/base accounting, selenium, boron.

Deficiency #2

*Skyline must develop a sampling plan for the waste disposal sites located at the Railroad Load Out and Scofield to include the parameters outlined in the Division Guidelines for Overburden Management including: SAR, EC, hot water soluble Se and B, acid/base potential, and percent coal. The plan must include the sampling interval and number of total samples to be taken at each site; depth segregation of samples, and a total sampling depth of at least three feet.*

Compliance:

No changes to the present plan could be found in Section 4.6.4.1, 4.7.7 or Section 4.4.5 was noted. Further information is requested concerning a sampling program for the final graded surface of the waste rock site, if a reduced level of cover <sup>is</sup> finalized.

R645-302-321.

Alluvial Valley Floor Determination.

Deficiency #1

*Skyline must provide the Division with a copy of the Dames and Moore report, "Excavation Dewatering Investigation, Load Out Area...", to enable a more thorough evaluation of the alluvial valley at the Railroad Load Out.*

Compliance:

A description of pertinent information from the Dames and Moore report has been included in Section 2, pages 2-30b. The evaluation of an alluvial valley floor was determined to be unnecessary and the deficiency was deleted as stated in an Administrative Review letter on 8/6/92.

Deficiency #2

*Skyline must expand the discussion of alluvial valley floors in Section 4-23 of the MRP to include a map and discussion of all agricultural areas adjacent to the permit area. This map*

*must show flood and subirrigated areas.*

**Compliance:**

The evaluation of an alluvial valley floor was determined to be unnecessary and the deficiency was deleted as stated in an Administrative Review letter on 8/6/92.

Deficiency #3

*Skyline must expand the discussion of the reclamation and permanent storage of waste rock at the Railroad Load Out and the measures to be taken to avoid potential effects on the hydrologic balance of the alluvial valley floor.*

**Compliance:**

The evaluation of permanent coal mine waste storage on an alluvial valley floor was determined to be unnecessary and the deficiency was deleted as stated in an Administrative Review letter on 8/6/92.

**CONCLUSION:**

As discussed in the body of this document, further information is required for a determination of compliance with the following deficiencies of Division Order 92C:

R645-301-222,	Deficiency #1
R645-301-231.400,	Deficiency #1
R645-301-242,	Deficiency #1
R645-301-536,	Deficiency #1, Deficiency #2
R645-301-540,	Deficiency #1, Deficiency #2.



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November 2, 1992

Mr. Glen Zumwalt  
Vice President  
Utah Fuel Company  
P. O. Box 719  
Helper, Utah 84526

Dear Mr. Zumwalt:

Re: Approval of Open Coal Storage Amendment, Coastal States Energy Company,  
Skyline Mine, ACT/007/005-921, Folder #3, Carbon County, Utah

The submittals received on September 8th and 16th, 1992 regarding the above noted permitting action were reviewed and found to be complete and adequate by the Division's technical staff.

The Division hereby approves open coal storage at the railroad loadout as proposed. The amendment will now be inserted into and become part of your Mining and Reclamation Plan.

Thank you for your cooperation during the permitting process.

Sincerely,

Daron R. Haddock  
Permit Supervisor

cc: P. Burton  
S. Demczak, PFO  
UTAHFUEL.APP