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TO: Daron Haddock, Permit Supervisor

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DATE: January 27, 1995

Folder # 2

RE: Draft Mid-Term Review; Revegetation Feasibility, Postmining Land Use, and Approximate Original Contour Deficiencies; Skyline Mines, Coastal States Energy Company; ACT/007/005; Working File; Carbon County, Utah

SYNOPSIS

Skyline committed in previous correspondence to respond by May 3, 1993, to certain deficiencies in their plan relating primarily to the postmining land use of the conveyor bench. By letter dated April 26, 1993, they said they believe the lease agreement for the conveyor bench provides the necessary latitude to develop a postmining land use between Utah Fuel and DOGM without further negotiations with the land owners. They also requested that the Division's Assistant Attorney General review the agreement and give his opinion.

Skyline's plan says the mine area will not be restored to approximate original contour (AOC). In addition, the conveyor bench cut slopes may not meet AOC restoration requirements. The plan does not include a variance or adequate justification for a variance from meeting these requirements.

Some of the slopes proposed to be left are not compatible with the approved postmining land uses, and it is unlikely that vegetation reference area standards can be achieved in some areas. Options for addressing these problems are discussed.

Memoranda dated February 19, 1993 and April 28, 1992, included deficiencies pertaining to these issues. The deficiencies from the April 28, 1992, review were dropped in a subsequent administrative review because they were not felt to be renewal issues. They are considered to be deficiencies in the plan that need to be addressed, however.

ANALYSIS

REVEGETATION

Regulatory Reference: UCA R645-301-341

Analysis:



Success Standards and Revegetation Feasibility

Under the current plan, traditional reference areas would be used as standards for success for all disturbed areas. The lowest cover value that would need to be achieved, according to baseline information, would be on the conveyor route where the corresponding reference area has 85.45% vegetative cover.

Skyline intends to leave the conveyor bench and associated cut slopes in their current configuration in final reclamation. They do not intend to put topsoil in these areas. The mining and reclamation plan contains a revegetation plan developed by the Soil Conservation Service where various seed and transplanting mixes, fertilization methods, and other vegetation manipulation treatments are to be tried.

Skyline has been working for nearly fourteen years to revegetate portions of the conveyor bench cut slopes with limited success. Some seeding and transplanting have been done in probably every year since the mine was opened, and several other treatments have been tried. As documented by the plan and by annual reports, vegetation has become established in some areas. The amount of vegetation is slowly increasing on the slopes, especially where Skyline has been adding transplants. However, despite these efforts, the vegetation cover is not approaching the reference area standard. The 1991 annual report says, "Overall, the establishment of vegetation on these steep slopes continues to be a slow process." The 1992 annual report says, "On the steep slopes, which have been reseeded numerous times, the vegetation continues to be sparse." It is unlikely the reference area standard will be achieved within the foreseeable future under present conditions.

If there is a change in the land use, the revegetation standard for success could also be changed. The standard would need to be compatible with the land use, and it would have to include the requirements of R645-301-353.

The plan indicates certain areas near the portals will have slopes as steep as 1h:2v. These areas would not receive topsoil except in basins prepared for transplants.

It is possible that some of the steep cut slopes that are to remain in the portals area are of small enough extent that having limited amounts of vegetative cover in these areas will not significantly affect the average amount of cover for the entire area. However, this needs to be discussed and demonstrated in the plan. It is clear from the plan that revegetation on these slopes will be at least as difficult as it has been on the conveyor cut slopes. A possible approach to this problem would be to discuss the areal extent of areas where steep cut slopes would remain compared to areas that would be regraded. It is impossible to judge from the maps and cross-sections in the plan how large the areas would be and how much they could affect revegetation and the land use of the area.

Findings:

The permittee has not demonstrated that revegetation is feasible on the cut slopes associated with the conveyor or on the very steep slopes proposed to be left near the portals.

Requirements

Coastal States Energy needs to demonstrate that revegetation is feasible on the cut slopes associated with the conveyor or on the very steep slopes above the portals.

POSTMINING LAND USES

Regulatory Reference: UCA R645-301-412, R645-301-413, R645-302-270

Analysis:

By correspondence dated April 26, 1993, Skyline said they believe the lease for the land on which the overland conveyor is located provides the latitude necessary to develop a postmining land use between Utah Fuel and the Division.

The regrading plan includes the following components:

"It is not intended that all of the disturbed areas be returned to their original contours or configurations. These areas . . . are currently being stabilized and consist primarily of those steep slopes where return to original configuration is impractical." (Section 4.1, page 4-1)

"Operational benches will not be removed. Their banks will be reduced to a 3h:1v slope; their surface areas will have a 10h:1v slope for drainage.

"Side hill cuts range between 1h:1v and 1h:2v. Most of these cuts will remain upon abandonment. Any physical support systems used to control these cuts along with any small terraces used for stability control will also remain." (Section 4.12.1, page 4-76)

"Final cut slopes in [the No. 1 mine portals] area will be contoured to a one horizontal to two vertical slope (1h:2v) with 8-foot wide benches provided at 30-foot height intervals. . . Final slopes in [the No. 3 mine] area will be contoured to a one horizontal to one vertical slope (1h:1v) with 8-foot wide benches provided at 30-foot height intervals. . . Stability and designated postmining land use will be achieved without extensive backfilling and

therefore the mine site will not be returned to the original contours." (Section 4.4.2, page 4-28)

"The final reclamation is to leave the conveyor bench intact. . . The only areas requiring treatment [during final reclamation] will be the disturbed areas where the supporting structures were located." (Section 4.7.3, pages 4-45(a) and 4-45(b))

Section 4.12.2 discusses consistency of the underground mining activities with land use plans. In this section, the plan mentions the postmining topography and the final surface drainage channels but does not otherwise justify for the postmining land use the cuts and terraces that are to remain.

Postmining land uses at the mine site and on the conveyor route would not change from the premining uses according to the current mining and reclamation plan. They would remain as grazing with wildlife habitat.

In addition to revegetation feasibility, there are several problems with leaving the cut slopes in their current configuration. These include whether or not grazing and wildlife uses are possible on these slopes, the requirements of the regulations to eliminate highwalls and to return mined areas to approximate original contour, and the land owners' desires for the postmining configuration. The plan needs to justify leaving these slopes and demonstrate that they meet approximate original contour (AOC) restoration requirements or it must include necessary reasoning and materials for granting a variance from AOC requirements for steep slope areas.

The cut slopes of the conveyor bench are not compatible with the approved postmining land use. These slopes are approximately 1h:1v. According to Bureau of Land Management guidelines, slopes steeper than 2h:1v are not generally considered to be suitable for grazing. Although grazing by sheep may not be completely precluded on slopes steeper than 2h:1v, it would be severely limited. Even wildlife use would be limited on the slopes in their current configuration because of the extent of rock outcrops. The Division and land owners should consider that the proportion of forage produced on these slopes that is usable by livestock will be reduced compared to the same amounts of forage being produced on a less steep slope.

Rather than reclaiming the conveyor bench to vegetative cover similar to what existed prior to mining, changing the land use to a public use, such as a safety bench for the highway, has been discussed with Skyline personnel. The position of the highway may make restoration of the cut slopes to their premining slopes impossible. The difficulty of restoring the slopes because of the highway would need to be documented in the permit change. A land use change would allow some flexibility in the revegetation standard for success and

should allow the slopes to be compatible with the postmining land use.

The limited extent of the cut slopes that are proposed to remain at the portals area may not preclude the postmining land use for the entire area; however, this needs to be demonstrated in the plan.

Some of the cuts that are proposed to remain are in the vicinity of the portals and are considered to be part of the highwalls. R645-301-553.120 requires that all highwalls be reclaimed except as provided in R645-301-553.650 for the retention of highwalls. If portions of the highwalls are to remain, the plan needs to demonstrate compliance with these regulations.

Previous memoranda have discussed a need for the permit to contain a variance from AOC requirements for steep slope areas and for the plan to contain the necessary information for variance approval both for the conveyor and portals areas. The memoranda discussed this requirement because the plan says some of the slopes will not be returned to AOC. Rather than pursuing a variance, Skyline may be able to demonstrate that the slopes meet AOC requirements. R645-301-553.400 says cut and fill terraces may be allowed by the Division when needed to conserve soil moisture, ensure stability, and control erosion on final slopes, if the terraces are compatible with the approved postmining land use. They may also be allowed when specialized grading, foundation conditions, or roads are required for the approved postmining land use, in which case the final grading may include a terrace of adequate width to ensure the safety, stability, and erosion control necessary to implement the postmining land-use plan.

If Skyline is not able to adequately demonstrate that the areas meet AOC requirements, the plan will need to contain necessary information for an AOC variance in steep slope areas as required in R645-302-270. As discussed with Bill Richards of the Attorney General's Office, this would need to include a request from the land owners that the land not be returned to AOC.

Regardless of whether a variance from AOC requirements is needed, other requirements, including public notice, will need to be met if the land use is to be changed for the conveyor area. Also, the plan will need to show the consideration given to the land owners' desires for the postmining land use. The plan must contain comments from the land owners concerning the land use whether or not the use is changed. This has been accomplished for the mine area but not for the overland conveyor.

Findings:

The proposed postmining configuration of the conveyor bench cut slopes and of the highwalls is not compatible with the approved postmining land uses. The plan needs to show

how the approved postmining land use will be achieved. The permittee may consider changing the postmining land use, but this change would be a significant revision from the approved plan.

The current plan says certain areas will not be returned to approximate original contour, but it does not contain adequate justification or land owner requests for a variance. For cuts and fills that are to remain after final reclamation, the plan needs to demonstrate compliance with the requirements to return them to approximate original contour or must contain necessary information for the Division to be able to grant a variance from these requirements as allowed for steep slope areas.

The plan needs to contain comments concerning the postmining land use from the land owners of the overland conveyor area. If the permittee seeks a variance from approximate original contour restoration requirements, the plan must include requests from the land owners for the variance.

Requirements:

The plan needs to demonstrate how the postmining land use will be achieved. Alternatively, the permittee may consider changing the postmining land use.

The plan must either demonstrate that approximate original contour will be achieved upon final reclamation, or it must include necessary information and justification for a variance from approximate original contour restoration requirements.

The plan needs to contain comments concerning the postmining land use from the land owners of the overland conveyor area.

RECOMMENDATIONS

Skyline must show that revegetation is feasible on the conveyor bench and mine area cut slopes that are proposed to remain after reclamation. Alternatively, Skyline may propose changing the postmining land use and the revegetation standards for success.

For cuts and fills that are to remain after final reclamation, the plan must demonstrate that highwall elimination and AOC restoration requirements are being met. If AOC is not to be restored, the plan must present information needed to grant a variance from AOC restoration requirements for mining in steep slope areas. The plan must also contain comments from land owners concerning the postmining land use.