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

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April 4, 2000

TO: Internal File

THRU: <sup>From</sup> Wayne H. Western, Reclamation Specialist III *WHW*

RE: Review of Midterm Response, Canyon Fuel Company, LLC, Skyline Mine ACT/007/005-MT99

**SUMMARY:**

Proposed changes to the Skyline Mine were received on March 22, 2000. These changes were in response to the midterm review, which required the Permittee to address highwall elimination and develop sediment pond design to eliminate NPDES discharge violations.

The information in the proposed amendment is not considered adequate to meet the requirements of the coal rules. The Permittee should make the changes to the amendment as outlined below.

**RECLAMATION PLAN**

**APPROXIMATE ORIGINAL CONTOUR RESTORATION**

Regulatory Reference: 30 CFR Sec. 784.15, 785.16, 817.102, 817.107, 817.133; R645-301-234, -301-270, -301-271, -301-412, -301-413, -301-512, -301-531, -301-533, -301-553, -301-536, -301-542, -301-731, -301-732, -301-733, -301-764.

**Analysis:**

The Permittee proposes to reclaim the mine site to approximate original contours except the area by State Road 264 and the cutslopes above the mine access road. The Permittee wants those areas to be exempt from the AOC requirements because the cut material from the construction of State Road 264 was used for fill at the mine site. Since State Road 264 cannot be reclaimed, the Permittee will have excess fill at the site. Therefore, the mine site cannot be restored to the original elevation. Also, some slopes cannot be returned to their premining configuration without reducing the safety factor below the regulatory requirements. Therefore, the reclaimed slopes must be gentler than the premining slopes.

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The Division believes that the site can be restored to AOC. AOC does not mean that the pre and post mining surfaces are identical. Rather, AOC means that the drainages in the reclaimed area will complement the surrounding natural drainages and that the site blends into the existing topography. Senate Report No. 28 on Senate Bill S.7 in 1974 shows a legislative intent to distinguish between elevation and configuration by stating:

*It must be emphasized that the requirement to return to approximate original contour does not necessarily mandate the attainment of original elevation.*

A request for an AOC variance can only be made through a significant revision, not an amendment. Thus, the Division must deny the request to allow some areas to be reclaimed to non AOC standards because the request was not included in a significant revision. If the Permittee wants to apply for an AOC variance then they must submit a request as outlined in R645-301-270.

### Findings:

Information provided in the proposed amendment is not considered adequate to meet the requirements of this section. Prior to approval, the Permittee must provide the following in accordance with:

**R645-302-270**, The Permittee must give the Division a formal request for a variance from the approximate original contour requirements as stated in R645-301-270, or remove the statements that the mine must be reclaimed to the approximate original contours. Note: the Division believes that the site can be reclaimed to AOC standards. See the analysis section for details.

## BACKFILLING AND GRADING

Regulatory Reference: 30 CFR Sec. 785.15, 817.102, 817.107; R645-301-234, -301-537, -301-552, -301-553, -302-230, -302-231, -302-232, -302-233.

### Analysis:

The Division reviewed the highwall elimination plan submitted on March 22, 2000. The plan for highwall elimination is given in Section 4.4.2 of the amendment and on drawings 4.4.2-1B and 4.4.2.AA. In the text the Permittee states that all highwalls will be backfilled. However, the location of the highwalls is not shown on the drawings. Therefore, the Division cannot verify that all highwalls will be eliminated.

Some cut slopes will be left as shown on drawings 4.4.2-1B and 4.4.2.AA. In Section 4.4.2, Grading and Final Contour, the Permittee states:

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Final cut slopes in this 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. . . . The Permittee will develop cutslopes with 1h:2v slopes in competent rock only and will develop cutslopes with 1h:1v (maximum) slopes in less competent materials such as soil and colluvium.

The cross sections do not show the 8-foot-wide benches. That information is needed to verify slope stability.

The reclaimed slopes, shown on drawings 4.4.2-1B and 4.4.2.AA, are straight with a 2h:1v angle. Long straight slopes will erode more quickly than concave slope or slopes with breaks. The Permittee must show that the slopes shown on drawings 4.4.2-1B and 4.4.2.AA minimize erosion or change the shape of the slope.

Some cutslopes may be reclaimed if the slope angles were increased. The Division needs the Permittee to show what the maximum slope angle could be used to get a 1.3 safety factor.

### Findings:

Information provided in the proposed amendment is not considered adequate to meet the requirements of this section. Prior to approval, the Permittee must provide the following in accordance with:

**R645-301-542.310**, The Permittee must show the location of the benches that will be left after final reclamation.

**R645-301-553.130**, The Permittee must show what the maximum slope angle can be and still have that the slopes achieve a 1.3 safety factor. The Permittee should also consider concave slopes when they try to eliminate cutslopes.

**R645-301-533.140**, The Permittee will either show how the straight slopes will be constructed to minimize erosion or use other slope configurations such as concave slopes or slope breaks.

## MAPS, PLANS, AND CROSS SECTIONS OF RECLAMATION OPERATIONS

Regulatory Reference: 30 CFR Sec. 784.23; R645-301-323, -301-512, -301-521, -301-542, -301-632, -301-731.

### Analysis:

#### Final Surface Configuration Maps

The plan for highwall elimination is presented in Section 4.4.2 and on drawings 4.4.2-1B and 4.4.2.AA. The drawings are considered inadequate because:

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- The cut and fill quantities do not have units
- The dashed lines are not referenced in the legend
- The highwalls are not shown on the cross sections. The Division needs to see the location of the highwalls to verify that they will be reclaimed.
- The Permittee needs to show the material that the cutslopes will be made in, such as rock or soil. The Division needs that information to verify slope stability.

### Findings:

Information provided in the proposed amendment is not considered adequate to meet the requirements of this section. Prior to approval, the Permittee must provide the following in accordance with:

**R645-301-121.100**, The Permittee must give the units for the cut and fill quantities.

**R645-301-121.100**, The Permittee must state what the dashed line mean on drawings 4.4.2-1B and 4.4.2.AA.

**R645-301-542.310**, The Permittee must show the location of the highwalls. That information is needed to verify that all highwalls will be reclaimed.

**R645-301-542.310**, The Permittee must show what cutslopes will be made in rock and which slopes will be in earth.

## BONDING AND INSURANCE REQUIREMENTS

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

### Analysis:

#### Determination of Bond Amount

The Permittee needs to show the location of any concrete structures that will be left in place during final reclamation on the reclamation maps and cross sections. The Division needs that information to verify the bond amount.

### Findings:

Information provided in the proposed amendment is not considered adequate to meet the requirements of this section. Prior to approval, the Permittee must provide the following in accordance with:

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**R645-301-830.130 and R645-301-542.310**, The Permittee must the location of all concrete structures that will be left in place on the reclamation maps and cross sections.

**RECOMMENDATIONS:**

The Division should deny the amendment submitted on March 22, 2000. The Division should make sure that the Permittee understands that AOC does not mean that the reclaimed surface must be identical to the premining surface. Therefore, the proposed reclamation surface may meet the AOC requirements.

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