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

Michael O. Leavitt  
Governor  
Ted Stewart  
Executive Director  
James W. Carter  
Division Director

355 West North Temple  
3 Triad Center, Suite 350  
Salt Lake City, Utah 84180-1203  
801-538-5340  
801-359-3940 (Fax)  
801-538-5319 (TDD)

June 21, 1993

Mr. Ken Payne, Manager  
Utah Fuel Company  
P. O. Box 719  
Helper, Utah 84526

Dear Mr. Payne:

Re: Partial Approval, Load Out Expansion, Coastal States Energy Company, Skyline Mine, ACT/007/005-93D, Folder #2, Carbon County, Utah

The Division has completed its review of Skyline Mine's proposal to expand the loadout facilities in Carbon County, Utah. Based on technical review by the coal staff, the Division has found that the information presented in the proposal is sufficient to authorize partial approval and condition final approval on submittal of additional information. The proposed changes include enlarging the existing pad area, adding ditches DD-13, DD-13A, and DD-14, and, increasing the size of the existing sediment pond. Additionally, because the expansion of the facilities is within the stream buffer zone, a variance for construction of these facilities within the stream buffer zone is also authorized.

This partial approval shall allow for the construction of the expanded area as proposed including enlargement of sediment pond and construction of ditches. This partial approval shall specifically exclude the placement or storage of coal materials, other than incidental spills related to construction, on or within the expanded area until such time as the conditions which follow in this approval are met.

In consideration of this partial approval, some information requirements regarding the design and the construction of the expansion remain and must be addressed by Skyline prior to full implementation of the area as a coal storage facility. This information is not considered essential to allowing Skyline to commence with the construction of the facilities and has been conditioned in this approval. Approval of the permit change is conditional upon written acceptance of the following terms and conditions for approval:

1. Pond Construction and Certification. In accordance with the requirements of R645-301-514.300, the operator shall be required to inspect and provide a certified report promptly upon completion of the construction and modification of the loadout facilities sediment pond. In conjunction with the as-built certification report, detailed information demonstrating that the sediment control structure is in compliance with the performance standards will be



required. This detailed information will include, but not be limited to the following: detailed contour and cross section maps of the sediment pond to clearly show the embankment elevation, width and slopes, the location and the extent of the french drain in relation to the bottom of the sediment pond, and the location and relation of the pond to the stream channel; details and designs for the clay liner installed in the pond; details of the emergency spillway configurations sufficient to demonstrate adequate discharge capacity; and, maps locating and identifying the runoff areas with supporting runoff calculations based on the as-built configuration to demonstrate adequate pond sizing and capacity. The certified as-built report for the ponds shall be submitted with the above information within 30 days of completion of the construction of the facilities.

2. Diversions and Drainages. Within 30 days of acceptance of this partial approval, the operator shall provide a map identifying the drainage areas used in the design calculations for ditches DD-13, -13A, and -14. The existing surface drainage design map shall be modified to incorporate these additional ditches and drainage areas. Design information and supporting calculations must be provided which demonstrate that the diversions and ditches downstream from these proposed ditches are adequate to handle the additional flow.
3. Foundation Materials and Slope Stability. Within 30 days of acceptance of this partial approval, the operator shall provide adequate cross sections through the expanded coal storage area detailing the stockpile at capacity. The cross sections shall show: the location of the stream channel in relation to the outslope of the pad area and the slope and elevations of the coal storage pile at capacity. Based on soils and foundation analysis utilized during the initial construction of the coal storage silos for the underlying materials and on characteristics of the fill materials to be used, the operator shall evaluate the stability of the storage pad area and facilities. Analysis needs to be made in order to determine whether or not the foundation materials beneath and part of the pad area are sufficient to prevent rotation failure into or toward the stream channel. Additionally, analysis should consider any other structures which lay beneath the pad area including culverts and the french drain. A 1.3 factor of safety is to be used in the analysis. Sections for analysis should be taken at critical areas including the steepest and highest outslope from the pad area and the area closest to the stream channel.
4. Maps and Plans. Maps provided of the railroad loadout facility, through successive changes to the site configuration have become illegible. An as-built surface operations and facilities map of the railroad loadout facilities must be submitted to the Division in conjunction with the certified report required in Condition 1 above. Contour information, facilities, boundaries and the text on the map must be made more clear and legible. It is understood that this site will be flown and new maps digitized and submitted in 1994.
5. Protection of Buffer Zones. Information found in the proposal does not specifically address the measures taken to prevent coal spills from occurring as

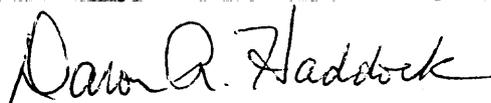
a result of coal handling on the storage pad area. A distinctive physical barrier must be provided to readily identify the extent to which coal can be stockpiled and to help prevent coal spillage on the outslopes of the pad area into the buffer zone. This can be accomplished by incorporation of berms or preferably jersey barriers along the top of the outslope of the pad area into the proposed permit change. In no case should coal materials be allowed to accumulate against or on top of these barriers in order to prevent such spillage. Such changes to the proposed plan shall be submitted to the Division within 30 days from the acceptance of this partial approval.

6. Habitat Enhancement. Skyline must commit to observe the success of the habitat enhancement effort at the end of the first or during the second growing season and to plant additional willows if necessary to achieve the desired enhancement. This commitment shall be incorporated into the text of the plan provided within 30 days of acceptance of this partial approval.
7. Backfilling and Grading. The operator must demonstrate that backfill materials used to construct the pad within the riparian area are non-acid and non-toxic forming. During backfilling operations of this area, the operator shall be required to take a minimum of 1 representative sample of the material to be used as fill in the riparian area. Analysis and evaluation of this sample shall be in accordance with the requirements of Table 6 of the Soils Guidelines. In the event that the material is found to be acid or toxic forming, the operator must commit to remove and replace the fill with more suitable material to protect surface and ground water within the buffer zone.
8. Topsoil Materials. Discrepancies in the topsoil volumes found in Table 4.6-4 and on pages 4-38(c) and (d) need to be revised and resubmitted within 30 days of acceptance of this partial approval.

With the exception of Conditions 1 and 4 above, the requirements of these commitments must be met prior to final approval, which would allow the utilization of the area for coal storage within the expanded pad area. Upon submittal and approval of the above information, final approval will follow for operation of the expanded coal storage and loadout facilities.

If you have any questions or need additional information, please contact me or Paul Baker, Reclamation Biologist, at your earliest convenience.

Sincerely,



Daron R. Haddock  
Permit Supervisor

Enclosures  
cc: P. Baker  
SKYAAPPR.93D



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801-359-3940 (Fax)  
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June 14, 1993

TO: File

THRU: Daron Haddock, Permit Supervisor

FROM: Sharon Falvey, Senior Reclamation Hydrologist

RE: Loadout Expansion in the Eccles Creek Buffer Zone, Coastal States Energy and Skyline Coal Companies, Skyline Mine, Folder #2, ACT/007/005, Carbon County, Utah.

SUMMARY

The Operator has submitted an amendment to expand the existing Train Loadout Coal Storage Pile. The proposed changes include adding ditches; DD-14, DD-13, and DD13-A, enlarging the pond and expanding the existing pad area by 0.04 acres.

In light of the numerous changes that have occurred on the train loadout site in the last year, the existing surface map for the train loadout site is no longer clear and accurate. Numerous labels and additions are included on the map that are difficult to read. The Operator should be required to provide a map that is clear and concise for future amendments. It appears that new flight maps are appropriate.

The Operator is proposing to enlarge the pond at the west inlet of the structure. This area is critical because the width between the pond and the stream channel is narrow. More information should be included for this area prior to approval.

ANALYSIS

**R645-301-120 Permit Application Clear and Accurate**

Proposal:

Pg. 3-27 and 3-27(a)

1. The Operator refers to the gob material being hauled to the existing area before the Scofield Waste Rock site was permitted.
2. The Operator's proposal states that the creek was (will be) backfilled with approximately 2,240 cu. yards.



3. The Operator states a new drainage ditch will be constructed at the toe of the slope along with a new concrete lined ditch to drain the northeast corner of the pad.
4. The Operator indicates this coal storage area may be further enlarged in the future.

Section 13

5. The Operator provides a portion of the undisturbed area tributary to the sediment pond on Exhibit 3.2.1-3.

Analysis:

1. The elevation of the loadout pad was reconfigured during the above ground storage area and reclaim tunnel construction. This reconstruction, and any material added at that time, should also be included in the discussion here.
2. The Operator's proposed disturbed area does not extend to the creek. Additionally, the creek itself is not approved to be backfilled. It is believed the Operator is referring to the riparian area adjacent to the stream where the proposed disturbance is mapped. Text should be clarified.
3. The new drainage ditches to be constructed should be referenced by label in the text of the plan for clarity.
4. The Operator states that the coal storage area may be further enlarged in the future. Should the Coal Storage area become further enlarged the Operator is not likely to be able to contain the increased volume in the pond and will probably be required to provide an additional sediment control pond or other appropriate method.
5. The Operator shows a portion of the undisturbed area, tributary to the sediment pond, on Exhibit 3.2.1-3 which is not labeled. This watershed should be labeled and a map showing the full extent of the watershed delineation referenced. (I believe it is labeled Disturbed Area (DA)-7, which is also confusing because it is described as an undisturbed area in the calculations.)

Deficiency:

1. Include a discussion of the loadout pad reconstruction and include a discussion of any materials that may have been added at that time.

2. Remove statement that the creek will be backfilled. Clarify that the proposed backfill is within the 100 ft. buffer zone and in a wetland/riparian area.
3. The new drainage ditches to be constructed should be referenced by label in the text of the plan for clarity.
4. None.
5. The watershed tributary to the sediment pond should be labeled and a map showing the full extent of the watershed delineation referenced on Exhibit 3.2.1-3.

#### **R635-301-711.300 Design Methods and Calculations**

##### Proposal:

The Operator provides design worksheet for runoff in Section 10, pg 1/14 through 14/14.

##### Analysis:

The Operator did not include the drainage area used in the calculation of runoff determination for DD-13 or DD-14. The drainage area should be mapped or otherwise identified. The Operator did not demonstrate that the downstream receiving Drainage(s) handle the additional flow.

##### Deficiency:

1. The Operator should include the drainage area used in the calculation of runoff determination for DD-13, -13A, and DD-14. The drainage area should be mapped or otherwise identified. The Operator must demonstrate that the downstream receiving Drainage(s) handle the additional flow from the expansion area.

#### **R645-301-722.500 Sufficient Slope Measurements or Contour Maps**

##### Proposal:

Refer to topo Map 3.2.1-3 for slope information. Section 13, pg 2c.

##### Analysis:

Map 3.2.1-3 does not present adequate contour information determine whether the slope information provided for disturbed area flow calculations and for erosional calculations is accurate. For instance DD-13A appears to be on either a 40% slope or greater depending on what elevation the contour lines represent. However, the Operator's calculations suggest an 11% slope. An additional line is drawn to the north of Ditch DD-14. The line appears to be a ditch, however it is not labeled and does not report anywhere.

Deficiency:

1. Provide a map that provides information sufficient to determine slope for hydrologic designs and clearly distinguishes drainages.

**R645-301-731.121 Surface Water Protection**

Proposal:

The Operator proposes to provide additional drainage for the extended area of the coal storage area.

Analysis:

The Operators current designs show Area 15, the alternate sediment control area, adjacent to the Coal Storage Area. Current surface configuration maps indicate drainage may flow toward the alternate sediment control area. The Operator should provide a berm jersey barrier or other drainage control methods to prevent drainage from the pad area into the alternate sediment control area and potentially into the creek.

Deficiency:

1. The Operator must provide adequate protection at the edge of the coal storage area to protect the surface water and include designs for the structure

**R645-301-731.311 Identify materials which may adversely affect water quality**

Proposal:

The Operator states that the material used to fill the pad within the riparian zone will be constructed of clean fill material.

Analysis:

The Operator does not discuss where this fill material will come from. However, the

fill is being placed in an area close to the water table and may discharge to surface water. It has the potential to adversely affect water quality. The Operator must demonstrate the material is a non-acid and non-toxic forming material and must include testing for parameters in Table 6 of the soils guideline for Division review prior to approval.

Deficiency:

1. The Operator should provide acid and toxic testing, per Table 6 of the soils guidelines, and locate the source of the material to be placed as fill in the riparian zone.

**733.160 Detailed Plan**

Proposal:

The Operator's Stage Volume Curve indicates the Operator intends to increase the volume of the pond.

Analysis:

No detailed drawings show the extent of the proposed increase. The information presented on Map No. 3.2.1-3 indicates the Operator is expanding the pond in a critical area adjacent to the outside erosive edge of a stream meander. Therefore, the information of a cross section from the pond to the stream bottom is critical in this section. At this time the Division is unable to determine whether the pond may be encroaching in a manner which may be an environmental concern.

Deficiency:

1. The Operator must provide additional information on the pond where the enlargement is encroaching on the embankment adjacent to the stream. Information should include a cross section extending from the far side of the pond through the pond embankment across the critical section and across the stream channel.

**731. General Requirements.**

Proposal:

The Operator references Map No 3.2.1-4 for the pond map.

Analysis:

Proposed changes and information are not presented in Map No. 3.2.1-4. The Operator has not provided cross-sections and an adequately sized plan view to show construction changes. Cross-sections should be available for a minimum of 2 areas (length and breadth) at the critical sections. Cross-sections should extend beyond the embankment to include pertinent information such as stream channels and roads if, they are in proximity of the pond. Other pertinent information to pond design should include riprapped inlets clay liners etc. Information that should be included on the map is enumerated below:

1. Elevations of primary and emergency spillway in cross-sections.
2. Elevation of maximum and 60 % clean out sediment levels in cross-section.
3. Decant elevation.
4. Bottom and minimum embankment elevation.
5. Depth from pond bottom to underlying French drain.
6. Sketch of spillway(s) and decant details.
7. Clay liner depth and location.

The Operator has not described what measures will be used to protect the pond from intercepting the french drain and protection from potential surface water contamination if pond leaks directly into the drain.

The Operator may need to obtain a construction permit from the Department of Environmental Quality.

Deficiency:

1. Update the information on Map 3.2.1-4 with proposed changes and pertinent information as described in the analysis.
2. Describe what measures will be used to protect the pond from intercepting the french drain and to provide protection of surface water contamination.

**742.223. Spillways:**

Proposal:

The Operator's previous spillway amendment includes a demonstration for meeting requirements by passing the 100-year, 24-hour event.

Analysis:

The Operator has not updated the existing information on the ability to pass the required event. The Operators current proposal did not adjust the values of CN and area to test the validity of the claim to the existing situation.

Deficiency:

1. The Operator must justify that the information concerning spillway design is adequate for this proposal.

RECOMMENDATION:

More information on the extent and methods of pond enlargement and supporting ditch design information should be received prior to approval of this amendment.

The operator has included straw bales for sediment control in the Army Corps permit information. According to R645-301-742.212 the bales should be in place prior to construction activities. The Operator should also be aware that when the pond is approved for construction the requirements of R645-301.514.300 must be met. Those regulations state "Inspections will be made regularly during construction, upon completion of construction ..." and "The qualified registered engineer will promptly, after each inspection, provide to the Division, a certified report". The Operator should be aware that the Division considers "prompt" to mean, 30 days following reconstruction, and will require the pond as-built changes to be submitted by that time.

cc: Steve Demczak  
SKYLOADE.TD



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TO: Daron Haddock, Permit Supervisor

FROM: Wayne H. Western, Reclamation Engineer *WHL*

DATE: June 15, 1993

RE: Loadout Expansion, Utah Fuel Company, Skyline Mine, ACT/007/005, Folder #2, Carbon County, Utah

**SUMMARY**

Utah Fuel Company has proposed expanding the coal storage area at the loadout facility located at the mouth of Eccles Canyon. The expansion will facilitate the movement of coal to the hopper/feeder and movement of material outside of the disturbed area. Sediment pond is undersized and needs to be enlarged. The company has not provided the Division with information on mass stability, potential public hazards, the fill materials toxic and acid forming potential, details on the sediment pond enlargement and the applicable increases in the reclamation bond.

Applicants Proposal:

The coal storage area or pad will be enlarged by 0.04 acres to facilitate the movement of coal to the hopper/feeder. The expansion will occur on wetlands. A permit from the Army Corps of Engineers was obtained.

The area will be stripped of its riparian vegetative sod. The sod will be transplanted onto unvegetated areas along Eccles Creek. Approximately 88 cubic yards of A and B horizon topsoil material will be removed. Fifty-nine cubic yards will be stored at the railroad loadout topsoil storage pile.

The area will be backfilled with approximately 2,240 cubic yards of clean fill material. This material consists of a complete gradation of material, with the largest being in the 8 to 10 inch size. The fill slope will be topped with approximately 6 inches of topsoil (29 cubic yards) and revegetated with approved seed mixture and mulch. Approximately 500 willow cuttings will be transplanted along Eccles Creek as a mitigation measure.



A new drainage ditch will be constructed at the slope's toe along with a new concrete-lined ditch to drain the northeast corner of the pad. See Drawing 3.1.1-3.

The sediment pond will be enlarged to handle the additional runoff and sediment load.

Analysis:

The fill material is described as being clean. There is no mention about the fill materials acid forming or toxic potential. Such information is needed to evaluate the potential environmental effects on the area.

Utah Fuel did not supply the Division with any information on how the fill material would be placed or the new slope's stability. The slope's toe will be located within 20 feet of the stream. During flooding it is possible that the toe could be eroded or saturated both of which reduce stability. The Operator did not address these issues.

The Operator did not supply the Division with a cross section of the expansion or the type and characteristic of the material that would be placed in the expansion. Nor was there any mention of how the material would be placed.

Utah Fuel did not supply any information on how the sediment pond would be enlarged. There is a French drain underneath the pond that could be damaged if the structure is deepened. The French drain needs to be located on the maps and cross section.

The main reason for expanding the coal storage area is to prevent material from rolling into the undisturbed area along Eccles Creek. The Operator has not supplied the Division with any information showing that the pad expansion will prevent the problem. On page 3-27(a) the Operator states that this coal storage area may be further enlarged in the future. If this expansion will not correct the problem, then the Operator should seek an alternative solution.

Deficiencies:

While the coal storage area is a temporary structure it still must meet the requirements of similar permanent structures with respect to ensuring mass stability and preventing mass movement during and after construction, not creating a public hazard, and being non-toxic and non-acid forming.

The main reason for expanding the coal storage area is to prevent material from rolling into undisturbed areas. The Operator has not demonstrated that the expansion will

solve the problem.

The Operator needs to show that the expansion of the sediment pond will not damage the French drain or any other structure that may be below the sediment pond expansion area. He must also state where the material from the sediment pond expansion will be placed and handled.

The Operator shall supply the Division with information on:

- The stability of the expansion during and after construction. This will include but not be limited to, a slope stability analysis, description of the fill material, and a description of the construction techniques.
- Any public hazards the expansion could cause, including the effects of flooding.
- The toxic and acid forming characteristics of the fill material.
- The construction techniques that will be used to enlarge the sediment pond, the potential for damaging the French drain.
- A description of where the material from the sediment pond expansion will be stored and handled.
- Estimated reclamation costs for expanding the coal storage area and sediment pond.



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TO: File

THROUGH: Daron Haddock, Permit Supervisor

FROM: Paul Baker, Reclamation Biologist 

DATE: June 3, 1993

RE: Loadout Expansion into the Eccles Creek Buffer Zone, Coastal States Energy and Skyline Coal Companies, Skyline Mines, Folder #2, ACT/007/005, Carbon County, Utah

## SUMMARY

Skyline has proposed to expand their pad at the loadout farther into the stream buffer zone of Eccles Creek. The disturbance would be 0.04 acres. A permit has been obtained from the Army Corps of Engineers to discharge approximately 2240 cubic yards of clean fill material into this wetland area. Mitigation measures required in the Department of the Army permit and included in the plan include transplanting 1598 square feet of wetland sod to unvegetated portions of Eccles Creek to stabilize the stream banks, and planting about 500 willow cuttings along some sections of the stream.

## ANALYSIS

### Proposal and Analysis

All riparian areas are considered to be critical wildlife habitat, and Eccles Creek is considered to be a Class III fishery that is also valuable as spawning habitat for cutthroat trout and other fish from Scofield Reservoir. Although the mitigation plan contained in the Army Corps of Engineers Permit is not under the direction of the Division, R645-301-333 requires the Operator to use the best technology currently available to minimize disturbances and adverse impacts to fish and wildlife and related environmental values during coal mining and reclamation operations and to achieve enhancement where practicable. The mitigation contained in the Department of the Army Permit is considered to be an effort to comply with this regulation in addition to the requirement of the Army Corps of Engineers.



Achievement of the enhancement should be measured after one or two growing seasons. If the initial transplanting has failed, some remedial action should be taken. Sod to transplant into the riparian areas would probably not be available without disturbing additional areas, but the willows could be replaced if they did not survive. This is felt to be within the definition of best technology currently available to enhance wildlife habitat.

According to Skyline's mining and reclamation plan, approximately 600 feet of Eccles Creek was relocated during construction of the loadout. Although some of the portions of the stream that were relocated are unknown to the reviewer, it does not appear that the lowermost section of the stream was relocated. There is a section just above the proposed disturbance that was relocated according to a 1980 map, and some other portions nearer the entrance to the loadout may also have been relocated. It is not known why the relocated sections of the stream are not within Skyline's disturbed area boundary. If they were, mitigation for this new disturbance would need to be in sections of the stream other than those that were relocated. Since these sections of the stream are not within the disturbed area boundary, this requirement cannot be made.

In addition to the above concerns, some apparent discrepancies in the yardages of topsoil to be stored and redistributed need to be corrected. These are contained on pages 4-38(c) and (d) in Table 4.6-4. On page 4-38(c), the yardages for the loadout are shown to be 25,548 for south slopes, 5,324 for north slopes, and 59 for riparian for a total of 30,870 cubic yards. These three figures instead add to 30,841, a difference of 29 cubic yards. The problem apparently has to do with the amount of topsoil that will be used in interim reclamation of the outslope of the portion of the pad that is proposed to be added, shown in the plan as 29 cubic yards. The 29 cubic yards used for interim reclamation will still need to be redistributed at final reclamation, however.

On page 4-38(d), the total figures do not match the totals shown in the double asterisk footnote. Also, with this amendment, the total amount of topsoil available for redistribution on private lands should increase, and the figure shown in this same footnote has not been changed from the previous plan.

**Deficiencies:**

1. Skyline should commit to observe the success of the habitat enhancement effort at the end of the first or during the second growing season and to plant additional willows if necessary to achieve the desired enhancement.
2. Discrepancies in topsoil volumes noted in this review need to be corrected.

**RECOMMENDATIONS**

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It is recommended that Skyline check the areas where they perform the enhancement proposed in this amendment to determine if the efforts have been successful. They should commit to perform supplementary planting of willows if necessary.

The topsoil volume discrepancies noted in this review need to be corrected.