



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

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October 12, 1993

Mr. Ken Payne
Coastal States Energy Company
Skyline Mine
P. O. Box 719
Helper, Utah 84526

Re: Waste Rock Expansion Deficiencies, Coastal States Energy Company, Skyline Mine, ACT/007/005-93H, Folder #3, Carbon County, Utah

Dear Mr. Payne:

The Division has completed a review of Skyline's proposed waste rock expansion amendment. At this time there appears to be a number of deficiencies with your plans that will need to be addressed before the amendment can be approved. Enclosed please find technical reviews that discuss the deficiencies. Please review the reviews and respond to them as quickly as possible.

If you have questions, please call me or the appropriate reviewer.

Sincerely,

A handwritten signature in black ink that reads "Daron R. Haddock".
Daron R. Haddock
Permit Supervisor

cc: B-Team
wastexpa.sky



October 5, 1993

TO: File

THROUGH: Daron Haddock, Permit Supervisor

FROM: James D. Smith *JDS*

RE: Permit Change #93-H: Waste Rock Disposal Expansion
Received August 19, 1993
Coastal States Energy and Skyline Coal Companies
Skyline Mine
ACT/007/005, Folder #2, Carbon County, Utah

Two new deficiencies have been identified based on a Technical Completeness Review of the proposed permit amendment ACT/007/005 #93-H, submitted by Coastal on August 19, 1993 to incorporate expansion of the waste rock disposal site into the Skyline mine MRP. These are covered by the first Proposal - Analysis - Deficiency section below.

With one exception, deficiencies from my February 18, 1993 Technical Completeness Review of ACT/007/005 #92-K (Operator Renewal Responses to DO #92-C, received January 27, 1993) were satisfied to at least some degree in Coastal's February 25, 1993 response; remaining deficiencies were discussed in my memo dated March 26, 1993. At that time it was determined that the one unaddressed deficiency plus the need to clarify or expand the responses to several other deficiencies were not critical to the adequacy of the plan nor to be reasons to deny the permit renewal. This current submittal for permit change has reopened two of those lingering issues. These are covered in the remaining Proposal - Analysis - Deficiency sections.

R645-301-700. Hydrology.

R645-301-724 Baseline Information

R645-301-731.200 Water Monitoring

Proposal:

Water quality samples will be collected from the Waste Rock Disposal Site well 92-91-03 in accordance with the schedule and parameter list on Table 2.3.7-5 (pages 2-35 and 2-37(a)).

Monitoring will be done three times between May and November (page 2-37(a)), with no sample taken during the five months from December to April.

Analysis:

Table 2.3.7-5 gives an extended list of parameters to be analyzed through the 1994 season, after which only parameters marked with an asterisk will be analyzed. This table follows DOGM's new recommended parameter list sent to coal operators on June 29, 1993 except: oil and grease is not in the baseline parameters and total alkalinity and anion/cation balance are not included in baseline and operational parameters.

The new guidelines make no recommendation as to sampling frequency: the old guidelines recommend four samples yearly, at fixed monthly intervals, for both baseline and operational monitoring. Data obtained on this schedule will be skewed, although significant changes may not be anticipated during the winter months. Year-round access to this well should not be a problem as it is in the work area adjacent to the sedimentation pond.

Deficiency:

#93-H JDS 1. Oil and grease is not in the baseline parameters, and total alkalinity and anion/cation balance are not included in baseline and operational parameters in Table 2.3.7-5.

#93-H JDS 2. The irregular schedule for sampling well 92-91-03 is not explained.

R645-301-722 **Cross Sections and Maps**
R645-301-722.100 **Location and Extent of Subsurface Water.**

Original Deficiency (92-C) 1. Location and extent of ground water at the waste rock disposal site are not shown on maps or cross sections, specifically Plates 2.3.4-2, which shows the potentiometric surface of the regional system, and 2.2.1-2, which shows the cross section at the waste rock disposal site.

Deficiency (92-K) 5. The ground water elevation measured in well 92-91-03MW and used in characterizing the regional ground water system should be shown on Plate 2.2.1-2, the cross section showing geology and hydrology of the waste rock disposal site.

Deficiency (92-K) 6. The ground water elevation measured in well 92-91-03MW and used in characterizing the regional ground water system should be added to Plate 2.3.4-2, the potentiometric surface map.

Proposal:

A water monitoring well has been installed at the waste rock disposal site and the well has been added to Skyline's ground water monitoring schedule.

The location and extent of ground water at the waste rock disposal site are discussed on pages 2-30 through 2-30(b).

Analysis:

The ground water elevation measured at well 92-91-03 has been used in characterizing the regional ground water system and the isolation of the waste rock disposal site from that system. Well 92-91-03 indicates the waste rock disposal site is underlain by the regional aquifer system, which connects with ground water along Pleasant Valley and the surface water in Mud Creek (pp. 2-30, 2-30(b)).

Errors can be introduced by using potentiometric data gathered at different dates but they are probably not significant on Plate 2.3.4-2 considering the low sampling density, small map scale, and large contour interval. The potentiometric surface contours on Plate 2.3.4-2 should be extended to the waste rock disposal site based on the measurement at 92-91-03.

Coastal committed in a letter dated March 17, 1993 to include a complete discussion of data from the well at the waste rock disposal site as a modification to the MRP, but to do it after the permit renewal process was completed. The hydrology of the site is discussed on pages 2-30 through 2-30(c) of the approved MRP, but Plates 2.2.1-2 and 2.3.4-2 still do not show the ground water elevation measured at well 92-91-03 and used in characterizing the regional ground water system.

Deficiency:

#93-H JDS 3. Plates 2.2.1-2 and 2.3.4-2 do not show ground water elevation that was measured at 92-91-03 and used in characterizing the regional ground water system at the waste rock disposal site.

R645-301-765

Permanent Casing and Sealing of Wells

Original Deficiency (92-C) 1. If wells W22-2-2 and W14-2B have been abandoned, proper abandonment procedures have not been followed.

Original Deficiency (92-C) 2. The MRP does not contain data and arguments that support abandonment of monitoring the Star Point aquifer at wells W22-2-2 and W14-2B

Deficiency (92-K) 9. The M&RP does not contain data and arguments to support abandonment of monitoring of the Star Point aquifer at W22-2-2 and W14-2B, and the Division of Oil, Gas, and Mining has not approved modification of the monitoring plan to omit these points. There are unresolved problems concerning the data that were used in the original determination of the PHC, and also with the idea of abandoning ground water monitoring at W22-2-2 and W14-2B. These problems may not be resolvable within the time frame or scope of this permit renewal.

Proposal:

From Coastal's letter dated February 25, 1993:

The status of these two failed wells will need to be the subject of further discussions with the Division, particularly in the area of their validity in establishing the PHC.

An approach to the Forest Service concerning the possibility of re-establishing these wells was met with a firm negative response, because of the resulting environmental damage. A mutually agreeable response will be attempted by March 1, 1993.

Analysis:

Modification of the water monitoring plan to allow abandonment of these piezometers has not been approved by DOGM.

Proper abandonment of W22-2-2 and W14-2B should be done in accordance with the requirements of the USFS, which is the surface and mineral owner, and after the method has been approved by DOGM and incorporated into the MRP. The operator should also confer with the State Engineer at the Division of Water Rights concerning final abandonment of these boreholes. W22-2-2 and W14-2B should not be considered as properly abandoned at this time.

Page 2-35 previously contained a commitment to follow procedures in Section 4.9 in abandoning these wells; this

commitment has been removed from page 2-35 in this proposed amendment. The method of permanent closure described in Section 4.9 may not be usable due to USFS' limitations on surface access and collapsed casing in the bore holes. How W22-2-2 and W14-2B are to be abandoned in compliance with R645-301-765 is one point that still needs to be addressed.

Deficiency:

#93-H JDS 4. The commitment to follow the procedures in Section 4.9 to abandon W22-2-2, W14-2B, and the other boreholes used as water level monitoring wells has been omitted from page 2-35 of the submitted amendment and no alternative method of abandoning these wells has been submitted for approval.

rspns93h.tcr



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October 7, 1993

TO: File

THROUGH: Daron Haddock, Permit Supervisor

FROM: Sharon Falvey, Senior Reclamation Hydrologist SKF

RE: Waste Rock Ditch Expansion August 19, Amendment 93-H, Utah Fuel Company, Skyline Mine, ACT/007/005, Folder #2, Carbon County, Utah

SUMMARY:

This memo analyzes the submittal received on August 19, 1992, with revised text dated August 09, 1993.

The operator is proposing to expand the waste rock site disturbance from 1.67 acres to 6.29 acres and increase the access road to the waste site by 0.25 acres. The operator has included a proposed well monitoring schedule for well 92-91-03. No water monitoring data for the well has been incorporated in the MRP. The operator has not provided any water quality samples to describe the characteristics of the seasonal water quality and quantity. The operator is proposing to provide a full suite of monitoring at this site through 1994.

No seeps or springs are found in the waste rock area. Shale and siltstone in the Blackhawk are found between the surface and ground water table. Of 41 sampling attempts the operator shows no water was available for collection. The operator does show the existence of a Stock watering pond which receives it's runoff directly from the existing waste rock site. Since this is the only water available at the site it should be a monitored point. If this site is currently used for stock watering it should be monitored according to use and described.

The operator has attempted to provide hydrologic information included in a quick courtesy review. However, detail in mapping, drainage areas and sediment pond design is still lacking.

Waste Rock Expansion Analysis

R645-300-120 SKF 93-H #1

Proposal:



Page2
ACT/007/005 93-H
October 7, 1993

Drainage and contour information are provided in drawings 3.3.8-2, 3.2.8-2A, 4-16.1-1C, 4.16.1-1B. and 3.2.8-3.

Analysis:

It is unclear what stage of drainage is represented on drawing 3.2.8-2 as DD-16 appears to be proposed to flow over a ridge. The contour lines at the top of the pile and drainage are not clear on Drawings 3.2.8-2, 3.2.8-2A, 4-16.1-1C, 4.16.1-1B. and 3.2.8-3. The legend does not describe the dotted lines shown across the proposed area on drawing 3.2.8-2.

Deficiency:

The operator must provide maps which clearly show the contour lines for all drainage topography on Drawings 3.2.8-2, 3.2.8-2A, 4-16.1-1C, 4.16.1-1B. and 3.2.8-3. Include a legend describing the dotted lines on 3.3.8-2.

R645-300-120 SKF 93-H #2

Proposal:

The operator's design for ditch UD-6 is shown on Drawings 3.2.8-1 and 3.2.8-2A.

Analysis:

It is unclear what the proposed operational design for the lower portion of UD-6 is, as it is different on drawing 3.2.8-1 and 3.2.8-2A.

Deficiency:

The operator must clarify the discrepancy for design location on ditch UD-6 for maps 3.2.8-1 and 3.2.8-2A.

R645-301-533.700 SKF 93-H #3

Proposal:

Drawing 3-2.8-4 Waste Rock Disposal Site Sediment Pond illustrates two cross sections across the sediment pond. The drawing provides 2 foot contour intervals on the inslope of the pond. Drawing 4-16-1C provides additional 5 ft. topographic contours around the pond.

Analysis:

The information on Drawing 3-2.8-4 is not detailed enough to describe what the relief at the southern portion of the pond is in comparison to the upstream channel. The information provided on Drawing 3-2.8-4 indicates the adjacent stream channel is at an equal elevation to the southern portion of

the pond. The cross sections provided do not adequately detail critical areas including minimum embankment widths. The operator may be required to demonstrate that the adjacent channel flow will not affect the pond design.

Deficiencies:

The operator must provide maps which adequately describe the detail for the pond structure for critical areas, including minimum widths and adjacent channel sections.

R645-301-711 SKF 93-H #4

Proposal:

Operations affecting the NPDES discharge Permit, which are not clearly defined in the permit, shall be coordinated with the Division of Environmental Health.

Analysis:

The operator is required to include a description of applicable hydrologic performance standards as given under R645-301-750. Regulation R645-301-751 sites all Utah and Federal water quality laws regulations and effluent limitations. The operator must provide the applicable information on pg. 4-82(a).

Deficiency

Correct the text on pg. 4-82(a) and provide applicable information on the NPDES permit for the Scofield Waste Disposal Site. If the site is not going to discharge and a NPDES permit is not required the information should be provided in the text.

R645-301-728 SKF 93-H #5

Proposal:

The discussion of acid and toxic material within the PHC references Part 3.28 for guideline disposal methods.

Waste Disposal site material will be compositely sampled on a quarterly basis during periods of deposition at the site with a minimum of 1 sample per 2000 tons hauled, unless previously sampled at the gob pile. Should acidity or toxicity problems be defined the Division will be notified and a mutually acceptable remedial action will be taken Pg.4-30.

Soils samples from the GOB pit in 1991 show available boron

is as high as 9.0 mg/kg. The paste analysis from a 1987 waste rock sample show total selenium of 1.08 ppm and Boron at 5.68 ppm.

Analysis:

The operator has not included applicable information in reference to the waste rock site potential for acid and toxic forming materials at the waste rock site. The operator should include the references to information found in Section 4.4.

Deficiency:

The operator's PHC should cross reference the information found in section 4.4 regarding handling of and testing for acid and toxic waste.

R645-301-731 SKF 93-H #6

Proposal

The operator has removed the commitment to submit water quality data within a 90 day submittal period and removed the reference to the annual report and summary on pg. 2-45.

Analysis:

The operator should retain the information for clarity. The operator does provide the commitment in the groundwater section. This implies groundwater data is the only data to be submitted. However, the regulations clearly require the operator to submit the water quality information. R645-301-731 states the permit application will include a plan, with maps and descriptions indicating how the relevant requirements of R645-301-730 will be met.

Deficiency

Retain the information describing how the requirements of R645-301-731.223 will be met.

R645-301-731-200 SKF 93-H #7

Proposal:

The operator provides one monitoring well for ground water monitoring of the waste rock site. Section 2.3.4.1 indicates the waste rock disposal site is isolated from the regional ground water system. page 2-30. A stockwater pond is located at the site.

Analysis:

No water quality analysis were submitted for the site to describe the characteristics of the seasonal water quality and quantity. However, the operator is proposing to provide a full sweep of water quality parameters through 1994.

According to the information presented in the current plan No mention of the waste rock site as a potential site for acid and toxic formation to a regional ground water system is identified. The operator has shown the occurrence of Boron and Selenium in some of the waste rock samples but, believes these are anomalies. The total number of samples and volume of waste disposal is relatively small with an estimated rate of 2694 cubic yards per year. An actual determination of the operational monitoring needs could not be determined until the extended parameter data samples are presented.

No seeps or springs are found in the waste rock area. Of 41 sampling attempts the operator shows no surface water was available for collection. The operator does show the existence of a Stock watering pond which receives it's runoff directly from the existing waste rock site. Since this is the only water available at the site it should be a monitored point. If this site is currently used for stock watering it should be monitored according to use and identified in text and in the Water Rights section.

Deficiency:

The operator must characterize the quality and quantity of the ground water below the waste rock disposal site. The operator must include the stock watering pond as a water monitoring point since it is the most reliable source for surface water data collection. Additionally, it will be beneficial for demonstrating the pond meets requirements for a permanent structure. Clarify the current use of the stock watering pond.

R645-301-732.200 SKF 93-H #8

Proposal:

Pg. 4-83 The operator indicates the coal waste disposal pond is recessed and therefore has no embankments requiring geotechnical analysis.

Analysis:

The operator is creating an embankment between the natural stream channel and the proposed pond location. The proposed configuration of the structure leaves approximately a 12.5

ft. embankment between the pond and the stream channel as shown on exhibit 3.2.8-4. It appears that the indicated width is not the critical section showing the minimum embankment width which appears to be approximately 10 ft or less. The resulting structure functions as an embankment and therefore will require a geotechnical analysis.

Deficiency:

The operator will need to provide justification for omitting a geotechnical analysis for the embankment created by the construction of the sedimentation pond. Provide an accurate description in the text (pg. 4-83) and on maps for the minimum embankment which is created by the construction of the pond.

R645-301-740 SKF 93-H #9

Proposal

Area 24 is described as being the Access road to the Disposal Site and Contains 3.55 acres. A small area of 0.1 acres was previously treated with excelsior matting and re-vegetation pg. 3-71.

Analysis:

The description of this area as a 0.1 acre disturbance has not changed from the previous disturbance and indicates that no additional area will be disturbed with the road construction. If this is true, the plan is adequate and the operator need only provide silt fences/straw bales or other erosion control methods where necessary. However, the additional disturbance of the 0.25 acre road disturbance is believed to be in part the proposed work area adjacent to the stream channel. Side cast and construction disturbances will require sedimentation controls which should be indicated in the plan.

Deficiency:

The operator must provide sediment control measures for the work area and any additional disturbance occurring due to road construction activities.

R645-301-740 SKF 93-H #10

Proposal:

Ditch DD-17 is shown to start at an elevation of 7895 ft.on exhibit DD-17.

Analysis:

Ditch DD-17 does not appear to receive drainage from the disturbed area upstream and south of the ditch. The operator must provide some type of sediment control measure for the proposed disturbed area above and to the south of DD-17.

Deficiency:

The operator must provide some type of sediment control measure for the disturbed area above and to the south of DD-17.

R645-301-740 SKF 93-H #11

Proposal:

Section 15 is provided for the waste rock Disposal Area Sedimentation Pond. The operator refers to use of the upper original sediment pond for treatment of the runoff from the highwall.

Analysis:

If the operator proposes to completely replace Section 15, information from the existing "Stock Watering" sediment pond will be removed. Designs for that pond and its new function must be included to clarify the function of the upper waste rock site pond. The operator should also discuss the disturbed site drainage that will continue to flow to the existing sediment pond in the text description.

Deficiency:

Clarify the function of the existing "Stock Watering" sediment pond. Provide a design for the proposed function and clearly show the drainage which reports to the pond.

R645-301-742.220 SKF 93-H #12

Proposal:

The operator proposes to provide a total containment pond without a spillway pg. 3-56. The pond is designed for the 100 year - 24 hour event pg.4-82.

Analysis:

The operator must provide a short discussion clearly indicating how the requirements for a total containment pond is being met. The operator is referred to CFR Sec. 817.46 (c)2(i) through (c)2(iii). The information submitted must

be certified by a qualified registered engineer. Currently missing criteria include; removing water from the pond in accordance with current prudent, engineering practices (A dewatering plan must be included and be certified by a registered engineer). The operator must provide a certified statement that the pond design meets or exceeds the design precipitation event for the pond based on whether the pond is located where failure would/would not cause loss of life or serious property damage.

Deficiency:

The operator must provide a short discussion clearly indicating how the requirements for a total containment pond is being met. The operator is referred to CFR Sec. 817.46 (c)2(i) through (c)2(iii). The information submitted must be certified by a qualified registered engineer. Currently missing criteria include; removing water from the pond in accordance with current prudent, engineering practices (A dewatering plan must be included and be certified by a registered engineer). The operator must provide a certified statement that the pond design meets or exceeds the design precipitation event for the pond based on whether the pond is located where failure would/would not cause loss of life or serious property damage.

R645-301-742.220 SKF 93-H #13

Proposal:

The operator proposes to pump and truck the water to the load out sediment pond pg. 3-56. On pg 4-83 the operator proposes the coal waste disposal sedimentation pond to be drained of all the water that will meet permit requirements. Water not meeting permit requirements will be used to water roads, vegetation or hauled to the RRLO sedimentation ponds.

Analysis:

Pond water is to be removed in accordance to prudent engineering practice. The proposed method of hauling would not be considered prudent. The ponds, the operator proposes to haul the water to, are not designed to handle the additional water. The operator can not remove water from the pond if it is to be a total retention pond. In addition the proposed use of any water from the pond which does meet discharge requirements would require a water right.

Deficiency

The operator must propose a prudent method of decanting the proposed waste rock site sediment pond. The operator must

remove the proposal to use water from the total containment pond.

R645-301-742-300 SKF 93-H #14

Proposal:

The operator proposes the addition of ditch DD-17 and Ditch DD-16 to convey water to the sedimentation pond.

Analysis:

There is no apparent drainage configuration or design for drainage DD-16, and DD-17 where the drainage reports to the pond. DD-16 is not actually shown to convey the water all the way to the pond.

Deficiency:

The operator must provide a design for the inlet to the sediment pond from ditch DD-17 and DD-16.

R645-301-742-300 SKF 93-H #15

Proposal:

UD-3 is illustrated to convey water to the Stock Pond. The stock pond is illustrated shown within the drainage area reporting to the sedimentation pond.

Analysis:

The operator shows UD-3 to be outside of the area draining to the new sediment pond. However, the Stock watering pond is within the new sediment pond drainage. No outlet is shown for the stock watering pond on map 3.2.8-2. Clarification on whether UD-3 reports to the sediment pond or to the undisturbed drainage must be made. Additional Water reporting to the new sediment pond must be included in the pond design.

Deficiency:

Clarification on whether UD-3 reports to the sediment pond or to the undisturbed drainage must be made. Additional water determined to be reporting to the new sediment pond must be included in the pond design.

R645-301-742-300 SKF 93-H #16

Proposal:

The Waste Rock Disposal Site Surface Drainage is shown on

Drawing 3.2.8-2A.

Analysis:

The Waste Rock Disposal Site Surface Drainage shown on Drawing 3.2.8-2A contains no scale and no watershed delineations. In the general notes the operator indicates the worst case drainage across the lift is identified at the 28250 lift elevation. The operator has not included the area above the lift also contributing drainage to the ditch.

Deficiency:

The operator must provide a delineation of the watershed area used to determine worst case scenarios for drainage across the lifts. The operator should include drainage reporting from the area above the lift. The map legend requires a scale and north arrow.

R645-301-742-300 SKF 93-H #17

Proposal:

The operator submitted designs for Ditch DD-16 on pages 1/18 through 5/18. The ditch is shown on Drawings 4.16.1-1B, 3.2.8-2 and 4.16.1-1C.

Analysis:

The operator uses a Manning's n of 0.040 for ditch DD-16. This value is not acceptable for a compacted earthen surface. Values of slope do not appear representative of maximum and minimum slopes shown on drawings. It is not clear where the upper and lower portions of Ditch DD-16 begin.

Deficiency:

The operator must present design values for Manning's n and channel slopes which are representative of the information presented on maps and in discussion. Ditches must be designed using the maximum and minimum slopes unless there is a constant grade. Identify where the upper and lower ditch designs for DD-16 apply.

R645-301-742-300 SKF 93-H #18

Proposal:

The operator provides an analysis for swale SW-17 across the road adjacent to the pond in Section 14 pg. 11/18.

Analysis:

In this analysis the operators design shows the time of

concentration to be greater than the storm event.
Therefore, the peak value presented is invalid (Section 14
pg. 11/18).

Deficiency:

Present a valid peak runoff determination for Swale SW-17.
The time of concentration can not exceed the duration of the
storm.

R645-301-742-300 SKF 93-H #19

Proposal:

Pg 4-3(a) The diversion ditches will be removed during final
reclamation if needed. The drainage diversion ditch will not
be reclaimed as it will be fully re-vegetated and in stable
condition pg.4-39.

Analysis:

The operator is not clear as to which ditches are referred
to in the discussion on retention without additional
reclamation design. In general, the need for the ditches
should be established as part of the reclamation plan. The
ditches must be demonstrated to meet design requirement at
the end of the reclamation period.

Deficiency:

Clarify what ditches are being referred to in text of pg 4-
39 and 4-3(a).

R645-301-761 SKF 93-H #20

Proposal:

No impoundments, sedimentation ponds or treatment facilities
will remain upon abandonment (pg. 4-3). The operator states
the existing/original sediment pond is being requested to be
left as a stock watering pond on pg.3-23 and references
Section 4.12 pg. 4-78(a). The operator states that the
upper and lower sedimentation pond will be permanent if,
over a period of time, it is shown that these ponds hold
natural runoff water and are beneficial for livestock and
wild life use. However, if no beneficial use is determined,
they will be reclaimed. Both maps 4.16.1-1B and 4.16.1C show
them as permanent structures.

Analysis

The operator provides conflicting information on what is
proposed for reclamation of sediment ponds. The operator

will have to demonstrate that the ponds meet the requirements of R645-301-761 prior to approval for retention. The operator should note that the CFR 816.49(c) indicates permanent impoundments must have a spillway. The operator will need to provide designs for reclaiming both ponds unless approval for retention can be demonstrated.

Deficiency

The operator must clarify conflicting text regarding retention of ponds as permanent impoundments. The operator must demonstrate the applicable regulations for permanent structure retention can be met for the ponds or, provide designs for pond reclamation.

R645-302 SKF 93-H #21

Proposal:

No proposal or reference to Prime Farmland determination or AVF determination was found in this amendment for this site.

Analysis:

No determination of Prime Farmland or AVF was referenced or located in the existing plan. Although it is unlikely that prime farmland or AVF exists in the area reference must be provided by the operator and a determination made by the lead agency.

Deficiency:

The operator should provide a summary and reference to applicable information found in the permit regarding Prime Farmland Determination and AVF for the waste rock area.

RECOMMENDATION

In light of missing information which is critical to the hydrologic requirements of this proposal. It is recommended that amendment ACT/007/005 93-H be denied.



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TO: File

THROUGH: Daron Haddock, Permit Supervisor

FROM: Paul Baker, Reclamation Biologist *PAB*

DATE: October 4, 1993

RE: Waste Rock Disposal Area Expansion, Coastal States Energy and Skyline Coal Companies, Skyline Mines, Folder #2, ACT/007/005, Carbon County, Utah

SUMMARY

Skyline is proposing to expand their waste rock facility and to construct a new sedimentation pond to the west of the current site. The revegetation plan is mostly unchanged from the current plan. The requirement to cover coal refuse with four feet of material needs to be addressed further. The plan includes a proposal to perform revegetation tests, but no details of this plan are included.

ANALYSIS

R645-301-330

Operation Plan

Proposal:

The new plan does not specifically address this regulation.

Analysis:

The area of the waste rock disposal site does not appear to contain critical habitat for any game species. All riparian areas are considered to be critical habitat for wildlife, but the vegetation survey does not show that the area contains riparian habitat.

There is a potential for some raptors and other birds of special interest to nest in the area. Since the site has already been disturbed, however, any birds that nest in the area should be accustomed to the disturbance. Therefore, adverse impacts to these species are not anticipated.



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ACT/007/005
October 4, 1993

Deficiencies:

None.

R645-301-340

Reclamation Plan

Proposal:

Skyline proposes that the waste rock be covered with 21 inches of subsoil and 12 inches of topsoil. The subsoil would be harvested from the site, and the topsoil would come from material salvaged by AML in its 1992 project and from other areas excluding soil salvaged for use on National Forest lands.

The plan states that a soil depth study will be initiated in cooperation with the Division in September, 1994, to determine the actual soil cover needed for revegetation for both the Scofield waste rock site and for the gob material at the loadout.

The seed and planting mix has been changed compared with the existing plan. Cicer milkvetch has been added to the seed mixture, and all of the shrubs would be established from transplants.

Analysis:

The changes in the seed and planting mix are desirable and should be approved. Cicer milkvetch is an introduced species, but it is a pioneer nitrogen-fixing species that usually grows very well on reclaimed sites.

The area of the waste rock site which would need the subsoil cover was estimated by the Division to be 5.11 acres. If 21 inches of subsoil is spread on this area, it would require 14427 yd³ of material. This compares with 13470 yd³ estimated in the plan to be available. This discrepancy should be addressed; however, errors in estimating the size of the area needing subsoil or in judging the amount of subsoil available could account for the difference.

R645-301-553.252 requires that four feet of non-toxic, non-combustible material be placed over refuse except that less than four feet may be allowed based on physical and chemical characteristics indicating that revegetation and soil stabilization requirements can be met. Fifteen analyses of the waste material were found in the plan and in 1991 and 1992 annual reports. Of these, three of the samples had high boron levels and two had high selenium levels compared to acceptable levels established in the Division's "Guidelines for Management of Topsoil and Overburden for Underground and Surface

Coal Mining". Since 1987, there has been just one sample with an elevated boron level out of a total of thirteen samples, and none have had high selenium levels.

Rather than having field trials, the reviewer recommends that the plan include provisions to special handle potentially toxic or acid-forming material and bury it under nontoxic waste. Potentially acid-forming or toxic material should not be encountered frequently. This option would negate the necessity of having field trials and the complications discussed below.

Field trials would be an acceptable alternative to special handling material that is shown to be potentially toxic; however, in order for the trials to be meaningful, potentially toxic or acid-forming waste rock would need to be used under the 33 inches of soil. Since potentially acid-forming or toxic material is encountered only infrequently, it might be several years before the test plots could be started.

The nature of the subsoil that would be used to cover the waste rock is not presented in the plan. Skyline needs to show that this material meets the requirements of R645-301-553.252 for being non-acid-forming and non-toxic.

The regulations concerning wildlife habitat enhancement are not addressed in the plan. However, cooperating with AML to extinguish the fire and reclaiming this site to mostly native vegetation will constitute enhancement that will satisfy the regulatory requirements.

Deficiencies:

1. Skyline needs to determine the amount of subsoil that will be needed to cover the waste rock with 21 inches of material and confirm that enough material is available for this purpose.
2. It is recommended that potentially acid-forming or toxic materials be special handled and covered with at least four feet of non-acid-forming and non-toxic waste and soil. An acceptable alternative would be to conduct field trials to determine if revegetation is feasible using less than four feet of cover over potentially acid-forming or toxic material.
3. Skyline needs to show that the subsoil material to be salvaged from the site fulfills the need for non-acid-forming and non-toxic cover over the waste.

RECOMMENDATIONS

The plan for expansion of the waste rock disposal site needs to contain further

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detail on how much subsoil will be needed compared to how much is available. The plan to conduct field trials is acceptable if they are conducted using less than four feet of cover over potentially acid-forming or toxic material rather than over non-acid-forming non-toxic waste. It is recommended, however, that any potentially acid-forming or toxic material be special handled and buried at least four feet.



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TO: File

THROUGH: Daron Haddock, Permit Supervisor

FROM: Lance Lawson, Reclamation Soil Specialist

DATE: 17 September, 1993

RE: Plan for Waste Rock Disposal Site Expansion, Coastal States Energy Company, Skyline Mine, ACT/007/005 93H, Folder #2, Carbon County, Utah

SUMMARY

States Energy Company has submitted a plan for expansion of their Waste Rock Disposal Site in conjunction with their Skyline Mine operation. This review is for completeness of proposed methods and estimated impacts to the soil resource of the area.

The Expansion Plan was reviewed in coordination with other materials that are pertinent to the analysis area and the soil resource. Any comments made are related to the submitted plan, and not previously excepted materials.

ANALYSIS

Proposal

States Energy Company has proposed the following impacts to the soil resource: 4.4.3 - Soil Stabilization, 4.4.4 - Stabilization of Rills and Gullies, 4.6.2 - Topsoil Stockpile, 4.6.3 - Topsoil Protection that have been reviewed from a soil resource objective point.

Analysis

4.4.3 - Soil Stabilization. The proposed action is sufficient to meet the needs of protecting and limiting potential detrimental impacts to the soil resource.

4.4.4 - Stabilization of Rills and Gullies. It is recommended that rills and gullies be attended to at a depth of six inches, instead of the proposed nine inch depth. This is due to the amount of productive soil material that can be lost. It is also recommended that all occurring rills and gullies be inspected to determine if they are ephemeral, or reoccurring, rills and gullies. If rills and gullies are found to be site specific



reoccurring, then other methods, besides filling and reseeding, for control of these type of rills and gullies should be implemented. Otherwise, the problem will not be solved. Specific preventive measures can be defined when action is needed.

4.6.2 - Topsoil Stockpile. The proposed action is sufficient to meet the needs of protecting and limiting potential detrimental impacts to the soil resource.

4.6.3 - Topsoil Protection. The proposed action is sufficient to meet the needs of protecting and limiting potential detrimental impacts to the soil resource.