

TO: Daron Haddock, Permit Supervisor
FROM: Paul Baker, Reclamation Biologist
DATE: ~~June 29, 1992~~ *Printed only on this date*
RE: Permit Renewal Deficiency Review, Utah Fuel Company, Skyline Mine, ACT/007/005, Folder #2, Carbon County, Utah

SUMMARY

This document is a review of the technical adequacy of the biology and land use and air quality sections of the above-referenced mining and reclamation permit application. Some of the problems encountered include a lack of raptor nesting information for areas which could be subjected to subsidence, inconsistencies between the text and cross sections of contours for final reclamation, and a lack of information to show reclamation feasibility, particularly for the conveyor bench and for very steep slopes which the text says would have a variance from approximate original contour requirements.

Land use sections of Skyline's permit application are missing a few referenced materials. The land owners' desires for the postmining land use for the loadout area are not clear. Most of the information required under land use regulations for a variance from approximate original contour are not contained in the plan.

ANALYSIS

R645-301-321. Vegetation Information.

Proposal:

Chapter 2 of the application contains general vegetation information and refers to Appendix A-2 for more detailed information. Appendix A-2 contains the results of several surveys conducted by Endangered Plant Studies.

The permit area contains about twelve vegetative communities ranging from spruce-fir and aspen types to sagebrush-grass and oak. The aspen-grass-elderberry-forb community represents about 1/3 of the permit area.

Disturbed areas contained aspen, sagebrush, spruce-fir, riparian, and sagebrush-grass communities. Areas disturbed as a result of facilities construction near the portals were described according to cover class methods which allowed total vegetative cover to be greater than 100%.

Analysis:

Most of the information required for this section appears to be present; however, because it is contained in several reports which were done over about a six year period, the information is difficult to find and to relate to terminology used in the current plan. Chapter 2 of the plan needs to contain a table or other summary showing where the following information, which is considered to be the most critical, can be located:

1. Woody species density for all reference areas and disturbed areas.
2. Plant productivity information for all reference areas and disturbed areas.
3. Vegetative cover information for all reference areas and disturbed areas.
4. Similarity comparisons between the disturbed areas and reference areas.

This summary needs to include the report name, date, and page number.

Specific information which was not located was woody species density for reference areas 3 and 4. The 1979 report which was amended in 1980 contains some reference area tree species density information, but there are conflicting, apparently incomplete data. Table 3 in the December 1981 report "Response to Stipulations Regarding Vegetation and Soils for the Skyline Mine" shows recalculations of some of the data, but there are no units. Assuming that the units are the sampling units leads to logical numbers of trees per acre, but the information doesn't correspond back to other information in the original report. There does not appear to be any information on shrub species density.

Included in some of the reports is monitoring information on final and contemporaneous reclamation through 1985. This data indicates very successful reclamation in some areas but problems on some of the sites that are too steep or rocky to hold jute matting, topsoil, seeds, or tublings. Erosion pin studies in some of these locations had to be abandoned because the slopes were too unstable. The information presented is very valuable for evaluating some of the final reclamation methods proposed.

Recent results of evaluations of revegetation work on the conveyor bench need to be included in the plan. The rules require that the plan contain sufficient information to determine the potential for reestablishing vegetation, and the Division is also required to make a determination that reclamation, as required by the State Program, is feasible. All of the descriptions contained in the plan are of a site where revegetation has been very difficult and only partially successful. The evaluation information will assist in making the finding that reclamation is feasible in this area by the methods proposed in the plan.

Deficiencies:

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1. The plan must contain either a summary of vegetative cover, woody species density, productivity, and similarity comparison information for the reference areas and disturbed and proposed disturbed areas or a table to show precisely where this information is located in Appendix A-2.
2. The plan must contain results of recent evaluations of the vegetation on the conveyor bench.

R645-301-322. Wildlife Information.

Proposal:

Wildlife studies were mainly performed in 1980 and 1981. The application contains a list of species, in Tables 2.9-1 through 2.9-3, which could potentially use the area and classifies them by the amount of potential use, whether they were encountered, and if they are of high interest. These studies include evaluations of deer, elk, and moose movement and use patterns in Eccles Canyon; a raptor survey within about 1 km of the mine, conveyor, and loadout facilities; and investigations of the aquatic fauna of Eccles Creek.

The area represents high priority habitat, primarily summer range, for big game. According to the studies, the summer range does not appear to be limiting for big game populations. Sites most commonly used by deer that cross Eccles Canyon are mapped and discussed.

Documented raptor use includes two active accipiter nests, an area frequented by golden eagles, and several inactive stick nests. Other birds encountered during the study are mentioned briefly or listed.

Eccles Creek is classified as a Class III fishery, but a report authored by Donaldson and Dalton states that it is "valuable" because it serves as spawning habitat for cutthroat trout and other fish from Scofield Reservoir.

Future aquatic monitoring is planned on an "as needed" basis established with DWR and required in case of a major perturbation or other anomalous condition.

Analysis:

Some changes to the list of high interest species have occurred since the 1978 report cited in the application. According to "Fauna of Southeastern Utah and Life

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Requisites Regarding their Ecosystems", Division of Wildlife Resources (DWR) publication No. 90-11, red bats, ringtails, raccoons, badgers, striped skunks, western smooth green snakes, milk snakes, and Utah mountain ringsnakes are all high interest species. The application apparently contains a typographical error on page 2-85 where "CR" and "X" seem to be misplaced in the row with boreal toad.

In 1986, the DWR made some comments on the plan which have not been incorporated. On page 2-66 is a statement that the fish have upstream migration access to a point just above Whiskey Gulch where a series of beaver dams frequently blocks upstream movement. Trout have upstream migration access in Eccles Creek up to the Forest Service boundary below the Skyline Mine pad.

On page 2-92 is a reference to information on elk biology from Seton (1927). DWR states that while Seton was a fine wildlife ecologist for his time, he would not do well in modern applications of elk management techniques. Data that references Seton(1927) should be eliminated.

Skyline needs to include results from recent DWR fishery surveys, probably as tabular data along with benthic and sediment data.

The mine has continued to affect Eccles Creek through discharge of dissolved solids, particularly sulfates, but the degree of the effects is not well known. A regular program of monitoring of aquatic life may be needed. DWR is evaluating this situation and the need for monitoring.

The raptor survey identified an active goshawk nest about 1,700 feet from where the conveyor would be constructed. The northern goshawk has recently been classified as a candidate for threatened or endangered species status. Although any birds now nesting in the area are probably accustomed to mine activities, the nest should be left undisturbed as far as possible, especially during the crucial period of April 15 to July 20. The plan must also identify this species as a candidate for threatened or endangered species status.

The plan does not include adequate raptor information for the parts of the permit area that could be subjected to subsidence. Raptor nests need to be identified and coordination with the Division of Wildlife Resources (DWR) undertaken when the areas containing the nests could subside during the crucial nesting period of April to July.

No threatened, endangered, or proposed plant species are listed in the species lists for the permit area. A few plant species under study for possible listing could be in the permit area. In particular, Hymenoxys helenioides has been collected in the vicinity and occupies aspen, sagebrush, mountain brush, and meadow communities in clay loam

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soils at 8,800 to 10,700 feet elevation in, among others, Carbon and Emery Counties. This plant is often located where Helenium hoopesii, a common and similar appearing species in the permit area, is found.

Deficiencies:

1. The application must include raptor nesting information for the entire permit area.
2. Changes to high interest species status of amphibians, reptiles, and mammals with ranges potentially within the permit area as listed in Tables 2.9-1 to 2.9-3 must be updated to the most current information available.
3. The application must identify goshawks which occur in the area as candidates for threatened or endangered species status.
4. The Applicant must correct statements that fish are only able to migrate to a point just above Whiskey Gulch and state that they have upstream migration access in Eccles Creek up to the Forest Service boundary below the Skyline Mine pad.
5. References to data from Seton (1927) must be deleted from the plan.
6. The plan must include data from recent Wildlife Resources fisheries surveys.

R645-301-330.

Operation Plan.

Proposal:

Areas disturbed in construction have been revegetated to the extent possible using various seed and planting mixes. Streams were channelized in some places, and riparian area enhancement practices were used in others.

Terrestrial wildlife are protected on the road to the extent possible through speed limits and wildlife warning signs. Fences will be constructed around the portal and pond areas if they are needed. Utah Fuel will participate in the prevention, suppression, and control of forest, range, and coal fires. Conservation training of employees is conducted in conjunction with DWR as part of the routine mine training schedule.

The upper reaches of Electric Lake, Huntington Creek, Bolger Creek, and the South Fork of Eccles Creek will not be subsided. A special three year subsidence

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monitoring program will be conducted to study the effects of subsidence related to full extraction coal mining on flow in the upper reaches of Upper Huntington Creek and Burnout Creek drainages. The details of this monitoring program are contained on page 4-100. The total amount of subsidence is expected to vary between 0 and 24 feet.

Analysis:

Comments relative to the conveyor are addressed in a separate review.

Because the plan does not contain surveys for raptor nesting sites outside of the portal/conveyor/loadout area, it is impossible to determine if subsidence could affect some nests or if monitoring or mitigation is necessary. If nests are found in areas that could subside, coordination that will be done with DWR to avoid impacts will need to be included in the plan. This requirement will be addressed when the information required under R645-301-322 deficiency No. 1 is received.

In addition to the subsidence monitoring program for Upper Huntington Creek and Burnout Creek, DWR has told me that the Applicant is working with them to develop a mitigation plan which would improve the possibility of other creeks, particularly James Creek, being used for cutthroat trout spawning. This is intended to mitigate for the possible subsidence-caused degradation or loss of Burnout Creek for spawning habitat.

The Applicant needs to commit to repairing any subsidence cracks which are of a size or nature that would cause injury or death to livestock or wildlife.

Deficiencies:

1. As it is developed, the plan for mitigation of loss of wildlife values due to subsidence in the Burnout Creek area must be incorporated into the plan.
2. The Applicant must commit to repairing any subsidence cracks which are of a size or nature that would cause injury or death to livestock or wildlife.

R645-301-341.100

Revegetation Timetable

Proposal:

All tree and shrub transplants will only be planted in the spring. Revegetation on slopes steeper than 3h:1v will be undertaken as soon as possible following topsoil placement, mainly during spring and early fall, with fall seeding preferred. Where too steep for topsoil placement, planting will be followed immediately after the area becomes

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available during construction activities. Revegetation on slopes less steep than 3h:1v will follow topsoil replacement.

The plan states on page 4-36 that within a suitable period prior to seeding, topsoil will be distributed on all areas to be reclaimed and allowed to settle and attain equilibrium with its natural environment.

Analysis:

The Applicant needs to commit to a definite time frame for topsoil replacement and revegetation. Topsoil placement needs to be timed so that seeding and planting proceed as soon as possible afterward and are still done during the first normal period for favorable planting conditions after replacement of the plant-growth medium.

Page 4-103 identifies the South Fork breakout area as an elk calving ground where disturbances need to be minimized during crucial periods. The plan needs to address the timing of reclamation operations in this area.

Deficiencies:

1. The application needs to contain a definite commitment to time topsoil replacement so that revegetation work can proceed as soon as possible afterward and be within a normal period for planting. The amount of time between topsoil placement and planting needs to be stated.
2. The application must discuss timing of reclamation activities in relation to elk calving in the South Fork breakout area.

R645-301-341.210.

Species and Quantities of Seeds and Seedlings.

Proposal:

The application contains seed and planting mixes for south to west and north to east-facing slopes, riparian areas, and for the waste rock disposal site.

Analysis:

The mixtures contain diverse mixtures of primarily native plants which would be expected to do well at this site.

The Applicant has informed me verbally that, as far as possible, it is Skyline's

intention to use seed collected from the site for final reclamation. This is a very good commitment, but it needs to be included in the plan if it is truly what Skyline intends to do. With this commitment, however, some provisions need to be made for determining seed quality. Any seed collected from the site must be representatively sampled and tested for purity, germination, and noxious weed content so that seeding rates can be determined.

Some seed will undoubtedly need to be purchased from commercial sources. The plan needs to contain methods to obtain adapted ecotypes or varieties from these sources. Some of the possibilities include using certified seed, origin verified seed tagged in cooperation with the Utah Crop Improvement Association, or using seed labelled with the county and elevation of origin as per Utah State law for tree and shrub seed.

The plan also needs to contain methods to be used to obtain adapted nursery materials and to have them delivered in the proper stage for planting. A possible reason for some of the shrubs on the conveyor bench not growing well is that they may not have been adapted to the site. Requirements for these materials will need to be anticipated at least two years in advance to allow time for propagation or for seed collection, stratification, and growing them to the proper stage.

In order to ensure that proper amounts of seed are planted and that the Utah Noxious Weed Act is not violated, Skyline should not accept seed sold in violation of the Utah Seed Act. The particular requirements of concern are the amount of time between testing and sale and the common and noxious weed contents of the seed. If too much time has elapsed between testing and sale, there can be no assurance of seed viability. In addition, seed and nursery stock need to be properly stored between delivery and use. Specifically, nursery stock needs to be kept moist, away from heat, and in dim light. Seed should be protected from heat, moisture, and animals. Failure to follow these recommendations could lead to a failure to follow the approved plan for quantities of seed planted.

Deficiencies:

1. The plan must contain methods to obtain seed and nursery materials of adapted ecotypes or varieties. If the Applicant is to gather seed from near the mine site, provisions for testing must be included so planting rates can be adhered to.

Proposal:

South-facing slopes of 1h:3v or less will have seed broadcast with a cyclone spreader, and slopes of 2h:1v or less will be hydroseeded. Plantings of shrubs and trees will be hand set. Slopes less than 10h:1v will be drill seeded. Slopes between 10h:1v and 1.5h:1v will be seeded by hand broadcast and manually buried by raking. Slopes greater than 1.5h:1v will be revegetated without topsoil except that basins will be filled with topsoil and have plants set in them. On these slopes, hydromulch seeding will be done in between the handset plantings.

Analysis:

The wording in this section of the plan is somewhat confusing. The plan says, "Seeding of the south-facing slopes (1h:3v) or lower flat areas will be conducted using a cyclone spreader. For slopes less than 2h:1v, seeding will be accomplished using a hydroseeder." It could be implied that only slopes between 1h:3v and 2h:1v would be seeded with a cyclone seeder, but the wording says 1h:3v or lower *flat* areas. The distinction needs to be made.

Although the previous paragraph assumes that the slopes less than 2h:1v referred to are south-facing slopes, this should be stated in the plan to make it more clear. It would also be helpful, when referring to seeding methods for other areas, to say that these seeding methods will be used for other than south-facing slopes.

The terminology "hydromulch seeding" implies that hydromulch and seed could be mixed together which must not be done.

Scarification of slopes, especially 3h:1v or greater, through methods such as terracing, gouging, or pitting, has proven very effective to establish vegetation. The plan states in the land use section on page 4-77 that operational areas will be scarified to reduce compaction and that steep slope areas which remain after abandonment will receive special ripping to create ledges, crevices, pockets, and screens to allow better soil retention and vegetation establishment. This discussion is appropriate for the revegetation or the soil redistribution section and needs to be included in one of these locations. It should also be elaborated to show equipment to be used and areas where these methods will be employed. The broadcast/hand rake seeding methods proposed are conducive to this type of surface treatment. Crimping straw or hay mulch would tend to destroy these features, but other mulching methods discussed below would be compatible.

Deficiencies:

1. Wording in the planting and seeding methods section of the plan must be revised to clearly define which seeding methods will be used on slopes of which angles and aspects, particularly on south-facing slopes and on other slopes greater than 1.5h:1v. Seed must not be mixed with mulch in hydroseeding operations.
2. The revegetation or soil redistribution section of the application must show methods to be used to roughen the surfaces of slopes in preparation for seeding, particularly those greater than 3h:1v.

R645-301-230. Mulching Techniques.

Proposal:

Slopes of 10h:1v to 3h:1v will be mulched with straw or other inert mulch materials which will be anchored by crimping or chemical tackifier. Slopes steeper than 3h:1v will be treated with hydromulch. All mulch will be applied at the rate of 2000 pounds per acre. All mulching and tackifier types and rates will be determined using the best technology currently available at the time of reclamation.

The plan states on page 4-77 that mulching may be used if moisture retention is determined during operational testing to be necessary.

Analysis:

The land use section of the plan needs to be altered to reflect the mulching techniques discussed in the revegetation section.

No mulching method is shown for slopes less than 10h:1v.

Several literature sources indicate that the best mulching technology currently available for controlling erosion on steeper slopes is either an Excelsior-type matting material or straw or hay applied at the rate of at least 1.5 tons per acre and anchored using either crimping where possible, chemical tackifier, or netting. The text of the plan proposes to leave some very steep slopes, and Excelsior-type matting material may be the best technology available for these areas. The plan should be updated by incorporating the best technology at periodic intervals.

Deficiencies:

1. Mulching methods reflecting best technology currently available, whether

determined through operational testing or literature sources, must be shown for all areas.

2. The land use section of the plan must be altered to reflect the mulching techniques discussed in the revegetation section.

R645-301-341.240.

Irrigation and Pest and Disease Control.

Proposal:

Irrigation is not planned for any areas except the conveyor bench. If irrigation is needed, a plan will be developed and submitted to the Division for approval.

Noxious weeds will be controlled on all areas of final reclamation.

Analysis:

Correspondence from the Division of Water Rights states that if supplemental irrigation is required, it will be necessary to file additional paperwork with them to accommodate irrigation uses.

Deficiencies:

1. Since irrigation is being used for the conveyor bench, the Applicant must show compliance with the Division of Water Rights requirement to file additional paperwork with them to accommodate irrigation uses.

R645-301-341.250.

Success Determination Measures.

Proposal:

All areas of final revegetation will be evaluated qualitatively each year. Shrub survival will be quantified using permanent transects for the first three years, and woody species density and total living cover will be estimated during the third year.

Vegetation reference areas and revegetated areas will be sampled for cover, density, productivity, and species composition in the last two years of the liability period and will meet sample adequacy tests for a 90% confidence level for a 10% change in the mean. Results of statistical analyses will show similarity between disturbance areas and reference areas. Reference areas will be checked every five years to be sure that they

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have not been significantly altered by subsidence or other man-induced degradation.

Analysis:

The Applicant is in compliance with this regulation. All methods used for determining revegetation success of reclaimed areas must be approved methods contained in Appendix A of the "Vegetation Information Guidelines". Although no attempt will be made to revegetate outcroppings of stone (p. 4-44), these areas will still need to be included in the revegetation sampling analyses as will any rock outcrops occurring in the reference areas as part of random sampling.

Deficiencies:

None.

R645-301-341.300.

Revegetation Feasibility Demonstration.

Proposal:

In reclamation years 1-5, all seeded areas were inspected at the end of each growing season to determine the success of the seeding program. Any areas not achieving 90% of original cover in the first five years are investigated to determine possible failure causes.

Analysis:

The 1985 vegetation monitoring report discusses a few areas where revegetation had not been successful because of: 1) slopes above the angle of repose; 2) areas composed primarily of rock outcrops; and 3) sites too steep to hold topsoil. Some areas, specifically parts of slopes 1 and 4, were not sampled because little was growing on them for these reasons. Yet, the text of the plan proposes areas with slopes of 1h:2v and perhaps greater, and topsoil is not to be used on slopes steeper than 1.5h:1v except in basins where shrubs would be transplanted. The Applicant has not adequately demonstrated that reclamation is feasible under conditions such as these.

The final reclamation proposed for the conveyor bench is to leave it intact. The descriptions contained in the plan are of a site that is very steep and unstable and where revegetation has been very difficult. The plan needs to contain more information on reclamation feasibility. The required information may not be available until after this coming growing season, and, even then, it will not be possible to establish a trend on the site without at least three years of quantitative data. If information gathered this year

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shows that the reference area standard is being approached, additional quantitative evaluations can wait a few years. If, however, the data shows that woody species density and vegetative cover are far from the reference area standards, annual quantitative evaluations will be needed to show an upward trend. If the data do not show that the reference area standard can be achieved for this area, the possibility of using different revegetation methodology, including, possibly, backfilling and topsoiling, will have to be explored.

The plan states on page 4-74 that asphalt and concrete surfaces will be disposed of by either fracturing and burying it to a minimum depth of two feet or by removing the materials and using them for backfill and covering them with soil. This section of the plan needs to be elaborated. If blacktop and concrete are not fractured adequately, they will present a barrier to root penetration. Two feet of soil cover over an impenetrable barrier is not adequate. This concern is discussed and a deficiency is included under R645-301-242 Soil Redistribution.

Deficiencies:

1. The plan must demonstrate revegetation feasibility in those areas where a variance from approximate original contour is proposed.
2. The plan must be revised to show that quantitative data, including percent cover by life form, woody species density, and shrub survival rates, will be gathered for the conveyor bench in 1992 and annually thereafter for at least the next two years (1993-1994) if the reference area standards are not being approached this year. Further data may be needed after that period, and the reference area may also need to be evaluated for some of these parameters for comparison.

R645-301-342. Fish and Wildlife.

Proposal:

The proposals contained in the section of the plan referred to in the cross reference are all for operation plans.

Analysis:

The plan must contain a fish and wildlife plan for the reclamation and postmining phase of operation. The species of plants proposed for planting in reclamation appear to meet the requirements of R645-301-342.200, but the plan needs to contain

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enhancement measures that will be used during the reclamation and postmining phases of operation to develop aquatic and terrestrial habitat. If no enhancement measures are to be used, the plan must contain a statement explaining why enhancement is not practicable.

Deficiencies:

1. The Application must include a fish and wildlife habitat enhancement plan for the reclamation and postmining phase of operation or must include a statement explaining why enhancement is not practicable. Consultation with the Division of Wildlife Resources is recommended.

R645-301-411. Land Use Environmental Description.

Proposal:

Premining land uses consisted of grazing, recreation, natural gas transmission, and forestry. The plan shows sheep allotment data for four allotments within the area. Vegetation production is related to potential animal use.

County zoning ordinances for Emery and Carbon Counties and the Manti LaSal National Forest management plan classify the area for recreation, forestry, and mining land uses.

Several archaeological surveys were done in the area, and no located archaeological sites appear to meet criteria for the National Register of Historic Places. The May 8, 1981 report recommended testing some of the sites for depth if they were to be disrupted.

The permit area does not contain any public parks or lands which are within the units of the National System of Trails or the Wild and Scenic Rivers System. The nearest cemetery is shown on Plate 1.6-1 near the road leading to the waste rock disposal site.

The Eccles Canyon Mine was located near the Skyline Mine portals. This mine operated intermittently from 1899 to 1952. Room and pillar methods were used to extract an unknown, but probably small quantity of coal from the Lower O'Connor A seam.

Analysis:

The first 48 pages of the May 8, 1981 AERC archaeological report are missing from

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the plan. The abstract of this report and other extant pages indicate the presence of some archaeological sites, but the locations and exact nature cannot be determined. One of the sites was recommended for excavation if it was to be disturbed, but since it is not known where this site is, an analysis of the threat from disturbance cannot be made. These pages need to be included in the plan.

The plan does not identify wildlife as a premining land use. This is generally understood but needs to be stated in the plan.

Other sections of the plan addressing this section of the regulations appear to be complete and adequate.

Deficiencies:

1. The Applicant must supply a copy of the first 48 pages of the May 8, 1981 AERC archaeological report or provide adequate information on what is contained in the report, and must address the concerns noted in the conclusion of this report as appropriate.
2. The plan must identify wildlife habitat as a premining land use.

R645-301-413. Reclamation Plan.

Proposal:

The area will be returned to original uses as wildlife habitat and grazing. The plan contains general summaries of the reclamation plan and how the postmining land use will be achieved.

The plan contains a copy of a letter from the representative of the land owner of the waste rock disposal site stating that he would like to have the waste rock disposal site levelled so that it can be used for corrals and a livestock containment area.

The Manti LaSal National Forest Land and Resource Management Plan from 1986 says that the land should be returned to land uses of grazing and wildlife habitat.

Table 4.12-1 on page 4-75 says that the premining land use for the loadout area is grazing, picnic, and stock pens. The proposed postmining land use is also grazing, picnic, and stock pens, and the alternative use is wildlife habitat. This table contains a footnote that says that the loadout picnic facilities and stock pens will only be returned to approximate pre-mining configuration if so requested by the postmining landowner.

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Analysis:

The plan states on page 4-79 that Maps 4.4.2-1A, 4.2.2-1B, and 4.7.2-1 present the proposed topography of the postmining area. I was unable to locate Map 4.7.2-1. This map either needs to be included in the plan or reference to it deleted.

The plan states that the land will not be restored to approximate original contour; therefore, several requirements of R645-302-270 become effective.

The surface owner comments must specifically address the requirements of R645-302-271.600. This regulation states that the surface landowner of the lands within the permit area must knowingly request, in writing, as part of the permit application, that a variance be granted so as to render the land, after reclamation, suitable for an industrial, residential, or public use (including recreational). The comments included as part of the plan are adequate for the waste rock site and for Forest Service land if there is no variance from approximate original contour.

The conveyor revision was to have included a copy of the lease agreement for the conveyor route to serve as landowner comments. This agreement, or pertinent excerpt from it, was not included in the most recent submittal and needs to be included in the plan. Since regrading to approximate original contour is not planned for the conveyor bench, additional comments from this landowner need to be obtained.

The landowner's desires for the loadout area are not clear, and comments need to be included in the plan.

Surface owner or manager comments need to be referenced in the cross reference for the regulations.

The potential use of areas with a variance from approximate original contour requirements must be shown to be constitute an equal or better economic or public use after consultation with appropriate land use agencies. The plan must also discuss and meet the criteria for alternative postmining land use in R645-301-413.300.

The plan must also address the hydrology aspects of R645-302-270.

Deficiencies:

1. The Application must contain comments on the proposed postmining land use for the loadout area.
2. The application must include either a copy of the lease agreement for the

conveyor corridor land, excerpts from this agreement, or other comment from this land owner on the postmining land use.

3. The cross reference must show the locations of surface owner or manager comments concerning the postmining land use for all areas.
4. The plan must adequately address the requirements for an alternative postmining land use in R645-301-413.300.
5. Skyline must show evidence of consultation with appropriate land use agencies to determine that the potential uses of areas not to be restored to approximate original contour will constitute equal or better economic or public uses.
6. The application must include written requests from surface landowners for a variance from approximate original contour so as to render the land, after reclamation, suitable for the postmining land use.
7. The application must show that the watershed of lands within the proposed permit and adjacent areas will be improved by the coal mining and reclamation operations when compared with its condition either before mining or if approximate original contour was restored.
8. Map 4.7.2-1 either needs to be included in the plan if it is needed or reference to it must be deleted.

R645-301-420.

Air Quality.

Proposal:

The Application states that prior to construction at the mine site, an application for Preconstruction Review and Prevention of Significant Deterioration was filed with the EPA, and a Notice of Intent to Construct was filed with the Utah Air Conservation Committee. All requested approvals were obtained as required.

Air quality monitoring will be conducted as required by the Utah Division of Air Quality.

Analysis:

As part of the conveyor revision, the Applicant was expected to supply a copy for

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the plan of the PSD or Air Quality Approval Order. This was not included in the latest submittal of this revision, but it appears that Skyline is in compliance with the Division of Air Quality's regulations.

Deficiencies:

1. Skyline must supply a copy of the PSD (from EPA) and the most recent Notice of Intent (from the Division of Air Quality) for insertion into the plan.

RECOMMENDATIONS

Some of the revegetation which Skyline has proposed may be extremely difficult and costly, and it is important that they be able to demonstrate reclamation feasibility for very steep slopes.

Raptor protection plans will need to be developed after more information is received, and the need for regular biological monitoring of Eccles Creek will be assessed after Wildlife Resources has had time to review stream monitoring data. Plans for mitigation of the potential subsidence of the Burnout Creek area, depending on monitoring data and Forest Service requirements, will need to be included in the plan.