

TECHNICAL MEMORANDUM

Utah Coal Regulatory Program

September 10, 2004

OK

TO: Internal File

THRU: Wayne Western, Environmental Specialist, Engineer, Team Lead

FROM: Jerriann Ernstsens, Ph.D., Environmental Specialist II, Biologist 

RE: North Lease Subsidence Mining, Canyon Fuel Company, Skyline Mine, Permit C/007/0005, Task ID #1976

SUMMARY:

The Division received an amendment, on July 1, 2004, that addresses undermining perennial streams within North Lease at the Skyline mine. This memo describes the review of the biology and archeology sections for the amendment.

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TECHNICAL ANALYSIS:

GENERAL CONTENTS

In this memo, there may be comments referring to “narrative”, which refers to text that belongs in the MRP regulation-related sections. The comment “narrative” does not refer to information in the MRP appendices. Typically, the important points of an appendix are summarized in the MRP narrative.

PERMIT APPLICATION FORMAT AND CONTENTS

Regulatory Reference: 30 CFR 777.11; R645-301-120.

Analysis:

Canyon Fuel Company (CFC) did not include a complete copy of page 2-132 in the submittal.

Findings:

The Division does consider the information in the application adequate to meet the minimum Permit Application Format and Contents section of the General Contents regulations.

REPORTING OF TECHNICAL DATA

Regulatory Reference: 30 CFR 777.13; R645-301-130.

Analysis:

The tables below provides a list of biological and archeological related information in the North Lease Subsidence Mining amendment including: titles of documents, dates of documents, names and organizations of those participating in biological and cultural resource data collection, and locations of resource collection projects. This table does not include the additional information in the MRP appendices. However, vegetation/wildlife and the cultural and historic reports are in Appendices A2 and the Confidential File, respectively.

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MRP

SURVEY	REPORT DATE	RESPONSIBLE PERSON (ORGANIZATION)	SURVEY LOCATION
Biological Data. 1. Riparian plant community survey near Scofield, Utah.	2002	Patrick Collins (Mt. Nebo Scientific, INC.)	Woods and Winter Quarters
2. Baseline monitoring of the benthos in Winter Quarters Canyon Creek.	Oct. 2002 June 2003	Dennis Shiozawa (Mt. Nebo Scientific, INC.)	Woods and Winter Quarters

CONFIDENTIAL FILE

SURVEY	REPORT DATE	RESPONSIBLE PERSON (ORGANIZATION)	SURVEY LOCATION
Cultural and Historic. 1. No additional reports.			

Findings:

CFC has met the minimum requirements of this section.

ENVIRONMENTAL RESOURCE INFORMATION

Regulatory Reference: Pub. L 95-87 Sections 507(b), 508(a), and 516(b); 30 CFR 783., et. al.

HISTORIC AND ARCHEOLOGICAL RESOURCE INFORMATION

Regulatory Reference: 30 CFR 783.12; R645-301-411.

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Analysis:

U.S. Forest Service Lease Stipulation #1 requires a cultural resource inventory and a paleontological appraisal of the areas to be undermined.

Section 2.1.1 of the application discusses the cultural, historical, and archeological resources. This section refers to the 1995 Environmental Assessment (EA) Appendix B (Criterion Number 7) which states that there are no properties included in the National Register of Historic Places on or near the proposed lease tract. Section 2.1.1 also refers to page 10 Section H of the EA, which states "Leasing of the tract should not result in significant impacts to cultural or paleontological resources." A copy of the EA is provided for in Appendix A-2 of the application. Section 2.1.1 page 2-4b refers to the Archeological Environmental Research Corporation (AERC), reports.

Section 2.1.1 page 2-4b of the application refers to a 1996 AERC report entitled "Cultural Resource Evaluation of Proposed Drillholes & Associated Access Routes in the Upper Winter Quarters Canyon and Winter Quarters Ridge Locality of Carbon County, Utah." The report states, "No previously recorded significant or National Register eligible cultural resources will be adversely effected by the proposed developments. No isolated artifacts were observed during the evaluation. No paleontological loci were identified during the evaluation. No newly identified cultural resource activity loci were discovered during the examination." This document is provided for in Appendix A-2 of the application.

As required by regulation the Division has notified the State Historic Preservation Officer (SHPO) of Canyon Fuel's application to mine in the identified lease area and requested their concurrence with the EA and current findings. In a conversation between Jerriann Ernstsens of the Division and Jim Dykman from the SHPO, on November 12, 2002 Mr. Dykman indicated that concurrence was granted when the request lapsed for 30 days, on or about November 10, 2002. A copy of the email from Mr. Dykman confirming the finding of No Historic Properties Affected is included in the file.

Findings:

The information in the MRP, EA, application and concurrence from SHPO is adequate to meet the requirements of this section of the regulations.

VEGETATION RESOURCE INFORMATION

Regulatory Reference: 30 CFR 783.19; R645-301-320.

Analysis:

The following Forest Service Stipulations attached to the lease require vegetation baseline information: Lease Stipulation #2 (T & E species), Stipulation #3 (baseline data), Stipulation # 7 (monitoring of effects), Stipulation #9 ("Except at specifically approved locations, underground mining operations shall be conducted in such a manner so as to prevent surface subsidence that would: ...(3) damage or alter the flow of perennial streams."

In Section 2.7.1, the application summarizes the vegetation communities for the North Lease as outlined in the EA (1995). The application indicates that the ridgetops are mountain grassland communities (where mountain brome *Bromus carinatus* and slender wheatgrass *Elymus trachycaulus* are dominant) and sagebrush-grass (where Vasey sagebrush *Artemisia tridentate* var. *vaseyana*; rabbitbrush *Chrysothamnus viscidiflorus*; Louisiana sagewort *Artemisia ludoviciana* are also dominant.) Section 2.7.1 also indicates:

- There are a few, productive, small meadows dominated by bluegrass with some sedges and carex.
- Riparian areas exist along streams and at seeps and springs.
- The vegetation along the waters edge consists of species of carex, bluegrass, and to a lesser extent sedges.
- Some willow is present along the streams.

Vegetation of the North Lease is discussed in Section 2.7.6 of the MRP and in Appendix A2. CFC agreed to provide aerial photographs as baseline data. They committed to take pictures annually starting August 2002. A qualified biologist will review the pictures.

Section 2.7.6 provides summary of a vegetation overview (Patrick Collins 1992). The main points of the overview include that the Aspen community is the most common vegetation type of the Winter Quarters tract area (North Lease). Along with snowberry *Symphoricarpos oreophilus* and Oregon grape (*Mahonia repens*) are the dominant understory. Also important by relative acreage are the communities of Engelmann spruce *Picea engelmannii* and subalpine fir *Abies lasiocarpa* with an understory of gooseberry currant *Ribes montigenum*.

The MRP states that a vegetation evaluation would take place in early summer of 2003 (Vol. 1A, p. 2-61d). However, Patrick Collins conducted a Level II (USFS) site-specific qualitative vegetation evaluation (*Riparian plant community survey near Scofield, Utah* Appendix A-2) in late October of 2002. Dr. Collins evaluated four and seven sites along Woods and Winter Quarter Canyon stream channels, respectively. The report includes colored pictures of all the sampling sites. Additional pictures of sites between the sampling sites are available. The pictures clearly show that the stream channels were snow-covered. The report includes field notes that also support that data collection was difficult at certain sampling sites because of snow or ice.

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Survey parameters along the Woods and Winter Quarters stream channels included pool attributes, aquatic vegetation, bank-type vegetation, and bank condition. The vegetation descriptions provided upland community types, species, and forage production estimates. The Division is concerned that the report does not clearly define the riparian areas along the stream channels. For example, there are vegetative descriptions of 100% grass/sedge/forge community type, yet the species observed does not include herbaceous type species. CFC only provided production estimates that do not include references to USDA data used for comparable sites as required by R645-301-321.100. Although the Division has concerns, the Division considers that CFC met the commitments to evaluate productivity measurements, plant community descriptions, and mapping of the riparian areas along perennial streams in the North Lease. CFC, however, must provide or clarify the total acreage for each vegetation type for the North Lease as requested (R645-301-322.100). The report only refers the reader to measure the distance between sample points on the map and see respective data.

Exhibit 2.7.5 of Appendix A2 contains a May 1992 report by Mount Nebo Scientific Research & Consulting (Springville, Utah) summarizing existing Forest Service vegetation information. The report concludes that "riparian and wetland vegetation was not specifically mapped" by the USFS and "these areas should be mapped if the lease area is pursued..."

The USFS is progressing towards electronic mapping of the Manti LaSal National Forest. In 2002, the Division previewed the electronic mapping information available in draft form and found riparian and wetland designations have yet to be added.

Section 2.1.2 indicates that there have been no threatened or endangered (TE) species identified on the project or adjacent areas. Section 2.7.6 indicates that there will be no surface impacts within the permit area and therefore no impacts to threatened, endangered, endemic or sensitive species.

The Intermountain Proposed Endangered, Threatened, and Sensitive Species List, last updated in January 1999, indicates that the following endangered species may inhabit the Manti La Sal:

- Clay phacelia *Phacelia argillacea*

The following threatened species may also inhabit the Manti La Sal:

- Heliotrope milkvetch *Astragalus montii*
- Ute ladies' tresses *Spiranthes diluvialis*
- Winkler cactus *Pediocactus winkleri*

Several more species that are sensitive are listed for the Manti La Sal:

- Chatterley Onion *Allium geyeri chatterleyi*
- Sweet-flowered rock jasmine *Androsace chamaejasme carinata*

- Link Trail columbine *Aquilegia flavescens rubicunda*
- Bicknell Milkvetch *Astragalus consobrinus*
- Creutzfeldt-flower cryptanth *Cryptantha creutzfeldtii*
- Pinnate spring-parsley *Cymopterus beckii*
- Abajo daisy *Erigeron abajoensis*
- Carrington daisy *Erigeron carringtonae*
- Kachina daisy *Erigeron kachinensis*
- LaSal daisy *Erigeron mancus*
- Canyonlands lomatium *Lomatium latilobum*
- Canyon sweetvetch *Hedysarum occidentale var. canone*
- Arizona willow *Salix arizonica*
- Musinea groundsel *Senecio musiniensis*
- Maguire campion *Silene petersonii*

In researching the potential occurrence of each of these species in more detail, CFC approached Bob Thompson, USFS Manti La Sal District Botanist who stated, "none of the currently listed TE species or sensitive species are found in the Winter Quarters lease area" (p. 2-63f).

The Division required vegetation site descriptions, a stream channel map, and productivity information for riparian and wetland areas along the perennial reaches of all stream channels within the permit area before the start of longwall mining. Although the Division stated some concerns of the 2002 Collins report, the Division considers that has met most of these commitments. The Division may require more information upon pending decisions from the USFS and BLM or in the event of surface disturbance of the perennial streams.

Findings:

The Division considers information in the application inadequate to meet the minimum requirements of the UCMR. Prior to approval, CFC must provide the following in accordance with:

R645-301-322.100, Provide or clarify the total acreage for each vegetation type for the North Lease as requested.

FISH AND WILDLIFE RESOURCE INFORMATION

Regulatory Reference: 30 CFR 784.21; R645-301-322.

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Analysis:

The fish and wildlife information is provided for in Sections 2.8 through 2.10 of the application, and Volume 1A of the approved MRP. Sec. 2.1.2, and 2.7.6, and 2.10.2 discuss Threatened & Endangered (T&E) species. Sections 2.8, 2.9 and 2.9-5 discuss aquatic and terrestrial wildlife information. Sections 2.10 and 2.10.2 discuss raptors. Avocet Consulting Inc. has been included in section 2.1 of the application as the firm that conducted the Ground Surveys for Nesting Raptors.

Drawing 1.6-3 has been revised to include the proposed addition to the permit area. This map shows the addition of the lease boundary. The proposed addition to the permit area includes critical value summer deer and elk and high value winter moose habitats.

On October 24, 2002, a meeting was held to discuss wildlife resource information required for the new lease. Specifically discussed were raptor monitoring, three-toed woodpecker monitoring and a survey protocol for macroinvertebrate and fish sampling. Representing agencies were USFS, USFWS, DWR and the Division. Representatives from the Forest Service indicated they did not need additional monitoring for raptors and the three-toed woodpecker for the proposed North Lease addition. An "E"-mail letter from the Forest Service was provided to the Division on November 14, 2002. This letter stated their position and is included in the file. Additional comments regarding sensitive species included:

- Goshawk was not likely to be affected by subsidence
- No impacts likely to the three toed wood pecker
- Wolverine had not been seen in Utah for many years
- Boreal toad habitat may be present but would be evaluated during the mollusk and amphibian survey
- No bats in the proposed lease area
- Sage Grouse were noted in adjacent areas.

The applicant committed to conduct macroinvertebrate and fish surveys during early summer 2003, before any subsidence occurring in 2004. The Division, USFS, Division of Wildlife Resources, and the USFWS agreed to the protocol. The protocol included surveying Winter Quarters and Woods stream two times a year (fall and spring) for two consecutive years and then every three years or for a period determined by the Division and other agencies until data supports a population trend (p.2-71a). CFC must conduct the surveys two years before longwall mining and at least two years after mining and subsidence ceases in the area.

Dennis Shiozawa conducted the first set of macroinvertebrate surveys for Winter Quarters and Woods streams in fall 2002 and spring 2003 (*Baseline monitoring of the benthos in Winter Quarters Canyon Creek and Woods Canyon Creek*). The two years of surveys will provide a pre-mining baseline for densities and taxa. The surveys will also provides sensitivity

and diversity values that may help demonstrate seasonal effects and understand population trends.

CFC agreed to conduct fish surveys for Winter Quarters and Woods streams. The survey protocol includes using a multi-pass electro-fishing technique to estimate fish populations. The surveys were supposed to begin in the fall of 2003 and then every third year (p. 2-71b.) CFC stated that they conducted fall and early summer fish and macroinvertebrate surveys for Winter Quarters Canyon and Woods Canyon streams during fall 2002 and summer 2003 (Appendix A-3). The Division, however, cannot find the fish report. CFC must provide the missing report (R645-301-322.100).

The Division asked CFC for information on the perennial nature of the streams and the reaches of the streams in the Environmental Resources Hydrologic Resource Information section of this TA. During a field visit to the proposed lease area on September 27, 2002, it was noted that water was flowing in Winter Quarters Creek, three unnamed tributaries and Bob's and Box Canyons. There is an established riparian corridor along the main stream channel. An unnamed side canyon to the south (approximately 1-mile from the USFS boundary) was flowing, but had been dammed by beaver activity. Fish were also observed in the lower reaches of the main stream near the east permit boundary.

The entire North Lease area is considered critical value elk summer use area and a high value deer summer use area on the Utah Natural Heritage Program database (e-mail communication from Anne Axel Information Manager, Utah Natural Heritage Program, Utah Division of Wildlife Resources, 10/21/02). The database showed no records of occurrence of threatened, endangered, or sensitive plant or animal species in the proposed addition. No raptor nests were shown on this database or the DWR database.

The Division required CFC to conduct surveys for raptors, amphibians, fish, and macroinvertebrates in early summer 2003 (with the anticipation of operations beginning in 2004). The Division only received the macroinvertebrate survey; therefore, the fish, raptor, and amphibian surveys are missing. Although the 2003 Annual Report provides the most recent Goshawk survey, it does not include the North Lease area. CFC explained that the timing for the Goshawk as well as the amphibian surveys for the North Lease is one year prior to undermining (personal contact Chris Hansen 9/9/04).

Findings:

The Division considers information in the application inadequate to meet the minimum Fish and Wildlife Resource Information section of the Environmental Resource Information regulations. Prior to approval, CFC must act in accordance with the following:

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R645-301-322.100, Provide the missing fish survey report for Winter Quarters and Woods stream.

OPERATION PLAN

PROTECTION OF PUBLIC PARKS AND HISTORIC PLACES

Regulatory Reference: 30 CFR784.17; R645-301-411.

Page 10 Section H of the Environmental Assessment for the lease area states "Leasing of the tract should not result in significant impacts to cultural or paleontological resources." According to Appendix B of the EA, there are no public roads, cemeteries, public buildings, or occupied dwellings within the proposed lease area. Supporting documents for these statements are provided in Appendix A-2 of the application.

Findings:

The information in the, MRP, EA, and supportive archeological information are adequate to meet the requirements of this section of the regulations.

FISH AND WILDLIFE INFORMATION

Regulatory Reference: 30 CFR Sec. 784.21, 817.97; R645-301-322, -301-333, -301-342, -301-358.

Analysis:

Protection and Enhancement Plan

There will be no surface disturbance for facilities. The current application anticipates mining underneath perennial streams. Potential disturbance may result from subsidence, which may affect habitat. In the amendment, CFC provides information supporting the unlikelihood of surface disturbance to the stream channels. The USFS is currently assessing the mining operation plan with respect to the stream channels and springs. CFC may need to include specific protection measures depending on the decisions between the USFS and BLM. The MRP must provide protection measures before final approval of full extraction (refer to R645-301-332, R645-301-322.100).

The DWR recently implemented a protection/mitigation agreement with the USFWS for the sage grouse. The Division is researching if the agreement will add to any of the monitoring, mitigation, or protection plans of this MRP (refer to R645-301-322.100). However, there will probably be no additional changes to the MRP concerning the grouse because there is no surface disturbance for facilities. Final decisions or plans for the sage grouse will come before approval of this amendment.

The Division required CFC to conduct surveys for amphibians and raptors in early summer 2003 (with the anticipation of operations beginning in 2004). Although the 2003 Annual Report provides the most recent Goshawk survey, it does not include the North Lease area. CFC explained that the timing for the Goshawk as well as the amphibian surveys for the North Lease is one year prior to undermining (personal conversation between Jerriann Ernstsens of the Division and Chris Hansen of CFC that took place on September 9, 2004. CFC must provide the commitment to survey the Goshawk and amphibians and clarify survey timing in the Raptor and Aquatic Wildlife section of the MRP, respectively. These surveys are important in order to determine if CFC must develop a protection plan. (R645-301-322.100).

Endangered and Threatened Species

According to the 1995 EA written jointly by the USFS and the BLM, the listed threatened, endangered and/or sensitive species that may occur within the proposed lease area are the bald eagle, northern three-toed woodpecker, and northern Goshawk. Suitable bald eagle nesting habitat does not occur in the permit area. The bald eagle would only occur as a winter resident and surveys will not be conducted. The prior section of this TA details the commitments concerning the Goshawk.

The Division, in consultation with other agencies, required CFC to conduct a survey for the three-toed woodpecker. CFC must provide the commitment to survey the three-toed woodpecker and clarify survey timing in the avifauna section of the MRP. If results are positive for the three-toed woodpecker, the MRP must describe protection measures. (R645-301-322.100)

The following table details the threatened and endangered species occurring in the Carbon County.

Table 1. Federally Listed Threatened and Endangered Species for Carbon County and Potential Occurrence on the North Lease.

Common Name		Habitat	North Lease Habitat
Uinta Basin Hookless Cactus	T	Gravelly hills on Quaternary and Tertiary alluvium, cold desert shrub community	Occurs in N and E portion of Carbon County, no habitat in the permit area

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Graham Beardtongue	C	Shaley talus knolls, desert shrub and P-J,	Restricted to the Uintah Basin
Bonytail Chub	E	Endangered fish of the Colorado River.	No surface water diverted for mining activity.
Colorado Pikeminnow	E	Endangered fish of the Colorado River.	No surface water diverted for mining activity.
Humpback Chub	E	Endangered fish of the Colorado River.	No surface water diverted for mining activity.
Razorback Sucker	E	Endangered fish of the Colorado River.	No surface water diverted for mining activity.
Bald Eagle	T	Nests in tall trees such as Cottonwoods.	No breeding habitat, may fly through the area
Mexican Spotted Owl	T	Nests in areas with >40% slope, 2000 habitat model	2000 model shows habitat for foraging. No surface disturbance.
Western Yellow-billed Cuckoo	C	Occurs in tall shrub/tree riparian areas at least 30 feet wide on each side and 12 feet tall.	No habitat in permit area.
Black-footed Ferret	E	Forages on prairie dogs, cold desert shrub habitat.	No prairie dog towns in permit area. Extirpated from Carbon County.

Adverse effects of mining on water quantity to the Colorado River drainages do affect four Colorado River endangered fish species (Colorado pikeminnow, humpback chub, bonytail chub, and razorback sucker). The USFWS considers water depletion to the Colorado River drainage as a potential jeopardy to these endangered fish. Water users may be required to mitigate if the overall water consumption is greater than 100 acre-feet per year. Currently, the mitigation fee is approximately 16.00 per acre-foot of depletion, but may change marginally from year to year. "If operations include use of surface waters which otherwise would have reached the Colorado River, for any purpose, including dust suppression, then a formal consultation must be initiated" (Robert Williams USFWS 1993; letter concerning Banning).

CFC must address possible adverse affects to these four fish species by first calculating the amount of water used by all mining operations and submitting this information in the aquatic wildlife section of the MRP (R645-301-333). The "Windy Gap Process" provides a guideline to calculate water consumption for coal mining. CFC may obtain the "Windy Gap Process as it Applies to Existing Coal Mines in the Upper Colorado River Basin" (Discussion Paper) from the Division. CFC must also include equations for water consumed from dust suppression programs. In brief, consumption values must at least include the following:

- Mining consumption.

- Ventilation consumption.
- Coal producing consumption.
- Ventilation evaporation.
- Sediment pond evaporation.
- Springs and seep effects from subsidence.
- Alluvial aquifer abstractions into mines.
- Alluvial well pumpage.
- Deep aquifer pumpage.
- Postmining inflow to workings.
- Coal moisture loss.
- Direct diversions.
- Dust suppression (not mentioned in Windy Gap.)

Through effects of water quantity and quality on the river, the mine could potentially adversely affect the four Colorado River endangered fish species. CFC must provide all evidence and equations leading to the sum of water consumption. The Division reminds CFC to submit all equations in a clear and orderly format.

Bald and Golden Eagles

Bald eagles are not common in the area during the winter but could occasionally fly through or roost in the proposed addition to the permit area. Mining would have negligible effects on these birds. The Forest Service stated that Bald Eagles are frequently seen around Scofield reservoir in October and November. After the reservoir freezes, the waterfowl leaves, as do the eagles.

Wetlands and Habitats of Unusually High Value for Fish and Wildlife

The perennial streams, springs and riparian areas within the proposed lease area are probable habitats of high value for fish and wildlife. The 1995 EA reports that the riparian habitat appears to be in excellent condition on the forest (in the North Lease area), but below the forest boundary to the east it has been heavily impacted by livestock grazing.

The Division realizes that the USFWS generally recommends to survey for stream, spring, and seep locations and to prepare a monitoring plan. The latest submittal provides updated-monitoring and vegetation information along the stream channels. The vegetation report did not include information for riparian areas adjacent to seeps and springs. CFC considers that subsidence will not impact seeps and springs and bases their conclusion on the study conducted in Burnout Canyon. CFC may need to include specific resource surveys and protection/mitigation measures for seeps and springs depending on the pending decisions between the USFS and BLM. (Refer to R645-301-332, R645-301-322.100).

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Streams, springs, and seeps may serve as refuge for isolated populations of benthic organisms, such as mollusks. Historical records for one rare mollusk (*Physella virgata*) exist for Carbon County. The 2002/2003 macroinvertebrate survey results only list one mollusk *Spaherium*. Future surveys may show positive results for other mollusks including the rare *Physella*.

The Permittee may need to include specific protection measures depending on the pending decisions between the USFS and BLM. For example, protection measures for Goshawk, Three toed woodpecker, fish, amphibians, or riparian habitat. The Division is researching if there are additional responsibilities for the Permittee set by recent changes in a sage grouse management plan.

Findings:

The Division considers information in the application inadequate to meet the minimum fish and wildlife regulations. Before approval, CFC must provide the following in accordance with:

R645-301-322.100, CFC must include information in the aquatic wildlife section of the MRP concerning the commitment to conduct amphibian surveys and survey timing. • Clarify in the raptor section of the MRP the timing for the Goshawk surveys. • Provide the commitment to survey the three-toed woodpecker and clarify survey timing in the avifauna section of the MRP.

R645-301-333, CFC must address possible adverse affects to the four Colorado River fish species by first calculating the amount of water used by all mining operations and submitting this information in the aquatic wildlife section of the MRP

VEGETATION

Regulatory Reference: R645-301-330, -301-331, -301-332.

Analysis:

The plan indicates in Section 2.7.6 that there is no anticipated surface effects to the North Lease permit area. Regardless, the Forest Service Lease Stipulation # 7 requires monitoring of effects of mining, as follows:

“The Lessee shall be required to establish a monitoring system to locate, measure and quantify the progressive and final effects of underground mining activities on the topographic

surface, underground and surface hydrology and vegetation. The monitoring system shall utilize techniques, which will provide a continuing record of change over time and an analytical method for location and measurement of a number of points over the lease area. The monitoring shall incorporate and be an extension of the baseline data.”

The approved MRP indicates in Section 4.17.5 that an aerial photogrammetric monitoring program will be used to “determine the effects of underground coal mining on surface renewable resources. The plan indicates that the monitoring program secures adequate baseline data prior to any subsidence to quantify the existing surface renewable resources....”

The application indicates on page 2-63d that aerial photographs were taken in August 2002 of the North Lease Tract to provide a baseline information. They are available for viewing at the mine site. Aerial photographs will continue to be taken annually, be interpreted by a qualified person, and a report will be provided in the Annual Report for the Skyline Mine (page 2-63d).

Color infrared aerial photography (CIR) on the same scale as the photogrammetric monitoring is also described in the MRP section 4.17.5.

When monitoring identifies surface effects are diminishing habitat, protective measures are required to be developed (R645-301-333.200) for species identified under R645-301-322.

The Permittee may need to include specific surveys and protection measures for riparian vegetation (specifically adjacent to seeps and springs) depending on the pending decisions between the USFS and BLM.

Findings:

The Division finds that information in the application is adequate to meet the minimum requirements of the regulations. .

RECLAMATION PLAN

GENERAL REQUIREMENTS

Regulatory Reference: PL 95-87 Sec. 515 and 516; 30 CFR Sec. 784.13, 784.14, 784.15, 784.16, 784.17, 784.18, 784.19, 784.20, 784.21, 784.22, 784.23, 784.24, 784.25, 784.26; R645-301-231, -301-233, -301-322, -301-323, -301-331, -301-333, -301-341, -301-342, -301-411, -301-412, -301-422, -301-512, -301-513, -301-521, -301-522, -301-525, -301-526, -301-527, -301-528, -301-529, -301-531, -301-533, -301-534, -301-536, -301-537, -301-542, -301-623, -301-624, -301-625, -301-626, -301-631, -301-632, -301-731, -301-723, -301-724, -301-725, -301-726, -301-728, -301-729, -301-731, -301-732, -301-733, -301-746, -301-764, -301-830.

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Analysis:

CFC does not plan to disturb the surface for facilities within the North Lease Permit Area. Therefore, there is no information in the submittal for reclamation of a disturbed area.

Findings:

The Division considers information in the application adequate to meet the minimum General Requirements section of the Reclamation Plan regulations.

RECOMMENDATIONS:

Do not approve the amendment until CFC addresses all deficiencies.

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