



United States Department of the Interior

OFFICE OF THE SOLICITOR

Rocky Mountain Region
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August 18, 2005

RECEIVED

JAN 03 2006

DIV. OF OIL, GAS & MINING

Handwritten signature and date: C/015/001

Memorandum

To: Carl R. Johnston, Utah Federal Lands Coordinator,
Office of Surface Mining Reclamation and Enforcement

From: *John R. Kunz*
John R. Kunz, Assistant Regional Solicitor

Subject: Mining Plan Modification Decision Document for
PacifiCorp's Deer Creek Mine; Federal Leases U-06039,
U-2810, SL-050862, and SL-051221

We have reviewed the draft mining plan decision document for the subject mine. We find that this document is legally sufficient for the purposes for which it is intended.

We did not attempt to verify land or legal descriptions, or map depictions.

Attachment (draft mining plan decision document)



United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Utah State Office
P.O. Box 45155
Salt Lake City, UT 84145-0155
<http://www.blm.gov>



IN REPLY REFER TO:
3485
UTU-79975
(UT-923)

DEC 22 2005

J. Terland
C/007/0071

CERTIFIED MAIL – Return Receipt Requested

DECISION

ANDALEX Resources, Inc	:	Coal Lease
45 West 10000 South, Suite 401	:	UTU-79975
Sandy, UT 84070	:	

Royalty Rate Re-certification Accepted Royalty Rate Reduction Continues

On September 11, 2004, ANDALEX Resources, Inc filed for a royalty rate reduction, on coal mined from Federal coal lease UTU-79975 from 8 percent to 5 percent.

The Bureau of Land Management approved the royalty rate reduction on August 25, 2005, effective October 1, 2004, subject to the annual submission of a certified statement that the conditions that justified the granting of the reduction continue to exist.

A re-certification statement was received in this office on November 21, 2005. It is hereby accepted and a royalty rate of 5 percent is to continue on coal lease UTU-79975 until October 1, 2006. Failure to submit an annual certification shall result in immediate termination of the royalty rate reduction, at which time the production royalty rate shall automatically revert to 8 percent.

Gene Terland

for Gene Terland
Acting State Director

cc: MMS, Solid Minerals Staff, MS 390B2, Box 25165, Denver, CO 80225
Ms. Mary Ann Wright, Acting Director, UDOGM, Box 145801, SLC, Utah 84114
Price Field Office (Attn: Steve Falk)

RECEIVED
MAD
DEC 27 2005 1406
DIV. OF OIL, GAS & MINING

MINING PLAN DECISION DOCUMENT

PacifiCorp

Deer Creek

Federal Leases U-06039, U-2810,

SL-050862, and SL-051221

Emery County, Utah



**U.S. Department of the Interior
Office of Surface Mining Reclamation and Enforcement**

Prepared December 2005

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United States Department of the Interior

OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20240

DEC 15 2005

MEMORANDUM

05-12-29-05

To: R.M. "Johnnie" Burton
Acting Assistant Secretary
Land and Minerals Management

From: Jeffrey D. Jarrett 
Director, Office of Surface Mining

Subject: Recommendation for Approval, Without Special Conditions, of the Mining Plan Modification for Federal Leases U-06039, U-2810, SL-050862, and SL-051221 at PacifiCorp's Deer Creek Mine located in Emery County, Utah

2005 DEC 23 PM 1:05
OFFICE OF THE SECRETARY
U.S. DEPARTMENT OF THE INTERIOR

I recommend approval, without special conditions, of this mining plan modification. My recommendation is based on:

- (1) PacifiCorp's complete permit application package (PAP),
- (2) compliance with the National Environmental Policy Act of 1969,
- (3) documentation assuring compliance with applicable requirements of other Federal laws, regulations, and executive orders,
- (4) comments and recommendations or concurrence of other Federal agencies, and the public,
- (5) the findings and recommendations of the Bureau of Land Management regarding the resource recovery and protection plan, the Federal lease requirements, and the Mineral Leasing Act, and
- (6) the Utah Department of Natural Resources, Division of Oil, Gas and Mining (UT-DOG M) State Decision Document, for the Rilda Canyon Portal Facilities, PacifiCorp, Deer Creek Mine, C/015/0018, and the Utah State program.

The Secretary may approve a Mining Plan for Federal leases under 30 U.S.C. §§ 207(c) and 1273(c). In accordance with 30 CFR Chapter VII, Subchapter D, I find that the proposed mining plan modification will be in compliance with all applicable laws and regulations.

Attachment



United States Department of the Interior

OFFICE OF SURFACE MINING
Reclamation and Enforcement
P.O. Box 46667
Denver, Colorado 80201-6667

UT-0016

IN REPLY REFER TO:

December 2, 2005

Memorandum

To: Jeffrey D. Jarrett
Director, Office of Surface Mining

From: Allen D. Klein 
Regional Director, Western Region

Subject: Recommendation for Approval, Without Special Conditions, of the Mining Plan Modification for Federal Leases U-06039, U-2810, SL-050862, and SL-051221 at PacifiCorp's Deer Creek Mine located in Emery County, Utah

I. Recommendation

I recommend approval, without special conditions, of a mining plan modification for Federal leases U-06039, U-2810, SL-050862, and SL-051221 at the Deer Creek Mine. This is a mining plan modification for an underground coal mine being permitted under the Federal lands program, the approved Utah State program, and the cooperative agreement.

My recommendation to approve the new mining plan is based on:

- (1) PacifiCorp's complete permit application package (PAP),
- (2) compliance with the National Environmental Policy Act of 1969,
- (3) documentation assuring compliance with applicable requirements of other Federal laws, regulations, and executive orders,
- (4) comments and recommendations or concurrence of other Federal agencies, and the public,
- (5) the findings and recommendations of the Bureau of Land Management regarding the resource recovery and protection plan, the Federal lease requirements, and the Mineral Leasing Act, and
- (6) the Utah Department of Natural Resources, Division of Oil, Gas and Mining (UT-DOG M) State Decision Document, for the Rilda Canyon Portal Facilities, PacifiCorp, Deer Creek Mine, C/015/0018, and the Utah State program.

If you concur with this recommendation, please sign the attached memorandum to the Assistant Secretary, Land and Minerals Management.

II. Background

The Deer Creek underground coal mine is located in Emery County, Utah, approximately 8 miles west of the town of Huntington, Utah and on lands within the Manti - LaSal National Forest. The mine has been in operation since 1969 and employs 360 people during full production. The life of the currently approved mining operations within the approved permit area is estimated to be approximately fifteen (15) years. The mining operations use a combination of room and pillar and longwall mining methods. The average production rate is approximately 4.0 million tons per year from the Blind and Hiawatha seams.

The original mining plan for Federal leases SL-064607-064621, SL-064900, SL-070645, U-1358, U-02292, U-084923, U-084924, U-083066, U-040151, U-044025, U-014275, U-024319, and U47979 at the Deer Creek mine was approved on October 11, 1985. Since that approval, there have been five mining plan modifications for the Deer Creek mine. The first mining plan modification for new Federal leases SL-050862 and U-47977 was approved on January 6, 1993. The second mining plan modification for Federal leases SL-050862 and U-47977 was approved on July 16, 1993. The third mining plan modification for Federal leases SL-050862, U-47977, and new Federal lease U-06039 was approved on July 29, 1994. The fourth mining plan modification for Federal leases SL-050862, U-06039, U-47977, and new Federal lease U-7653 was approved on December 13, 1994. The fifth mining plan modification for Federal leases U-06039, and SL-050862, and new Federal leases U-024317, and U-2180 was approved on August 12, 1997.

Since the last mining plan modification, fifty (50) acres have been incorporated into the approved mining plan area. These acres did not require Secretarial approval since they met the requirements of 30 CFR 746.18(d)(3)(ii). Specifically, this incidental boundary revision was in Federal lease U-06039 located in the S $\frac{1}{4}$ NW $\frac{1}{4}$, Section 20, Township 16 South, Range 7 East, of the SL Meridian Utah, and is included within the approved mining plan area depicted on the mining plan map of this mining plan decision document and Attachment 1 of the mining plan approval document.

Also since the last mining plan modification, another sixty-six (66) acres have been incorporated into the approved mining plan area. These acres did not require Secretarial approval since they met the requirements of 30 CFR 746.18(d)(3)(ii). Specifically, this incidental boundary revision was in Federal lease U-06039 located in Lot 2, Lot 3, and the W $\frac{1}{2}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$, Section 19, Township 16 South, Range 7 East, of the SL Meridian Utah, and is included within the approved mining plan area depicted on the mining plan map of this mining plan decision document and Attachment 1 of the mining plan approval document.

The State's current permit area covers 22,769 acres.

Approximately ninety-six (96) surface acres are disturbed within the State's permit area.

A total of 15,471 acres of Federal coal exist within the State's current permit area.

A total of 6.0 million tons of Federal coal remain within the current permit area.

A total of 16,074 acres of Federal surface land exist within the State's current permit area.

The post mining land use within the currently approved mining plan area is grazing, wildlife habitat, and recreation.

III. The Proposed Action

This mining plan action consists of a mining plan modification for Federal leases U-06039, U-2810, SL-050862, and SL-051221. Specifically, the mining plan action proposed by PacifiCorp consists of:

constructing portals, a mine ventilation fan, office/bathhouse/warehouse, and other associated surface support facilities on Federal coal leases U-06039, U-2810, SL-050862, and SL-051221, within the area covered by Utah State permit C/015/018, in parts of;

Township 16 South, Range 7 East SL Meridian Utah

Section 28, S $\frac{1}{2}$ NW $\frac{1}{4}$;
Section 29, S $\frac{1}{2}$ S $\frac{1}{2}$ NE $\frac{1}{4}$.

The majority of the facilities, portals, a mine ventilation fan, office/bathhouse/warehouse, and other associated surface support facilities will be located on approximately nine (9) acres of Federal coal lease U-06039. A subsoil stockpile will be located on the surface of approximately three (3.0) acres of Federal lease U-2810, and a topsoil stock pile will be located on the surface of approximately one (1.0) acre straddling Federal leases SL-050862, and SL-051221.

The life of the mining operations is expected to continue for fifteen (15) years under Utah Permit C/015/018 and this proposed mining plan modification.

The average annual production rate and the maximum production rate would not change.

The approved State permit area would not increase from its present 22,769 acres.

Surface disturbance within the approved State permit area will increase by approximately thirteen (13) acres from its present ninety-six (96) acres to a new total of 109 acres.

This mining plan modification will not add any additional acres for the mining of Federal coal to the approved mining plan area shown on the map included with this decision document.

Approval of this mining plan modification will not authorize the mining of any additional tons of recoverable Federal coal.

No new acres of Federal surface lands will be included in the mining plan area as a result of this action.

The post mining land use within the permit and mining plan area will not change.

The UT-DOGM has placed three (3) Special Conditions to its permitting action. An explanation of each stipulation and the requirements for its resolution can be found in the State Decision Document made a part of this Mining Plan Decision Document. PacifiCorp's proposal does not require any additional special conditions to comply with Federal laws.

UT-DOGM requested the approval of an experimental practice in accordance with the Federal regulations under 30 CFR 785.13. The experimental practice involves covering in place topsoil with a geotextile fabric and placing subsoil materials over the in-place topsoil in lieu of topsoil removal and stockpiling. The experimental practice was approved by Office of Surface Mining Reclamation and Enforcement (OSM) on August 1, 2005.

IV. Review Process

The UT-DOGM reviewed the PAP under the Utah State program, the Federal lands program (30 CFR Chapter VII, Subchapter D), and the Utah cooperative agreement (30 CFR § 944.30). Pursuant to the Utah State program and the cooperative agreement, UT-DOGM approved the permit revision on July 27, 2005.

OSM has consulted with other Federal agencies for compliance with the requirements of applicable Federal laws. Their comments and/or concurrences are included in this decision document.

The Bureau of Land Management (BLM) reviewed the Resource Recovery and Protection Plan for compliance with the Mineral Leasing Act of 1920, as amended, and 43 CFR Part 3480. The BLM recommended approval of this mining plan modification in a memorandum dated March 25, 2005 with respect to the Rilda Canyon Facilities located on Federal lease U-06039. The BLM previously recommended approval of a mining plan modification for Federal leases SL-050862 and SL-051221, and U-2810 in memoranda dated February 28, 1991, and July 16, 1997.

In accordance with the September 24, 1996, Biological Opinion and Conference Report from the U.S. Fish and Wildlife Service (USFWS) to OSM, the UT-DOGM has sought comments from the U.S. Fish and Wildlife Service (USFWS) on threatened and endangered species and has incorporated the necessary reporting requirements into the UT-DOGM State Decision Document for the Rilda Canyon Portal Facilities, PacifiCorp, Deer Creek Mine, C/015/0018. The USFWS and the UT-DOGM did not develop or recommend any species-specific protective measures, as indicated in the USFWS letter dated May 16, 2005.

The State Historic Preservation Officer concurred with the proposed mining plan in a letter dated March 18, 2005.

The proposed area of mining plan approval is not unsuitable for mining according to section 522(b) of SMCRA.

The mining plan modification area is located on Federal lands west of the 100th meridian within the boundaries of the Manti - La Sal National Forest. However, the Secretary of Agriculture finds that these lands do not have significant forest cover and that this surface coal mining operation complies with the Multiple-Use Sustained Yield Act of 1960 (16 U.S.C. §§ 528-531), the Federal Coal Leasing Amendments Act of 1976 (Pub. L. 94-377, 30 U.S.C. 201 *et seq.*), the National Forest Management Act of 1976 (90 Stat. 2949), and the provisions of SMCRA. Based on OSM's analysis and on the concurrence of the U.S. Forest Service in its letter dated December 1, 2005, and effective on December 20, 2005, the Deer Creek Mine will not be incompatible with significant recreational, timber, economic, or other values of the Manti - La Sal National Forest.

I have determined that approval of this mining plan modification will not have a significant impact on the quality of the human environment. The Environmental Assessment dated July 22, 2005, titled *Deer Creek Coal Mine, Mining Plan Modification, Federal Coal Leases U-06039, U-2810 and SL-051221, Emery County, Utah*, prepared by UT-DOGM and OSM, in cooperation with U.S. Forest Service and the Bureau of Land Management, and other environmental documents noted in the Finding of No Significant Impact (FONSI), describe the impacts that may result from approval of this mining plan modification and its alternatives. The FONSI and supporting environmental analyses are included in this decision document.

OSM's review of the proposed action did not identify any issues that required resolution via the addition of special conditions to the mining plan approval.

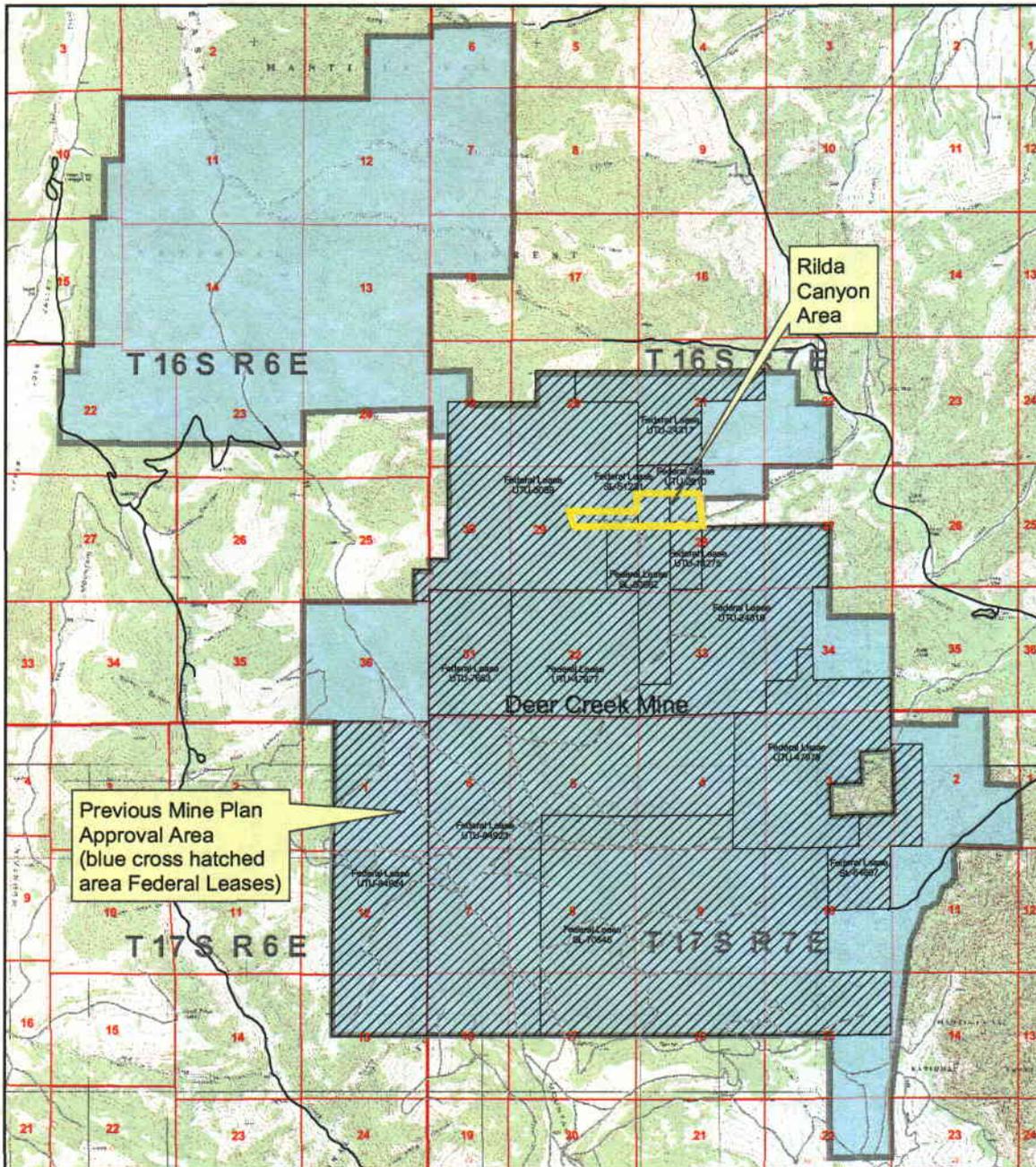
Publication of a notice in the *Emery County Progress* newspaper notified the public of the availability of the administratively complete PAP for review. The last publication date was February 22, 2005. No public comments were received. The UT-DOGM determined that a bond for \$4,113,000.00 is adequate for the Utah Permit C/015/0018 associated with this new mining plan. The bond is payable to the State and the United States.

A chronology of events related to the processing of the PAP and this mining plan decision is included with the decision document. The information in the PAP, and other information identified in the decision document, has been reviewed by UT-DOGM staff in coordination with the OSM Federal Lands State Coordinator.

OSM's administrative record of this new mining plan consists of the following:

- the PAP submitted by PacifiCorp and updated through July 26, 2005,
- UT-DOGM's State Decision Document, for the Rilda Canyon Portal Facilities, PacifiCorp, Deer Creek Mine, C/015/0018, provided to OSM under the cooperative agreement,
- *"Deer Creek Coal Mine, Mining Plan Modification, Federal Coal Leases U-06039, U-2810 and SL-051221, Emery County, Utah"*
- the FONSI of the proposed action and alternatives prepared by OSM,
- other documents prepared by UT-DOGM, and
- correspondence developed during the review of the PAP.

Attachment

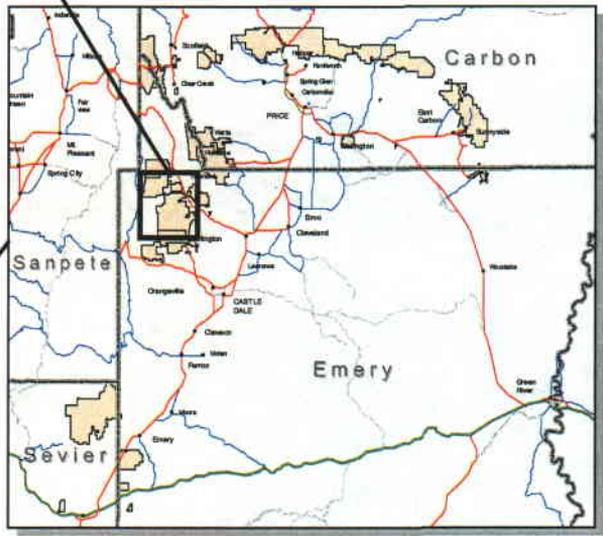


Deer Creek Mine Mining Plan Approval Area

ACT0150018
Emery County, Utah
June 2005

Township 16 South Range 7 & 8 East
Township 17 South Range 6 & 7 East

File: N:\gis\coal\coalareamaps\C0150018Fed.pdf



Locator Map

CHRONOLOGY

Deer Creek Mine
Federal Leases Federal Leases U-06039, U-2810, SL-050862, and SL-051221
Mining Plan Decision Document

DATE	EVENT
September 2, 2004	PacifiCorp submitted the permit application package (PAP) under the approved Utah State Program to the Utah Division of Oil, Gas, and Minerals (UT-DOGGM) for a permit revision for the Deer Creek Mine.
December 6, 2004	PacifiCorp withdraws the permit application.
December 21, 2004	PacifiCorp submitted a revised permit application package (PAP) under the approved Utah State Program to the Utah Division of Oil, Gas, and Minerals (UT-DOGGM) for a permit revision for the Deer Creek Mine.
January 4, 2005	The Office of Surface Mining Reclamation and Enforcement (OSM) received the PAP.
January 28, 2005	UT-DOGGM determined that the PAP was administratively complete for public review and comment.
February 22, 2005	PacifiCorp published in the <i>Emery County Progress</i> the last consecutive notice of intent to construct the Rilda Canyon Portal Facilities at the Deer Creek mine.
March 18, 2005	The State Historic Preservation Office provided its comments on the mining plan
March 25, 2005	The Bureau of Land Management provided its findings and recommendations on the approval of the mining plan, with respect to the Resource Recovery and Protection Plan.
May 16, 2005	The U.S. Fish and Wildlife Service provided its final consultation comments on the mining plan.
July 27, 2005	UT-DOGGM approved the PAP.
August 1, 2005	The Office of Surface Mining Reclamation and Enforcement approves UT-DOGGM's request for an experimental practice.

CHRONOLOGY

Deer Creek Mine
Federal Leases Federal Leases U-06039, U-2810, SL-050862, and SL-051221
Mining Plan Decision Document

DATE	EVENT
December 1, 2005	The Federal land management agency, U.S. Forest Service, provided its concurrence with the approval of the mining plan with respect to the management of Federally owned surface lands under their control.
December 2, 2005	OSM's Western Regional Coordinating Center recommended to the Director, OSM, that the mining plan action be approved.

U.S. DEPARTMENT OF THE INTERIOR
OFFICE OF SURFACE MINING RECLAMATION AND ENFORCEMENT
FINDING OF NO SIGNIFICANT IMPACT
FOR

Deer Creek Mine
Federal Coal Leases Federal Leases U-06039, U-2810, SL-050862, and SL-051221
Mining Plan Decision Document

1. Introduction

PacifiCorp submitted a permit application package (PAP) for a permit revision for the Deer Creek Mine to the Utah Department of Natural Resources, Division of Oil, Gas, and Mining (UT-DOG M). The PAP proposed constructing portals, a mine ventilation fan, office/bathhouse/warehouse, and other associated surface support facilities on approximately 13 acres of Federal leases U-06039, U-2810, SL-050862, and SL-051221. Under the Mineral Leasing Act of 1920, the Assistant Secretary, Land and Minerals Management, must approve, approve with conditions, or disapprove the mining plan modification for Federal leases U-06039, U-2810, SL-050862, and SL-051221. Pursuant to 30 CFR Part 746, the Office of Surface Mining (OSM) is recommending approval of the mining plan modification action without special conditions.

2. Statement of Environmental Significance of the Proposed Action

The undersigned person has determined that the above-named proposed action would not have a significant impact on the quality of the human environment under section 102(2)(C) of the National Environmental Policy Act of 1969 (NEPA), 42 U.S.C. 4332(2)(C), and therefore, an Environmental Impact Statement is not required.

3. Reasons

This finding of no significant impact is based on the attached Environmental Assessment dated July 22, 2005, titled *Deer Creek Coal Mine, Mining Plan Modification, Federal Coal Leases U-06039, U-2810, SL-050862, and SL-051221, Emery County, Utah*, prepared by UT-DOG M and OSM, in cooperation with U.S. Forest Service and the Bureau of Land Management which has been independently evaluated by OSM and determined to assess the environmental impacts of the proposed action adequately and accurately and to provide sufficient evidence and analysis for this finding of no significant impact. OSM takes full responsibility for the accuracy, scope, and content of the attached environmental assessment.

Banvir Singh
Chief, Northwest Branch

Aug. 01, 2005
Date

ENVIRONMENTAL ASSESSMENT

**Deer Creek Coal Mine
Mining Plan Modification
Federal Coal Leases U-06039, U-2810, SL-050862, and SL-051221
Emery County, Utah**

Prepared by

United States Department of the Interior
Office of Surface Mining
Western Regional Coordinating Center

and

State of Utah
Department of Natural Resources
Division of Oil, Gas & Mining

In Cooperation with

USDA Forest Service
Manti-La Sal National Forest
Price Ranger District

USDOJ Bureau of Land Management
Utah State Office

July 22, 2005

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**Deer Creek Coal Mine
Mining Plan Modification
Federal Coal Leases U-06039, U-2810, SL-050862, and SL-051221
Emery County, Utah**

CHAPTER 1: PURPOSE AND NEED

1.1 Introduction

This Environmental Assessment (EA) has been prepared to analyze the effects of PacifiCorp's plan to construct new surface facilities in North Rilda Canyon for the Deer Creek underground coal mine located in Emery County, Utah. A Federal action is required because the U.S. Office of Surface Mining Reclamation and Enforcement (OSM) determined on January 20, 2005 that the proposed action will require a mining plan modification to Federal Coal Leases U-06039, U-2810, SL-050862, and SL-051221 pursuant to 30 CFR §746.18(d). The Assistant Secretary of the Interior, Land and Minerals Management (the Assistant Secretary) must approve, disapprove or conditionally approve the mining plan modification in accordance with the Mineral Leasing Act of 1920, as amended (MLA). The EA is a site-specific analysis of potential impacts that could result from the implementation of the proposed action or alternatives to the proposed action. The EA will assist OSM in project planning and ensuring compliance with the National Environmental Policy Act (NEPA), and in making a determination as to whether any "significant" impacts could result from the analyzed actions. "Significance" is defined by NEPA and is found in regulation 40 CFR 1508.27. An EA provides a basis for determining whether to prepare an Environmental Impact Statement (EIS) or a issue statement of "Finding of No Significant Impact" (FONSI). If the decision maker determines that the proposed project would result in "significant" impacts following the analysis in the EA, then an EIS would be prepared for the project. If not, a FONSI or other appropriate Decision Record (DR) approving a selected alternative would be signed for the EA.

1.2 Background

The proposed project is located in Rilda Canyon, in Section 28, Township 16 South, Range 7 East, Salt Lake Base and Meridian, Emery County, about 8 miles west of the town of Huntington, Utah (See Figure 1: Location Map for the general location and Appendix D Maps for detailed maps). It is within coal leases U-06039, SL-050862, SL-051221 and U-2810 (Figure 1, Location Map). The surface of the project area is administered by the USDA Forest Service (USFS) Manti-La Sal National Forest; the coal leases are administered by the USDOJ Bureau of Land Management (BLM). Coal mining is regulated by the Utah Division of Oil, Gas and Mining (DOG M) under the authority of the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The Deer Creek coal mine has been operating since the late 1960's. The project area is near Rilda Creek within the vicinity of the abandoned Helco, Leroy, and Rominger (including the Jeppson) mines. Access to the project area would be via Emery County Road 306.

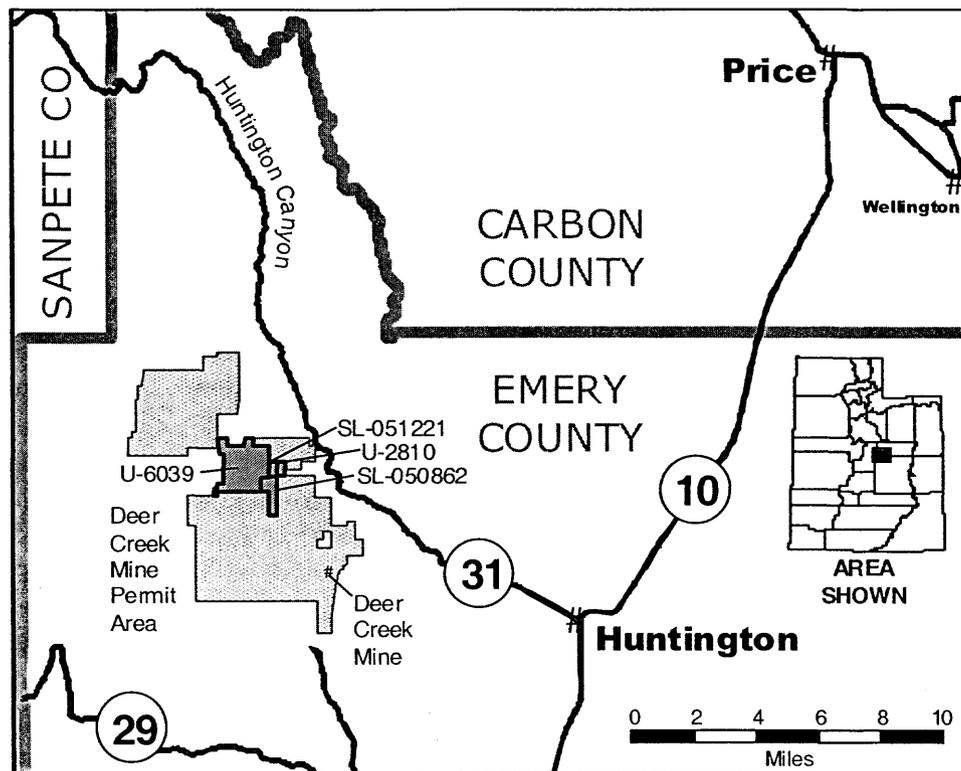


Figure 1: Location map, showing the four coal leases in relation to the Deer Creek mine, permit area, and Huntington.

The current land use in the area is a mix of livestock grazing, winter range for wildlife, mining and mineral development, management of the riparian ecosystem, and timber production. The total permitted area of the mine is 22,769 acres, of which 96 acres have been affected by surface disturbance. Mining is expected to continue for another 15 years. The underground mining operations utilize longwall mining methods to access the Blind Canyon and Hiawatha coal seams at an average production rate of about 4 million tons per year.

Mining has occurred in the Rilda Canyon area since the 1940's. Four historic mines (the Helco, Leroy, Jeppson, and Rominger mines) are located in Rilda Canyon. These abandoned mines were reclaimed by DOGM's Abandoned Mine Reclamation Program in 1988. In February 1990, PacifiCorp submitted a permit revision application for the 2,372-acre Rilda Lease Extension. Concerns about subsidence effects on water resources and escarpments in Rilda Canyon resulted in an extended review of the application. In 1993, PacifiCorp encountered unforeseen adverse mining conditions and needed to extend mining operations into two of the Rilda Lease Extension Federal leases to determine if the proposed mining plan for the Rilda Lease Extension area was feasible. Adverse mining conditions such as increased water-related-stress levels in tunnels, as well as coal quality issues, continued to be a problem. After several small lease expansions and incidental boundary changes were approved to accommodate further

investigations, the focus of mining shifted to the north in order to avoid these adverse conditions.

In 1997, PacifiCorp expanded its Deer Creek mining operations into the North Rilda area to mine the Hiawatha and Blind Canyon coal seams. This expansion involved increasing the size of the Deer Creek permit area by 1,960 acres. An additional 50 acres were added in 1998 upon completion of a lease modification to Federal Lease U-06039. As reported to the federal Mineral Management Service, approximately 23 million tons of mineable coal were recovered from the North Rilda Ridge area during the past few years. The FONSI issued by OSM for the 1997 action, based on the 1994 EA, did not include construction of any surface facilities.

In April 1999, PacifiCorp acquired the Mill Fork Lease (SL-48258) from the State of Utah and in December 2001, Federal Coal Lease U-06039 was modified to include an additional 65.7 acres to allow the boundaries of the Federal Lease to become contiguous with the Mill Fork Lease (SL-48258). PacifiCorp has been in the process of developing a modification to the existing permit that would allow them to mine this most recent lease acquisition since the fall of 2003.

Although some support facilities currently exist in Rilda Canyon, these facilities were built for previous mining activities and, because of design and physical distance, they cannot be used to support worker access and ventilation to the Mill Fork Lease. The existing facilities in the left fork of Rilda Canyon include a gravel access road, a pad area which supports two portals, a substation, power line, fan, water storage tank and pumphouse. The proposed facilities would include a ventilation fan, mine entry for personnel and materials, bath house, parking lot, office, shop, top soil storage area, and sediment ponds (see part 2.1.1, Description of the Proposed Mining Plan Modification, for a complete description). The existing gravel access road would be paved. This is a project with independent utility that is not known to have a "connected action" to any future activities for purposes of NEPA compliance.

1.3 Purpose and Need for the Federal Action

On December 21, 2004, PacifiCorp submitted a permit revision application to the Utah Division of Oil, Gas and Mining (DOGGM) proposing to construct new surface facilities in North Rilda Canyon for the Deer Creek underground coal mine located in Emery County, Utah. A Federal action is required because OSM determined on January 20, 2005 that the proposed action will require a mining plan modification to Federal Coal Leases U-06039, U-2810, SL-050862, and SL-051221 pursuant to 30 CFR §746.18(d).

DOGGM's approval of the mining and reclamation plan and OSM's recommendation to the Secretary of Interior for Approval of the Mining Plan Modification would allow PacifiCorp to proceed with mining as proposed.

Because of the coal's distance from the Deer Creek Main Portal, a closer entry that would improve ventilation and provide materials and personnel is required to maintain the ongoing mine operation and improve worker safety. Transport of miners and supplies to work sites in the Mill Fork Lease (North Rilda Canyon) via the existing Deer Creek Main portal requires lengthy underground travel, approximately 6 miles. The portal and surface facilities proposed in the mining plan modification would allow workers to access the lease closer to work sites and thus reduce underground transit time and exposure to underground hazards. Because of the distance, it is not possible to ventilate the Mill Fork Lease from the Deer Creek Main Portal. The proposed fan and portal are needed if the coal in the lease is to be mined safely.

1.4 Roles of Federal and State Agencies in the Proposed Action

Regulations for the Federal Lands Program at 30 CFR Chapter VII, Subchapter D require OSM to prepare mining plan decision documents. OSM is the agency responsible for making a mining plan recommendation to the Assistant Secretary and is the lead agency for the preparation of an EA under the requirements of NEPA. Pursuant to the Utah Cooperative Agreement at 30 CFR §944.30, Article VI, C.3, and 30 CFR §740.4(c)(7), OSM has delegated the preparation of the EA to Utah DOGM with OSM assistance where appropriate.

The SMCRA gives the OSM primary responsibility to administer programs that regulate surface coal mining operations and the surface effects of underground coal mining operations. In January 1981, pursuant to Section 503 of SMCRA, the DOGM developed, and the Secretary of the Interior approved, a permanent program authorizing DOGM to regulate surface coal mining operations and surface effects of underground mining on non-Federal lands within the state of Utah. In March 1987, under Section 523(c) of SMCRA, DOGM entered into a cooperative agreement with the Secretary of the Interior authorizing DOGM to regulate surface coal mining operations and surface effects of underground mining on Federal lands within the State.

Additionally, under the cooperative agreement, Federal coal lease holders in Utah must submit permit application packages (PAP's) to OSM and DOGM for proposed mining and reclamation operations on Federal lands in the State. The DOGM reviews the PAP to ensure that the permit application complies with the permitting requirements and that the coal mining operation would meet the performance standards of the approved permanent program. If it does comply, the DOGM issues the applicant a permit to conduct coal mining operations. The OSM, BLM, USFS, and other Federal agencies, review the PAP to ensure that it complies with the terms of the coal lease, the MLA, NEPA, and other Federal laws and their attendant regulations. OSM recommendations could include: approval; approval with conditions; or disapproval of the mining plan to the Assistant Secretary.

The DOGM enforces the performance standards and permit requirements during the mine's operation and has primary authority in environmental emergencies. OSM retains

oversight responsibility for this enforcement. The BLM and USFS have authority in those emergency situations where DOGM or OSM inspectors cannot act before environmental harm or damage occurs.

The role of the BLM is to review the request to modify the existing Resource Recovery and Protection Plan (R2P2) in accordance with 43 CFR 3482 and to write a letter recommending approval of the modification to the Assistant Secretary.

The Forest Supervisor, Manti-La Sal National Forest, must concur in the terms of the mining plan approval. This authority is granted under the National Forest Management Act of 1976, Federal Coal Leasing Act of 1975, and Federal Regulations contained in 30 CFR §740.4(e)(4). The USFS must ensure that the proposed action complies with the directives of the Land and Resource Management Plan, Manti-La Sal National Forest, 1986, as amended (LRMP). The Forest Supervisor may need to modify the existing public road easement issued to Emery County in order to accommodate the proposed construction.

1.5 Conformance with Land Use Plan(s)

The proposed mine plan modification conforms to the BLM management guidance of the San Rafael Resource Management Plan (RMP), which allows coal exploration and leasing on public lands inside the Wasatch and Emery Known Recoverable Coal Resource Areas (USDOI-BLM 1999). The proposed mine plan modification conforms to the USFS Manti-La Sal National Forest LRMP which describes forest-wide and management unit direction (USDA-FS 1986).

1.6 Existing/Related Environmental Documents

Recent environmental documents have previously been prepared that disclose potential impacts of other actions on project area resources. These are:

- 1) An EA entitled "PacifiCorp Deer Creek Mine Surface Facilities and Mining Under Escarpments in Rilda Canyon," was prepared by the USDA Forest Service, Intermountain Region, Manti-La Sal National Forest, Price Ranger District, Emery County, Utah (August 1994). The EA analyzed a mine permit revision proposing to construct a breakout with ancillary facilities in Rilda Canyon for the Deer Creek Mine. The purpose of the breakout was to provide intake and exhaust portals for ventilation of underground workings. The proposal included construction of a facilities pad and new access road on Federal Coal Lease U-06039 in the left fork of Rilda Canyon, reconstruction of the existing road in Rilda Canyon to accommodate project and public use, and installation of an overhead power transmission line. PacifiCorp also proposed to mine beneath escarpments in Rilda Canyon which could cause subsidence. The EA resulted in a Decision Notice and Finding of No Significant Impact (September 1994).

mine beneath escarpments in Rilda Canyon which could cause subsidence. The EA resulted in a Decision Notice and Finding of No Significant Impact (September 1994).

2) An EA entitled "Minor Coal Exploration: Geotechnical Investigation, Federal Coal Leases SL-051221 and U-2810" was prepared by the BLM in March, 2004.

3) A Biological Evaluation/Biological Assessment (BE/BA) entitled "Biological Evaluation and Biological Assessment for the PacifiCorp(Energy West) Mine Plan Modification, Rilda Canyon Surface/Portal Facilities, (Federal Coal Lease U-06039)" was prepared by the USDA Forest Service, Intermountain Region, Manti-La Sal National Forest, Price Ranger District (June 2005). The BE/BA analyzes the proposed action's potential effects on threatened, endangered, proposed or sensitive plant and animal species.

1.7 Identification of Issues Associated with the Proposed Action:

Issues were identified utilizing comments made by the public and resource experts at two open houses, internal agency meetings and letters sent in response to announcements about the proposed mining activity in the Price Sun Advocate and Emery County Progress newspapers. The DOGM, USFS, OSM, BLM, United States Fish and Wildlife Service (USFWS), Utah Division of Wildlife Resources (DWR), Utah Division of Water Rights and Emery County resource specialists studied the critical elements of the human environment specified in NEPA, and identified potential issues. The DOGM, USFS, OSM, BLM evaluated issues raised by the public and other agency officials and determined which were primary and requiring more detailed analysis in this document and which were secondary, and could be deleted from further consideration.

1.7.1 Primary Issues

The primary issues concern direct effects to resource values related to both the construction disturbance in the footprint of the proposed facilities and to the ongoing noise and activity from day-to-day mine operations. These issues, which are described and analyzed in detail in Chapters 3 and 4 of this EA, can be summarized as follows:

Issue 1: Wildlife

How would wildlife be affected by habitat changes and disturbance from operations?

Within this category are six key areas of concern:

- Potential effects on big game winter range (quantity, avoidance)
- Potential effects on threatened, endangered, and sensitive species
- Potential effects on USFS Management Indicator Species (MIS)
- Potential effects on migratory birds
- Potential effects on the Mexican spotted owl
- Potential effects on wildlife due to vehicle traffic and road issues (safety, noise, round-the-clock activity, animal road kills)

Issue 2: Hydrology (Surface and Groundwater)

How would the existing culinary spring development be protected and the continued flow of culinary water to the North Emery Water Users Special Service District be assured (quality and quantity)?

How would the proposed activity affect surface water quality (salt and sand storage, salt runoff, hard surfaces)?

Issue 3: Noise

How would the proposed activity affect ambient noise conditions?

Issue 4: Air Quality

How would fugitive dust and emissions from traffic and mine operations affect air quality?

Issue 5: Recreational Resources

How would the recreation resource be affected public access, visual quality, etc.?

Issue 6: Socioeconomics

How would Emery County employment and revenue be affected?

Issue 7: Hazardous Waste

How would the proposed activity handle hazardous waste material issues such as spills and storage?

Table 1.1 below briefly summarizes the analyzed effects for each of these seven issues. A detailed description of these impacts is found in Chapter 4.

Issue	Proposed Action/Alternative 1	No Action/Alternative 2 (change from current)		
1. Wildlife				
a. Big Game	Moderate, short term <table border="1" style="display: inline-table; vertical-align: middle;"> <tr> <td>deer - indirect 420 acres</td> </tr> <tr> <td>elk - indirect 1,325 acres</td> </tr> </table>	deer - indirect 420 acres	elk - indirect 1,325 acres	none
deer - indirect 420 acres				
elk - indirect 1,325 acres				
b. TES	negligible, short term	none		
c. MIS	negligible, short term	none		
d. Mex. Spotted Owl	negligible, short term	none		
e. Traffic	moderate, short term	none		
2. Hydrology				
a. NEWUSSD	negligible, short term	none		
b. Road Salt	negligible, short term	none		
3. Noise	minor, short term	none		
4. Air Quality	minor, short term	none		
5. Recreation	minor, short term	none		
6. Socioeconomics	minor, short term	none		
7. Hazardous Waste	negligible, short term	none		

1.7.2 Secondary Issues Not Analyzed in Detail

Changes in project design have eliminated the basis for some concerns. For example, an earlier proposal to culvert a 1,200-foot stretch of Rilda Creek raised enough concern about potential effects on fish, aquatic macroinvertebrates, and riparian vegetation that the concept was discarded. The current proposal does not directly impact the creek channel and eliminates any potential direct effects on aquatic or riparian resources.

Some issues raised either were special cases of the primary issues listed above, concerned effects with low risk of impacting area resources, or were so broad in scope that it would be impractical to address them in this document. Such issues were determined not to merit detailed analysis in this EA.

CHAPTER 2: DESCRIPTION OF ALTERNATIVES

2.1 Alternative 1: Approval of the Proposed Permit Application Package with Conditions (Proposed Action)

Under this alternative, the Assistant Secretary would approve the applicant's proposed Permit Application Package submitted December 21, 2004 for expansion of the Deer Creek Mine surface facilities in Rilda Canyon onto surface land managed by the Manti-La Sal National Forest to facilitate mining of Federal Coal Leases U-06039, U-2810, SL-050862, and SL-051221. Certain standard conditions and any necessary special conditions would be included in the decision document to ensure compliance and adherence to environmental values.

2.1.1 Description of the Proposed Mining Plan Modification

The new facilities would be located in Rilda Canyon, in Section 28, Township 16 South, Range 7 East, Salt Lake Baseline and Meridian, Emery County, Utah, about 8 miles west of the town of Huntington. The proposed mining plan modification calls for the construction of new surface facilities in Rilda Canyon, down-canyon from the existing facilities in Left Fork.

The proposed facilities would cover a long, slender area approximately 4,000 feet long by 200 feet wide covering 13.1 acres on the canyon floor. Of this area, the support facilities (portals, shop, office, etc.) would cover an area approximately 2,000 feet long by 120 to 250 feet wide (9.0 acres) at the west (up-canyon) end of the site. The remainder of the site to the east of the mine yard area would have hydrologic controls, two topsoil stockpiles, and a road turnaround. All facilities would be entirely on the north side of Rilda Canyon Creek except for one topsoil stockpile. The proposal would use the existing county road and 25 kv power line that run through the site. The county road would be paved. See Appendix E, Map 4 (Layout of Proposed Surface Facilities) for a complete description of the proposed facilities. Proposed facilities would include:

Structures: Office/bathhouse/warehouse building; four (4) vertical retaining walls constructed of 12-inch thick concrete; two (2) other retaining walls in the yard area; water treatment building; mine ventilation fan; 168-stall parking lot; underground vehicle parking garage; steel frame building to house fan motors; steel framed storage sheds to house bagged rock dust, ready-mix concrete, and other dry products; oil shed; fueling dock with 4,000 gallon above-ground diesel fuel storage tank; steel shed for storage of cans of oil and lubricant; rock dust silo; pneumatic pipeline for rock dust; and a sediment pond with supporting drainage structures.

Power: An existing 25 kv power line already provides power at the Left Fork Portal Facility. A transformer would be installed to supply power to the Rilda

Canyon portal facility and there would be diesel generator backups for the ventilation fan.

Water related facilities:

Culinary system: 10,000-gallon steel water storage tank for treated culinary water.

Sewage system: Waste water from office/bathroom/warehouse would be separated into gray water and black water. A 20,000-gallon temporary storage tank would hold black water (sewage) until it can be transported by truck to an approved disposal facility. Gray water (discharge from boot wash, showers, floor drains, etc) would be stored before being pumped into an abandoned portion of the underground mine workings. Permits from the U.S. Mine Safety and Health Administration (MSHA) and Utah Department of Environmental Quality, Division of Drinking Water Quality would be obtained.

Runoff system: a two compartmented runoff collection tank with 1) a 7,540 gallon compartment for gray water, and 2) an 18,500 gallon compartment for temporary storage of surface runoff water. Surface runoff would spill over into the gray water compartment of the tank. This system would also include an emergency spillway connected by pipe to the sediment pond; pump station to move surface runoff into collection tank.

Drainage system: two systems, 1) for collection of "undisturbed" or overland runoff water from above the portal site and from adjacent side slopes that bypasses the developed area and moves this runoff into the natural channel, and 2) for collection of runoff and all non-sewage waste water from the disturbed portal area, parking lots, storage areas, bathroom/office/ warehouse, and fan area to convey it to the runoff collection tank for discharge into the mine. Culverts would direct any overflow to the sediment pond.

Storage: Mining and snow removal material and equipment would be stored on asphalt and gravel surface areas on the cut or embankment fills. A primary covered storage area would be constructed west of the parking garage to store non-coal waste, coal waste, oil, fuel facilities and bulk rock dust. Secondary covered storage areas would be constructed to store crib blocks, roof bolts, conveyor hardware, conveyor belting, beams, and other associated construction/repair materials. Another covered non-coal waste/sand/rock waste storage area would be constructed on the north side of the mine yard between the fan and access portal. Sand and salt for winter road maintenance would also be stored here. Coal and non-coal wastes would be hauled away.

Soil Stockpile Storage Areas: Two topsoil and subsoil stockpile areas not contiguous to the main facilities and on previously disturbed land (approximately 800 feet by 300 feet, 3.0 acres, and 320 feet by 220 feet, 1.1 acres) would be

created. The smaller stockpile would be on the south side of Rilda Canyon Creek and accessed via the existing bridge.

County Road: The existing gravel road would be paved and widened. The road would be realigned to make curves less acute. The design speed would be increased. A trailhead parking lot would be installed to the east of the limited access mine yard to provide public access to Forest Service recreation areas west of the proposed facility.

The projected active life of the facilities is 15-20 years. When the mine shuts down, the site would be reclaimed. Structures would be removed, the site regraded to its original topography, topsoil from the stockpiles redistributed over the site, and all disturbed areas revegetated. The county road would be returned to a gravel surface. Reclamation would take approximately twelve years, two years for the actual demolition and site restoration work and the balance of the time for vegetation to become established before final bond release.

2.1.2 Standard Conditions

Under this alternative, both standard conditions and any necessary special conditions would be included in the decision document. The standard conditions would be as follows:

- a. The operator shall conduct coal development and mining operations only as described in the complete permit application package, and as approved by the Utah DOGM, except as otherwise directed in the conditions of this mining plan approval.
- b. The operator shall comply with the terms and conditions of the lease, this mining plan modification approval and the requirements of the Utah Permit No. C/015/0018 issued under the Utah State program, approved pursuant to the SMCRA.
- c. This mining plan approval shall be binding on any person conducting coal development or mining operations under the approved mining plan and shall remain in effect until superseded, canceled, or withdrawn.
- d. If during mining operations unidentified prehistoric or historic resources are discovered, the operator shall ensure that the resources are not disturbed and shall notify the Utah DOGM and the OSM. The operator shall take such actions as are required by the Utah DOGM in coordination with OSM.
- e. The Secretary retains jurisdiction to modify or cancel this approval, as required, on the basis of further consultation with the USFWS pursuant to Section 7 of the Endangered Species Act, as amended, 16 USC 1531 *et seq.*

2.2 Alternative 2: Disapproval of the Proposed Permit Application Package (No Action)

Under this alternative, the Assistant Secretary would disapprove the applicant's proposed Permit Application Package submitted December 21, 2004 for expansion of the Deer Creek Mine surface facilities in Rilda Canyon onto surface land managed by the Manti-La Sal National Forest to facilitate mining of Federal Coal Leases U-06039, U-2810, SL-050862, and SL-051221.

2.3 Other Alternatives Considered, but Eliminated from Further Analysis

By obtaining a federal coal lease a mining company demonstrates that it has a legal right to mine coal under the Mineral Leasing Act. Once the legal right to mine has been established, the SMCRA permitting process is the regulatory platform by which the OSM imposes all environmental protection standards that coal companies must meet in order to obtain a mine permit. The administrative and technical reviews that occur as part of the permitting process are designed to set the environmental protection and enhancement standards that a mine operator must, at a minimum, meet. When a mining company's permit application has successfully completed the technical and administrative reviews required by SMCRA and has been found to be in compliance with all other applicable environmental regulations, OSM's NEPA decision is limited to approval or disapproval.

In the course of exploring its options for accessing the Mill Fork Lease, PacifiCorp looked at several different configurations for mining operations. These were considered and rejected for reasons discussed below. These preliminary proposals were submitted but later withdrawn from the mine plan. Since these early proposals are not part of the final Mining Plan Modification, they are not part of the proposed action to be reviewed and were not analyzed further. These early proposals and the rationales as to why they were not carried forward for detailed analysis are described below.

2.3.1 Access through the Genwal Mine

PacifiCorp's initial plan was purchase a portion of the Genwal Coal Mine and utilize existing underground facilities to gain access to the coal. This business transaction proved to be non-viable because the owner of the Genwal Coal mine would not sell the property to PacifiCorp as required to allow the alternative to occur and this alternative was not pursued further.

2.3.2 Stream Culvert and Down-Canyon Facilities

In March 2004, PacifiCorp submitted a draft permit revision application to DOGM proposing to construct new surface facilities in North Rilda Canyon for the Deer Creek underground coal mine. This draft application was never formally accepted by DOGM. The draft application proposed locating the surface facilities further down the canyon in a more central location. The draft application also proposed relocating Emery County

Road 306 and culverting 1,200 feet of Rilda Creek for approximately 15 years. The DOGM's public comment period and open house in Huntington, Utah, generated comments from the public and other government agencies indicating many environmental concerns regarding the potential impact of culverting Rilda Creek. In response to these concerns PacifiCorp withdrew the draft application in June 2004, and informed DOGM that it would be working on a new proposal. Accordingly, this alternative was eliminated from further analysis.

2.3.3 Topsoil Storage Off Permitted Area and Up-Canyon Facilities

In September 2004, PacifiCorp resubmitted a draft permit revision application to Utah DOGM proposing to construct new surface facilities in North Rilda Canyon for the Deer Creek underground coal mine. The application proposed locating the facilities further up the canyon making it unnecessary to either relocate Emery County Road 306 or to culvert Rilda Creek. This proposal involved the creation of 5.5 acres of topsoil/subsoil storage areas that would be located outside of the existing mine permit boundary area. During permit review discussions in November 2004, PacifiCorp decided to reconsider this application and relocate the soil storage stockpiles within the permit boundary utilizing areas previously disturbed by historic mining. In December 2004, PacifiCorp requested that its September 2004 draft application be withdrawn from the public record due to the potential management concerns associated with locating the topsoil/subsoil storage area outside of the existing mine permit boundary.

2.4 Past, Present, and Reasonably Foreseeable Actions

CEQ regulations (40 CFR 1508.7) define cumulative impact as "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time."

Past, present, and reasonably foreseeable future actions in the project area have been developed in support of this EA. The cumulative effects for each resource category are addressed under each alternative in Chapter 4. Estimates of residual, current, or anticipated effects are discussed. The sum of the effects, in addition to the anticipated direct and indirect effects of the proposed action, would form the basis for the cumulative effects analysis. Past, present and future actions that concern the surface land managing agency, the Forest Service, are outlined in Appendix D. In addition, other cumulative effects would be due to road improvements and increased traffic on Highway U-31.

CHAPTER 3: AFFECTED ENVIRONMENT

3.1 Introduction

This chapter discusses the existing environment that could potentially be affected by the proposed surface facilities described in Chapter 2 of this EA. This chapter provides the baseline for comparison of the environmental effects described in Chapter 4.

The proposed action analyzed in this EA involves the land surface on four federal coal leases totaling 2,157 acres. The proposed surface facilities analyzed in this document would cover 13.1 acres (or 0.6% of the leased area). Because the mining is underground, the direct effect on most surface environmental resources would be limited. Most of the concerns raised during the scoping process (at the public meetings, internal staff meetings, during agency reviews of this document) center on the potential impacts of the proposed surface facilities. Consequently, the focus of this EA is on the surface facility development. Underground mining plans and activities are approved and operate through a separate process managed by the Bureau of Land Management. Where there is a potential for indirect impacts beyond the footprint of the surface facilities (particularly regarding traffic effects) they are discussed in the appropriate section.

3.2 General Setting

Rilda Canyon is an east-west trending canyon of the western Colorado Plateau, a tributary to the Huntington Canyon drainage which feeds into the San Rafael basin and eventually into the Colorado River drainage (See Appendix E, Map 1). Typical of small side canyons in the area, Rilda Canyon has very steep walls and narrow, rounded ridge tops. Canyon elevations range from 7,200 feet to over 9,600 feet. Vegetation is diversified, with plant communities that include pinyon-juniper, mountain brush, mixed conifer (upper elevations), sagebrush/grass and a narrow band of riparian vegetation along Rilda Canyon Creek and Rilda Canyon Springs (Appendix E, Maps 12 and 13). Habitat in the canyon is mostly influenced by steep and broken slopes and their orientations. Water resources include Rilda Canyon Creek and Rilda Canyon Springs. The average maximum temperature is 56 °F and the average minimum is 33 °F. The average yearly precipitation amount is 14.5 inches, with August being the wettest month due to influence by the monsoonal conditions to the south.

The proposed surface facilities would be located on the north side of Rilda Creek below its fork and about two miles west of its confluence with Huntington Creek (Appendix E, Map 2). The footprint of the facilities would cover an area approximately 3,200 feet long by 25 feet to about 250 feet wide (9.0 acres). Two nearby topsoil stockpile areas not contiguous to the main facilities and on previously disturbed land (approximately 800 feet by 300 feet, 3.0 acres, and 320 feet by 220 feet, 1.1 acres) would bring the total disturbed area of the proposal to 13.1 acres. The elevation of the disturbed area footprint would range from 7,400 to 7,725 feet (Appendix E, Maps 4 and 5). The proposed access road realignment would widen the existing easement (mostly by shifting the northern

boundary up to 45 feet further north), a change that would take in 4.8 acres of federal land.

3.2.1 Permit Application Package

The PacifiCorp Permit Application Package (PAP) is a comprehensive and detailed compilation of information as it narratively outlines the proposed action. It includes descriptions of the existing environment and descriptions of the proposal. The PAP contains over 1,500 pages of text, drawings, maps, photos, engineering calculations, field notes, etc. Many of the survey reports and technical publications cited in this EA are reproduced in their entirety in the PAP. The descriptions and analyses in this EA rely heavily on the data presented in the PAP. It is beyond the scope of this EA to reproduce the contents of the PAP. This EA is necessarily a synopsis of information contained in the PAP.

A full copy of the PAP is in the administrative record for this project and this information is available upon request.

3.3. Critical Elements of the Human Environment

Under 36 CFR 740.4(c)(7), OSM requires the analysis of the following resource values critical to the human environment: Air Quality; Environmental Justice, Fish and Wildlife, Hydrology, Historic and Cultural, Land Use (includes Prime farmlands), Noise, Native American Religious Concerns; Recreation, Socioeconomic, Soils; Vegetation (includes wetlands), Topography, and Wastes (hazardous or solid).

Issues identified in the scoping process relating to each of these resources are analyzed in detail in Chapter 4, Environmental Effects.

3.3.1 Description of the Affected Environment

3.3.1.1 Resource 1: Wildlife Resources

3.3.1.1.1 Big Game Winter Range

Three big game species are of interest in Rilda Canyon: elk, mule deer, and moose. Big game species are actively managed to sustain huntable populations. These animals are enjoyed by both consumptive and non-consumptive users.

On the Wasatch Plateau, big game tend to occupy the higher elevation aspen and mixed conifer habitats from spring through early fall, and then move to lower elevation mixed shrub, pinyon-juniper, and sagebrush habitats for winter range. Big game generally occupy winter range from about December through mid-April, but this varies depending on the severity of the winter. Protection of winter range and calving/fawning habitat is considered important in maintaining big game populations. Severe weather conditions

and birthing and raising young impose high nutritional demands on animals. Therefore, available forage within calving/fawning habitat is especially important, as is forage within winter range to increase chances of survival (USDA-FS 2005b).

Most of Rilda Canyon, including the proposal area, is classed by DWR as Critical Winter Range for elk and High Value Winter Range for mule deer. The high elevation upper reaches of the canyon are classed as Critical Summer Range for both elk and mule deer. DWR classes the canyon bottom along Rilda Creek as Critical Summer Range for moose and the entire canyon as High Value Winter Range for moose (PAP 1:82-84). Rilda Canyon also provides a migratory corridor for big game as they move between higher elevation summer range to lower elevation winter range (USDA-FS 2005b). The deer herd in Huntington Canyon is estimated at 28,500 head, with about 3,500 in Rilda Canyon and Mill Fork. About 300 elk use the ridge between Rilda Canyon and Mill Fork (Bates 2005). Moose have been observed in nearby Crandall Canyon, but none have been observed in Rilda Canyon.

Elk and mule deer populations fluctuate from both natural and artificial controls (e.g. weather, number of hunting permits issued). Twelve years of elk population data for the Manti elk census unit show numbers fluctuating around 700-800 head, with a slight decrease over the past few years. Mule deer populations have shown an upward trend in the past five years for the Manti Division of the National Forest (USDA-FS 2005b).

3.3.1.1.2 Special Status Animal Species

The project area lies within the historic range of or has potential habitat for a number of animal species with special conservation management status. For the purposes of this EA, "special status species" means those protected by state or federal law or policy and includes those listed as threatened or endangered under the Endangered Species Act, those listed on the Forest Service Intermountain Region Sensitive Species list for the Manti-La Sal National Forest, and those listed by the Utah Division of Wildlife Resources (DWR) on the State Sensitive Species list.

The Species Matrix in Appendix A lists those status animal species identified as potentially occurring in Emery County or the Manti-La Sal National Forest. Based on assessments of known occurrences of these species, historic ranges, and habitat preferences, the following species are considered to have sufficient likelihood of occurring in the project area or being affected by the proposed work to be discussed in this document:

- Bald eagle (*Haliaeetus leucocephalus*) - Threatened
- Mexican spotted owl (*Strix occidentalis lucida*) - Threatened
- Townsend's big-eared bat (*Corynorhinus townsendii pallascens*) - Sensitive
- Spotted bat (*Euderma maculatum*) - Sensitive
- Northern goshawk (*Accipiter gentilis*) - Sensitive
- Peregrine falcon (*Falco peregrinus anatum*) - Sensitive

Flammulated owl (*Otus flammeolus*) - Sensitive
Three-toed woodpecker (*Picoides tridactylus*) - Sensitive
Western toad (*Bufo boreas*) - Sensitive

Of these, the bald eagle and Mexican spotted owl are listed as "Threatened" under the Endangered Species Act. The other species are considered "Sensitive" by DWR and other agencies.

Bald Eagle

Bald eagle nests are typically located in multi-storied (uneven aged) coniferous forest stands near bodies of water that support prey species. Nest trees are generally the largest trees in the stand for good visibility and clear flight paths. Bald eagles spend over 90 percent of the daylight hours perching. Important perch sites generally have three fundamental elements: a direct view of potential food sources, location within 50 meters of water, and isolation from human disturbance. There are only a few known nesting pairs of bald eagles in Utah. There is a bald eagle nest site located approximately 20 miles from the proposed facilities. The pair does not forage on National Forest System (NFS) lands; nesting adults and fledglings were found to forage within a 5 mile radius of the nest tree. No bald eagles are known to nest on Manti-La Sal National Forest. Most bald eagle sightings on the Forest have been at Joes Valley Reservoir and Huntington Canyon during late fall and early winter prior to freeze over (USDA-FS 2005a, USDA-FS 2005b). There are no landscape characteristics in Rilda Canyon that would attract bald eagles. Rilda Canyon is not known or expected to be used by nesting, wintering or foraging bald eagles. However, bald eagles may occur incidentally in Rilda Canyon as transient visitors.

Mexican Spotted Owl

Mexican spotted owls can nest in a variety of habitats, but typically they nest in areas with a complex forest structure or rocky canyons, and containing uneven-aged, multi-storied mature or old growth stands that have high canopy closure. In Utah, the Mexican spotted owl nests in steep-walled, complex rock canyons at relatively low elevations. Canyons are generally at least 2 kilometers long and less than 2 kilometers wide with mixed conifer stands on 40 percent or greater slopes. Most nests are in caves or on cliff ledges in steep-walled canyons typically characterized by cooler conditions and frequently containing small clumps or stringers of ponderosa pine, Douglas fir, white fir, and/or pinyon-juniper (USDA-FS 2005b, PAP 1:65-66). There is no suitable Mexican spotted owl nesting habitat in or near the proposed facilities area. There is suitable, but not prime, foraging habitat in Rilda Canyon.

The Mill Fork Lease has been modeled using the 2000 Willey-Spotskey Mexican Spotted Owl Habitat Model. The model predicts a few scattered areas of potential nesting habitat in Mill Fork Canyon and Huntington Canyon north of Rilda Canyon. It predicts potential foraging habitat in Rilda Canyon (PAP 1:66-67). Areas predicted by the model as suitable nesting habitat are beyond the recommended 0.5 mile buffer around active spotted owl nests (Romin and Muck 1999). Rilda Canyon contains some elements of

spotted owl foraging habitat, but it is considered marginal (USDA-FS 2005a, USDA-FS 2005b). No Mexican spotted owls have been found in surveys of similar habitats in the general area (EISEEC 2004).

Townsend's Big eared Bat

Townsend's big-eared bats occur widely across Utah. They inhabit a wide variety of habitats including desert scrub, sagebrush, chaparral, deciduous and coniferous forests. They are obligate cavern roosters and require relatively spacious, relatively cool cave-like roost sites. Townsend's big-eared bats have not been detected during bat surveys in Rilda Canyon (USDA-FS 2005a, USDA-FS 2005b, PAP 1:67-69). A survey of the proposal area found limited cavern habitat in or near the disturbance footprint (one small natural rock alcove and a sealed adit at an abandoned mine). No bat sign (guano) was present at these sites, indicating no bats are using them (Diamond and Diamond 2004). The absence of Townsend's big-eared bats from surveys and the limited roosting sites in the area suggest that there are no resident Townsend's in the canyon, although they might forage there.

Spotted Bat

Spotted bats are widely distributed across Utah in low densities in a variety of habitats. They commonly roost in crevices in cliffs. Surveys have found spotted bats in several major canyons of the Wasatch Plateau; they are relatively common in Huntington Canyon. Spotted bats appear to tolerate some human activity, having been observed in city parking lots and near highways with coal truck traffic. Rilda Canyon contains suitable roosting and foraging habitat for spotted bats and they have been acoustically detected in the canyon (USDA-FS 2005b, PAP 1:67-69). However, a survey of the proposal area found no crevices used by spotted bats in or near the disturbance footprint (Diamond and Diamond 2004).

Northern Goshawk

Northern goshawks have been found in a variety of forest ecosystems including lodgepole pine, aspen, ponderosa pine, Douglas fir, and mixed forests. Goshawk nest sites are usually located in dense mature forests with relatively large trees, near water, and on benches of relatively little slope. Closed canopies are important for protection and cover, and relatively open understories are important for foraging. Suitable goshawk habitat is often heterogeneous, which supports a broad range of prey species. Important forest components in Utah include snags, multiple canopies, and downed woody debris. There is marginally suitable goshawk habitat in the Rilda Canyon area, but none in the proposed facilities area. The potentially suitable goshawk habitat near the area was surveyed in 2004, but no goshawks were found. The Forest Service has monitored goshawks in the Manti-La Sal National Forest (MLSNF) since the 1980's. The goshawk population on the MLSNF has fluctuated but remained stable over the past decade. There has been a slight upward trend in the percentage of monitored nests that are active in this same period (USDA-FS 2005a, USDA-FS 2005b).

Peregrine Falcon

Peregrine falcon preferred nesting habitat is on cliff faces with recesses or protected shelves, although reintroduced birds regularly nest on man-made structures such as towers and high-rise buildings. A wide variety of habitats are used for foraging, where they prey on a variety of birds. Peregrine falcons may travel up to 18 miles from their nest site to forage for food, however a ten mile radius around the nest is an average hunting area, and 80% of foraging occurs within a mile of the nest. There are no cliff faces of the type preferred by peregrine falcons for nesting in or near the proposed facilities area. There is suitable, but not prime, foraging habitat in Rilda Canyon. The nearest known peregrine falcon aerie is located approximately 6.5 miles from the project area (USDA-FS 2005a, USDA-FS 2005b). This is well beyond the recommended 1.0 mile restricted development buffer around active falcon aeries (Romin and Muck 1999).

Flammulated Owl

Flammulated owls are generally associated with mature ponderosa pine or mixed conifer habitat that has a ponderosa pine component, but they have also been found in mixed conifer stands that mimic relatively open habitat characteristics of ponderosa pine stands. Flammulated owls are obligate secondary cavity nesters. There is marginally suitable flammulated owl habitat in Rilda Canyon, but none in the proposed facilities area. The potentially suitable flammulated owl habitat near the area was surveyed in 2004, but no owls were found (USDA-FS 2005a, USDA-FS 2005b).

Three-toed Woodpecker

Three-toed woodpecker is found in northern coniferous and mixed forest types up to 9,000 feet elevation. Forests containing spruce, grand fir, ponderosa pine, tamarack, and lodgepole pine are used. Nests may be found in spruce, tamarack, pine, cedar, and aspen trees. They forage mainly in dead trees, primarily insect- or fire-killed trees. There are mixed stands of conifer in the proposal area that could be suitable habitat, but three-toed woodpeckers are not considered likely to occur there (USDA-FS 2005a, USDA-FS 2005b).

Western Toad

Western toads occur across much of Utah in a variety of habitats, including streams, springs, ponds, meadows, and woodlands. (DWR-UCDC 2005). There has been no survey for western toads and they have not been surveyed or observed in the proposal area, but the springs and Rilda Canyon Creek and riparian zone could provide suitable habitat.

3.3.1.1.3 Management Indicator Species (MIS)

Management Indicator Species (MIS) are species identified by the USDA-FS to fulfill requirements of 36 CFR Chapter II - 219.19. MIS are used as proxies to monitor habitat conditions. For the MLSNF, there are the following MIS:

Rocky Mountain elk (*Cervus elaphus*)

Mule deer (*Odocoileus hemionus*)
Northern goshawk (*Accipiter gentilis*)
Golden eagle (*Aquila chrysaetos*)
Aquatic macroinvertebrates (several phyla)

Elk and mule deer are discussed in part 3.3.1.1.1 above. The northern goshawk is discussed in part 3.3.1.1.2, Special Status Animal Species, above.

Golden Eagle

Golden eagle nests are usually located on cliffs overlooking large open expanses of grass-shrub or shrub steppe habitat. Suitable cliffs and foraging habitat are abundant in the Wasatch Plateau canyons. The Forest Service has monitored golden eagles since 1998. The percentage of monitored nests on the Manti Division that were active in 2002-2004 was substantially lower than in 1998-2001 (though 2004 nesting activity was up from the previous years). The fluctuation may reflect a natural cycle or may be related to the recent drought (USDA-FS 2005b). Golden eagles may respond to disturbance by avoiding the source during foraging and nesting, reducing breeding productivity, or by abandoning nests or territories (USDA-FS 2005b).

There is a known golden eagle nest in Rilda Canyon located slightly more than half a mile (3,000 feet) from the proposed surface facilities. The nest was inactive in 2001, tended in 2002 and 2003, inactive in 2004, and active in the spring of 2005. Golden eagles are known to forage along the north rim and south-facing slopes of Rilda Canyon. Because of the topography, most of the proposed facilities would be hidden from view of the nest. There is a direct line of sight from the nest to a short section of the middle part of the proposed facilities that has the road and no other mine features. Observations of the eagles using the nest have shown that they typically fly down the tributary canyon where the nest is located to the main trunk of Rilda Canyon to forage along the north rim and south-facing slopes.

Aquatic Macroinvertebrates

Aquatic macroinvertebrates are a group of water-dwelling invertebrates (insects, crustaceans, mollusks, worms, etc.) that are important as indicators of water quality and as a prey base for fish. Key representatives are the insect orders Ephemeroptera (mayflies), Plecoptera (stoneflies), and Trichoptera (caddisflies), whose immature forms are aquatic. Because different species have different tolerances for environmental conditions, the particular mix of macroinvertebrates present can give an indication of water quality. Several numerical indices based on macroinvertebrate composition, such as the Hilsenhoff Biotic Index (HBI) and the Biotic Condition Index (BCI), are used to infer water quality.

Aquatic macroinvertebrates in Rilda Canyon Creek were sampled at several locations in May 2004. A total of 814 individuals representing 33 taxa were collected in 6 samples. Mayflies of the genus *Baetis* dominated the samples (nearly half of the total specimens), with *Cinygmula* mayflies and oligochaete worms secondary dominants, comprising

around a tenth of the total each (Vinson 2004). The Rilda Canyon Creek samples had a mean HBI of 3.28 (0-10 scale), indicating "slight organic enrichment." The mean dominance weighted community tolerance quotient (CTQd) was 72. This index varies from around 20 to 100; lower values indicate better water quality (Vinson 2004). Using a potential (i.e. reference, or CTQp) value of 50 with this CTQd gives a BCI value of 69.4, which does not meet the Forest Plan standard of 75. Existing BCI data suggest that portions of the Huntington Creek watershed are stable and portions are experiencing a downward trend, but there are too few data to reliably determine trends for macroinvertebrates on the MLSNF (USDA-FS 2005b).

3.3.1.1.4 Non-Game/Non-Special Status Wildlife

There are a number of other terrestrial wildlife species that may occur in Rilda Canyon as breeding residents, foragers, seasonal migrants, or short-term transients. Most are protected by law (such as by the Migratory Bird Act) from direct take, some may be common, and some may be uncommon, but none of these non-game species have been identified as warranting special conservation management concern. These species include many common passerine birds (e.g. magpies, ravens, pinyon jays, rock wrens), raptors, and non-game mammals (coyotes, squirrels, wood rats), reptiles and amphibians. Of these, neotropical migratory birds have elicited the most concern. The Utah Partners in Flight Avian Conservation Strategy identifies 20 non-game migratory land birds as priority species. Several of these species could potentially occur in Rilda Canyon, including the Virginia warbler (*Vermivora virginiae*), sage sparrow (*Amphispiza belli nevadensis*), black rosy-finch (*Leucosticte atrata*), Brewer's sparrow (*Spizella breweri breweri*), broad-tailed hummingbird (*Selasphorus platycercus*), and gray vireo (*Vireo vicinior*) (USDA-FS 2005b). Rilda Canyon has not been surveyed for these birds. The potential habitat for them ranges from marginal to suitable, depending on the species.

3.3.1.1.5 Fish

Rilda Canyon Creek was twice surveyed by electrofishing (using electrical shocks to non-lethally capture fish for censusing) in the summer and fall of 2004 from its confluence with Huntington Creek to the proposed facilities location (Walker 2004, de la Hoz 2004). Both surveys found two species, brown trout (*Salmo trutta*) and cutthroat trout (*Onchorhynchus clarki*). The surveys found 20 and 65 cutthroat trout distributed along the sampled reach after making a single electrofishing pass. Both surveys found only a single brown trout each, both near the mouth of Rilda Canyon. No fish were found upstream of the road crossing near the North Emery Water Users Special Services District (NEWUSSD) spring development.

3.3.1.2 Resource 2: Vegetation

3.3.1.2.1 Vegetation Communities

Rilda Canyon has several identifiable plant communities with distribution determined in part by elevation, soils, and aspect. In broad terms, the north-facing aspect of the canyon is dominated by Douglas fir forest. The drier south-facing aspect is dominated by juniper forest (PAP, Map 300-1). Vegetation in the proposal area has been surveyed; major vegetation types are shown on the vegetation map in Appendix E, Map 13.

The major vegetation communities in the proposal area are pinyon-juniper, mountain brush transition, mixed conifer, and aspen. Prominent species in this area include Utah juniper Rocky Mountain juniper, pinyon pine, curl-leaf mountain mahogany, ponderosa pine, big sage, Salina wildrye, Indian rice grass, Cutler ephedra, and bluebunch wheatgrass). The mixed conifer community, typified by white fir, Douglas fir, quaking aspen, Saskatoon serviceberry, and bluebunch wheatgrass, occurs at higher elevations in the canyon. Cottonwood and blue spruce (*Picea pungens*) grow along Rilda Canyon Creek.

The specific communities identified as mapping units on the detailed vegetation map occur as zones roughly following an elevational gradient. There is a band of cottonwood/blue spruce community along Rilda Canyon Creek. This is bordered by a blue spruce/white fir zone that occupies much of the flatter bottomland, except at the east end of the proposal where much of the vegetation associated with the historic abandoned mines is classed as previously disturbed. The north-facing slopes south of the creek are Douglas fir/white fir. On the north side there is a narrow band of sagebrush/grass, then the pinyon-juniper/curl-leaf mountain mahogany/ponderosa pine community on the lower slopes, with the pinyon-juniper/curl-leaf mountain mahogany community further upslope. Smaller side canyons and other patchy areas on the north side are marked by Salina wildrye and Douglas fir/white fir communities. There are no identified wetlands in the proposal area.

Table 3.1 Areas of vegetation communities in the Rilda Proposal	
Location/Vegetation Community Type (Mapping Unit)	Area (acres)
Main Facilities	
Douglas Fir/White Fir	0.28
Pinyon-Juniper/Curl-leaf Mountain Mahogany/Ponderosa Pine	1.48
Previously Disturbed (Includes County Road)	2.85
Sagebrush/Grass	1.71
Salina Wildrye	0.03
White Fir/Aspen	2.65
Main Facilities Total	9.00
Soil Stockpiles	
Aspen	0.39
Douglas Fir/White Fir	0.14
Pinyon-Juniper/Curl-leaf Mountain Mahogany	0.70
Pinyon-Juniper/Curl-leaf Mountain Mahogany/Ponderosa Pine	0.75

Location/Vegetation Community Type (Mapping Unit)	Area (acres)
Previously Disturbed	2.11
Salina Wildrye	0.01
Soil Stockpiles Total	4.10

3.3.1.2.2 Special Status Plant Species

The project area lies within the historic range of or has potential habitat for a number of plant species with special conservation management status. For the purposes of this EA, “special status species” means those protected by state or federal law or policy and includes those listed as threatened or endangered under the Endangered Species Act, those listed on the Forest Service Intermountain Region Proposed, Endangered, Threatened, and Sensitive Species list (December 2003), and those listed by the Utah Division of Wildlife Resources (DWR) on the State Sensitive Species list.

The Species Matrix in Appendix A lists those special status plant species identified as potentially occurring in Emery County or the Manti-La Sal National Forest. Based on assessments of known occurrences of these species, historic ranges, and habitat preferences, the species considered to have a reasonable likelihood of occurring in the project area or being affected by the proposed work are the Chatterley onion (*Allium geyeri chatterleyi*), Bicknell milkvetch (*Astragalus consobrinus*), canyon sweetvetch (*Hedysarum occidentale* var. *canone*) and Link Trail columbine (*Aquilegia flavescens rubicunda*). All may occur in sagebrush or conifer communities; all but the milkvetch prefer moister sites.

No special status plants, nor ideal habitat for them, were found by plant surveys of the proposal area in 2003 and 2004 (Collins 2004a, Collins 2004b, PAP 2:56).

3.3.1.3 Resource 3: Hydrology/Water Resources

3.3.1.3.1 Surface Water

The Rilda Canyon watershed covers approximately 5,100 acres, or about 4% of the Huntington Canyon watershed. Rilda Canyon is drained by Rilda Canyon Creek, a small first order tributary to Huntington Creek. Rilda Canyon Creek is deeply entrenched in a confined channel with steep eroded banks. The creek is marked by dense vegetative cover and woody debris in the channel. The creek is fed by snowmelt and springs. The upper reaches (above the Rilda Canyon Springs) are seasonally dry and are considered ephemeral/intermittent; downstream of the springs the creek is perennial. Stream flow varies greatly, both seasonally and annually. Peak flows typically occur in May and June. Annual peak flows at the proposed facilities area over a 15 year period (1989-2003) ranged from less than 100 gallons per minute (gpm) or 0.2 cubic feet per second (cfs) to over 5,000 gpm (111 cfs), depending on the year. Low flows generally ran in the 0-300 gpm (0-0.7 cfs) range for the same period (PAP 3:386ff).

The entire Huntington Creek watershed above the National Forest boundary, including Rilda Canyon Creek, has the following beneficial use classifications by the Utah Division of Water Quality: 1C (drinking water), 2B (secondary contact recreation), 3A (cold water fishery), and 4 (agricultural: irrigation and stock watering) (DWQ 2005). The upper Huntington Creek watershed meets applicable standards for these use classifications. Total dissolved solids (TDS) concentrations observed in Rilda Canyon Creek typically run in the 200-650 mg/l range (DOG M MHDIC 2005). These levels meet applicable standards (DWQ 2005).

3.3.1.3.2 Groundwater

Groundwater quantity and quality are controlled by the geology. (See Appendix E, Maps 10 and 11) Groundwater recharge in the region comes from snowmelt. In Rilda Canyon, a surface topography of cliffs and steep slopes combined with relatively impermeable geologic formations limits recharge. Groundwater movement is primarily through fractures due to the low permeability of the formations. Quality is good, with relatively low TDS. There is a regional groundwater quality gradient: TDS increases from north to south and vertically with depth, particularly when groundwater percolates through to the Mancos Shale underlying the sandstones in Huntington Canyon.

Springs in Rilda Canyon and surrounding areas have been inventoried and monitored by PacifiCorp since 1979. Most springs are in the North Horn formation and are usually associated with fluvial deposits or fault-related fractures. Discharge varies seasonally, peaking with spring snowmelt.

The North Emery Water Users Special Service District (NEWUSSD) has a spring development for culinary water supply at the Rilda Canyon Springs in the bottom of Rilda Canyon near the east end of the proposed facilities. The development includes a system of collection lines, meters, valves, manholes, and flumes to measure creek flow. The development is fenced to exclude livestock and wildlife. A pipeline parallels the Rilda Canyon road, carrying water down-canyon to users. The springs are fed by the alluvial system in Rilda Creek and the majority of their recharge is from springs at the head of Rilda Canyon, west of the project area a north-south fracture system also likely contributes to recharge. Spring output varies seasonally, ranging from around 75 gpm in the winter to around 300 gpm during spring runoff (PAP 1:190, 2:214).

It has been determined from pump tests performed by PacifiCorp that the major source of groundwater to the Rilda Canyon Springs is from the alluvial deposits. Most of the recharge to the alluvial deposits is from the right fork of Rilda Canyon. Recharge to the alluvial deposits of Rilda Canyon occurs above the Castlegate Sandstone to the west of the permit boundary (PAP 1:235).

3.3.1.4 Resource 4: Soils

3.3.1.4.1 Soil Types

Surveyed and mapped soils in the project area are shown in Appendix E, Map 9. The soil units are described by Nyenhuis (2004). The dominant map unit in the proposal area, and the map unit underlying most of the proposed surface facilities (and a portion of one of the topsoil stockpile areas), is “Colluvial Toeslopes, Bench.” This unit occupies a gently sloping alluvial fan toeslope-bench situated between the Star Point Sandstone outcrop at the base of the steep mountain sideslope and the alluvial bottomland of Rilda Creek to the south. Depths of unconsolidated materials in this unit range from 5 feet on the north edge along the Star Point Sandstone outcrop to 50-75 feet on the south edge of the bench that abuts the Rilda Creek alluvial bottomland. The balance of the surface facilities footprint and most of the two topsoil stockpile areas is on “Previously Disturbed Area (Reclaimed Abandoned Mine)” soils. The remainder of the topsoil stockpiles is on “Alluvial Bottomland” and “Steep Rocky Slopes, Haplustepts, Ustorthents” soils. These soils generally have a moderate water erosion hazard potential (Sasser 2005).

The table below lists the soil units that occur in the proposal area and their respective areas.

Soil Map Unit	Area (acres)	Closest Series
A. Alluvial Bottomland Soils	0.41	Schupert/Brycan
B. Steep Rocky Slopes, Haplustepts, Ustorthents	1.29	
C. Previously Disturbed Area (Reclaimed Abandoned Mine)	3.53	Osote
F. Colluvial Toeslopes, Bench	6.96	
RD. Rilda Canyon Road (Emery County Road #306)	0.91	
Total	13.10	

3.3.1.4.2 Experimental Practice

PacifiCorp proposes to use an experimental practice to protect the existing topsoil resources with the use of colorful marker fabric to identify the predisturbed topography. This experimental practice would be used on approximately 3.0 acres of the 13.1 acre proposed disturbed area. Approximately 1.4 acres of the 3.0 acre site were previously disturbed by historic coal mining activities (refer to the PAP, Maps 200-1 and 200-2). The application, which is incorporated in the PAP, provides the details of the proposed experimental practice (see PAP 1:38-51).

This experimental practice would test the feasibility of storing of existing topsoil materials in place in areas where: 1) original, pre-existing soil structure was disturbed by historical coal mining; 2) native soils lie on steep slopes.

Approximately 3.0 acres (total area for the subsoil/construction fill) is proposed for the soil storage without removal of existing topsoil. Of the 3.0 acres proposed for the experimental practice, 1.4 acres were disturbed by coal mining activities in the past. In the Rominger mine area, the side slopes are rough, steep, irregular, and limited soil resources exist. Recovery of topsoil from the side slopes would be difficult due to the topography and formational outcrops. The current soil material supports a variety of vegetation and erosion is not a problem.

3.3.1.4.3 Prime Farmland

The Natural Resources Conservation Service (NRCS) has determined there are no prime farmlands in the proposal area (USDA-NRCS 2004).

3.3.1.5 Resource 5: Air Quality

Air pollution related to human activity in Rilda Canyon is primarily from fugitive dust and gaseous emissions produced by vehicular traffic on Emery County Road 306. The current vehicular traffic load is normally very light, with fewer than ten vehicles per day making trips up and down the canyon.

3.3.1.6 Resource 6: Noise

Human sources of noise in Rilda Canyon consist of the existing mine fan in the left fork, mine-related traffic accessing the fan and other traffic on Emery County Road #306; vehicle traffic on Highway U-31 in Huntington Canyon, and overflying aircraft. Sound level measurements taken in Rilda Canyon in November 2004 show frequencies in the 500-2,000 Hz range peaking at 35-61 dBA. Sound measurements of the Left Fork mine fan taken directly across the canyon from the fan show frequencies in the 250-1,000 Hz range peaking at 75.5-77.9 dBA. At a distance 1,600 feet down the canyon, the fan noise in this same frequency range had attenuated to 47.5-50.0 dBA (PAP 2:239).

For comparison, similar sound level measurements taken in Mill Fork Canyon in November 2004 show frequencies in the 500-2,000 Hz range peaking at 35-61.5 dBA (PAP 2:239). With the exception of traffic near the mouth of the canyon, Mill Fork Canyon has no human sources of noise. The higher sound levels measured near the mouth of the canyon reflect the influence of traffic on highway U-31 in Huntington Canyon.

To put the sound level measurements into context, Table 3.3 below presents the typical sound levels of familiar sounds.

dB	Typical sounds
0	Threshold of hearing
10	Human breathing (10 feet)
20	Rustling leaves, soft whisper, empty theater, watch ticking

Table 3.3 Comparison of Typical Sound Decibel Levels	
dB	Typical sounds
30	Quiet whisper (3 feet), quiet conversation, quiet bedroom at night
40	Quiet home, private office, residential area at night
50	Quiet street, quiet restaurant, quiet stream, normal office, moderate rainfall
60	Normal conversation, office or restaurant, dishwasher
70	Car interior at 60 mph, busy traffic, vacuum cleaner
80	Heavy traffic, vacuum cleaner (3 feet), alarm clock
90	Food blender, OSHA 8 hour exposure standard
100	Lawn mower, motorcycle, diesel truck under load, disco
110	Chain saw, accelerating motorcycle
120	Jackhammer, amplified concert
130	Pain threshold, jet plane (100 feet)

Table compiled from multiple sources. See "Table 3.2 References" in Part 5.5.

3.3.1.7 Resource 7: Recreational Resource Values

3.3.1.7.1 Formally Designated Recreation Areas

There are no areas with outstanding recreational, educational, scientific, or scenic values formally designated or proposed as Wilderness, Wilderness Study Area, Wild and Scenic River, Area of Critical Environmental Concern, or State or National Park in the proposal area.

3.3.1.7.2 General Recreation Values

Huntington Canyon and the Wasatch Plateau as a whole experience a variety of recreational uses, including: camping, hunting, fishing, ATV and OHV riding, horseback riding, and mountain biking. There are Forest Service campgrounds in Huntington Canyon and East Mountain, including one in Huntington Canyon about two miles down-canyon from Rilda Canyon and one on Indian Creek in Upper Joes Valley west of the Mill Fork Lease. Highway U-31 in Huntington Canyon is a designated scenic byway that, with the Eccles Canyon scenic byway (U-96 and U-264), forms the Energy Loop, a scenic driving tour highlighting the energy industries and mining history of the Wasatch Plateau. (USDOT-FHWA 2005).

With its history of past and present coal mining, its road and power line, and spring development, Rilda Canyon is not a pristine natural area, but it remains a rugged and scenic place. There is a former drill road converted to a trail (Forest Service Trail #395) that goes up the Right Fork of Rilda Canyon about 1.5 miles; it does not connect to other trails and is considered a dead-end trail. It experiences light summer and fall use by hikers and hunters. Undeveloped campsites in Rilda Canyon receive light use in summer (USDA-FS 1999).

3.3.1.7.3 Visual Resources

Visual or viewshed resources are defined by the USDA Forest Service as a separate and distinct resource category that must be analyzed for NEPA purposes. The USFS has inventoried and surveyed National Forest System lands by establishing Visual Quality Objectives (VQO's). Rilda Canyon can be characterized visually as a tight narrow canyon extending west from Huntington Canyon and Highway U-31, with limited visibility by the general public from Highway U-31 for 0.2-0.5 miles. Otherwise it is visible only by someone within the canyon on County Road 306. According to the Visual Quality Objectives (VQO's) listed in the Forest Plan, the proposed facilities would be within areas rated as "Modification." The Modification VQO allows for activities and facilities that can visually dominate the original characteristic landscape. They should conform to naturally established form, line, color, and texture to be compatible with natural surroundings (Hanchett 2005).

3.3.1.8 Resource 8: Cultural Resources

3.3.1.8.1 Prehistoric/Historic Resources

Rilda Canyon has been the site of historic coal mining. Four small mining operations active in the 1940's and 1950's are located near the proposed facilities: the Leroy (Comfort) mine, the Rominger (Ferrell) mine (includes the mine known as the Jeppson mine), and the Helco mine.

The proposal area has been surveyed for cultural resources. A few isolated finds evidencing prehistoric and historic use of the area were located. Isolated finds are not considered to be eligible for listing on the National Register of Historic Places. No eligible or significant historic properties have been identified (Senulis 2003, Senulis 2004, PAP 1:87, 2:342). The SHPO has been consulted and has concurred with this determination (Appendix B - Consultation Letters).

3.3.1.8.2 Native American Concerns

Initial scoping documents were sent to the tribal governments of the Hopi, Paiute, Ute Mountain Ute, White Mesa Ute, Ute Tribe (Fort Duchesne), and Navajo and to the Utah Division of Indian affairs in April of 2004. No Traditional Cultural Properties or sacred sites or culturally significant traditional plants were identified in the analysis area.

3.3.1.8.3 Paleontological Resources

A massive Pleistocene pack rat midden, likely of Mexican packrat (*Neotoma mexicana*) origin, exists in the rock/cliff outcrop immediately west of the proposed mine yard. Although it has not been surveyed or analyzed, it could contain important information about paleoclimatic conditions in the area during the Pleistocene and Holocene.

3.3.1.9 Resource 9: Solid/Hazardous Wastes

There are no solid waste or hazardous materials presently used or generated in the proposed facilities area. Any solid waste or hazardous materials that may be present at the currently existing Left Fork fan portal are handled according to best management practices, the existing mine permit, MSHA rules, and other applicable federal, state, and local laws.

3.3.1.10 Resource 10: Socioeconomics

3.3.1.10.1 Economic Conditions

Rilda Canyon is an unpopulated area situated in rural Emery County, Utah. Emery County's economy is specialized in coal mining-related industries and electric services, with agriculture a third important component. It ranks as the fourth highest county (of 29) in Utah in terms of total mining wages paid at \$31,773,790 (2003) and twelfth highest county in Utah in household income due to these mining industry jobs. Mining employment (all coal) accounts for approximately 723 out of 3,505 jobs in the nonagricultural category. About half of the mining employment is with the Deer Creek Mine, which makes PacifiCorp/Energy West one of the largest employers in the county. Current annual coal production at the Deer Creek Mine is approximately 4 million tons, which is the primary supply for the nearby Huntington Power Plant. Emery consistently ranks among the counties with the highest unemployment rates and in 2003 was the highest in the State with 11% unemployed. Total population in Emery County is approximately 10,493 (2004) and it has one of the slowest growth rates in the state, with an average increase of 0.4% per year from 1990 to 2000. Emery is projected to reach a population of 12,438 by 2030.

3.3.1.10.2 Land Use

The current land use in the area, as designated by units mapped in the LRMP, is a mix of range, general winter range for wildlife, mining and mineral development, management of the riparian ecosystem, and timber production. There is a USFS grazing allotment in Rilda Canyon that the permittee uses for short periods in the spring (Harber 2005, USFS 1986).

3.3.1.10.3 Roads and Traffic

Access in Rilda Canyon is via Emery County Road 306. The road is approximately 2.3 miles long from the junction with Highway U-31 at the mouth of Rilda Canyon to the existing mine ventilation fan in the Left Fork. Portions of the road are on NFS lands, some are privately held and the rest is in the PacifiCorp Deer Creek Mine Permit area. The one-lane road has a crushed gravel surface. Current usage of the road is estimated at fewer than ten vehicles per day. These trips are usually made for purposes such as mine support, spring monitoring by water-users, and grazing and recreational activities. The

USFS issued Emery County an easement for the road so that PacifiCorp could access the Left Fork fan.

Current commuter traffic to the Deer Creek mine takes a 3.0 mile paved road from Highway U-31 to the mine. It is 3.5 miles on U-31 from this road to the County Road 306 turnoff to Rilda Canyon.

According to the Finding issued by DOGM:

The Rilda Canyon Road...is categorized as a Utah State Class "B" (improved surface) county road. Emery County Special Service District #1 plans to realign and improve portions of this road to provide local land owners, water users, miners, recreationists and other users with safe and convenient access to locations within and adjacent to Rilda Canyon.

During the operation of the proposed facilities approximately 2300 feet of the Rilda Canyon Road passing through the proposed mine facilities area, will be "temporarily suspended" from unrestricted public use. A new trailhead parking area will be constructed at the lower end of the suspended section and a hiking trail will be extended around the "suspended" section allowing continued access to Rilda Canyon for multiple use purposes. Because the Permittee (PacifiCorp/EWMC) will assume responsibility for the reclamation and reconstruction of the modified section of EC #306 that falls within the fan portal disturbed area, this section of the county road **will not** be exempt from regulation according to State of Utah Coal Mining Rules R-645, et seq, and the DOGM July 3, 1995 policy on roads. (Hedberg 2005).

3.3.1.11 Resource 11: Environmental Justice

There is no permanent resident population in the proposal area. Based on the 2000 U.S. Census, the ethnic composition of Emery County is 90.4% White/non-Hispanic and 9.6% other minority ethnic groups, with White/Hispanic the largest at 5.2% followed by American Indian/Alaskan Native at 0.7%. The Deer Creek Mine employs 23 minority workers. The median household income in the county is \$39,850 and 11.5% of the population lives below the poverty level.

CHAPTER 4: ENVIRONMENTAL EFFECTS

4.1 Introduction

This chapter provides an analysis of potential environmental effects of Alternative 1 (the Proposed Action) and Alternative 2 (No Action). It is assumed that the proposed action would be carried out as described in Chapter 2 and during the time period proposed by the applicant.

4.1.1 Analysis Terminology

The Office of Surface Mining regulates active coal mining nation wide. The proposed action is a routine action for OSM. The OSM-Western Region Coordinating Center's accepted definitions of impacts will be used throughout this document. These terms are as utilized in the Proposed Mining Plan and Permit Application, Fence Lake Mine, Catron and Cibola Counties, New Mexico and Apache County, Arizona, Final Supplemental OSM EIS-31. The OSM usage analyzes the magnitude of impacts in terms of their intensity or severity and their duration. See Table 4.1.

Table 4.1 OSM Analysis Terminology	
CONTEXT: routine action for OSM	
INTENSITY OF IMPACTS	
Negligible	ranging from immeasurable and undetectable to lower levels of detection
Minor	detectable, but slight
Moderate	readily apparent environmental effects
Potential to become major	potentially severe adverse or exceptional beneficial environmental impacts
Major	severe adverse or exceptional beneficial environmental impacts
DURATION OF IMPACTS	
Short term	life of the mine, including the reclamation period (approximately 30 years)
Long term	after bond release

The Proposed Action would occur in phases over a period of approximately 30 years. The type of activity occurring and thus the environmental effects would vary with each phase. The initial construction of the facilities would occur for 0-2 years. Active mining operations would take place for approximately 15 years. Active reclamation (demolition and removal of facilities, restoration of topography, topsoil replacement, revegetation) would take about 2 years. This would be followed by a SMCRA-mandated 10-year bond release period to establish vegetation. PacifiCorp's management responsibility for the site lasts until bond release, or approximately 30 years. Active mining and reclamation would last about 20 years. The balance of the time would consist of custodial management (monitoring and maintenance).

4.2 Direct/Indirect Impacts

4.2.1 Alternative 1: Approval of the Proposed Mining Plan Modification

Under this alternative, the Assistant Secretary would approve the applicant's proposed Mining Plan Modification for expansion of the Deer Creek Mine by constructing surface facilities in Rilda Canyon. PacifiCorp could then proceed with development of the proposed surface facilities in Rilda Canyon described in part 2.1.

4.2.1.1 Resource 1: Wildlife Resources

4.2.1.1.1 Big Game Winter Range

Construction and operation of the proposed facilities would result in the direct loss of 13.1 acres of critical winter range for mule deer and elk. Using a 200 meter disturbance buffer for mule deer and an 800 meter disturbance buffer for elk, the proposed facilities and road would result in the indirect loss of 420 acres of mule deer winter range and 1,325 acres of elk winter range (USDA-FS 2005b). This is rangeland that would not be directly disturbed but would likely be avoided by game because of noise and human activity. DWR predicts that about 50 deer would be displaced. DWR expects that displaced wintering elk would probably move down Huntington Canyon to cultivated fields in Stump Flats, where they could cause economic damage through crop depredation (Bates, 2005b). Rilda Canyon has valuable moose range, but there are too few moose using the area to be of concern. (Bates 2005) The location of the facilities below the confluence of the left and right forks of Rilda Canyon allows for continued wildlife circulation between the forks, reducing habitat fragmentation, though the confluence is still within the avoidance zone for both mule deer and elk. PacifiCorp has committed to offsite big game mitigation actions, but these actions are voluntary efforts and are not enforceable under SMCRA. The projected increase in vehicle traffic (see part 4.2.1.10.3, Roads and Traffic) would increase the potential for vehicle collisions with big game.

Under the proposed action, there would be moderate short-term effects on big game winter range. If PacifiCorp follows through with the voluntary mitigation commitments they have included in the proposal, effects would be further reduced. Effects of the proposed action on big game would last for the projected life of the facilities in Rilda Canyon (15 years of operation plus two years to complete reclamation). When the facilities are no longer needed, the site would be reclaimed. Species used for revegetation would be selected for the purpose of providing wildlife browse.

4.2.1.1.2 Special Status Animal Species

Bald Eagle and Mexican Spotted Owl

The proposed facilities would not affect bald eagle nesting, foraging or wintering habitat. The proposed facilities would not directly affect Mexican spotted owl nesting habitat, but

could directly affect 6.0 acres of marginal mixed conifer spotted owl foraging habitat. Therefore, the proposal's potential to directly or indirectly affect bald eagles or the Mexican spotted owl would be negligible. The USFWS has concurred with these determinations for these two ESA-listed threatened and endangered species (Appendix B - Consultation Letters).

Bats

The two caverns identified as potential, but unoccupied, Townsend's big-eared bat roosts are outside the disturbance footprint and would not be disturbed by the proposed facilities. Therefore, the proposal would have a negligible effect on Townsend's big-eared bats. There are no suitable spotted bat roost sites in the proposal area footprint, so there would be no direct loss of roosting habitat by facilities development. However, foraging habitat could be affected by the proposed 24-hour operations at the site. Assuming a 100-foot avoidance zone around the proposed facilities, 20 acres of foraging habitat would be lost (USDA-FS 2005b). This could be offset somewhat by lights attracting prey insects, increasing forage availability. Rilda Canyon Creek would not be disturbed by the proposal, so it would remain as a water source for all bat species. Therefore, the proposal would have a negligible effect on spotted bats.

Northern Goshawk

There is no suitable habitat in the proposed facilities area for northern goshawks and only marginally suitable goshawk habitat in the general area. Northern goshawks have not been detected during surveys. Since the proposed facilities would not directly affect suitable habitat and no goshawks have been detected in the marginally suitable habitat near the proposal, the proposal would have a negligible effect on the northern goshawk.

Peregrine Falcon

The proposed facilities would not directly affect peregrine nesting habitat. The nearest known peregrine falcon aerie is well beyond the recommended 1.0 mile buffer around active peregrine nests (Romin and Muck 1999), but within the typical peregrine foraging radius. The proposed facilities could directly affect peregrine foraging habitat. The 13-acre disturbance footprint of the facilities represents 0.006% of a theoretical 10-mile foraging radius. Therefore, the proposal's potential to directly or indirectly affect the peregrine falcon would be minor.

Flammulated Owl

There is no suitable habitat in the proposed facilities area for flammulated owls and only marginally suitable habitat for this species in the general area. No flammulated owls have been detected during surveys. Since the proposed facilities would not directly affect potentially suitable habitat and no flammulated owls have been detected in the marginally suitable habitat near the proposal, the proposal would have a negligible effect on the flammulated owl.

Three-toed Woodpecker

There is suitable habitat for three-toed woodpeckers in the general area, but they are not considered likely to occur there. (USDA-FS 2005a, USDA-FS 2005b) A small amount (3.5 acres) of Douglas fir/white fir and aspen community would be eliminated to construct the surface facilities. The other vegetation communities that would be affected are marginal or unsuitable for three-toed woodpeckers. The proposal would have a negligible effect on the three-toed woodpecker.

Western Toad

Effects on western toads are tied to effects on the hydrology of Rilda Canyon Creek. There would be a loss of some dry upland terrestrial habitat with the proposal, but the mine operational plan calls for a buffer zone to be maintained around the creek. The creek channel and riparian vegetation would not be disturbed. Therefore, the proposal would have a negligible effect on western toads.

Conclusion

Under the proposed action, there would be negligible to minor effects on special status wildlife (depending on species) because of the limited amount of habitat that would be affected. These negligible to minor effects would be short term. They would last for the projected life of the active mining and reclamation operations in Rilda Canyon (15-20 years) and would cease when the site entered the custodial reclamation phase (approximately 10 years).

4.2.1.1.3 Management Indicator Species (MIS)

Effects on elk and mule deer are discussed in part 4.2.1.1.1, Big Game Winter Range above. The northern goshawk is discussed in part 4.2.1.1.2, Special Status Animal Species, above.

Golden Eagle

The golden eagle nest is just outside the 0.5 mile buffer zone recommended by the USFWS (Romin and Muck 1999). Topography would block views from the nest of most activities at the mine except for traffic on a short segment of the road. The proposed facilities and related activities would interfere with the eagles' typical foraging flight path (down the side canyon to the main trunk of Rilda Canyon) and reduce the value of the foraging area in the canyon. The Forest Service estimates that 747 acres of foraging habitat would be reduced in value by the operations (USDA-FS 2005b). Additionally, fan noise could disturb the nesting birds. As discussed in part 4.2.1.6, Noise Resources, fan noise attenuates with distance. The history of the nest shows a degree of tolerance for the existing fan noise and mine activity in the left fork of Rilda Canyon, but the proposed facilities would be closer and busier. Golden eagle behavioral responses to the proposed facilities could result in reduced foraging activity, interrupted nesting and breeding, reduced nest productivity, or territory abandonment (USDA-FS 2005b).

Aquatic Macroinvertebrates

Effects on aquatic macroinvertebrates are tied to effects on the hydrology of Rilda Canyon Creek. The mine operational plan calls for a buffer zone to be maintained around the creek. Accordingly, the creek channel and riparian vegetation would not be disturbed. As discussed in part 4.2.1.3, Hydrology/Water Resources, operational hydrologic controls would maintain surface water quality and quantity in the creek. Therefore, the proposal would have a negligible impact on aquatic macroinvertebrates.

Under the proposed action, there would be negligible to minor effects on MIS wildlife (depending on species) because of the limited amount of habitat that would be affected. These negligible to minor effects would be short term. They would last for the projected life of the active mining and reclamation operations in Rilda Canyon (15-20 years) and would cease when the site entered the custodial reclamation phase (approximately 10 years).

4.2.1.1.4 Non-Game/Non-Special Status Wildlife

The proposal would affect migratory birds, possibly including some of the Partners in Flight priority species, and other terrestrial wildlife through the construction and operation of the facilities. There would be a direct loss of 9.0 acres of potential wildlife habitat in the facilities footprint that would be unavailable to wildlife for the life of the facilities. An additional 4.1 acres at the soil stockpiles would be disturbed during construction but would be available as habitat for some species shortly thereafter once vegetation was re-established. The vegetation community types that would be disturbed by the facilities are marginal habitats for most of the priority bird species.

Specific concerns have been raised about the effects of fan noise on wildlife. The specific response of wildlife would vary by species. Some species have the behavioral flexibility and tolerance to adapt to human activity, but some would be expected to avoid the noise, traffic, and activity at the site and thus would be displaced. The Left Fork fan noise attenuates over distance of 1,600 feet to 47-50 dB, a level equivalent to the sound levels of some natural environments (e.g. stream, rainfall) and those measured in adjacent Mill Fork Canyon, which has no industrial activity. Assuming the same attenuation rate for the proposed new fan, a 1,600-foot radius around the fan would contain 184 acres exposed to louder-than-natural sound that migratory birds and other wildlife might avoid.

The mine operation plan mitigates potential effects on wildlife, by using raptor-safe power poles and annual raptor surveys.

Under the proposed action, there would be moderate effects on non-game/non-special status wildlife (depending on species) because of indirect habitat loss due to noise and activity-related avoidance/disturbance effects. These moderate effects would be short term. They would last for the projected life of the active mining and reclamation operations in Rilda Canyon (15-20 years) and would cease when the site entered the custodial reclamation phase (approximately 10 years).

These moderate and short term impacts described above could be further reduced by the several voluntary offsite actions to which PacifiCorp has committed. These voluntary actions are enforceable under R645-300.142 which requires the mining company to follow the approved mining and reclamation plan.

4.2.1.1.5 Fish

Effects on fish are tied to effects on the hydrology of Rilda Canyon Creek. The mine operational plan calls for a buffer zone to be maintained around the creek. The creek channel and riparian vegetation would not be disturbed. As discussed in part 4.2.1.3, Hydrology/Water Resource, below, operational hydrologic controls would maintain surface water quality and quantity in the creek. Therefore, the proposal would have a negligible impact on fish in Rilda Canyon Creek. Likewise, the proposal would have negligible impact on fish species of concern living far downstream in main trunk rivers of the Colorado River system.

4.2.1.2 Resource 2: Vegetation

4.2.1.2.1 Vegetation Communities

An estimated 9.0 acres would be disturbed by the proposed surface facilities. The grading plan and building construction would necessitate the removal of most vegetation from the disturbed area footprint. At the west end of the site where most of the operational facilities would be located, blue spruce/white fir, sagebrush/grass, and pinyon-juniper/curl-leaf mountain mahogany/ponderosa pine communities would be disturbed. At the east end, most of the proposed facilities would be on previously disturbed vegetation, with some Douglas fir/blue spruce community also affected. The two topsoil stockpile areas would disturb an estimated 4.1 acres, mostly on previously disturbed vegetation, but also affecting pinyon-juniper/curl-leaf mountain mahogany/ponderosa pine, pinyon-juniper/curl-leaf mountain mahogany, Douglas fir/white fir, and aspen communities.

Vegetation would be preserved where feasible. An undisturbed buffer zone would be maintained along Rilda Canyon Creek.* Disturbed areas would be seeded and interim vegetation established during the life of the mine operations. Following the cessation of operations at these facilities, the site would be restored to its approximate original topography and the salvaged topsoil redistributed. Disturbed areas would be reseeded with locally-adapted species chosen to promote the post-mining land use (See Appendix C - Seed Mixes). In order to qualify for bond release, the vegetation on the reclaimed

* The disturbed area footprint would be on the secondary stream terrace above the active channel and would stay out of the channel. The undisturbed buffer zone between the edge of the disturbed area and the active channel would be 50-75 feet wide for most of the length of the facilities. It would be 75-100 feet wide below the NEWUSSD spring development. The buffer zone would be as narrow as 25-30 feet in three locations where the active channel meanders north.

areas must be established to predefined performance standards based on comparison to undisturbed reference areas.

Under the proposed action, there would be moderate effects on vegetation due to the limited area subjected to direct loss of vegetation. These moderate effects would be short term. They would last for the projected life of the active mining and reclamation operations in Rilda Canyon (15-20 years) and would cease when the site entered the custodial reclamation phase (approximately 10 years).

The road easement right-of-way boundary change for the paving and safety upgrades would take in 4.78 acres of NFS land beyond that in the current right-of-way (see part 4.2.10.3, Roads and Traffic). Because the roadway does not occupy the entire right-of-way width (80 feet), the amount of NFS land directly affected by road construction would be less. The horizontal displacement of the roadbed caused by the realignment ranges from 0 to about 40 feet, but is generally 10-20 feet and almost entirely to the north away from the creek. Assuming that new ground disturbance for road construction would average 15 feet wide along the 2.3 mile length, 4.18 acres of NFS and private land with sagebrush/grass, pinyon-juniper/mountain brush, and riparian vegetation types would be disturbed. Disturbed areas would be revegetated. Effects on vegetation would be minor and short term.

4.2.1.2.2 Special Status Plant Species

Surveys have found no special status plants species (as defined in part 3.3.1.2.2), nor ideal habitat for special status plants, in the proposed facilities area. Therefore, the proposal would have no effect on special status plants.

4.2.1.3 Resource 3: Hydrology/Water Resources

4.2.1.3.1 Surface Water

The operations plan utilizes engineered hydrologic control structures designed to protect the surface water regime. A key feature is a dual collection system that keeps runoff from the disturbed area separate from runoff from undisturbed areas. Runoff from overland flow and ephemeral drainages from undisturbed areas outside the footprint of the surface facilities would be intercepted by ditches before reaching the footprint and diverted around the disturbance via culverts to Rilda Canyon Creek. The disturbed area would be graded to direct all surface runoff to an internal collection system that drains to a sediment pond. Domestic gray water and surface runoff from the disturbed area collection system would be pumped into abandoned underground mine workings after removal of sediment. Domestic black water (sewage) wastes would be wholly contained in holding tanks and removed from the site for treatment. The fueling station would also have a separate containment system (see part 4.2.1.9, Solid and Hazardous Wastes) to prevent fuel spills from contaminating surface runoff. Standard sediment and erosion control management practices (silt fences, straw bale filters, revegetation, etc.) would be

used to prevent loss of soil and the loading of surface water with sediment. The hydrologic controls would be engineered to handle design events specified by regulation. Surface runoff and sediment management practices would be subject to SMCRA inspection and enforcement actions.

Erosion of the streambanks could occur because of their geometry, soil type, and vegetation characteristics but is not expected. Certain design features of the surface facilities proposal are intended to avoid changing the flow regime and channel morphology of Rilda Canyon Creek. Mine water would be diverted to the Deer Creek portal for discharge outside of Rilda Canyon so as not to increase flow in Rilda Canyon Creek. A buffer zone would be maintained around the creek and riparian vegetation would be preserved. The surface runoff collected from the disturbed area footprint and diverted underground would represent a loss of input to the creek. The 9 acre disturbed area collection basin is 0.18% of the total Rilda Canyon watershed (5,100 acres) and would have a minor short-term impact on creek flow.

Salt used to melt snow on roadways accessing the mine would enter the watershed. Emery County would maintain County Road #306 from Highway U-31 to the proposed facilities; PacifiCorp would maintain the road on the facilities. Emery County's snow removal strategy is to plow first and supplement with salt as needed. The county uses a 4:1 sand:salt blend on roads applied at a rate of approximately 5 cubic feet of salt per mile of road (Funk and Sorensen 2005). This rate is roughly equivalent to 86 pounds per acre or 10 grams per square meter of road surface. Each application on County Road #306 would use about 750 pounds of salt. PacifiCorp would use the same sand:salt blend on the road through the mine site. Salt would not be used on the parking lots and other hard surfaces. The total amount of salt applied to the road each winter would vary with each year's precipitation pattern.

The concentration of salt in water (i.e. snow/slush) on the road surface, undiluted by mixing with overland flow from the watershed, is estimated to be less than 1,000 mg/l for a 4-inch snowfall. For comparison, the state water quality standard for TDS for class 4 waters is 1,200 mg/l for irrigation and 2,000 mg/l for livestock watering (DWQ 2005). Each salt application on County Road #306 would contribute an amount of dissolved solids estimated at less than 100 µg/l (ppb) to the typical snowmelt runoff in Rilda Canyon Creek (assuming salt accumulation through the winter and release in the spring). Estimates based on very low stream flows predict less than a 10 mg/l (ppm) contribution to TDS in spring runoff per salt application. In a stream with typical TDS levels of 200-650 mg/l, this is a negligible addition to TDS.

The paving of County Road 306 and the parking lot and the construction of buildings would replace permeable soil surfaces with impermeable hard surfaces that could increase runoff from precipitation events. All hard surfaces within the proposed facilities boundary would drain to an internal collection system that would be isolated from the rest of the canyon hydrology. The road paving would add approximately 6.0 acres of hard

surface to the watershed. This is 0.12% of the total watershed area and would have a negligible effect on storm hydrology.

With the design features and operational controls set forth in the proposed action, and in conjunction with the approved mine plan, there would be minimal risk of a major change in the quality or quantity of surface water in Rilda Canyon Creek or elsewhere in the watershed. Under the proposed action, there would be negligible effects on surface water hydrology because of controls incorporated into the project design. These negligible effects would be short term. They would last for the projected life of the active mining and reclamation operations in Rilda Canyon (15-20 years) and would cease when the site entered the custodial reclamation phase (approximately 10 years). There would be negligible short- or long-term effects on salinity in the Colorado River basin.

4.2.1.3.2 Groundwater

The proposed surface facilities have been designed to avoid impact to the Rilda Canyon Springs. The surface water collection and containment system would prevent surface runoff from the facilities from flowing into the springs. PacifiCorp negotiated a mitigation plan with NEWUSSD in 1994 based on a worst-case scenario of total loss of spring recharge. PacifiCorp built a water treatment plant (slow sand filter) and storage reservoir. Additionally, PacifiCorp, under a standing agreement with NEWUSSD, ensures that the same quantity and quality of water will be available for NEWUSSD's use. Under that agreement PacifiCorp constructed a Water Treatment Plant and agrees in Item 5 to provide wells "at or near the Water Treatment Plant to be utilized as an alternative source for treatment in the Water Treatment Plant in the event that the Rilda Canyon Springs are impacted by the mining operations of Energy West... during the time of Energy West's mining operations." Along with agreeing to monitor flows from Rilda Canyon, Energy West agrees in Item 16 "if, at the conclusion of Energy West's activities and because of those activities the flows of the Rilda Creek Springs have not returned to historic levels or if contaminants in the water from the Rilda Canyon Springs make that water unsuitable for use by North Emery [NEWUSSD], the PacifiCorp shall take such action as is required at that time to comply with all applicable laws and regulations regarding the replacement and/or restoration of water supplies affected by mining related activities." (NEWUA & EWMC, 1994, PAP 1:235-236) No replacement spring development is anticipated or planned for at this time. If it should ever become necessary, full NEPA analysis would be conducted at that time.

The underground disposal of gray water from the bathhouse/office and surface runoff from the facilities is designed to avoid surface water impacts resulting from increased flows. The gray water/runoff would be treated to remove sediment before being pumped underground. The water would be piped underground through the mine to the Deer Creek portal and discharged in the existing system in accordance with the mine's UPDES permit (PAP 1:246).

PacifiCorp would comply with all applicable laws and permitting requirements for the underground water disposal (e.g. UDWQ underground injection control, MSHA). If PacifiCorp is unable to obtain the necessary permits, then the water would be piped to the Deer Creek portal and discharged in the existing system in accordance with the mine's UPDES permit instead.

With the design features and operational controls set forth in the proposed action, the facilities are hydrologically isolated from the watershed. Because of the stormwater controls and the appropriate disposal of gray and black water, there would be negligible effects on surface or ground water quality or quantity. There would be negligible effects on the function of Rilda Canyon Springs. These negligible effects would be short term. They would last for the projected life of the active mining and reclamation operations in Rilda Canyon (15-20 years) and would cease when the site entered the custodial reclamation phase (approximately 10 years).

4.2.1.4 Resource 4: Soils

4.2.1.4.1 Soil Types

The surface facilities proposal calls for topsoil and subsoil in the disturbance area to be removed and stockpiled prior to constructing the facilities. An estimated 9.0 acres of moderately-erodible soils would be disturbed by the proposed surface facilities and an additional 4.1 acres would be disturbed for two soil stockpiles. Standard erosion control best management practices (revegetation, soil roughening, surface runoff controls, sediment traps, etc.) would be instituted to prevent and control soil erosion during construction and mine operations. These would be subject to USFS and SMCRA inspection and enforcement actions. Following the cessation of active mining operations at these facilities, the site would be restored to its approximate original topography and the salvaged topsoil redistributed. Disturbed areas would be revegetated with locally adapted species (see Appendix C – Seed Mixes). In order to qualify for bond release, the vegetation on the reclaimed areas must be established to meet performance standards defined in SMCRA based on comparison to undisturbed reference areas.

Minor, short-term disturbance of soil profiles in the soil stockpile areas would occur. The topsoil and subsoil removed from the facilities area would be placed on the two stockpile areas with markers to indicate the interface. During mine operations, standard erosion control best management practices (revegetation, diversion ditches, surface pocking, sediment traps, etc.) would be instituted to prevent and control soil erosion. During the time of the final reclamation work (estimated to be the year 2022) the stockpiled soil would be removed down to the original soil surface for redistribution on the facilities area and the stockpile sites reseeded (PAP 1:31-32).

With the design features and operational controls set forth in the proposal, there would be disturbance, but no major erosion or loss of the capability of the soil to support vegetation would occur. Vegetation would be re-established. The SMCRA bonding requirement

ensures that successful revegetation would be achieved. It provides an incentive to the operator and, in the event of failure, it provides a funding mechanism for DOGM to correct problems.

Under the proposed action, there would be minor effects on soil because of excavation and temporary relocation (stockpiling). These minor effects would be short term. They would last for the projected life of the active mining and reclamation operations in Rilda Canyon (15-20 years) and would cease when the site was reclaimed and the soil returned to its original location and productivity.

4.2.1.4.2 Experimental Practice

The proposed experimental practice is potentially more, or at least as, environmentally protective during and after mining operations as would otherwise be required by the standards put forth by SMCRA. Although removal of topsoil and storage during mine operations is the routine method of topsoil protection required by SMCRA, in this case, leaving the topsoil material intact and in place appears to be the most suitable means of protecting the soil, maintaining slope stability and achieving successful long term revegetation. The effect of storing topsoil in place should prove to be beneficial because the soil structure and integrity (including roots, rocks and cementation) would remain intact and would not have to be reestablished on steep slopes when mining ceases. Because rocks, roots, and soil structure would not be disturbed, the potential for erosion and slope failure would be reduced. It is anticipated that less time will be required to reestablish soil viability and successful vegetative cover. Some loss of soil microorganisms will occur, but the loss should be similar to that expected if the routine soil handling/storage methods were used. The experimental practice also reduces the total amount of surface disturbance required by the proposed action. Storage of the topsoil in place under the fill material would have a negligible to minor, short term effect on the soil resource.

Protection afforded the public health and safety will not fall below that required by SMCRA. PacifiCorp's monitoring program will measure and compare 1) the bulk density before and after on differing slopes and 2) erosion on slopes within the experimental practice area and on adjacent undisturbed slopes. PacifiCorp's monitoring program will also ensure that reliable data will be collected, analyzed, and reported to DOGM so DOGM can evaluate the effectiveness of the experimental practice and ensure that all requirements contained in 30 CFR 785.13 are satisfied.

Under the proposed action, there would be minor effects on soil due to the experimental practice. These minor effects would be short term. They would last for the projected life of the active mining and reclamation operations in Rilda Canyon (15-20 years) and would cease when the site was reclaimed and the soil returned to its original location and productivity.

4.2.1.4.3 Prime Farmlands

There are no prime farmlands in the proposal area. Therefore, the proposal would have no effect on prime farmlands.

4.2.1.5 Resource 5: Air Quality

Approval of the proposal would result in Emery County Road 306 being paved from Huntington Canyon to the new surface facilities. The paving would be removed when the proposed facilities are closed and reclaimed. The new facilities would increase traffic on the road to approximately 220 round trips per day (see part 4.2.1.10.3, Socioeconomics) compared to the fewer than ten round trips per day that currently occur. Traffic would peak during the three daily shift changes.

During the three peak periods there would be an increase in fugitive dust emissions. However, the impact would be partially mitigated by the fact that paved roads generate 5 to 10 times less fugitive dust than unpaved roads. Fugitive dust emissions would thus be expected to increase 2-4 times (20-22-fold increase in traffic divided by a 5-10-fold decrease in dust production). Fugitive dust produced from traffic on the 0.3 mile of road not paved would remain at the same level as it was prior to approval of the new surface facilities because traffic volume to the old ventilation fan would not increase. Most of any measurable and visible changes in air quality would be related to engine exhaust emissions that would produce increases in concentrations of NO₂, CO, and CO₂ along the road. The primary concentrations would be temporary, daily occurrences directly related to the three mine shift changes. The degree of concentration would likely be mitigated by the effect of any down slope and upslope winds in Rilda Canyon. The left turn lane on Highway U-31 would maintain smooth traffic flow and reduce the congestion and idling that create CO hot spots. The relatively low overall traffic volume, the absence of other emissions sources, and wind dispersion would mean that gaseous emissions should not concentrate to levels that exceed standards.

Although there would be temporary, daily increases in fugitive dust and gaseous emissions in Rilda Canyon, there would not be any appreciable net impact to the Deer Creek mining operation since the mine is not increasing its workforce and the workers traveling to the new surface facilities would be shifting their current travel pattern from neighboring Deer Creek Canyon to Rilda Canyon. The new travel pattern would require an additional 2.5 miles of driving each way compared to travel to the Deer Creek portal. The vehicle emission increases in Huntington and Rilda Canyons resulting from this change in travel pattern would be partially offset by reductions in Deer Creek Canyon.

In addition to paving road surface areas with asphalt, PacifiCorp would be required by its Utah Division of Air Quality (DAQ) Approval Order for Deer Creek Mine to implement typical dust suppressant measures in Rilda Canyon such as restricting speeds for vehicular traffic and limiting travel on service roads. All areas adjacent to roads or travel

ways would be revegetated to limit fugitive dust sources. Periodic inspections by DAQ and DOGM would be conducted to verify compliance.

Under the proposed action, there would be minor effects on air quality due to an increase in vehicle emissions. These minor effects would be short term. They would last for the projected life of the active mining and reclamation operations in Rilda Canyon (15-20 years) and would cease when the site entered the custodial reclamation phase and traffic reverted to pre-mining levels. The restoration of the dustier gravel road surface at the reclamation phase would be matched by a substantial decrease in traffic volume; it would constitute a return to current conditions.

4.2.1.6 Resource 6: Noise

The proposed facilities would add three new sources of sound: onsite operations, the ventilation fan, and vehicle traffic.

Onsite operations would include the sounds of machinery, heavy equipment (engine noise, back-up alarms), power and hand tools, voices, telephones, radios, and other sounds of construction and mining activity. Some of these sounds of day-to-day operational could be loud for brief periods - gas powered tools (chain saws, generators) and earthmoving equipment operate around 85-110 dB at close range. Onsite operational sound levels would fluctuate over time based on the activities at hand.

The ventilation fan would operate continuously for the life of the facility. It would be similar to the existing fan in the Left Fork and would produce around 80 dB at 100 feet away. The Left Fork fan noise attenuates to 47-50 dB at a distance of 1,600 feet from the fan. Assuming the same attenuation rate for the proposed new fan, the fan noise level at the east end of the facilities near the proposed trailhead parking would be about the same as a typical office, residential street, or stream. Sound levels in the 1,700 feet between the two fans would reflect the influence of both sources.

Vehicle traffic would consist of commuting employees and support vehicles (contractors, suppliers, deliveries, etc.) visiting the site. Traffic noise would be generated along the full length of the road. It would peak at shift changes when dozens of vehicles would be on the road at one time. Support vehicle traffic would generally be limited to day shift working hours. Sound levels for busy to heavy traffic are in the 70-80 dB range.

Sounds from all sources would decrease in intensity with distance from the source.

Under the proposed action, there would be minor effects on noise levels due to mining activity and traffic. These minor effects would be short term. They would last for the projected life of the active mining and reclamation operations in Rilda Canyon (15-20 years) and would cease when the site entered the custodial reclamation phase and noise-generating activity reverted to pre-mining levels.

4.2.1.7 Resource 7: Recreational Resource Values

4.2.1.7.1 Formally Designated Recreation Areas

There are no areas formally designated or proposed as Wilderness, Wilderness Study Area, Wild and Scenic River, Area of Critical Environmental Concern, or State or National Park in the proposal area. Therefore, the proposal would have no effect on this type of areas.

4.2.1.7.2 General Recreation Values

The proposed facilities would expand the existing industrial presence in Rilda Canyon from the Left Fork into the main trunk of the canyon and could inconvenience recreational users seeking a natural outdoor experience. Recreationists attracted to the mining heritage of the area would likely find the facilities less incompatible than those looking for nature. Increased vehicle traffic, fan noise, and the visual incongruity of the facilities would be the causes of a diminished recreational experience, as would avoidance behaviors by wildlife discussed in part 4.2.1.1, Wildlife Resources. Consumptive and non-consumptive recreational consumers of wildlife would be displaced to the extent that wildlife avoids the area. There is a possibility that the regular exposure of a large workforce to the canyon might raise awareness of the canyon in the community or that the road paving might make access more convenient, resulting in an increase in recreational use. However, given that Deer Creek miners (and Emery County residents in general) probably are already familiar with Rilda Canyon and environs, and given the many alternate recreation locales nearby, this scenario would be unlikely.

The proposed facilities would not be visible to travelers on the Huntington Canyon or Energy Loop Scenic Byways. Mine-related traffic on Highway U-31 or County Road #306, when present, would be consistent with the coal mining theme of the Energy Loop byway designation as featured in promotional materials for the byway (see, for example, USDOT-FHWA 2005).

The proposed facilities would close the county road to the public and thus eliminate the existing uncontrolled trailhead parking for Trail #395 at the mouth of the Right Fork of the canyon. To offset this, the proposal provides for public trailhead parking at the east end of the facilities opposite the Rilda Canyon Springs. A new segment of trail would be established along Rilda Canyon Creek to take people past the facilities to the Right Fork trailhead. The trail would be about 2,100 feet long, beginning at trailhead parking off County Road 306 near the western NEWUSSD springs, crossing the creek, and running along the south side of the creek to rejoin the existing trail at the fork of the canyon (see Maps 4 or 5 in Appendix E for the trail alignment). The trail would pass through Douglas fir/white fir and white fir/aspen communities. Assuming a 2-foot-wide path, about 0.1 acre of land would be potentially exposed to trampling of understory vegetation and minor soil compaction from occasional foot traffic. Individual riparian plants might

be trampled at stream crossing points. Overstory trees would not be affected. At the completion of mining, public access to the Right Fork trailhead would be restored.

Under the proposed action, there would be minor effects on recreation. These minor effects would be short term. They would last for the projected life of the active mining and reclamation operations in Rilda Canyon (15-20 years) and would cease when the site entered the custodial reclamation phase and the area reverted to pre-mining conditions.

4.2.1.7.3 Visual Resources

The proposed facilities would be consistent with the Modification VQO (Hanchett 2005). For the purposes of this analysis, visual effects are considered acceptable if they fall within the VQO management objective. Accordingly, impacts to visual resources would be considered negligible considering the visual management setting of the area.

Under the proposed action, there would be negligible effects on visual resources because changes would be consistent with the VQO. These negligible effects would be short term. They would last for the projected life of the active mining and reclamation operations in Rilda Canyon (15-20 years) and would cease when the site entered the custodial reclamation phase and the area reverted to its pre-mining appearance.

4.2.1.8 Resource 8: Cultural Resources

4.2.1.8.1 Prehistoric/Historic Resources

No historic properties have been identified in the proposal area. Therefore, the proposal would have no effect on cultural resources. The Utah SHPO has been consulted and has concurred with this determination.

4.2.1.8.2 Native American Concerns

Initial scoping documents were sent to the tribal governments of the Hopi, Paiute, Ute Mountain Ute, White Mesa Ute, Ute Tribe (Fort Duchesne), Navajo, and the Utah Division of Indian Affairs in April of 2004. Responses to scoping documents were received from the Hopi, Navajo, and Forest Cuch of the Utah Division of Indian Affairs. In these three cases the responses indicated no interest in the project (Hopi and Navajo), or a request for the cultural inventory report if cultural properties were found (Division of Indian Affairs). In the cases of the Ute Tribe and Ute Mountain Ute, the tribes deferred to those tribes in closest proximity to the proposed project, specifically the Paiute. The Paiute did not respond to scoping. However they did respond to a request for consultation on the results of the cultural resource inventory. The Forest Service routinely submits copies of such reports to the tribes for their review and comment. Because no historic properties were found during the inventory, the Paiute responded in a letter dated January 4, 2005 that they did not have any concerns with the project.

No Traditional Cultural Properties or sacred sites were identified in the analysis area through these consultations efforts. However disturbance of a natural spring was identified as a concern; because there is a high potential for archeological remains and traditionally used plants around springs. A list of traditionally used plants provided by the Paiute was submitted to the Forest Service for expert botanical review. No sensitive or threatened species area on that list and they are not likely to be affected by the proposed project. There would be no effect on traditional cultural properties as a result of this project.

3.3.1.8.3. Paleontological Resources

The pack rat midden would not be disturbed by the proposed action. Additionally, a 6-foot chain link fence would be placed around the midden to protect it from any potential indirect impacts. Accordingly, there would be no effect on this paleontological resource as a result of this project.

4.2.1.9 Resource 9: Solid/Hazardous Wastes

Operation of the proposed facilities would require the onsite storage and use of motor fuels, lubricants, and similar materials. The refueling station at the proposed facility would have an independent spill collection system isolated from the surface water runoff collection system. The station would be aboveground on a concrete pad with an impermeable liner and a berm would be installed on the creek side. Any spills would be contained and removed from site. PacifiCorp has a Spill Prevention, Control, and Counter-measures Plan in the Deer Creek mine permit. This would be incorporated into the Rilda facility's plan of operations.

Solid waste would be handled according to all federal, state and local laws. All solid waste would be removed from the proposed project area and disposed of properly.

Under the proposed action, there would be negligible potential for the release of hazardous materials into Rilda Canyon Creek because of the design features and operational controls set forth in the PAP. This negligible risk would be short term. It would last for the projected life of the active mining and reclamation operations in Rilda Canyon (15-20 years) and would cease when the site entered the custodial reclamation phase and solid or hazardous wastes would no longer be present on the site.

4.2.1.10 Resource 10: Socioeconomics

4.2.1.10.1 Economic Conditions

Under the terms of the proposed action, mining at the Deer Creek Mine would continue at the current rate and expand into Federal Leases U-06039, U-2810, SL-050862, and SL-051221 from the Rilda Canyon surface facilities. The current production rate of 4 million tons per year would be maintained and the existing employment rate at the mine would

remain unchanged at approximately 350 workers. In Emery County there would be no noticeable changes in the unemployment rate, the total population, the population growth rate, or in the total number of people employed in mining due to approval of the proposed action. However, construction of the proposed surface facilities in Rilda Canyon would generate an estimated \$75,000 in additional annual tax revenue for Emery County. The socioeconomic impact under Alternative 1, the Proposed Action, would be minor and short-term.

Economic losses to farmers could result if elk disturbed by the proposed facilities move down canyon to the east as expected and use cultivated fields for winter forage and damage fences and irrigation systems. Depredation costs could range between \$5,000 and \$8,000 per year, based on 100 elk being displaced for 90 days and eating 10 pounds of forage per day (= 45 tons of hay at \$125/ton) (Bates, 2005b).

4.2.1.10.2 Land Use

Under the terms of the Alternative 1, the Proposed Action, land use designations in Rilda Canyon would be unchanged. Land use in the proposal area itself would change from potential to actualized mining and mineral development, consistent with the Forest Plan. There would be no impact to land use designation as a result of the proposed project (USDA-FS 1986).

4.2.1.10.3 Roads and Traffic

Approval of the proposal would result in Emery County Road 306 being completely asphalted from its junction with Highway U-31 in Huntington Canyon to the new surface facilities area in Rilda Canyon. The remaining 0.3 of a mile of road extending beyond the proposed facilities disturbed area to the ventilation fan in the left fork of the canyon would retain its crushed gravel surface. The paved portion would have minor realignments to safely accommodate the expected increase in traffic. A mixture of salt and sand would be applied to the road periodically for safety reasons when winter driving conditions exist. When the proposed facilities are shut down and reclaimed, the asphalt paving would be removed from the County Road 306 to return the road to its current crushed gravel surface.

The road upgrades and realignments would require a change in the right-of-way boundary. The adjusted right-of-way would be 80 feet wide (40 feet on either side of the centerline) compared to the current 66-foot right-of-way. The adjustments generally move the boundary north 20-30 feet (but as much as 45 feet in one location). In addition, the right-of-way would be widened an additional 40 feet (to 120 feet wide) in three discontinuous segments 800, 300, and 300 feet long. The right-of-way boundary adjustment would take in an additional 4.78 acres of federal (NFS) land beyond that in the existing easement.

All of the disturbed area would be contained within the proposed right-of-way adjustment. The road realignments would generally shift the roadbed north by distances of 0-15 feet, but up to 40 feet in one location. The earthwork cut/fill limits would extend beyond the roadbed but be within the adjusted easement width. Just under two (1.99) acres of NFS land in the right-of-way adjustment would be disturbed. Of this disturbance, 1.11 acres are on the PacifiCorp leased land west of the Rominger soil stockpile area and 0.88 acres are east of the stockpile.

Road construction activity would primarily be confined to the disturbed corridor along each side of the existing road right-of-way. Widening and realigning the road would cause a temporary (less than 2 months), major increase in noise, fugitive dust, and sediment during the construction period. After that the effect would be minor and short term, and would eliminate or drastically reduce noise, fugitive dust and sediment runoff for the life of operations. The road would be returned to the same conditions as those existing prior to the installation of the mining facilities when the Rilda Canyon facilities ceased active operations.

The vehicular traffic load on County Road 306 would increase. The increase in traffic volume would be confined almost entirely to the two miles of road that would be paved. The primary increase in traffic along the road would be most noticeable during three short periods of time in the 24-hour span when the mine shift changes occur. An estimated 100 vehicles belonging to workers on the morning shift would make daily round trips. An estimated 50 vehicles belonging to workers on the afternoon shift and 50 vehicles belonging to workers on the evening shift would also make daily round trips. Vendor and other mine support vehicles would make an estimated 18 round trips each day. The three work shifts at the Deer Creek Mine normally operate seven days a week and would continue for the 15-20 years of active coal production remaining at the mine. The new traffic load of existing vehicular traffic plus additional traffic resulting from approval of the new surface facilities would be approximately 220 round trips per day. With the increase in traffic, there would be corresponding related effects on noise levels, air quality, and hydrology (analyzed elsewhere in this EA) and increases in roadside litter and trash.

Because of concerns about traffic congestion and safety on Highway U-31, PacifiCorp has committed funding for construction of a left turn lane on Highway U-31 at the Rilda Canyon turnoff independent of whether the proposed action takes place or not. Construction of the turn lane has commenced. The turn lane is designed to relieve congestion and reduce the risk of accidents.

The effects on traffic related to approval of the new facilities in Rilda Canyon would be moderate. While there would be more than a 20-fold increase in Rilda Canyon traffic, there would be a decrease in Deer Creek and no net change over all. The estimated 220 round trips per day would be spread over three peak periods at specific times of day. The left turn lane on U-31 would decrease congestion at the intersection, reducing wait times for turning cars and permitting through traffic to proceed unimpeded. Upgrades on

County Road 306 would improve its capacity to handle the projected traffic load safely and without congestion. The elevated traffic volume would last only for the projected life of the active mining and reclamation operations in Rilda Canyon (15-20 years) and would cease when the site entered the custodial reclamation phase and traffic reverted to pre-mining levels.

4.2.1.11 Resource 11: Environmental Justice

Under the terms of the proposed action, Emery County would realize approximately \$75,000 in additional tax revenue from the facilities constructed in Rilda Canyon. This revenue would be an economic benefit to the county of roughly \$7 per capita based on the 2004 census data. There would be no disproportionately high and adverse human health or environmental effects on minority populations and low-income populations in Emery County under Alternative 1, the Proposed Action.

4.2.2 Alternative 2: Disapproval of the Proposed Permit Application Package

Under this alternative, the Assistant Secretary would disapprove the applicant's proposed Permit Application Package for expansion of the Deer Creek Mine by constructing surface facilities in Rilda Canyon. There would be no development of surface facilities as proposed in Rilda Canyon and no ventilation or miner access to the Mill Fork Lease via Rilda Canyon would occur. If the proposed mine plan modification is not approved, mining would continue under the existing mine plan to the extent possible. The mine would eventually reach the limit of coal mineable using the existing facilities and would be forced to cease or curtail production. Under this scenario, there would be no change from the existing environmental conditions in Rilda Canyon. There would be no effect on the biotic and abiotic ecological resources (Resources 1-9: wildlife, vegetation, hydrology, soils, etc.); therefore, these are not discussed further in this section. Denial of the mine plan revision would have ramifications on the projected operational life of the Deer Creek Mine and, as a consequence, socioeconomic effects. These are discussed below.

4.2.2.1 Resource 10: Socioeconomics

4.2.2.1.1 Economic Conditions

Under this alternative, disapproval would result in a loss of production and employment at the Deer Creek Mine. Without this surface facility coal production would be reduced from 4 million tons to an estimated 2 million tons annually, and employment would be reduced from 350 to an estimated 175 workers. Coal reserves from this operation would be left in place if the ventilation does not occur. The decrease in annual production could also potentially reduce the number of years remaining in the life-of-mine as well as cause short-term shortages in coal supply and power generation capacity at the Huntington Power Plant.

The reduction in employment would result in a loss of approximately one-quarter of the mining jobs in Emery County, which would mean a loss in mining wages paid in the county of about \$8 million. The county would lose an estimated \$28,000 in royalties due to the cutback in coal production. Another \$75,000 in anticipated annual tax revenue from the proposed surface facilities would also be lost to the county. Under Alternative 2, with the largest employment sector laying off 25% of its workforce, major short-term socioeconomic impacts would be experienced throughout Emery County, e.g. a steep rise in unemployment, loss of family income, increased stress on social services, depressed economy for local businesses, and decrease in county revenues.

4.2.2.1.2 Land Use

Under this alternative, land use would not change. The Rilda Canyon facilities would not be built, but the land use designation in the Forest Plan would continue to allow for mining and mineral development.

4.2.2.1.3 Roads and Traffic

Under this alternative, conditions would not change. Emery County Road 306 would not be paved. Traffic would remain at its current low level of a few vehicles per day. Traffic volume on Highway U-31 and the Deer Creek mine entrance road would reflect employment levels at the mine, falling off as layoffs reduced the mine workforce.

4.2.2.2 Resource 11: Environmental Justice

Under this alternative, Emery County would experience a shortfall in county revenue and a sharp increase in unemployment. County social and welfare services would almost certainly be required to operate with less funding than is currently available and have to reduce the scope of their activities. The fifty percent layoff of employees at the Deer Creek Mine could be expected to impact minority and non-minority workers equally. With an already high unemployment rate fluctuating around 11%, and 11.5% of the population currently living below the poverty level, the impacts under Alternative 2 would have a disproportionately high and adverse effect on low-income populations in Emery County, which, especially during times of high unemployment and economic depression, have a greater degree of reliance on social and welfare services. Under this alternative, there would be major short-term impacts to low-income populations.

4.3 Cumulative Impacts

Cumulative impacts are those that occur based on the Proposed Action, coupled with past, present and reasonably foreseeable future actions that have occurred or are expected to occur in the watershed.

This project is taking place independent of any other federal action. The data gathered from this project would facilitate future activities, but no future activities would be

authorized by approval of the proposed action. Any future projects in this area would require further NEPA analysis including analysis of cumulative impacts.

The proposed project would help facilitate the mining of reserves currently under federal lease and planned for mining. No additional future mining beyond that covered by existing approved mine permits is expected. No new coal reserves are being added, and no new lands are proposed for lease. The current proposal would allow PacifiCorp to obtain all of the currently leased economically mineable coal available in Rilda Canyon and the immediate surrounding area. Additional facilities are not anticipated or foreseen in this or adjacent canyons. Further exploration in the area may open up new leaseable coal lands, but the reserves most would likely be accessed from existing facilities.

4.3.1 Past, Present, and Reasonably Foreseeable Future Actions

There are a few actions scheduled to take place during or after implementation of the Proposed Action that could affect the environmental resources in the whole Rilda watershed and in the larger Huntington Canyon drainage. In addition, other activities have taken place that have affected the human environment. All of these past, present and future actions need to be considered as part of the cumulative effects analysis. The following summarizes these actions.

4.3.1.1 Past Actions

Past actions that have occurred in Rilda Canyon include: 1) grazing, by wildlife and livestock; 2) coal mining: four historic abandoned coal mines which were reclaimed in 1988 and current activity including the installation of the existing ventilation fan and necessary road upgrades approved by the USFS by a FONSI based on the 1996 EA; 3) development of a spring for culinary use in 1972 by the NEWUSSD; 4) an unlawful timber harvest on SITLA land in 2000; and 5) traditional recreational use, primarily hiking and hunting access. See also the table in Appendix D, Past, Present and Future Actions.

4.3.1.2 Present Actions

Present actions occurring in Rilda Canyon include: 1) grazing use by wildlife and livestock; 2) ongoing operation and maintenance of the Deer Creek mine's Left Fork ventilation fan; 3) ongoing operation and maintenance of the NEWUSSD spring development; 4) recreational access to the right and left forks of Rilda Canyon primarily for hunting and hiking; and 5) installation by Emery County of a left turn lane and school bus turnaround on Highway U-31 to improve safety in anticipation of increased traffic connected with the Proposed Action (construction began on June 9, 2005). Several energy production facilities are operating in Huntington Canyon near Rilda Canyon. They include the Deer Creek mine, the Co-op mine in Trail Canyon, the Genwal mine in Crandall Canyon, and the Huntington power plant (see Appendix E, Map 3).

4.3.1.3 Reasonably Foreseeable Future Actions

Foreseeable future actions in Rilda Canyon include a timber harvest per a SITLA timber sale contract that has already been awarded. There will be the harvest of 9,750 tons of timber in the area southwest of the road in Section 36, Township 16 South, Range 6 East, (about 320 acres; this is adjacent to, but mostly outside of, Rilda Canyon), with access through Mill Canyon. Best management practices will be used to prevent erosion. Upon completion the contractor will be required to close roads, reseed, and leave the area in an ecologically acceptable condition. SITLA also plans to clean up the damage from the 2000 timber theft in the summers of 2005 and 2006 (Wilcox 2005).

The Deer Creek mine plan includes construction of a ventilation fan break-out around the year 2012. PacifiCorp has acquired a right-of-way from Andalex Resources (the owner of the Genwal mine) to locate this breakout within the current Genwal mine disturbed area. No new surface disturbance would result although construction activity related disturbance would occur during installation operations (Deer Creek PAP, Volume 12, Section R645-301-521.170/180, p. 5-8). The Co-op mine could potentially add new portals as mining progresses towards Mohrland and the distance increases from the main entryway (No. 3 mine portal). Additional ventilation portals would be constructed causing concomitant construction-related surface disturbance. Oil, gas, and coal exploration is not anticipated west of the USFS boundary in Huntington Canyon.

4.3.2 **Cumulative Impacts**

The Proposed Action would add an additional 13.1 acres of direct impacts to the area already disturbed by past mining and that proposed to be disturbed by logging. The facilities are proposed to operate 24 hours/7 days for 15 years, with 2 additional years of active reclamation to remove mining facilities, followed by 10 years of custodial management before bond release. The project would add to current noise levels associated with the ventilation fans and with the ongoing fan operations and maintenance activities. It would add to the amount of traffic flow into the canyon on County Road 306, taking it from isolated and occasional (fewer than 10 trips a day) to regular and frequent (more than 220 round trips a day, concentrated in peak periods).

Indirect impacts caused by noise, traffic and general activity would accrue in a wider area around the 13.1 acres, but would not extend beyond Rilda Canyon. A slight increase and a shift in traffic patterns in Huntington Canyon could affect recreational users.

In response to drought and other undetermined causes the minimum flow from Electric Lake has been reduced from 12 cubic feet per second (cfs) to 6 cfs over the last few years. However, as the proposed action is not expected to affect flows in Rilda Canyon Creek, it should have no effect on the flow level in Huntington Creek.

Of all the other types of actions occurring in the area (grazing, silviculture, recreation, etc.), the other energy producing operations share similar characteristics (e.g. size of

surface facilities, type of activity, noise, traffic, scale and schedule of operations) with the proposed action that are likely to create cumulative effects. Taking into account wildlife disturbance buffers, sound transmission, and traffic, the environmental influence of the proposed facilities would not extend beyond the confines of Rilda Canyon.

4.3.2.1 Wildlife

Implementation of the Proposed Action in connection with other known energy development (coal mining) related actions acts could have a cumulative effect on wildlife. A total of 133 surface acres is directly affected by the total current permitted coal mine activity in Huntington Canyon. See Table 4.2 below for wildlife habitat acres affected by coal mining in Huntington Canyon.

Type of Wildlife Use	Type of Effect	Existing Operations ²	Proposed Action	Total	Incremental Increase
Bat Foraging ³	Direct ⁴	385	13	338	3.4%
	Indirect ⁵	78	20	98	25.6%
Elk Winter Range	Direct	373	13	384	3.5%
	Indirect	4916	1325	6241	27.0%
Mule Deer Winter Range	Direct	373	13	384	3.5%
	Indirect	1050	420	1470	40.0%
Golden Eagle Nesting	Direct	0 ⁶	0 ⁶	0 ⁶	--
	Indirect	646	0	646	0.0%
Golden Eagle Foraging	Direct	0 ⁶	0 ⁶	0 ⁶	--
	Indirect	1822	747	2569	41.0%

Notes:

1. Table is based on disturbance area estimates from the USDA-FS 2005b and Nelson (2005). Areas for different types of wildlife use may overlap, so acreages may be double counted.
2. "Existing Operations" are coal mine surface facilities and access roads near Rilda Canyon that, with the proposed action, could have cumulative effects on wildlife. They include the Deer Creek mine, the Rilda Canyon Left Fork fan, the Co-op mine in Trail Canyon, the Genwal mine in Crandall Canyon, the Huntington power plant, and a segment of Highway U-31.
3. Bat foraging estimate primarily applies to spotted bats, but also to Townsend's big-eared bats if they occur in Rilda Canyon.
4. "Direct" effect refers to habitat directly disturbed by the footprint of the operations.
5. "Indirect" effect refers to undisturbed habitat outside the operational footprint but within an avoidance buffer zone around the footprint.
6. Direct effect area equal to indirect effect area if facility construction occurs during active nesting.

While the elk winter-range indirect-disturbance-zones mapped in the Wildlife Resources Report about for the Deer Creek mine and Huntington power plant and for the Rilda Left Fork fan and proposed fan, there is still adequate separation between Crandall, Rilda, Trail, and Deer Creek canyons to allow elk circulation. Circulation routes remain when the proposed timber sale site is added to the indirect disturbance zones. The disturbance zones for other species are smaller and would not affect movement. The loss of habitat occurring due to coalbed methane exploration coupled with previous coal mining related disturbance in Huntington Canyon has caused a reduction in winter range (Bates, 2005b). It is likely that elk displaced from Rilda Canyon will move, or force other animals to

move, onto private agricultural areas in lower Huntington Canyon and forage in hay fields and damage fences and irrigation systems, causing an economic loss to land owners.

4.3.2.2 Traffic

If the proposed action is approved, traffic would increase on the 3.5 mile segment of Highway U-31 between the Deer Creek mine entrance and the entrance to Rilda Canyon. This is a shift in traffic location from Deer Creek to Rilda Canyon, not an increase in the number or frequency of vehicles, so no cumulative effects are expected.

4.3.2.3 Other Resource Values

Other than the effects on select wildlife species and traffic discussed above, there would be no cumulative effects to vegetation, hydrology/water resources, soils, air quality, noise, recreational resource values, cultural resources, solid/hazardous wastes, socioeconomics, or environmental justice. Because the projected combined effects of the proposed action and past, present, and reasonably foreseeable future actions on these resources would be negligible, the cumulative impacts would not be significant.

Based on the history of the area, any future coal mining would be by approved underground mining techniques, and typically would have a direct surface disturbance on less than 50 acres per operation. Under SMCRA, coal mine operations are required to be reclaimed after the end of active mining operations. The expected sequence of events would be for new mines to be developed in unmined areas as older mines are retired and reclaimed. Over time, the location of active mining operations would migrate around the coal field, but the total area of disturbed land would not be likely to change greatly. Reclamation would keep pace with new development.

4.4 Monitoring and Compliance

The proposal, if approved, becomes an amendment to the Deer Creek mining permit which is a legally enforceable document under SMCRA. The DOGM is authorized to regulate surface coal mining operations and surface effects of underground mining on Federal lands within the State (see part 1.4, Roles of Federal and State Agencies in the Proposed Action). The DOGM enforces the performance standards and permit requirements during the mine's operation and has primary authority in environmental emergencies. In its capacity as the regulatory authority, the DOGM is required to have a system in place to inspect and monitor surface coal mining and reclamation operations. The DOGM must conduct a complete inspection (administrative and physical) of the mine during one month of each quarter of the calendar year. During the other two months of each quarter, the DOGM must conduct at least one partial inspection each month. The DOGM has the authority to order a revision of the permit at any time if the operation is not in compliance with the provisions of the approved regulatory program. It

also has the authority to issue notices of violation, assess penalties and suspend or revoke a permit if necessary.

Pursuant to Section 201 of SMCRA, the OSM is responsible for ensuring adherence to Federal and State statutory and regulatory requirements and maintaining minimum nationwide mining and reclamation standards. The OSM maintains a Federal oversight system to evaluate the administration of approved State programs such as Utah's.

CHAPTER 5: CONSULTATION & COORDINATION

5.1. Preparers

J. Chris Rohrer, Environmental Scientist, Utah Division of Oil, Gas and Mining; Salt Lake City, Utah

Lucia Malin, Environmental Scientist, Utah Division of Oil, Gas and Mining; Salt Lake City, Utah

Robert Block, Physical Scientist, Office of Surface Mining, Western Regional Coordinating Center, Denver, Colorado

5.2. Consultation

5.2.1 Reviewers/Contributors

Table 5.1 identifies Federal, State, local agencies, consultants and individuals who participated in initial discussions or provided data regarding specific resources in the project area.

NAME	Agency	Area
Bill Bates	Utah Division of Wildlife Resources	Wildlife/big game
Bob Thompson	United States Forest Service, Manti-La Sal	T & E, Vegetation
Bruce Ellis	United States Forest Service, Manti-La Sal	Cultural/Nat Am Con
Chris Colt	Utah Division of Wildlife Resources	Wildlife/big game
Craig Walker	Utah Division of Wildlife Resources	Aquatics biologist
Dale Harber	United States Forest Service, Manti-La Sal	NEPA/geologist
Dan Smith	Utah Division of Oil, Gas and Mining	Computer maps
Daren Rasmussen	Utah Division of Water Rights	404 permit
Diana Whittington	United States Fish and Wildlife Service	Wildlife
Gregg Hudson	Bureau of Land Management	Geology
Jerriann Ernsten	Utah Division of Oil, Gas and Mining	Biology
Jim Smith	Utah Division of Oil, Gas and Mining	Hydrology
Joe Helfrich	Utah Division of Oil, Gas and Mining	Wildlife/big game
Justin Hart	Utah Division of Wildlife Resources	Fisheries biologist
Katherine Foster	United States Forest Service, Manti-La Sal	Hydrology
Kelle Reynolds	United States Forest Service, Manti-La Sal	Wildlife
Leland Sasser	USDA National Resources Conservation Service	Soil Scientist
LeRoy Mead	Utah Division of Wildlife Resources	Wildlife/big game
Mark Page	Utah Division of Water Rights	404 permit
Matt Petersen	SWCA, Inc	EA review/NEPA QA/QC
Pam Jewkes	United States Forest Service, Manti-La Sal	Fisheries biologist
Priscilla Burton	Utah Division of Oil, Gas and Mining	Soils
Rex Funk	Emery County	Roads Engineer
Rick Collins	Mt Nebo Scientific	Riparian, T & E
Susan White	Utah Division of Oil, Gas and Mining	Biology/Veg
Terry Nelson	United States Forest Service, Manti-La Sal	Wildlife/Big game

NAME	Agency	Area
Wayne Hedberg	Utah Division of Oil, Gas and Mining	Permit Supervisor
Wayne Western	Utah Division of Oil, Gas and Mining	Engineer

5.2.2 Consultation Letters

A National Historic Preservation Act (NHPA) Section 106 clearance letter was received from the Utah State Historic Preservation Officer (SHPO) on March 18, 2004.

An Endangered Species Act (ESA) Section 7 clearance letter was received from the United States Fish and Wildlife Service (USFWS) on May 16, 2005.

A letter from BLM on March 25, 2005, indicating approval of the modification to the R2P2 by the BLM with two contingencies regarding: 1) rock slope location and 2) underground storage of rock material and upon approval of the State Permit

5.3 Public Participation

The Utah DOGM announced that the PAP had been determined administratively complete on January 27, 2005. On February 3, 2005, letters announcing this were sent to 49 federal and state agency representatives and other interested parties.

Preliminary public meetings discussing the proposed action concept were held at the Huntington, Utah, City Hall on May 12 and August 11, 2004. These meetings were announced in the *Price Sun Advocate* and *Emery County Progress* newspapers on April 12 and August 11, 2004. Letters announcing these meetings and requesting public input were sent to 30 interested parties on April 23 and July 13. A separate letter inviting 15 people who commented or attended the May 12 open house period to the second open house was mailed on July 23, 2004. Fourteen letters were received response to the open houses and request for public input. Letters are on file at DOGM.

Date	Who	Main topic(s)
May 3, 2004	James Dykmann, SHPO	recommends survey
May 3, 2004	Tom Faddies, SITLA	strong support
May 12, 2004	Louis Shelley, President, Local 1769, UMWA, with 193 signatures	need project for safety and efficiency reasons
May 12, 2004	Bryant Anderson, Emery County Planning & Zoning	EnergyWest is following process
May 12, 2004	Bruce Wilson, Public Lands Council	general support
	Joel Ban, Wildlaw Southwest	concern about stream culvert impacts
May 12, 2004	Lori Sudbery	project would improve safety, provide closer escape way, reduce underground travel time, company has good reclamation record
May 20, 2004	Rep Brad King, Utah House	enhances safety, balances production with social interests, economic benefit to county

Table 5.1 Public Comment Letters		
Date	Who	Main topic(s)
May 21, 2004	Senator Mike Dmitrich, Utah Senate	enhances safety, balances production with social interests, economic benefit to county
May 26, 2004	Dee Jense, President, Interwest Mining	need fuel production, reduce underground travel time, safety issues
June 1, 2004	Leigh J. Kuwanwisiwma, Hopi Tribe	avoid archaeological sites and traditional cultural properties
May 12, 2004	William Coyne	concern about impacts to wildlife, traffic, pollution, degradation of North Emery's water supply, develop Elk Springs as an alternative
May 27, 2004	John Harja, Executive Director, Governor's Office of Planning & Budget, Resource Development Coordinating Committee	
August 2, 2004	Forrest S. Cuch, Director, Utah Division of Indian Affairs	

A legal notice announcing PacifiCorp's submittal of a Significant Mine Revision was published in the Emery County Progress on February 1, 8, 15 and 22, 2005. Notification of DOGM's determination of administrative completeness was mailed on February 3, 2005 to a mailing list of 49 people as per UAC R645-300 121.310. Notification of DOGM's determination of administrative completeness was also mailed to those who commented on the proposal on February 15, 2005.

5.4 Unsolicited Publicity

March 28, 2004, New Mine Portal Proposed, *Deseret Morning News*, Salt Lake City, Utah

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PAP Citations: The PacifiCorp PAP (a primary source for descriptions of the Proposed Action and of the existing environment) lacks a unified organizational structure or pagination. It has numerous sections, appendices, and copies of publications or reports, each with independent pagination and some with no pagination at all. Consequently, there is no convenient, concise way to cite references to the PAP. The DOGM has electronically scanned the entire PAP and converted it to pdf-format digital files (readable with the widely available free Adobe Acrobat Reader software). Pages with text, graphics, photos, and some maps are contained in three pdf documents corresponding to the three binders of the paper originals. Several large format maps are in separate files. Pages in the pdf documents are numbered, which provides a way to unambiguously cite parts of the PAP. In this EA, specific pages of the PAP are cited as

“PAP a:b” where “a” is the binder number and “b” is the page number in the pdf document for that binder. Documents used as references that may be found in the PAP are noted above.

5.6 List of Acronyms and Abbreviations Used in this EA

BE/BA	Biological Evaluation/Biological Assessment
BCI	Biotic Condition Index [BCI= (CTQp/CTQd) x 100]
BLM	U.S. Bureau of Land Management (USDOJ)
CD	Compact Disc
CEQ	U.S. Council on Environmental Quality
CFR	U.S. Code of Federal Regulations
cfs	cubic feet per second (measure of stream flow)
CTQd	Dominance-weighted Community Tolerance Quotient
CTQp	Potential Community Tolerance Quotient
DAQ	Utah Division of Air Quality (DEQ)
dB or dBA	decibels (a unit of sound intensity or loudness). The “A” indicates that the measurement was made using a sound level meter with an A-weighted frequency spectrum, which is designed to mimic the response of the human ear by filtering out lower frequencies.
DEQ	Utah Department of Environmental Quality
DNR	Utah Department of Natural Resources
DOGMA	Utah Division of Oil, Gas and Mining (DNR)
DR	Decision Record
DWQ	Utah Division of Water Quality (DEQ)
DWR	Utah Division of Wildlife Resources (DNR)
EA	Environmental Assessment
EIS	Environmental Impact Statement
EWMC	Energy West Mining Company (subsidiary of PacifiCorp)
ESA	Endangered Species Act of 1973, as amended
FONSI	Finding of No Significant Impact
gpm	gallons per minute (measure of stream flow)
HBI	Hilsenhoff Biotic Index
Hz	Hertz (frequency of a wave in cycles/second)
kv	kilovolt
LRMP	Land and Resource Management Plan (USFS)
MIS	Management Indicator Species
MLA	Mineral Leasing Act of 1920, as amended
MLSNF	Manti-La Sal National Forest
MRP	Mining and Reclamation Plan
MSHA	U.S. Mine Safety and Health Administration (Department of Labor)
NEPA	National Environmental Policy Act of 1969, as amended
NEWUA	North Emery Water Users Association (predecessor to NEWUSSD)
NEWUSSD	North Emery Water Users Special Service District
NFS	National Forest System

NRCS	U.S. Natural Resources Conservation Service (USDA)
OSHA	U.S. Occupational Safety and Health Administration (Dept. of Labor)
OSM	U.S. Office of Surface Mining, Reclamation and Enforcement (USDOI)
PAP	Permit Application Package (also used in citations)
pdf	Portable Document Format (computer file format)
PLS	Pure Live Seed (used in seed mix specifications)
R2P2	Resource Recovery and Protection Plan
RMP	Resource Management Plan (BLM)
SHPO	State Historic Preservation Office
SMCRA	Surface Mining Control and Reclamation Act of 1977, as amended
TDS	Total Dissolved Solids
tpy	tons per year (coal production)
UPDES	Utah Pollutant Discharge Elimination System (administered by DWQ)
USC	U.S. Code (compilation of federal laws)
USDA	U.S. Department of Agricultural
USDOJ	U.S. Department of the Interior
USFS	USDA Forest Service
USFWS	U.S. Fish and Wildlife Service (USDOJ)
VQO	Visual Quality Objective
WRCC	Western Regional Coordinating Center (OSM)
WRR	Wildlife Resources Report

5.7 Electronic Version of this EA

This EA is being distributed in both printed form and in electronic form on a compact disc (CD). The electronic files are in portable document format (pdf), readable with the widely available free Adobe Acrobat Reader software. The wide availability of this software ensures that users of the print and electronic versions of the EA have equal access to content. Users unable to access the electronic versions may request paper copies from DOGM.

Certain large format maps are included only in electronic form. The source paper maps in the PAP are oversized and their electronic versions are very large files. To keep this EA manageable, as both a physical and electronic document, these maps are included only in their electronic form. Because they are large files, they are kept as separate files on the CD to facilitate loading and viewing.

The files on the CD that comprise this EA are:

RildaEA_text_072205.pdf

This file contains the contents of the print version of the EA, including the text of the body, appendices, and the first four maps in Appendix E.

RildaEA_AppxEMap01.pdf

RildaEA_AppxEMap02.pdf

RildaEA_AppxEMap03.pdf
RildaEA_AppxEMap04.pdf
RildaEA_AppxEMap05.pdf
RildaEA_AppxEMap06.pdf
RildaEA_AppxEMap07.pdf
RildaEA_AppxEMap08.pdf
RildaEA_AppxEMap09.pdf
RildaEA_AppxEMap10.pdf
RildaEA_AppxEMap11.pdf
RildaEA_AppxEMap12.pdf
RildaEA_AppxEMap13.pdf

These files have all 13 Appendix E maps as separate files.

APPENDIX A - Species Matrix

Special Status Species

The Rilda Canyon proposal lies within the historic range of or has potential habitat for a number of species with special conservation management status. "Special status species" in this EA means those species protected by state or federal law or policy and includes those listed as threatened or endangered under the Endangered Species Act, those listed on the Forest Service Intermountain Region Proposed, Endangered, Threatened, and Sensitive Species list (December 2003), and those listed by the Utah Division of Wildlife Resources on the State Sensitive Species list.

Different entities maintain lists of special status species for management and planning purposes. These lists are typically organized by county or land management unit. In the case of the Rilda proposal, the USFWS and DWR provide species lists for Emery County and the USDA-FS uses a list for the Manti-La Sal National Forest. Both areas span thousands of square miles and a vast range of ecological conditions, from Mancos Shale desert to alpine forests. Not every species on a county-wide or forest-wide list has an equal probability of occurring in a particular area. This appendix analyzes status species lists from several sources and identifies those species with sufficient likelihood of occurring in the proposal area or of being affected by the proposal to be analyzed in detail in the body of the EA.

Although not treated as "special status species" in this EA, two other lists of species are relevant to the environmental analysis of the proposal. They are the Forest Service Management Indicator Species (MIS) and the species addressed and analyzed by PacifiCorp in the PAP. They are also included in this table.

Species that are shaded in the first column are carried forward for discussion in the body of the EA under the "Special Status Species" headings (parts 3.3.1.1.2, Special Status Animal Species; 3.3.1.2.2, Special Status Animal Species; 4.2.1.1.2, Special Status Animal Species; and 4.2.1.2.2 Special Status Plant Species).

Species	FS R4 Status	MLSNF Status	MLSNF Rilda BE/BA	MLSNF Rilda WRR	USFWS Emery	DWR Emery	MLSNF MIS	PAP	Habitat/Range	Potential to Occur in Rilda Proposal Area
MAMMALS										
Moose <i>Alces alces</i>								Other		Known occurrence in nearby canyons. Critical summer range and high value winter range. (PAP 1:61)
Rocky Mountain elk <i>Cervus elaphus</i>				MIS-MD			X	Other	Tend to occupy higher elevation aspen and mixed conifer habitats from spring through early fall, and move to lower elevation mixed shrub, pinyon-juniper, and sagebrush habitats for winter. (WRR)	Known occurrence. Critical winter range. (PAP 1:61)
Townsend's (Western) big-eared bat <i>Corynorhinus townsendii palliescens</i>	FS-Sens	x	Sens-MD	Sens-MD		SPC		Sens	In Utah, roost and hibernate in caves and mines; they also roost (but not hibernate) in buildings. Their roost requirements are restrictive, and their distribution is strongly correlated with the availability of roost habitat. This species forages primarily in forest habitat, forest edge habitat, or in open habitat near forests. (BE/BA)	Potential. Suitable habitat present, but bats have not been detected by surveys. (BE/BA, PAP 2:278)
White-tailed prairie-dog <i>Cynomys leucurus</i>						SPC				Unlikely. Prairie dog colonies absent from proposal area. Vegetation and soils marginal for prairie dogs.
Spotted bat <i>Eidemia maculatum</i>	FS-Sens	x	Sens-MD	Sens-MD				Sens	Likely found throughout Utah. Known to use a variety of vegetation types at elevations ranging from approximately 2700-9200', including riparian, desert shrub, spruce/fir, ponderosa pine, montane forests and meadows. Roost alone in rock crevices high up on steep cliff faces. (BE/BA)	Known. Suitable habitat. Detected by acoustic surveys in 1997. (BE/BA, PAP 2:278)
Mountain lion/Cougar <i>Felis concolor</i>								Other		Potential. Suitable habitat present in proposal area. (PAP 1:61)

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Species	FS R4 Status	MLS NF Status	MLS NF Rilda BE/BA	MLS NF Rilda WRR	USFWS Emery	DWR Emery	MLS NF MIS	PAP	Habitat/Range	Potential to Occur in Rilda Proposal Area
Wolverine <i>Gulo gulo</i>								Other	High mountainous areas, prefer alpine tundra and mountain forest habitats that are not frequented by humans. (UCDC)	Unlikely. Suitable habitat present in proposal area, but marginal and subject to human activity. (PAP 1:61) Records of occurrence 8 miles NW and 13 miles SW of Rilda Canyon (PAP 1:64)
North American (Canada) lynx <i>Lynx canadensis</i>						S-ESA		Thr	Large tracts of coniferous forests with cold, snowy winters. (PAP 2:57) Montane coniferous forests. (UCDC)	Unlikely. Marginal habitat.
Black-footed ferret <i>Mustela nigripes</i>			End-Em	End-Em	E Extirp	S-ESA		End	Dependent on prairie dog colonies for food and shelter. (BA/BE)	Extremely unlikely. Prairie dog colonies absent from proposal area. Vegetation and soils marginal for prairie dogs. (BE/BA, PAP 1:57) Only known Utah ferrets are a re-introduced experimental population in Uintah County. (UCDC)
Mule deer <i>Odocoileus hemionus</i>				MIS-MD			X	Other	Broadly distributed in a variety of habitats.	Known occurrence. Critical winter range. (PAP 1:61)
Black bear <i>Ursus americanus</i>								Other		Potential. Suitable habitat present in proposal area. (PAP 1:61)
Kit fox <i>Vulpes macrotis</i>						SPC			Most often occurs in open prairie, plains, and desert habitats. (UCDC)	Unlikely. Suitable habitat absent from proposal area.
BIRDS										
Northern goshawk <i>Accipiter gentilis</i>	FS-Sens	x	Sens-MD	Sens-MD & MIS-MD		CS	X	Sens	Found in variety of forest habitat types that are generally mature stands with complex structures that provide certain habitat characteristics including: 1) multiple canopy levels with high canopy closure, 2) relatively open understories, snags and downed woody debris, 3) small openings, and 4) a surface water source. (BE/BA)	Potential. Suitable habitat present (BE/BA, PAP 1:59) Habitat present is marginal. (WRR)

Species	FS R4 Status	MLS NF Status	MLS NF Rilda BE/BA	MLS NF Rilda WRR	USFWS Emery	DWR Emery	MLS NF MIS	PAP	Habitat/Range	Potential to Occur in Rilda Proposal Area
Sage sparrow <i>Amphispiza belli</i>				MB-MD				MB	Species occurs throughout Utah during the spring and summer months, but primarily in the southwestern portion of the state during the winter. Prefers shrubland, grassland and desert habitats. (PAP 1.62)	Potential. Primary habitat present in the proposal area in small patches. (PAP 1.62)
Golden eagle <i>Aquila chrysaetos</i>				MIS-MD			X	Other	Generally found in mountainous or hilly terrain, but also inhabit valleys and plains, especially during migration and winter. They generally nest on cliffs; however tree nests are not uncommon. They hunt over open country for small mammals, snakes, birds and carrion. (WRR)	Known occurrence. Single nest in Rilda Canyon. (WRR, PAP 1.61)
Burrowing owl <i>Athene cunicularia</i>						SPC			Open grassland and prairies, but also other open situations, such as golf courses, cemeteries, and airports. (UCDC)	Unlikely. Habitat absent from the proposal area.
Ferruginous hawk <i>Buteo regalis</i>				MB-MD		SPC			During breeding, flat and rolling terrain in grassland or shrub steppe is most often used. Ferruginous hawks avoid high elevations, forests, and narrow canyons, occurring in grasslands, agriculture lands, sagebrush/saltbush/greasewood shrub lands, and at the periphery of pinyon/juniper forests. (UCDC)	Unlikely. Habitat absent or marginal in the proposal area.
Greater sage-grouse <i>Centrocercus urophasianus</i>	FS-Sens	x	Sens-MD	Sens-MD		SPC		Sens	Generally found where there are large tracts of sagebrush habitat with a diverse and substantial understory of native grasses and forbs or in areas where there is a mosaic of sagebrush, grasslands, aspen. Wet meadows, springs, seeps, or other green areas within sagebrush shrublands are generally needed for the early brood-rearing period. (BE/BA)	Unlikely. Marginal habitat: sagebrush community in Rilda Canyon too small to support sage-grouse. (BE/BA)

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Species	FS R4 Status	MLSNF Status	MLSNF Rilda BE/BA	MLSNF Rilda WRR	USFWS Emery	DWR Emery	MLSNF MIS	PAP	Habitat/Range	Potential to Occur in Rilda Proposal Area
Yellow-billed cuckoo <i>Coccyzus americanus</i>			Cand+Em	Cand+Em & MB-MD	C				Riparian obligates. Nesting habitat is dense lowland cottonwood/willow riparian forest characterized by a dense sub-canopy or shrub layer. In Utah, nesting habitats are found at elevations between 2500-6000'. They appear to require large tracts (100-200 acres) of contiguous riparian nesting habitat. (BE/BA)	Unlikely. Habitat absent from the proposal area. (BE/BA)
Black swift <i>Cypseloides niger</i>				MB-MD					Black swifts nest in small colonies near and often behind waterfalls at elevations ranging from 6000-11500'. Only 2 confirmed breeding locations Utah. (WRR)	Unlikely. Habitat absent from the proposal area. (WRR)
Black-throated gray warbler <i>Dendroica nigrescens</i>				MB-MD				MB	Preferred breeding habitat includes dry oak slopes, pinyon/juniper, open mixed woods and dry coniferous and mixed conifer habitats, with grassy understories at elevations up to 5400'. (PAP 1:62)	Unlikely. Suitable habitat present in proposal area, but area is 2,000' above preferred elevation range.
Southwestern willow flycatcher <i>Empidonax traillii eximius</i>	F-End	x	End-Em	End-Em	E	S-ESA		End	Riparian obligate, nesting in areas with high shrub densities interspersed with openings or meadows; they nest in cottonwood/willow habitats and structurally similar riparian vegetation such as alder and aspen. (BE/BA)	Unlikely. Habitat absent from the proposal area. (BE/BA)
Peregrine falcon <i>Falco peregrinus anatum</i>	FS-Sens	x	Sens+MD	Sens+MD				Sens	Prefers cliff faces for nesting. May forage more than 18 miles from the nest site. The nearest known peregrine falcon eyrie is located approximately 13 miles from the project site. (BE/BA)	Potential. Rilda Canyon cliffs are marginal nesting habitat, but suitable forage habitat is present. (BE/BA) No known aeries in Rilda Canyon.
Whooping crane <i>Grus americana</i>						S-ESA		End	Wetlands, also pastures and cultivated fields. (PAP 2:58)	Extremely unlikely. Habitat absent from the proposal area. (PAP 1:58)

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Species	FS R4 Status	MLSNF Status	MLSNF Rilda BE/BA	MLSNF Rilda WRR	USFWS Emery	DWR Emery	PAP	Habitat/Range	Potential to Occur in Rilda Proposal Area
Bald eagle <i>Haliaeetus leucocephalus</i>	F-Thr	x	Thr-Em	Thr-Em	T	S-ESA	Thr		No known nesting or occurrences in canyon; may occur as incidental forager. (BE/BA)
Black rosy-finch <i>Leucosticte atrata</i>				MB-MD			MB	Breeding habitat is crevices and cavities in vertical cliffs. (PAP 1:62)	Potential. Suitable habitat present in proposal area. (PAP 1:62)
Phainopepla nitens <i>Phainopepla nitens</i>	FS-Sens	x	Sens-MD	Sens-MD			Sens	Prefers mature ponderosa pine/Douglas fir forests with open canopies, but can be found in second growth ponderosa pine, aspen and mixed conifer forests that contain a ponderosa pine component. (BE/BA)	Potential. Suitable habitat present in proposal area (BE/BA, PAP 1:60)
Three-toed woodpecker <i>Picoides stricklandii</i>	FS-Sens	x	Sens-MD	Sens-MD			Sens	Found in northern coniferous and mixed forest types up to 9000 feet elevation. Forests containing spruce, grand fir, ponderosa pine, tamarack, and lodgepole pine are used. Nests may be found in spruce, tamarack, pine, cedar, and aspen trees. (BE/BA) They forage mainly in dead trees, primarily insect- or fire-killed trees. (FS EA)	Potential. Some small mixed stands of conifer habitat present in canyon. (PAP 1:59) Area not likely to support three-toed woodpeckers. (BE/BA, WRR)
Broad-tailed hummingbird <i>Selasphorus platycercus</i>				MB-MD			MB	Primary nesting habitat is lowland riparian areas, but nests also recorded in mountain riparian and conifer communities. Elevation range 6000-8000'. (PAP 1:62)	Potential. Potentially suitable habitat present. (WRR) Primary habitat absent from the proposal area. (PAP 1:62)
Brewer's sparrow <i>Spizella breweri</i>				MB-MD			MB	Primary habitat is Utah is the shrub steppe habitat, but may also be found in high desert scrub (greasewood) habitats. They may also breed in large sagebrush openings in pinyon/juniper or coniferous forest habitats. (PAP 1:62)	Potential. Suitable habitat present in proposal area. (PAP 1:62)

Species	FS R4 Status	MLSNF Status	MLSNF Rilda BE/BA	MLSNF Rilda WRR	USFWS Emery	DWR Emery	MLSNF MIS	PAP	Habitat/Range	Potential to Occur in Rilda Proposal Area
Mexican spotted owl <i>Strix occidentalis pacifica</i>	F-Thr	x	Thr-Em	Thr-Em	T	S-ESA		Thr	In Utah, the Mexican spotted owl nests in steep-walled, complex rock canyons at relatively low elevations. Canyons are generally at least 2 kilometers long and less than 2 kilometers wide with mixed conifer stands on 40% or greater slopes. (BE/BA)	Unlikely. Rilda Canyon has some elements of suitable habitat, but is near upper limit of elevation range. Surveys in general area have not found MSO's. (EISEEC 2004)
Virginia warbler <i>Vermivora virginiae</i>				MB-MD				MB	Preferred breeding habitat includes chaparral and open stands of pinyon/juniper, ponderosa pine and scrub oak, mountain mahogany thickets on dry mountainsides. (PAP 1:62)	Unlikely. Marginal habitat present. No confirmed nests found on the Manti-La Sal National Forest. (PAP 1:62)
Bell's vireo <i>Vireo bellii arizonae</i>				MB-MD					Preferred nesting habitat in Utah is cottonwood-willow dominated riparian areas. Breeds in SW Utah in the Virgin River drainage, Zion NP, and Beaver Dam Wash. Does not generally occur above 4300' Elevation. (WRR)	Unlikely. Habitat absent from the proposal area and area is outside breeding range. (WRR)
Gray vireo <i>Vireo vicinior</i>				MB-MD				MB	Species breeds on arid slopes dominated by mature pinyon/juniper and juniper woodlands in southwestern Utah, north to Sevier County. (PAP 1:62)	Potential. Suitable habitat present in proposal area. (PAP 1:62)
REPTILES AND AMPHIBIANS										
Western toad <i>Bufo boreas</i>						SPC			Occurs throughout most of Utah, and can be found in a variety of habitats, including slow moving streams, wetlands, desert springs, ponds, lakes, meadows, and woodlands. (UCDC)	Potential. Suitable habitat present in proposal area.

Species	FS R4 Status	MLSNF Status	MLSNF Rilda BE/BA	MLSNF Rilda WRR	USFWS Emery	DWR Emery	MLSNF MIS	PAP	Habitat/Range	Potential to Occur in Rilda Proposal Area
Columbia spotted frog <i>Rana luteiventris</i>	FS-Sens	x	Sens-MD	Sens-MD				Sens	Commonly found in cold, still, permanent water in such habitats as marshy edges of ponds or lakes, in algae-grown overflow pools of streams, and near flat water springs with emergent vegetation. This frog has a broad distribution throughout the previously glaciated regions of British Columbia and Alberta, and has patchy distribution in the US, from WA to MT and south to NV and UT. In Utah, the spotted frog occurs in isolated populations, and is considered to be a relict from the last ice age. (BE/BA)	Unlikely. Springs and seeps present in area. The spotted frog has not been found on the Manti-La Sal National Forest or in the proposed project area. (BE/BA)
FISH										
Bluehead sucker <i>Catostomus discobolus</i>						CS			Fast flowing water in high gradient reaches of mountain rivers in the upper Colorado River system, the Snake River system, and the Lake Bonneville basin. (UCDC)	Unlikely. Suitable habitat may be present in the proposal area. Has not been found in surveys of Rilda Canyon Creek. (Walker 2004, de la Hoz 2004)
Flannelmouth sucker <i>Catostomus latipinnis</i>						CS			In Utah, the species occurs in the main-stem Colorado River, as well as in many of the Colorado River's large tributaries. Flannelmouth suckers prefer large rivers, where they are often found in deep pools of slow-flowing, low gradient reaches. (UCDC)	Extremely unlikely. Habitat absent from proposal area. Scope of project unlikely to affect watershed far downstream. Has not been found in surveys of Rilda Canyon Creek. (Walker 2004, de la Hoz 2004)

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Species	FS R4 Status	MLSNF Status	MLSNF Rilda BE/BA	MLSNF Rilda WRR	USFWS Emery	DWR Emery	MLSNF MIS	PAP	Habitat/Range	Potential to Occur in Rilda Proposal Area
Humpback chub <i>Gila cypha</i>	F-End	o	End-Em	End-Em	E	S-ESA		End	Restricted to deep, swift mainstem and large tributaries in relatively inaccessible canyons of the Colorado River Basin. Adults require eddies and sheltered shorelines in streams that maintain high spring flows that flush sediments from spawning areas and form gravel deposits used for spawning. Young require low-velocity shoreline habitats. Currently, there are six known extant populations, which are located in the Upper Colorado River, Yampa River and Little Colorado River. (BE/BA)	Extremely unlikely. Habitat absent from proposal area. Scope of project unlikely to affect watershed far downstream. (BE/BA, PAP 1:58) Has not been found in surveys of Rilda Canyon Creek. (Walker 2004, de la Hoz 2004)
Bonytail chub <i>Gila elegans</i>	F-End	o	End-Em	End-Em	E	S-ESA		End	Historically, the bonytail existed in warm water reaches of larger rivers in the Colorado River Basin; it is considered to be adapted to pools and eddies of mainstem rivers. It has been extirpated from most of its historic range. Currently, a small number of wild adults exist in Lake Mohave in the Lower Colorado River Basin, and there are small numbers of wild individuals in the Green River and in subbasins of the Upper Colorado River Basin. (BE/BA)	Extremely unlikely. Habitat absent from proposal area. Scope of project unlikely to affect watershed far downstream. (BE/BA, PAP 1:58) Has not been found in surveys of Rilda Canyon Creek. (Walker 2004, de la Hoz 2004)
Roundtail chub <i>Gila robusta</i>						CS			Prefers large rivers, and is most often found in murky pools near strong currents in the main-stem Colorado River, and in the Colorado River's large tributaries. (UCDC)	Extremely unlikely. Habitat absent from proposal area. Scope of project unlikely to affect watershed far downstream. Has not been found in surveys of Rilda Canyon Creek. (Walker 2004, de la Hoz 2004)

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Species	FS R4 Status	MLS NF Status	MLS NF Rilda BE/BA	MLS NF Rilda WRR	USFWS Emery	DWR Emery	MLS NF MIS	PAP	Habitat/Range	Potential to Occur in Rilda Proposal Area
Colorado River cutthroat trout <i>Oncorhynchus clarki pleuriticus</i>	FS-Sens	x	Sens-MD	Sens-MD				Sens	Requires cool, clear water in streams with well vegetated banks, which provides cover and bank stability. Deep pools and structures such as boulders and logs provide instream cover. This species is believed to have formerly been widespread in lakes, rivers, and streams in Utah, however now it is limited to isolated headwater streams and other rigorous environments where other species such as rainbow trout and Yellowstone cutthroat trout have not been introduced. (BE/BA)	Unlikely. Suitable habitat present in the proposal area. <i>O. clarki</i> found in surveys of Rilda Canyon Creek. (Walker 2004, de la Hoz 2004), but not the subspecies. <i>O. c. pleuriticus</i> not found in the proposal area. (BE/BA)
Bonneville cutthroat trout <i>Oncorhynchus clarki utah</i>	FS-Sens	?	Sens-MD	Sens-MD				Sens	Requires cool, clear, well-oxygenated water and the presence of clean, well-sorted gravels with minimal fine sediments for successful spawning. They are found at high, moderate and low elevations in small head water streams in the Bonneville basin. (BE/BA)	Unlikely. Suitable habitat present in the proposal area. <i>O. clarki</i> found in surveys of Rilda Canyon Creek. (Walker 2004, de la Hoz 2004), but not the subspecies. <i>O. c. utah</i> not found in the proposal area. (BE/BA)
Colorado squawfish (pikeminnow) <i>Ptychocheilus lucius</i>	F-End	o	End-Em	End-Em	E	S-ESA		End	Endemic to the Colorado River Basin. Historically it extended from the Green River in Wyoming, to the Gulf of California; it was widespread and abundant in warm-water rivers and tributaries. It is a long-distance migrator (hundreds of kilometers to and from spawning areas). Adults require deep pool and eddies habitats in streams that have high spring flows. (BE/BA)	Extremely unlikely. Habitat absent from proposal area. Scope of project unlikely to affect watershed far downstream. (BE/BA, PAP 1:58) Has not been found in surveys of Rilda Canyon Creek. (Walker 2004, de la Hoz 2004)

Species	FS R4 Status	MLSNF Status	MLSNF Rilda BE/BA	MLSNF Rilda WRR	USFWS Emery	DWR Emery	MLSNF MIS	PAP	Habitat/Range	Potential to Occur in Rilda Proposal Area
Razorback sucker <i>Xyrauchen texanus</i>	F-End	o	End-Em	End-Em	E	S-ESA		End	Historic distribution was mainly along the mainstreams of the Colorado, Green and San Juan Rivers. They presently only occur in a portion of their former range in these rivers. The nearest known population occurs approximately 50 miles from the project area in the Lower San Rafael River and Green River. The species is normally found in water four to ten feet deep, within areas of strong currents and backwaters. (BE/BA)	Extremely unlikely. Habitat absent from proposal area. Scope of project unlikely to affect watershed far downstream. (BE/BA, PAP 1:58) Has not been found in surveys of Rilda Canyon Creek. (Walker 2004, de la Hoz 2004)
INVERTEBRATES										
Macroinvertebrates (Aquatic) Unspecified: Includes Mayfly (<i>Ephemera spp.</i> , <i>Ephemera doddsi</i>), Dipterans (Chironomidae)				MIS-MD			X	Other		Known occurrence. Suitable habitat present in Rilda Canyon Creek.
PLANTS										
Chatterley onion <i>Allium geyeri chatterleyi</i>	FS-Sens	x							Pinyon/juniper, ponderosa pine, sagebrush, grass-forb, spruce-fir communities, typically moist, 6500-10500'. (Welsh 803)	Potential. Suitable habitat present. Specimens or habitat not found by plant surveys. (Collins 2004b)
Sweet-flowered rock jasmine <i>Androsace chamaejasme carinata</i>	FS-Sens	x							Alpine tundra, 10000-12600', Grand & San Juan Counties. (Welsh 497)	Extremely unlikely. Suitable habitat absent, out of range. Specimens or habitat not found by plant surveys. (Collins 2004b)
Pink Trail columbine <i>Aquilegia flavescens rubicunda</i>	FS-Sens	x	Sens-MD					X	Spring seeps and perennial wet sites on east side of Wasatch Plateau. (BE/BA)	Potential. Suitable habitat present. Specimens or habitat not found by plant surveys. (Collins 2004b)
Blackell milkvetch <i>Asragalus consobrinus</i>	FS-Sens	?							Sagebrush-grassland, pinyon-juniper communities at 6000-7200', (Welsh 359)	Potential. Suitable habitat present. Specimens or habitat not found by plant surveys. (Collins 2004b)

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Species	FS R4 Status	MLS NF Status	MLS NF Rilda BE/BA	MLS NF Rilda WRR	USFWS Emery	DWR Emery	MLS NF MIS	PAP	Habitat/Range	Potential to Occur in Rilda Proposal Area
Deseret milkvetch <i>Astragalus desereticus</i>	F-Thr	?							Sagebrush-juniper community at 6000', Utah County endemic. (Welsh 360)	Unlikely. Suitable habitat present, but out of range. Specimens or habitat not found by plant surveys. (Collins 2004b)
Heliotrope milkvetch <i>Astragalus montii</i>	F-Thr	x						X	Known only from Flagstaff limestone at 11000', Sanpete County endemic. (Welsh 370)	Extremely unlikely. Suitable habitat absent, out of range. Specimens or habitat not found by plant surveys. (Collins 2004b)
Slender moonwort <i>Botrichium lineare</i>	FS-Sens	?							Grass-forb meadows, under trees in woods, limestone cliffs, 4900-6600', in Utah known only from Salt Lake County. UNPS	Extremely unlikely. Suitable habitat absent, out of range. Specimens or habitat not found by plant surveys. (Collins 2004b)
Creutzfeldt-flower cryptanth <i>Cryptantha creutzfeldtii</i>	FS-Sens	x	Sens-MD						Shallow, rocky, heavy clay soils; open Mancos shale slopes. Endemic to central Utah in Carbon and Emery Counties at 5000-6500'. (BE/BA)	Extremely unlikely. Suitable habitat absent, out of range. Specimens or habitat not found by plant surveys. (Collins 2004b)
Jones cycladenia <i>Cycladenia humilis</i> var. <i>jonesii</i>			Thr-Em		T			X	Gypsiferous saline soils on the Chinle, Cutler, and Summerville Formations in cool desert shrub and juniper communities, 4400-6000'; central Emery County. (BE/BA)	Extremely unlikely. Suitable habitat absent, out of range. Specimens or habitat not found by plant surveys. (Collins 2004b)
Pinnate spring-parsley <i>Cymopterus beckii</i>	FS-Sens	x							Sandy or stony places, pinyon-juniper-mountain brush communities, 5600-7050', San Juan and Wayne Counties. (Welsh 621)	Unlikely. Suitable habitat present, but out of range. Specimens or habitat not found by plant surveys. (Collins 2004b)
Abajo daisy <i>Erigeron abajoensis</i>	FS-Sens	x							Pinyon-juniper, ponderosa pine, and spruce-fir communities at 7000-11300', Garfield, Wayne, Piute, San Juan Counties. (Welsh 183)	Unlikely. Suitable habitat present, but out of range. Specimens or habitat not found by plant surveys. (Collins 2004b)

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Species	FS R4 Status	MLS NF Status	MLS NF Rilda BE/BA	MLS NF Rilda WRR	USFWS Emery	DWR Emery	MLS NF MIS	PAP	Habitat/Range	Potential to Occur in Rilda Proposal Area
Carrington daisy <i>Erigeron carringtonae</i>	FS-Sens	x	Sens-MD						Limestone outcrops and escarpments in subalpine vegetation type. Occurs on wind blown ridge tops and snowdrift sites at high elevations of the Wasatch Plateau (9000-11000'). (BE/BA)	Extremely unlikely. Suitable habitat absent, out of range. Specimens or habitat not found by plant surveys. (Collins 2004b)
Kachina daisy <i>Erigeron kachinensis</i>	FS-Sens	x							Seeps and hanging gardens of the Colorado Plateau, at 5500-6200', San Juan County. (Welsh 187)	Extremely unlikely. Suitable habitat absent, out of range. Specimens or habitat not found by plant surveys. (Collins 2004b)
Maguire daisy <i>Erigeron maguirei</i>			Thr-Em		T			X	Cool, moist wash bottoms and dry partially shaded slopes of eroded sandstone cliffs. Wingate, Chinle, and Navajo Sandstone Formations in pinyon-juniper, mountain shrub, ponderosa pine, and Douglas fir communities. Endemic to San Raphael Swell. (BE/BA)	Extremely unlikely. Suitable habitat absent, out of range. Specimens or habitat not found by plant surveys. (Collins 2004b)
La Sal daisy <i>Erigeron mancus</i>	FS-Sens	x							Alpine forb and grass-sedge communities at 10000-12000' in La Sal Mountains. (Welsh 188)	Extremely unlikely. Suitable habitat absent, out of range. Specimens or habitat not found by plant surveys. (Collins 2004b)
<i>Erigeron mancus</i>	FS-Sens	x	Sens-MD					X	Usually found on sites that have a high water table, near springs or stream beds; riparian sites within the Pinyon/Juniper, sagebrush and wash communities between 5500-8000'. River birch and squaw brush are the most commonly associated species. Endemic to Duchesne, and Carbon Counties. (BE/BA)	Potential. Suitable habitat present. Specimens or habitat not found by plant surveys. (Collins 2004b)
Canyonlands tomatium <i>Lomatium latilobum</i>	FS-Sens	x							Pinyon-juniper and desert shrub communities, mainly in Entrada Sandstone, at 5000', Grand and San Juan Counties. (Welsh 631)	Extremely unlikely. Suitable habitat absent, out of range. Specimens or habitat not found by plant surveys. (Collins 2004b)

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Species	FS R4 Status	MLS NF Status	MLS NF Rilda BE/BA	MLS NF Rilda WRR	USFWS Emery	DWR Emery	MLS NF MIS	PAP	Habitat/Range	Potential to Occur in Rilda Proposal Area
San Rafael cactus <i>Pediocactus despainii</i>			End-Em		E			X	Open pinyon-juniper community on limestone gravels, 6000- 6200'; Endemic to central Emery County. (BE/BA)	Unlikely. Suitable habitat present, but out of range. Specimens or habitat not found by plant surveys. (Collins 2004b)
Winkler (pincushion) cactus <i>Pediocactus winkleri</i>	F-Thr	?	Thr-Em		T			X	Salt desert shrub communities, 4800-5200'. Endemic to northern Wayne County.	Extremely unlikely. Suitable habitat absent, out of range. Specimens or habitat not found by plant surveys. (Collins 2004b)
Clay phacelia <i>Phacelia argillacea</i>	F-End	?							Steep hillsides in a sparse pinyon-juniper and mountain brush community on Green River Shale at 6600' in Spanish Fork Canyon, Utah County. (Welsh 321)	Extremely unlikely. Suitable habitat absent, out of range. Specimens or habitat not found by plant surveys. (Collins 2004b)
Arizona willow <i>Salix arizonica</i>	FS-Sens	x	Sens-MD						Specific habitat that occurs as narrow strips in wet meadows along perennial streams; known on MLSNF only from Muddy Creek drainage. (BE/BA)	Unlikely. Suitable habitat present, but out of range. Specimens or habitat not found by plant surveys. (Collins 2004b)
Barneby reed-mustard <i>Schoenocrambe barnebyi</i>			End-Em		E			X	<i>Eriogonum</i> and <i>Ephedra</i> communities on mixed shade-scale soils of the Chinle Formation, 5600-5700'; south-central Emery County. (BE/BA)	Extremely unlikely. Suitable habitat absent, out of range. Specimens or habitat not found by plant surveys. (Collins 2004b)
Wright fishhook cactus <i>Sclerocactus wrightiae</i>			End-Em		E			X	Salt desert shrub to juniper communities on Mancos Shale, 7800-6200'; southeastern Emery County. (BE/BA)	Unlikely. Suitable habitat present, but out of range. Specimens or habitat not found by plant surveys. (Collins 2004b)
Musinea groundsel <i>Senecio musiniensis</i>	FS-Sens	x	Sens-MD						Limestone barrens and talus slopes of the southern Wasatch Plateau. (BE/BA)	Extremely unlikely. Suitable habitat absent, out of range. Specimens or habitat not found by plant surveys. (Collins 2004b)
Maguire campion <i>Silene petersonii</i>	FS-Sens	x	Sens-MD					X	Occurs at high elevations (10000 - 11800') on open calcareous and igneous soils derived from Flagstaff Limestone. (BE/BA)	Extremely unlikely. Suitable habitat absent, out of range. Specimens or habitat not found by plant surveys. (Collins 2004b)

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Species	FS R4 Status	MLS NF Status	MLS NF Rilda BE/BA	MLS NF Rilda WRR	USFWS Emery	DWR Emery	MLS NF MIS	PAP	Habitat/Range	Potential to Occur in Rilda Proposal Area
Ute ladies' tresses <i>Spiranthes diluvialis</i>	F-Thr	?							Along streams, bogs, open seepages in cottonwood, tamarix, willow, and pinyon-juniper communities at 4400-6800' (Weish 817)	Unlikely. Suitable habitat present, but out of range. Specimens or habitat not found by plant surveys. (Collins 2004b)
Last chance townsendia <i>Townsendia aprica</i>			Thr-Em		T			X	Salt desert shrub and pinyon-juniper communities on clay or clay silt of the Arapien and Mancos Shale Formations, 5100-8000'; southeastern Emery County. (BE/BA)	Extremely unlikely. Suitable habitat absent, out of range. Specimens or habitat not found by plant surveys. (Collins 2004b)

Explanation of Column Headings and Abbreviations Used in the Appendix A Species Matrix

FS R4 Status

US Forest Service Region 4 (Intermountain) list of special status species. Only those species with an entry in the Manti-La Sal National Forest column of the table are listed here.

Source: Intermountain Region proposed, endangered, threatened, and sensitive species: known/suspected distribution by forest (December 2003)

F-End	Federal Endangered (designated by USFWS under ESA)
F-Thr	Federal Threatened (designated by USFWS under ESA)
F-Pro	Federal Proposed (designated by USFWS under ESA)
FS-Sens	Forest Service Sensitive (designated by FS)

MLSNF Status

Species on the FS R4 list known or suspected to occur on the Manti-La Sal National Forest

Source: Intermountain Region proposed, endangered, threatened, and sensitive species: known/suspected distribution by forest (December 2003)

x	known distribution species and/or habitat
?	suspected or potential habitat
o	offsite impacts (e.g. downstream)

MLSNF Rilda BE/BA

Species listed in Tables 1, 2, 3, or 4 of the Forest Service's draft Biological Evaluation and Biological Assessment (BE/BA) for the Rilda Canyon facilities.

End-Em	Federally listed "endangered" species that could occur in Emery County (Tables 1 and 3).
Thr-Em	Federally listed "threatened" species that could occur in Emery County (Tables 1 and 3).
Cand-Em	Federally listed "candidate" species that could occur in Emery County (Tables 1 and 3).
Sens-MD	Sensitive species that could occur in the Manti Division of the Manti-La Sal NF (Tables 2 and 4).

Shading indicates a species considered possible in the proposal area and carried forward for further discussion in the BE/BA.

MLSNF Rilda WRR

Species listed in Tables 1, 2, 3, or 4 of the Forest Service's draft Wildlife Resources Report (WRR) for the Rilda Canyon facilities.

End-Em	Federally listed "endangered" species that could occur in Emery County (Table 1).
Thr-Em	Federally listed "threatened" species that could occur in Emery County (Table 1).
Cand-Em	Federally listed "candidate" species that could occur in Emery County (Table 1).
Sens-MD	Sensitive species that could occur in the Manti Division of the Manti-LaSal NF (Table 2).
MIS-MD	Management Indicator Species (MIS) that could occur in the Manti Division of the Manti-LaSal NF (Table 3).
MB-MD	Neotropical migratory birds listed as priority species by the Utah Partners in Flight Avian Conservation Strategy that could occur on the Manti Division of the Manti-LaSal NF (Table 4).

Shading indicates a species considered possible in the proposal area and carried forward for further discussion in the Wildlife Resources Report.

USFWS Emery

Federally listed (Endangered Species Act) species known or suspected to occur in Emery County

Source: http://dwrcdc.nr.utah.gov/ucdc/ViewReports/te_cnty.pdf (accessed 03/30/05)

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- E A taxon that is listed by the U.S. Fish and Wildlife Service as "endangered" with the probability of worldwide extinction.
- T A taxon that is listed by the U.S. Fish and Wildlife Service as "threatened" with becoming endangered.
- C A taxon for which the U.S. Fish and Wildlife Service has on file sufficient information on biological vulnerability and threats to justify it being a "candidate" for listing as endangered or threatened.
- E Extirp An "endangered" taxon that is "extirpated" and considered by the U.S. Fish and Wildlife Service to no longer occur in Utah.

Each species with an entry in this column is addressed in the ESA Section 7 "no effect" concurrence letter from Henry Maddux, USFWS, to Jerriann Ernstsens, UDOGM, dated May 16, 2005. (See Appendix B)

DWR Emery

State listed species known or suspected to occur in Emery County on the September 22, 2004 version of the state sensitive species list.

Source: http://dwrcdc.nr.utah.gov/ucdc/ViewReports/sscounty_20040922.pdf (accessed 03/30/05)

Yellow-billed Cuckoo (*Coccyzus americanus*) listed as "possibly" occurring in Emery County.

Bald eagle (*Haliaeetus leucocephalus*) listed as "breeding" in Emery County.

Black-footed ferret (*Mustela nigripes*) listed as "unconfirmed" extirpated from Emery County.

- S-ESA Federal listed or candidate species under ESA
- SPC Species of concern
- CS Conservation Species with special management under a Conservation Agreement

MLSNF MIS

Species identified in the USFS Manti-La Sal National Forest Plan as "Management Indicator Species" to fulfill requirements of 36CFR Chapter II - 219.19.

- X Species is a Management Indicator Species for the Manti-La Sal National Forest

PAP

Species listed in the text and in tables 300-1 through 300-4 of the PacificCorp PAP (PAP 2:56-62)

- End Species listed as "Endangered" in Table 300-1 of the PAP (PAP 2:57-58)
- Thr Species listed as "Threatened" in Table 300-1 of the PAP (PAP 2:57-58)
- Sens Species listed in Table 300-2 (Sensitive Species) of the PAP (PAP 2:59-60)
- Other Species listed in Table 300-3 (Other Wildlife of Consideration) of the PAP (PAP 2:61)
- MB Species listed in Table 300-4 (Migratory Birds) of the PAP (PAP 2:62)
- X Plant species listed in "Threatened, Endangered, and Sensitive Plant Species" discussion in the PAP (PAP 2:56)

Nomenclature Notes:

There is some variation in common and scientific names used by the various sources.

The DWR lists use: *Corynorhinus townsendii* = Townsend's big-eared bat.

The USFS R4 list uses: *Corynorhinus townsendii pallescens* = Western big-eared bat.

The MLSNF BE/BA, WRR, and PAP use: *Plecotus townsendii pallescens* = Townsend's big-eared bat.

The DWR lists use: *Lynx canadensis* = Canada lynx.

The USFS R4 list uses: *Lynx canadensis* = North American lynx.

The DWR lists use: *Strix occidentalis* = Spotted owl.

The USFS R4 list uses: *Strix occidentalis lucida* = Mexican spotted owl.

The DWR lists use: *Gila elegans* = Bonytail.

The USFS R4 list uses: *Gila elegans* = Bonytail chub.

The DWR lists use: *Ptychocheilus lucius* = Colorado pikeminnow.

The USFS R4 list uses: *Ptychocheilus lucius* = Colorado squawfish.

The DWR lists use: *Pediocactus winkleri* = Winkler pincushion cactus.

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Deer Creek Coal Mine: Mining Plan Modification
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The USFS R4 list uses: *Pediocactus winkleri* = Winkler cactus.

The PAP uses: *Cervus canadensis* = Rocky Mountain elk

The USFS uses: *Cervus elaphus* = Rocky Mountain elk

The PAP uses: *Silene petersonii* = Plateau catchfly

The PAP uses: *Aquilegia flavescens* = Yellow columbine

References:

To save space, references are abbreviated in the table. Citations of primary sources used by these references have been omitted from the Habitat/Range descriptions in the table.

BE/BA = USDA-FS 2005a

WRR = USDA-FS 2005b

FS EA = USDA-FS 1999

PAP = PacifiCorp 2004. See Part 5.5 of the EA for the citation method.

UCDC = DWR-UCDC 2005

UNPS = Utah Native Plant Society 2005

Welsh = Welsh, S.L., *et al.* 1987.

APPENDIX B - Consultation Letters

National Historic Preservation Act, Section 106 Concurrence Letter
Wilson G. Martin, SHPO, to D. Wayne Hedberg, DOGM
March 18, 2005

Endangered Species Act, Section 7 Concurrence Letter
Henry R. Maddux, USFWS, to Jerriann Ernstsens, DOGM
May 16, 2005

Digitally scanned images follow.



State of Utah

JON M. HUNTSMAN, JR.
Governor

GARY R. HERBERT
Lieutenant Governor

Department of Community and Economic Development

YVETTE DONOSSO DIAZ
Executive Director Designee

Division of State History / Utah State Historical Society

PHILIP F. NOTARIANNI
Division Director

March 18, 2005

D. Wayne Hedberg
Permit Supervisor
Division of Oil, Gas and Mining
1594 West North Temple, Suite 1210
P. O. Box 145801
Salt Lake City UT 84114-5801

Incoming
2/15/2018
Gregg J. J. J.
and Wayne #

RE: Replacement of Volume II, Energy West Mining Inc., PacifiCorp, Deer Creek Mine,
E/015/0018, Task ID #2093, Outgoing File

In Reply Please Refer to Case No. 05-0465

Dear Mr. Hedberg:

The Utah State Historic Preservation Office received the referenced information on
March 10, 2005. After consideration of the consultation request in behalf of the Division of Oil,
Gas & Mining, the Utah Preservation Office provides the following comments per U.A.C. 9-8-
404.

Section 404 Consultation DOGM; USHPO concurs with the determination of No Historic
Properties Affected.

This information is provided on request to assist with state law responsibilities as specified in
U.A.C. 9-8-404. If you have questions, please contact me at (801) 533-3552. My e-mail address
is wmartin@utah.gov

Sincerely,

Wilson G. Martin
State Historic Preservation Officer - Utah

JLD:04-0465 DOGM/NAE

0045



United States Department of the Interior
FISH AND WILDLIFE SERVICE
UTAH FIELD OFFICE
2369 WEST ORTON CIRCLE, SUITE 50
WEST VALLEY CITY, UTAH 84119

In Reply Refer To
FWS/R6
ES/UT
05-0547

May 16, 2005

RECEIVED
MAY 18 2005
DIV OF OIL GAS & MINING

Jerriann Ernsten
Division of Oil, Gas, and Mining
1594 West North Temple, Suite 1210
P.O. Box 145801
Salt Lake City, Utah 84114-5801

Jerriann
2/15/0018
Cory Jernigan
CPM
Wage H.

RE: Informal Section 7 Endangered Species Consultation, Energy West Mining., PacifiCorp.
Deer Creek Mine, Rilda Canyon Portal, C/015/0018

Dear Ms. Ernsten:

The U.S. Fish and Wildlife Service (Service) has reviewed your letter of March 3, 2005 and a Biological Evaluation for the project proposal provided in e-mails of February 25 and March 24, 2005, from Terry Nelson of the Manti-LaSal National Forest. Potential impacts to proposed or listed species from mining activities have been previously addressed in the Service's September 24, 1996 Biological Opinion and Conference Report on Surface Coal Mining and Reclamation Operations under the Surface Coal Mining and Reclamation Act of 1977. As part of the terms and conditions of this BO, the regulatory authority must implement and require compliance with any species-specific protective measures developed by the Service field office and the regulatory authority.

We concur with your "no effect" determination for the following candidate, threatened and endangered species and critical habitat included in the species list for Emery County: Barneby Reed-mustard, Jones cycladenia, last chance townsendia, Maguire daisy, San Rafael cactus, Winkler cactus, Wright fishhook cactus, bonytail, Colorado pikeminnow, humpback chub, razorback sucker bald eagle, Mexican spotted owl, western yellow-billed cuckoo, black-footed ferret, southwestern willow flycatcher. No endangered species-specific protective measures are considered necessary for the subject project.

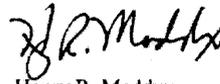
Should project plans change, or if additional information on the distribution of listed or proposed species becomes available, this determination may be reconsidered.

Only a Federal agency can enter into formal Endangered Species Act section 7 consultation with the Service. A Federal agency may designate a non-Federal representative to conduct informal

consultation or prepare a biological assessment by giving written notice to the Service of such a designation. The ultimate responsibility for compliance with ESA section 7, however, remains with the Federal agency.

We appreciate your interest in conserving endangered species. If further assistance is needed or you have any questions, please contact Tiera Whitton at (201) 975-3330, extension 328.

Sincerely,



Henry R. Maddux
Utah Field Supervisor

cc: OSM - Denver (Attn: Ranvir Singh)
UDWR - Salt Lake City (Attn: Frank Howe)
USFS - Manti LaSal Supervisor's Office, Price (Attn: Terry Nelson)

APPENDIX C - Seed Mixes

Planting rates for grasses, forbs, and shrubs are given in pounds of pure live seed (PLS) per acre. Planting rates for trees are given in seedlings per acre.

Revegetation Seed Mix for:
Pinyon-Juniper/Mountain Brush Community

<u>Common Name</u>	<u>Scientific Name</u>	<u>Planting Rate</u>
<u>Grasses</u>		
Thickspike Wheatgrass	<i>Agropyron dasystachyum</i> var. Critana	2.0 lbs PLS/acre
Western Wheatgrass	<i>Agropyron smithii</i> var. Rosanna	3.0 lbs PLS/acre
Bluebunch Wheatgrass	<i>Agropyron spicatum</i>	1.0 lbs PLS/acre
Great Basin Wildrye	<i>Elymus cinereus</i>	2.0 lbs PLS/acre
Indian Ricegrass	<i>Oryzopsis hymenoides</i> var. Paloma	3.0 lbs PLS/acre
Big Bluegrass	<i>Poa ampla</i>	0.5 lbs PLS/acre
<u>Forbs</u>		
Louisiana Sage	<i>Artemisia ludoviciana</i>	0.2 lbs PLS/acre
Blueleaf Aster	<i>Aster glaucoides</i>	0.5 lbs PLS/acre
Northern Sweetvetch	<i>Hedysarum boreale</i>	1.0 lbs PLS/acre
Blue Flax	<i>Linum lewisii</i>	1.0 lbs PLS/acre
Palmer Penstemon	<i>Penstemon palmeri</i>	0.5 lbs PLS/acre
<u>Shrubs</u>		
Saskatoon Serviceberry	<i>Amelanchier alnifolia</i>	1.0 lbs PLS/acre
Big Sagebrush	<i>Artemisia tridentata wyomingensis</i>	0.5 lbs PLS/acre
Fourwing Saltbush	<i>Atriplex canescens</i>	3.0 lbs PLS/acre
Curl-leaf Mountain Mahogany	<i>Cercocarpus ledifolius</i>	2.5 lbs PLS/acre
<u>Trees</u>		
Utah Juniper	<i>Juniperus osteosperma</i>	200 trees/acre
Rocky Mountain Juniper	<i>Juniperus scopulorum</i>	200 trees/acre
Pinyon Pine	<i>Pinus edulis</i>	200 trees/acre

Revegetation Seed Mix for:
Sagebrush/Grass Community

<u>Common Name</u>	<u>Scientific Name</u>	<u>Planting Rate</u>
<u>Grasses</u>		
Thickspike Wheatgrass	<i>Agropyron dasystachyum</i> var. Critana	2.0 lbs PLS/acre
Western Wheatgrass	<i>Agropyron smithii</i> var. Rosanna	2.0 lbs PLS/acre
Salina Wildrye	<i>Elymus salinus</i>	2.0 lbs PLS/acre
Indian Ricegrass	<i>Oryzopsis hymenoides</i> var. Paloma	3.0 lbs PLS/acre
Sandberg Bluegrass	<i>Poa secunda</i>	2.0 lbs PLS/acre
Needle and Thread Grass	<i>Stipa comata</i>	3.0 lbs PLS/acre
<u>Forbs</u>		
Louisiana Sage	<i>Artemisia ludoviciana</i>	0.2 lbs PLS/acre
Blueleaf Aster	<i>Aster glaucoides</i>	0.5 lbs PLS/acre
Northern Sweetvetch	<i>Hedysarum boreale</i>	1.0 lbs PLS/acre
Blue Flax	<i>Linum lewisii</i>	1.0 lbs PLS/acre
Palmer Penstemon	<i>Penstemon palmeri</i>	0.5 lbs PLS/acre
<u>Shrubs</u>		
Big Sagebrush	<i>Artemisia tridentata wyomingensis</i>	1.0 lbs PLS/acre
Fourwing Saltbush	<i>Atriplex canescens</i>	2.0 lbs PLS/acre
Snowberry	<i>Symphoricarpos oreophilus</i>	1.2 lbs PLS/acre

Revegetation Seed Mix for:
White Fir/Aspen Community

<u>Common Name</u>	<u>Scientific Name</u>	<u>Planting Rate</u>
<u>Grasses</u>		
Western Wheatgrass	<i>Agropyron smithii</i> var. Rosanna	3.0 lbs PLS/acre
Bluebunch Wheatgrass	<i>Agropyron spicatum</i>	1.0 lbs PLS/acre
Mountain Brome	<i>Bromus marginatus</i>	2.0 lbs PLS/acre
Slender Wheatgrass	<i>Elymus trachycaulus</i> ssp. <i>trachycaulus</i>	2.0 lbs PLS/acre
Indian Ricegrass	<i>Oryzopsis hymenoides</i> var. Paloma	2.0 lbs PLS/acre
Kentucky Bluegrass	<i>Poa pratensis</i>	1.0 lbs PLS/acre
<u>Forbs</u>		
Louisiana Sage	<i>Artemisia ludoviciana</i>	0.2 lbs PLS/acre
Pacific Aster	<i>Aster chilensis</i>	0.2 lbs PLS/acre
Northern Sweetvetch	<i>Hedysarum boreale</i>	1.0 lbs PLS/acre
Silky Lupine	<i>Lupinus sericeus</i>	1.0 lbs PLS/acre
Rocky Mountain Penstemon	<i>Penstemon strictus</i>	1.0 lbs PLS/acre
<u>Shrubs</u>		
Saskatoon Serviceberry	<i>Amelanchier alnifolia</i>	2.0 lbs PLS/acre
Big Sagebrush	<i>Artemisia tridentata wyomingensis</i>	0.2 lbs PLS/acre
Skunkbush Sumac	<i>Rhus trilobata</i>	1.0 lbs PLS/acre
<u>Trees</u>		
White Fir	<i>Abies concolor</i>	200 trees/acre
Blue Spruce	<i>Picea pungens</i>	200 trees/acre
Quaking Aspen	<i>Populus tremuloides</i>	200 trees/acre

APPENDIX D - Past, Present, and Future Actions

Action	Implementation Dates (Begin and End)	Residual Effects
<i>Past</i>		
I. Minerals: Coal Mining		
<p><u>Helco, Leroy, Jeppson, & Rominger Mines.</u> These small mines were located just down-canyon from the proposed surface facilities in Rilda Canyon. They were all reclaimed by the Utah DOGM's Abandoned Mine Reclamation Program in 1988.</p>	1938 - 1969	<p>The mine portals were sealed, the area put back to approximate original contour, and the area revegetated. Original productivity of the area has been restored.</p>
<p><u>Crandall Canyon Mine.</u> In Crandall Canyon (S1/2 NW1/4, Sec 5, T16S, R7E, SLBM) - The mine was constructed in 1980 and is still an active mine. The mine has disturbed approximately 5.4 acres, not including the Crandall Canyon Road. The Crandall Canyon Road was widened to two lanes and asphalt paved to accommodate coal haul traffic.</p>	1980 - Present	<p>The mine operates 24 hours a day, every day at differing intensities depending on production shifts. 13.6 acres are permitted for disturbance; however, only 9.9 acres have actually been disturbed: 8.2 acres on Genwal fee and 5.4 acres of vegetation/habitat has been removed for operations on the Forest. The physical activity and operations/haul traffic on the Crandall Canyon and Huntington Canyon roads impacts other resources and uses. Approximately 3,900 acres of NFS, State, and private lands included in permit area. Subsidence of mined lands has occurred. No subsidence of Crandall Creek is permitted.</p>
<p><u>Old Leamaster Mine.</u> In Mill Fork Canyon (NE1/4 SE1/4 SW1/4, Sec 16, T16S, R7E, SLBM). The original Mill Fork Road, now a Forest Development Road (FDR 50245), was probably constructed prior to 1943 for access to the mine and for coal exploration. The Forest Development Trail that extends several miles up the canyon, beyond the Forest Development Road (171, 391), and Trails 086 and 394 on the north slope of the canyon, were most likely originally constructed prior to 1943 as coal exploration roads. The road and trails are maintained on the Forest Transportation System.</p>	1943 - 1964	<p>The old mine was reopened in 1976 as the Huntington Canyon #4 Mine (see below). Most of the original disturbed area was re-disturbed and expanded for the new surface facilities.</p>

Action	Implementation Dates (Begin and End)	Residual Effects
<p><u>Huntington Canyon #4 Mine.</u> SW1/4 SW1/4, Sec 16, T16 S, R7E, SLBM. The mine was reconstructed at the Old Leamaster Mine in 1976 with a total surface disturbance of approximately 12.5 acres (almost all on private inholdings). A 25 kv powerline was constructed from the Huntington Canyon Power Plant in Huntington Canyon over the south Huntington Canyon slope to Mill Fork Canyon. Surface disturbance was minimized by helicopter installation and was designed to minimize impacts to raptors. The powerline remains today under a special-use permit and was extended in 1986 to provide service to the Crandall Canyon Mine. The mine was reclaimed in 1985 (recontoured to approximate original contour) and determined to be successful in 1995. Remnants of the highwalls are still visible. In 1985, the Mill Fork Road was reduced from two lanes to a single-lane (with turnouts). The second lane was recontoured and has been successfully revegetated. The permit area of 1,320 acres (private and NFS lands) were only partially mined. No visible signs of subsidence.</p>	<p>1976 - 1985</p>	<p>The area was reclaimed in 1985. Final bond release was made in 1998. There are no residual effects.</p>
<p><u>Deer Creek Mine, Rilda Canyon Fan Portal.</u> The breakout pad and access road (from forks to breakout) have disturbed approximately 2 acres. Underground mining has subsided extensive areas on East Mountain and the south slope/escarpment of Rilda Canyon and the Left Fork of Rilda Canyon. One small rock fall (probably induced by subsidence) on the Castlegate Sandstone cliff along the south slope of Rilda Canyon has been observed in the NE corner of Sec. 33. The Rilda Canyon Road, from the intersection with Hwy. 31 to the forks, was widened to two lanes, improved, and graveled by Emery County in 1995 and 1996 (See Transportation Section).</p>	<p>1995 - Present</p>	<p>The breakout pad removed approx. 2 acres of overstory riparian vegetation and non-riparian understory vegetation. Approximately 200 feet of the Left Fork creek channel is culverted. Fan noise and limited activity at the pad would affect wildlife until they become accustomed to the disturbance. Subsidence has caused one small failure that damaged some trees and vegetation as described above. This is the only evidence of subsidence on the ground surface and no impacts have been discovered by monitoring.</p>

Action	Implementation Dates (Begin and End)	Residual Effects
<p><u>Deer Creek Mine</u>, Deer Creek Canyon. Portal facilities. The facilities have disturbed 20 acres. A paved Emery County road runs up Deer Creek Canyon from the intersection with Hwy. 31 to the mine, a distance of approximately 3 miles. Road width averages 20 feet. Most of the drainages in the vicinity of the mine are culverted.</p>	1946 – Present	
I. Minerals: Coal Exploration		
<p>Nearly 200 coal exploration holes have been drilled on East Mountain, a number of which were located at the head of Rilda Canyon.</p>	1950s - Present	<p>The drill sites, and the associated access roads, are reclaimed after the drilling is completed. All of the drill sites in Rilda Canyon have been successfully reclaimed and the reclamation bonds released.</p>
I. Minerals: Gas Exploration/Production		
<p><u>Flat Canyon /Indian Creek Gas Field (East Mountain Unit)</u>. Several wells produced gas but have been plugged.</p>	1950 - 1970	<p>These wells have been abandoned and have been revegetated. They are visible only from related slope changes.</p>
<p><u>Indian Creek Gas Field</u>. Meridian Oil drilled 6 wells since the early 1980's which are producing natural gas. There is a pipeline on the surface and a compressor station.</p>	1982 - Present	<p>Approximately 6 acres (1 acre/well) remains disturbed for gas production. Negligible residual effects are due to drainage and sediment control. Five of the wells are visible from Cottonwood Canyon Road.</p>
II. Recreation		
<p>Flat water fisheries improvements to Cleveland Reservoir, Huntington Reservoir and Potters Ponds.</p>	1995 - 2002	<p>Improved access, containment of motorized use, and designation of campsites has tended to improve soil, water, and vegetative components associated with these sites.</p>
<p><u>Huntington Canyon Restoration Project</u>. Improvement of over 60 sites and closure and rehabilitation of over 50 sites located along the U31 Highway corridor.</p>	1998 - 1999	<p>Improved access, containment of motorized use, designation of campsites, and streamside restoration activities have all combined to improve soil, water, and vegetative components along the Huntington Canyon corridor. Some displacement of dispersed camping to Lake Canyon area.</p>
III. Range/Vegetation		
<p>Grazing by sheep and/or cattle started shortly after settlement of Emery County.</p>	1870's	<p>Agriculture remains a basic industry in the county.</p>
<p>Rangeland improvements included installation of water troughs, to improve livestock distribution, and drift fences to better control cattle.</p>	Early 1900's	<p>Water troughs made water more available from small springs and seeps. Short fences kept cattle from drifting too far up canyons.</p>

Action	Implementation Dates (Begin and End)	Residual Effects
Initiation of improved grazing systems.	1950's and 1960's	More formal management prescriptions were established based on evolving scientific information.
<u>Flat Canyon Controlled Burn</u> . This controlled burn was used to remove conifer invading aspen stands and to regenerate the aspen. The fire escaped and burned portions of upper Rilda and Mill Fork Canyons.	1993	The aspen stands are regenerating. Some of the burned timber at the top of Flat Canyon was sold. Vegetation community is being re-established.
IV. Timber		
<u>State of Utah Timber Sale</u> . Sec. 36, T16S, R6E. Approximately 210 acres in drainage		
V. Surface Structures: Power Lines		
<u>Utah Power 345 kv line (Huntington Power Plant to Mount Pleasant)</u> . Crosses through the head of Rilda Canyon, then northwest across East Mountain.	1977 - Present	Access roads have been reclaimed. Powerline is visually prominent.
Present		
I. Minerals: Coal Mining		
<u>Crandall Canyon Mine</u> . Portal and entry development is currently underway on fee property in the South Crandall Lease.	1980 - Present	The mine is in continuous operation. The impacts will continue until the mine is reclaimed.
<u>Deer Creek Mine</u> . Entry development in the Mill Fork Tract is currently underway. Access to the Mill Fork Tract is currently provided through the Deer Creek Mine.	Present	The mine is in continuous operation. The impacts will continue until the mine is reclaimed.
II. Recreation		
Ongoing recreation use on East Mountain.	Present	Dispersed recreation affects soils and vegetation. These impacts are similar to what occurs elsewhere on the forest.
III. Range/Vegetation		
Livestock reductions and consolidation of allotments on sheep allotments: Crandall Ridge and Crandall Canyon. A portion of the Crandall Ridge Allotment was moved into the Trail Mountain cattle allotment.	2001	Due to changes in sheep operators and concerns for resource conditions, livestock reductions and consolidation of allotments was initiated. Allotment boundaries have been adjusted and permits modified. This will reduce/eliminate grazing impacts on steep head walls in the head of Crandall Canyon mostly on SITLA lands. Monitoring of vegetative and soil trends continue.

Action	Implementation Dates (Begin and End)	Residual Effects
Permitted livestock within the area: Gentry Mt. Allotment 1440 cattle, 6/27-9/30. Trail Mt. Allotment 901 cattle, 6/21-9/20. East Mt. Allotment 341 cattle, 6/21-9/10. Crandall Canyon and Crandall Ridge Allotment, approximately 900 sheep, 7/1-9/30. Horse Creek Allotment 666 sheep, 7/1-9/30.	1998 - 2001	Prescribed burning of aspen and sagebrush stands on East Mountain were completed to maintain healthy plant communities.
Range improvement inventory.	2002	Many water troughs needed replacement or heavy maintenance. Drift fences are still functioning as intended.
IV. Timber		
There are no current logging or other timber operations.	Present	No effects.
V. Surface Structures: Power Lines		
No current changes to existing power lines.	Present	No effects.
Reasonably Foreseeable Future		
I. Minerals: Coal Mining		
<u>Deer Creek Mine.</u> The anticipated life of the mine is approximately 16 more years. Mining will continue until the coal reserves are depleted.	2005 - 2021	The mine facilities will be removed, the surface restored to approximate original contour, topsoil replaced, and vegetation re-established. The total time for reclamation to final bond release is expected to be approximately 10 years.
<u>Crandall Canyon Mine.</u> The anticipated life of the mine is approximately 7 more years. Mining will continue until the coal reserves are depleted.	2005 - 2012	The mine facilities will be removed, the surface restored to approximate original contour, topsoil replaced, and vegetation re-established. The total time for reclamation to final bond release is expected to be approximately 10 years.
I. Minerals: Coal Exploration		
Approximately 15 to 20 coal exploration holes are expected over the life of the Deer Creek Mine. Most of the holes would be drilled with heli-portable rigs.	2006 - 2020	Surface effects are minimal when drilled with heli-portable rigs. The only surface impacts are from minor earth movement with hand tools to level the rig. All fluids and cuttings are contained and transported off the drill site.
I. Minerals: Oil and Gas Exploration		

Action	Implementation Dates (Begin and End)	Residual Effects
<p>Two exploratory gas wells have been proposed on School and Institutional Trust Lands Administration lands on the top of East Mountain, at the head of Rilda Canyon. The northern end of FR 50145 would be graveled to handle the equipment traffic. If economic deposits are found, a pipeline would be needed to connect the two wells to the pipeline in Flat Canyon.</p>	<p>2005</p>	<p>Surface effects would be two drill pads of approximately 1 acre each, and a graveled road in place of the current native surface road. If a pipeline were needed, it would probably be place in the road. A gas well could have a life of 20 to 30 years, after which the facilities would be remove, the disturbed areas replaced to approximate original contour, and the area revegetated.</p>
<p>II. Timber</p>		
<p><u>SITLA Timber Sale.</u> SITLA has proposed a timber sale on State lands they administer (Sec. 36, T15 S, R6E., and Sec. 2. T16S, R6E). Access to the area would require construction of approximately 3 miles of new gravel road and graveling of approximately 2.5 miles of FR 50244, which is currently a native surface road.</p>	<p>2006 - 2008</p>	<p>Effects would be soil compaction during logging operations and increased soil erosion until vegetation is re-established on the logged areas. SITLA would maintain road access to a currently roadless area.</p>

APPENDIX E - Maps

Standard Map Sheets Included in the Print Version of the EA:

Map 1: General Location

Scale 1:100,000 (1 inch = 1.6 miles)

Map 2: Rilda Canyon Location

Scale 1:24,000 (1 inch = 2,000 feet)

Map 3: Coal Mine Permit Areas in Huntington Canyon

Approximate scale 1:17,300 (1 inch = ~3.3 miles)

Map 4: Layout of Proposed Surface Facilities

Approximate scale: 1" = 300'.

This is a reduced copy of the map in RildaEA_AppxE_Map05.pdf (see below).

Oversized Map Sheets Included as Digital (pdf) Files on the CD Version of the EA:

The PAP contains several large format maps and drawings that describe the environment in Rilda Canyon and the proposed action. DOGM has scanned these maps as pdf-format electronic files. The source paper maps in the PAP are oversized and their electronic versions have large files. To keep this EA manageable, as both a physical and electronic document, these maps are included only in electronic form. The wide availability and pan-and-zoom capabilities of Adobe Acrobat Reader software ensure that users of the EA have the same access to map content as if paper copies were included. Users unable to access the electronic maps may request paper copies from DOGM.

The topographic base used for the 1:1200 scale maps has 5-foot elevation contours and shows Rilda Canyon Creek, lease boundaries, County Road 306, the boundary of the disturbed area footprint, the underground mine workings of the abandoned mines, and the entries and underground workings of the proposed mining.

The following maps are included on the CD:

Map 5: Layout of Proposed Surface Facilities

EA file name: RildaEA_AppxE_Map05.pdf

Source DOGM file name (size): 500-3.pdf (6978 kb)

Sheet size: 24"h x 48"w

Title: Deer Creek Mine Rilda Canyon Surface Facilities

Title Box Drawing #: 500-3

Drawing Scale: 1" = 100' (1:1200)

Content: Layout of proposed surface facilities (structures, parking areas, storage areas, hydrologic controls, soil stockpiles) and locations of earthwork cross sections on a topographic base.

Map 6: Earthwork Cross-sections (1 of 2)

EA file name: RildaEA_AppxE_Map06.pdf

Source DOGM file name (size): 500-4_all.pdf (2626 kb)

Sheet size: 26"h x 43"w

Title: Deer Creek Mine Rilda Canyon Facilities Cross Sections

Title Box Drawing #: DS1874D

Drawing Scale: 1" = 60' (1:720)

Content: Cross-section diagrams for the sections shown on RildaEA_AppxE_Map05.pdf.

Map 7: Earthwork Cross-sections (2 of 2)

EA file name: RildaEA_AppxE_Map07.pdf

Source DOGM file name (size): 500-4_4of5.pdf (1230 kb)

Sheet size: 36"h x 24"w

Title: Deer Creek Mine Rilda Canyon Facilities Subsoil/Construction Fill Cross Sections

Title Box Drawing #: 500-4

Drawing Scale: 1" = 60' (1:720)

Content: Cross-section diagrams for the sections in the eastern (Rominger) soil stockpile shown on RildaEA_AppxE_Map05.pdf.

Map 8: Construction Sequence

EA file name: RildaEA_AppxE_Map08.pdf

Source DOGM file name (size): 500-2.pdf (174 kb)

Sheet size: 28"h x 42"w

Title: Deer Creek Mine Rilda Canyon Facilities Sequence of Construction

Title Box Drawing #: MFS1889D

Drawing Scale: none

Content: Sequence of facilities construction steps shown as a series of cross-sectional diagrams.

Map 9: Soils

EA file name: RildaEA_AppxE_Map09.pdf

Source DOGM file name (size): 200-1.pdf (8474 kb)

Sheet size: 24"h x 48"w

Title: Deer Creek Mine Rilda Facilities Soils Map

Title Box Drawing #: 200-1

Drawing Scale: 1" = 100' (1:1200)

Content: Soil map units on a topographic base.

Map 10: Hydrology and Mine Plan

EA file name: RildaEA_AppxE_Map10.pdf

Source DOGM file name (size): HM-9.pdf (4257 kb)

Sheet size: 30"h x 42"w

Title: Deer Creek Mine North Rilda Area Geologic & Hydrologic Information

Title Box Drawing #: CE-10901-EM

Drawing Scale: 1" = 500' (1:6000)

Content: Surface topography, geologic structure (outcrops and faulting), surface and ground water monitoring station locations, existing and proposed underground mine plan, lease boundaries.

Map 11: Geology

EA file name: RildaEA_AppxE_Map11.pdf

Source DOGM file name (size): Map600-1.pdf (4686 kb)

Sheet size: 26"h x 43"w

Title: Deer Creek Mine Rilda Canyon: General Geology Well P-7 Cross Section Plan & Profile

Title Box Drawing #: DS1882D

Drawing Scale: as noted

Content: Surface and subsurface geology of Rilda Canyon shown in plan and cross section.

Map 12: Aerial Photograph

EA file name: RildaEA_AppxE_Map12.pdf

Source DOGM file name (size): Map500-1_2of2.pdf (8474 kb)

Sheet size: 24"h x 48"w

Title: Deer Creek Mine Rilda Canyon Pre-Disturbance Aerial

Title Box Drawing #: 500-1-SHEET2

Drawing Scale: 1" = 100' (1:1200)

Content: Lease boundaries and disturbed area footprint boundary superimposed on an aerial photograph base.

Map 13: Vegetation

EA file name: RildaEA_AppxE_Map13.pdf

Source DOGM file name (size): Vegetation.pdf (10,916 kb)

Sheet size: 24"h x 62"w

Title: Vegetation Map of the North Rilda Canyon Portal Facilities

Title Box Drawing #: None

Drawing Scale: 1" = 100' (1:1200)

Content: Vegetation community boundaries on a topographic base. Has photos of vegetation community types in the sheet margins.

0024



United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Utah State Office

P.O. Box 45155

Salt Lake City, UT 84145-0155

<http://www.blm.gov>



TAKE PRIDE
IN AMERICA

IN REPLY PLEASE REFER TO:

3482/ U-06039

(UT-923)

Certified Mail--Return Receipt Requested
Certificate No.

Mr. Carl Pollastro
Director of Technical Services and Project Development
Interwest Mining Company
One Utah Center, Suite 2000
Salt Lake City, Utah 84140-0200

Re: Minor Modification of Resource Recovery and Protection Plan (R2P2), 1st Right Sub-Mains and Ventilation Portals, Hiawatha Seam, Deer Creek Mine

Dear Mr. Pollastro:

The Bureau of Land Management (BLM) received a request dated 22 March 2005 from PacifiCorp by and through Interwest Mining Company (Interwest) and energy west Mining Company as mine operator to change the approved R2P2 by extending the 1st Right sub-mains and provide ventilation portals (request attached).

PacifiCorp proposes to drive entries to access ventilation portal sites as shown on the attached mine map "1st Right Sub-Main Extension & Projected Portal Sites Right-Fork Rilda Canyon." BLM understands this plan is based on extensive underground drilling to better define the geologic conditions, including the areas of naturally burned coal (map attached showing extent of underground drilling).

However, BLM understands further modifications could become necessary as actual mine conditions are encountered and additional analysis of the surface uses is completed.

The mine personnel project the recoverable coal reserves will increase by some 35,000 to 50,000 tons with this proposed R2P2 change (attached: Request for R2P2 Modification).

BLM approves development mining of the 1st Right Sub-Mains Extension with the planned rock slopes as shown. Should it become necessary to alter this configuration, PacifiCorp is required to consult with BLM and further modifications could be necessary. Should PacifiCorp store rock

James
4/12/05
Copy Wayne H. H.
MAR 25 2005

Jim S. Steved,
Shawn
RECEIVED
MAR 28 2005
DIV. OF OIL, GAS & MINING

from the rock slope drivages, the three (or more) entry access to coal remaining inby from the end of the 1st Right Sub-Main Extension will be maintained and not blocked with rock or other materials placed by the mine.

This approval of a minor modification to an existing R2P2 is Categorically Excluded from National Environmental Policy Act (NEPA) analysis in that no new surface disturbance will occur from this action as stated in Overview of BLM's NEPA Process, February 1997, Appendix 2, page 2-7 (F)(7).

The modification of the R2P2 complies with the Mineral Leasing Act of 1920, as amended, the regulations at 3480, and the lease terms and conditions. The modification will achieve maximum economic recovery of the federal coal partly because of efforts to recover coal under a powerline right-of-way and continuing efforts to mine as near low coal areas as possible. The low coal areas are much larger than originally projected.

The modification to the R2P2, as depicted on mine map "1st Right Sub-Main Extension & Projected Portal Sites Right-Fork Rilda Canyon" is approved, contingent on the requirements stated above and pending State Permit approval. A copy of the approved mine map is enclosed. If you have any questions, please contact Jeff McKenzie of my staff at (801) 539-4038.

Sincerely,
JAMES F KOHLER

James Kohler
Chief, Solid Minerals

Enclosures:

Approved Mine Map
Reference Mine/Geologic Map
Reference Underground Horizontal Drilling Map

cc: UT-070, Price, Utah (w/encl.)
Utah Division of Oil Gas and Mining (w/encl.)
1594 West North Temple, Suite 1210
Salt Lake City, Utah 84114-5801
Energy West Mining Company (w/encl.)
P. O. Box 310
Huntington, Utah 84528



United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Moab District
Price River/San Rafael Resource Area
125 South 600 West
P. O. Box 7004
Price, Utah 84501

July 16, 1997

3482
U-06039
U-024317
SL-051221
U-2810
(UT-066)

Pamela Grubaugh-Littig
Permit Supervisor
Department of Utah Natural Resources
Division of Oil, Gas and Mining
1594 West North Temple, Suite 1210
Box 145801
Salt Lake City, Utah 84114-5801

Re: Resource Recovery and Protection Plan (R2P2), PacifiCorp. Deer Creek Mine, Emery County, Utah

Dear Ms. Grubaugh-Littig

On May 16, 1997, the Bureau of Land Management (BLM) received from your office for our review/comments, PacifiCorp's response to technical deficiencies concerning the North Rilda area. Also, on July 2nd, we received from the Manti-LaSal National Forest (FS), PacifiCorp's revisions concerning:

- 1) the ground stability of the 4th North Mains crossing of the Right Fork Rilda Canyon; and
- 2) the Castlegate Escarpment statement of mining in the North Rilda area,

which was submitted to their office on the same date.

In addition to your request for BLM's review/comments, the FS has requested documentation of our findings concerning the location and entry stability of the proposed route (4th North Mains) accessing reserves of the Blind Canyon and Hiawatha coal seams in the North Rilda area.

As you may be aware, an approved R2P2 for the subject area is already in place. It is our understanding that PacifiCorp is now requesting to expand the current Deer Creek mining operation/mine permit area. In part, PacifiCorp seeks partial approval to afford a timely access into the North Rilda area in order to sustain the current level of longwall coal production.

According to the proposal, the 4th North Mains would access the reserves by advancing beyond the current permit boundary to the northern boundaries of Federal coal leases U-06039 and U-024317. Then, a series of east-west-oriented longwall panels would be developed along the east side of the Mains. These panels would be developed and sequentially extracted from the north to the south. PacifiCorp proposes to confine mine development at this time to the Blind Canyon coal seam and limit panel extraction to the four most northern panels.

Approval to complete extraction of the remaining panels in the Blind Canyon and Hiawatha Seams, which are developed under the Castlegate Escarpment, would be subject to the findings of the on-going Castlegate Escarpment Geotechnical Studies and number of other requirements made by the FS (archaeology survey, Spotted Bat survey, EA) on the affected areas.

In regard to the location and long-term stability of the 4th North Mains:

1) We recognize PacifiCorp's difficulty in determining the best location for the 4th North Mains and feel that an attempt to locate the Mill Fork fault zone by means of exploring with a continuous miner will not impact the surface or affect the hydrologic regime. However, it will provide data for maximizing recovery of the coal resource.

2) PacifiCorp, at the request of the SMA, provided step-by-step calculations to illustrate how the factor of safety was calculated for the coal pillars and entry opening. The safety factors were calculated by using **standard industry-accepted equations**. The calculated safety factors for pillar stability and entry opening are in the range of 3.57 to 23.94 and 4.92, respectively. In standard industry practice, safety factors used to define stable conditions and long-term stable conditions are 1 and 1.5 to 2, respectively. It is evident that PacifiCorp is well beyond the acceptable values for long-term stability.

Finally, approval for full-extraction (longwall) mining under the Castlegate Escarpment will be based on:

1) the **Castlegate Escarpment studies** provided by PacifiCorp; and

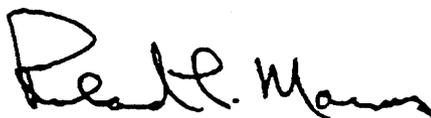
2) an **objective environmental analysis** of the affected resources by the SMA,

prior to BLM's determination.

The BLM has reviewed the proposed R2P2 Revisions/Deer Creek Mine Permit Expansion and all available information concerning the mining of the subject area. The BLM has determined that PacifiCorp's R2P2 for the Deer Creek Mine appears to be a logical and prudent mine plan. It is technically complete and complies with the Mineral Leasing Act of 1920, as amended, the regulations at 43 CFR 3480, the lease terms and conditions, and will achieve maximum economic recovery of the Federal coal. Therefore, we recommend approval of the proposed Deer Creek Mine permit expansion.

If you have any questions, please contact Barry Grosely in the Price River/San Rafael Resource Area at (801) 636-3606.

Sincerely,



Area Manager

cc: Manti-LaSal National Forest
599 Price River Drive
Price, Utah 84501

MFC

3482
SL-070645
U-02292
(U-065)Moab District
P.O. Box 970
Moab, Utah 84532

FEB 28 1991

Pamela Grubaugh-Littig, Permit Supervisor
State of Utah
Division of Oil, Gas and Mining
355 West North Temple Street
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203

Dear Ms. Grubaugh-Littig:

On February 21, 1990, the Bureau of Land Management (BLM) received PacifiCorp's proposed Rilda Canyon Lease Tract addition for the Deer Creek Mine Permit Application Package (PAP). The BLM was asked to review the resource recovery and protection plan (R2P2) and submit our findings which are discussed below.

PacifiCorp plans to enlarge the Deer Creek Mine Permit Area (Act/015/018) by adding an adjacent tract to the north. The tract includes one State of Utah coal lease (ML-22509), three Federal coal leases (U-7653, U-47977, and SL-050862) and the southern portion of Federal coal lease U-06039.

The R2P2 calls for the development of main entries in a north-northwest direction beyond the Roan's Canyon Fault. Longwall panels are projected on both sides of these main entries. A number of longwall panels located along the south side of Rilda Canyon will undermine portions of the canyon escarpments (see enclosed highlighted map). This has prompted an in-depth review of potential escarpment failure.

The Manti-LaSal National Forest (FS) has asked BLM to evaluate the R2P2 and determine if the mining plan provides adequate protection of surface resources in accordance with the Federal lease terms and conditions. The BLM is currently working on a response to the FS regarding our analysis of the escarpment issue. Final approval of mining zones that may affect sensitive escarpment areas is contingent on the completion of the technical studies currently underway. Because the mine plan provides adequate flexibility for any necessary future adjustments in these areas, development as proposed for the remainder of the R2P2 is recommended for approval.

We have determined that the R2P2 as submitted is complete and technically adequate. The R2P2 is also in compliance with the Mineral Leasing Act, as amended, the regulatory provisions of 43 CFR 3480, Federal lease terms and conditions, and will achieve maximum economic recovery (MER) of the Federal coal. Therefore, we recommend partial approval of the R2P2 for this permit action.

Sincerely yours,

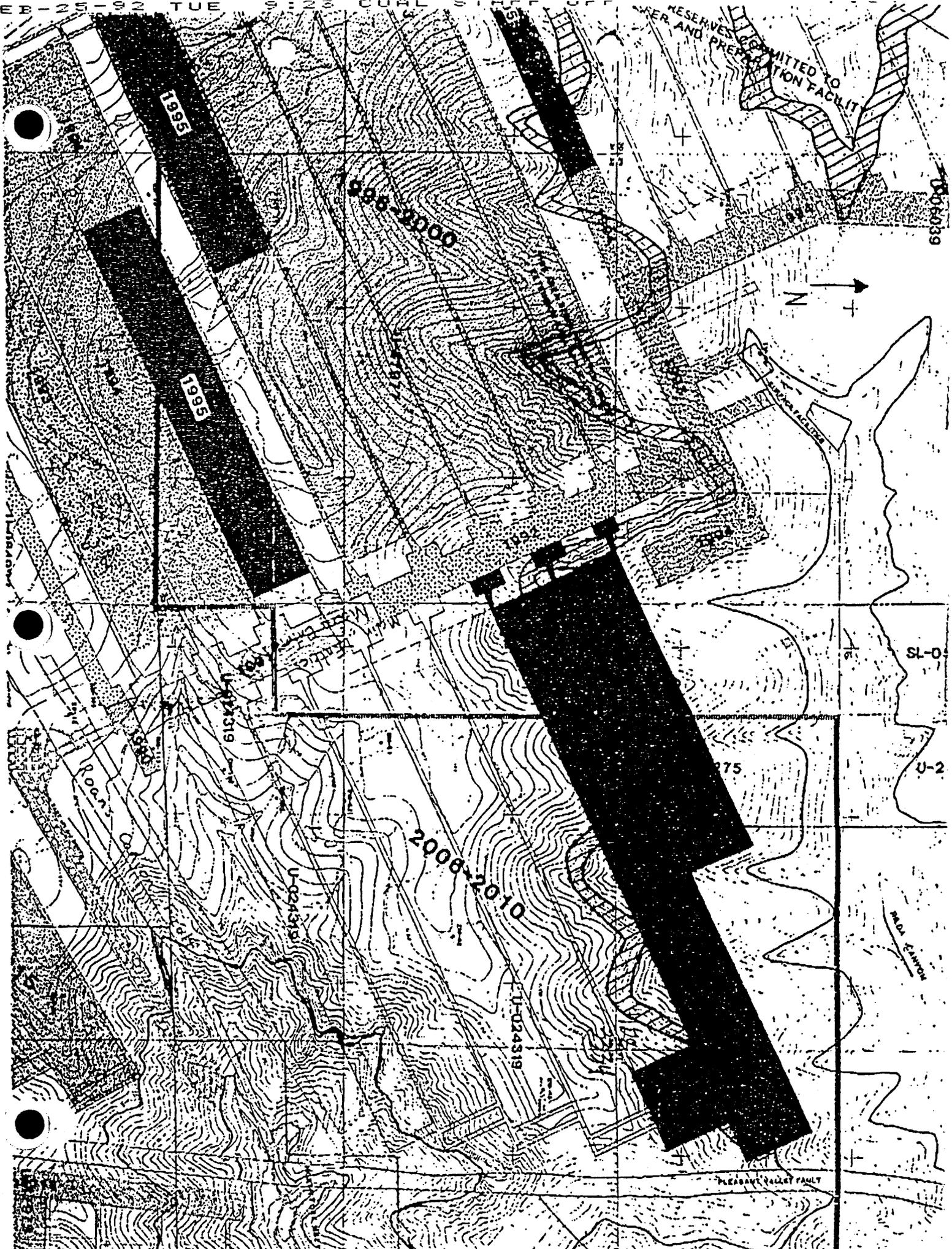
Mary Johnson
for

Assistant District Manager
Mineral Resources

Enclosure:
Mine Projection Map

cc: SD, Utah (U-921), w/enclosure
DM, Moab (U-065), w/enclosure
Office of Surface Mining, Denver, w/enclosure
PacifiCorp, SLC, Utah, w/enclosure
Manti-LaSal NF, Price, Utah, w/enclosure

SFalk:ks:2/15/91
Wang 2015D



0045



United States Department of the Interior
FISH AND WILDLIFE SERVICE

UTAH FIELD OFFICE
2369 WEST ORTON CIRCLE, SUITE 50
WEST VALLEY CITY, UTAH 84119

In Reply Refer To
FWS/R6
ES/UT
05-0547

May 16, 2005

RECEIVED
MAY 16 2005
DIV. OF OIL, GAS & MINING

Jerriann Ernstsens
Division of Oil, Gas, and Mining
1594 West North Temple, Suite 1210
P.O. Box 145801
Salt Lake City, Utah 84114-5801

Incoming
5/15/05
Copy Jerriann
CPAM
Wayne H.

RE: Informal Section 7 Endangered Species Consultation, Energy West Mining., PacifiCorp,
Deer Creek Mine, Rilda Canyon Portal, C/015/0018

Dear Ms. Ernstsens:

The U.S. Fish and Wildlife Service (Service) has reviewed your letter of March 3, 2005 and a Biological Evaluation for the project proposal provided in e-mails of February 25 and March 24, 2005, from Terry Nelson of the Manti-LaSal National Forest. Potential impacts to proposed or listed species from mining activities have been previously addressed in the Service's September 24, 1996 Biological Opinion and Conference Report on Surface Coal Mining and Reclamation Operations under the Surface Coal Mining and Reclamation Act of 1977. As part of the terms and conditions of this BO, the regulatory authority must implement and require compliance with any species-specific protective measures developed by the Service field office and the regulatory authority.

We concur with your "no effect" determination for the following candidate, threatened and endangered species and critical habitat included in the species list for Emery County: Barneby Reed-mustard, Jones cycladenia, last chance townsendia, Maguire daisy, San Rafael cactus, Winkler cactus, Wright fishhook cactus, bonytail, Colorado pikeminnow, humpback chub, razorback sucker bald eagle, Mexican spotted owl, western yellow-billed cuckoo, black-footed ferret, southwestern willow flycatcher. No endangered species-specific protective measures are considered necessary for the subject project.

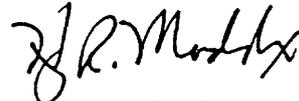
Should project plans change, or if additional information on the distribution of listed or proposed species becomes available, this determination may be reconsidered.

Only a Federal agency can enter into formal Endangered Species Act section 7 consultation with the Service. A Federal agency may designate a non-Federal representative to conduct informal

consultation or prepare a biological assessment by giving written notice to the Service of such a designation. The ultimate responsibility for compliance with ESA section 7, however, remains with the Federal agency.

We appreciate your interest in conserving endangered species. If further assistance is needed or you have any questions, please contact Diana Whittington, at (801) 975-3330 extension 128.

Sincerely,



Henry R. Maddux
Utah Field Supervisor

cc: OSM - Denver (Attn: Ranvir Singh)
UDWR - Salt Lake City (Attn: Frank Howe)
USFS - Manti LaSal Supervisor's Office, Price (Attn: Terry Nelson)



United States
Department of
Agriculture

Forest
Service

Manti-La Sal
National Forest

Supervisor's Office
599 West Price River Drive
Price, UT 84501
Phone # (435) 637-2817
Fax # (435) 637-4940

File Code: 2820-4

Date: December 1, 2005

Mary Ann Wright
Associate Director for Mining
Utah Division of Oil, Gas and Mining
1594 West North Temple, Suite 1210
P.O. Box 145801
Salt Lake City, UT 84114-5801

Subject: New Surface Facilities in Rilda Canyon, PacifiCorp, Deer Creek Mine, C/015/0018,
Task ID #2266, Outgoing File

Dear Ms. Wright:

By this letter, the Forest Service consents to the Mining and Reclamation Plan for new surface facilities in Rilda Canyon for PacifiCorp's Deer Creek Mine as required by 30 U.S.C. § 207(c). My decision to consent to the modification, dated August 25, 2005, was upheld by the Regional Forester on administrative appeal on November 28, 2005. In accordance with regulations at 36 CFR § 215.9(b), my decision may be implemented on December 20, 2005. Forest Service consent to the Mining and Reclamation Plan will be effective on that date.

The mine plan revision application includes conditions for operations that are consistent with the Manti – La Sal National Forest Land and Resource Management Plan, and with lease stipulations consented to by the Forest Service. The proposed post-mining land uses of the location for the proposed surface facilities in Rilda Canyon are the same as the pre-mining land uses, and therefore are consistent with the Forest Plan. Forest Service consent is conditioned upon inclusion of terms in the mine plan that requires compliance with the Forest Plan standard for macroinvertebrates.¹ Since the current macroinvertebrate inventory of Rilda Creek is measured

¹ 30 CFR 740.4 Responsibilities (c) "The following responsibilities of OSM may be delegated to a state regulatory authority under a cooperative agreement: ... (2) Consultation with and obtaining the consent, as necessary, or the Federal land management agency with respect to post-mining land use and to special requirements necessary to protect non-coal resources of the areas affected by surface coal mining and reclamation operations:".

30 CFR 740.4 Responsibilities, (e) - "The Federal land management agency is responsible for: (1) Determining post-mining land uses; (2) Protection of non-mineral resources; (3) Requiring such conditions as may be appropriate to regulate surface coal mining and reclamation operations under provisions of law applicable to such lands under its jurisdiction; and (4) Where land containing leased Federal coal is under the surface jurisdiction of a Federal agency other than the Department, concur in the terms of the mine plan approval".

30 CFR 740.11(d) "Nothing in this subchapter shall affect in any way the authority of the Secretary or any Federal land management agency to include in any lease, license, permit, contract, or other instrument



at a Biotic Condition Index (BCI) of 69, conforming to the Forest Plan standard for BCI would mean that any mining related activities that caused the BCI to be reduced below 69 would require corrective action by the operator.

Also in accordance with our surface management agency responsibilities² to help protect non-coal resources, we desire that the Rilda Creek Riparian Habitat Restoration Project that is documented in the Permit Application Package/Mining and Reclamation Plan, Table 300-5 Rilda Canyon Wildlife Mitigation of the May 2005 "R645-301-300 Biology" document be retained and enforced under the permit.

Sincerely,

/s/ Alice B. Carlton

ALICE B. CARLTON
Forest Supervisor

cc: Regional Forester
Pete Rutledge, OSM
Kent Hoffman, BLM

such conditions as may be appropriate to regulate surface coal mining and reclamation operations under provisions of law other than the Act on land under their jurisdiction".

30 CFR 740.13(d)(3) "The regulatory authority shall consult with the Federal land management agency to determine whether any permit revision will adversely affect Federal resources other than coal and whether the revision is consistent with that agency's land use plans for other Federal laws, regulations and executive orders for which it is responsible."

² 30 CFR 740.4 Responsibilities, (e) - "The Federal land management agency is responsible for: (1) Determining post-mining land uses; (2) Protection of non-mineral resources; (3) Requiring such conditions as may be appropriate to regulate surface coal mining and reclamation operations under provisions of law applicable to such lands under its jurisdiction; and (4) Where land containing leased Federal coal is under the surface jurisdiction of a Federal agency other than the Department, concur in the terms of the mine plan approval".

0022



State of Utah

JON M. HUNTSMAN, JR.
Governor

GARY R. HERBERT
Lieutenant Governor

Department of Community and Economic Development

YVETTE DONOSSO DIAZ
Executive Director Designee

Division of State History / Utah State Historical Society

PHILIP F. NOTARIANNI
Division Director

March 18, 2005

D. Wayne Hedberg
Permit Supervisor
Division of Oil, Gas and Mining
1594 West North Temple, Suite 1210
P. O. Box 145801
Salt Lake City UT 84114-5801

Handwritten note:
McComig
2/10/15/0018
Corey Jarrin
and Wayne H

RE: Replacement of Volume II, Energy West Mining Inc., PacifiCorp, Deer Creek Mine, E/015/0018, Task ID #2093, Outgoing File

In Reply Please Refer to Case No. 05-0465

Dear Mr. Hedberg:

The Utah State Historic Preservation Office received the referenced information on March 10, 2005. After consideration of the consultation request in behalf of the Division of Oil, Gas & Mining, the Utah Preservation Office provides the following comments per U.A.C. 9-8-404.

Section 404 Consultation DOGM; USHPO concurs with the determination of No Historic Properties Affected.

This information is provided on request to assist with state law responsibilities as specified in U.A.C. 9-8-404. If you have questions, please contact me at (801) 533-3552. My e-mail address is wmartin@utah.gov

Sincerely,

Wilson G. Martin
State Historic Preservation Officer - Utah

JLD:04-0465 DOGM/NAE

UNITED STATES

DEPARTMENT OF THE INTERIOR

This mining plan approval document is issued by the United States of America to:

PacifiCorp
P.O. Box 310
Huntington, Utah 84528

for a mining plan modification for Federal lease U-06039, U-2810, SL-050862, and SL-051221 at the Deer Creek Mine. The approval is subject to the following conditions. Genwal Resources, Inc. is hereinafter referred to as the operator.

1. Statutes and Regulations.--This mining plan approval is issued pursuant to Federal leases U-06039, U-2810, SL-050862, and SL-051221; the Mineral Leasing Act of 1920, as amended (30 U.S.C. 181 et seq.); and in the case of acquired lands, the Mineral Leasing Act for Acquired Lands of 1947, as amended (30 U.S.C. 351 et seq.). This mining plan approval is subject to all applicable laws and regulations of the Secretary of the Interior which are now or hereafter in force; and all such laws and regulations are made a part hereof. The operator shall comply with the provisions of the Federal Water Pollution Control Act (33 U.S.C. 1251 et seq.), the Clean Air Act (42 U.S.C. 7401 et seq.), and other applicable Federal laws.
2. This document approves the mining plan modification for Federal leases U-06039, U-2810, SL-050862, and SL-051221 at the Deer Creek Mine and authorizes the construction of portals, a mine ventilation fan, office/bathhouse/warehouse, and other associated surface support facilities on the Federal leases within the area of mining plan approval. This mining plan modification authorization will not be valid beyond the following Federal coal lands:

Township 16 South, Range 7 East SL Meridian Utah

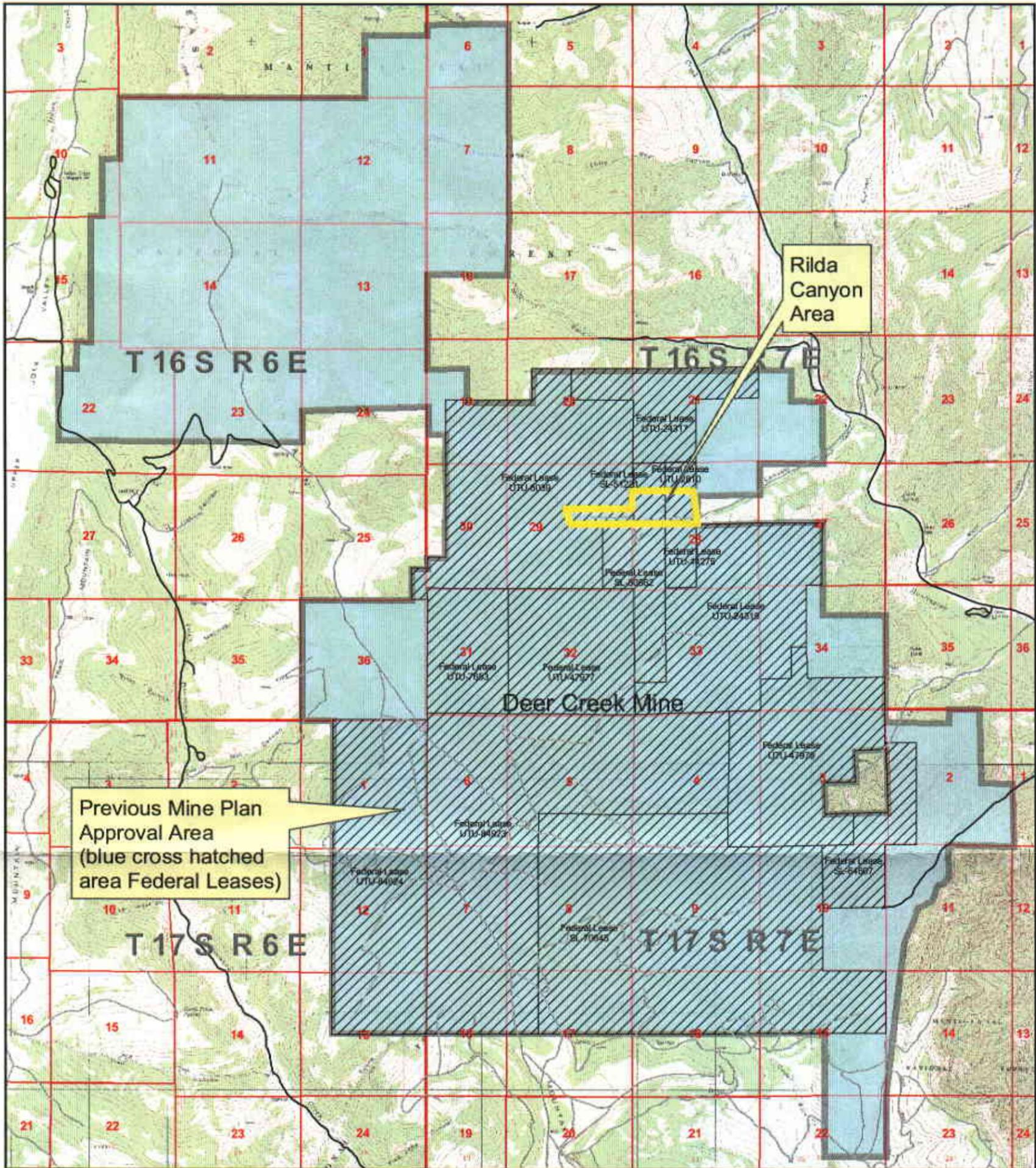
Section 28, S $\frac{1}{2}$ NW $\frac{1}{4}$;
Section 29, S $\frac{1}{2}$ S $\frac{1}{2}$ NE $\frac{1}{4}$.

These lands encompass approximately 13 acres and are found on the USGS 7.5 minute Quadrangle map of Rilda Canyon, Utah, and as shown on the map appended hereto as Attachment A.

3. The operator shall conduct coal mining operations only as described in the complete permit application package, and approved by the Utah Division of Oil, Gas and Mining, except as otherwise directed in the conditions of this mining plan approval.
4. The operator shall comply with the terms and conditions of the lease, this mining plan approval, and the requirements of the Utah State Permit No. C/015/018 issued under the Utah State program, approved pursuant to the Surface Mining Control and Reclamation Act of 1977 (30 U.S.C. 1201 *et seq.*).
5. This mining plan approval shall be binding on any person conducting coal mining operations under the approved mining plan and shall remain in effect until superseded, canceled, or withdrawn.
6. If during mining operations unidentified prehistoric or historic resources are discovered, the operator shall ensure that the resources are not disturbed and shall notify Utah Division of Oil, Gas and Minerals and the Office of Surface Mining Reclamation and Enforcement (OSM). The operator shall take such actions as are required by Utah Division of Oil, Gas, and Minerals in coordination with OSM.
7. The Secretary retains jurisdiction to modify or cancel this approval, as required, on the basis of further consultation with the U.S. Fish and Wildlife Service pursuant to section 7 of the Endangered Species Act, as amended, 16 U.S.C. 1531 *et seq.*


Acting Assistant Secretary
Land and Minerals Management

12-21-05
Date



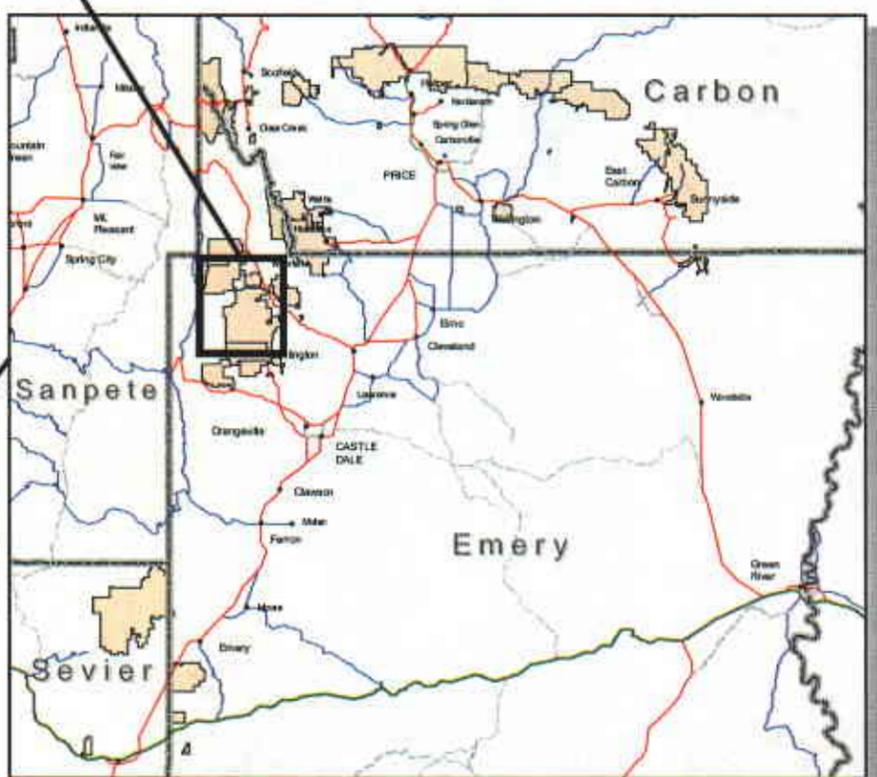
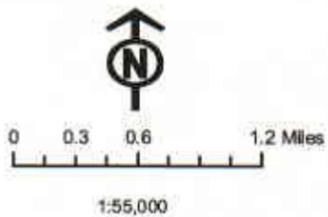
Deer Creek Mine Mining Plan Approval Area

ACT0150018
Emery County, Utah
June 2005

RECEIVED

JAN 03 2006
Township 16 South Range 7 & 8 East
Township 17 South Range 6 & 7 East

DIV. OF OIL, GAS & MINING
<http://www.dogm.utah.gov/coal/coalareamaps/C0150018Fed.pdf>



Locator Map

U.S. DEPARTMENT OF THE INTERIOR
OFFICE OF SURFACE MINING RECLAMATION AND ENFORCEMENT

CONCURRENCE

With

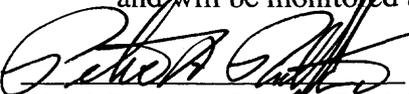
Findings of Utah Division of Oil, Gas and Mining and Approval of
an Experimental Practice for Top Soil Protection on Steep Slopes

At

PacifiCorp's Deer Creek Mine

Pursuant to Federal Regulation at 30 CFR 785.13(d) and OSM Directive REG-7, "Experimental Practices", dated April 24, 1992, I have reviewed the written findings of the Utah Division of Oil, Gas and Mining (UT-DOGM) in accordance with Utah State regulations at R645-302-210. I concur with UT-DOGM's findings that;

- (1) The experimental practice encourages advances in coal mining and reclamation technology due to; (a) information gained from bulk density testing of the existing surface soils prior to, and after storage of the subsoil, and (b) enhancement of reclamation technique on steep slopes through the use of anionic polyacrylamide (PAM).
- (2) The experimental practice is potentially more, or is at least as, environmentally protective, during and after coal mining operations, as would otherwise be required by standards promulgated under 30 CFR, Chapter VII, subchapter K, since; (i) additional disturbance in the form of a larger topsoil storage area would be required for salvaged topsoil and storage, and storage of subsoils; (ii) the undisturbed surface soils will be covered with marker fabric to delineate and protect it in place from contamination and erosion.
- (3) The mining operations are not larger than necessary to determine the effectiveness of the experimental practice as storage of subsoil will take place on a single side of a canyon, partially disturbed by historical mining and subsequently reclaimed by Utah Division of Abandoned Mine Land program. The use of previously disturbed area allows for the evaluation of the experimental practice of storing sub-soils on undisturbed topsoil and against steep, undisturbed slopes, without creating additional disturbed lands.
- (4) The experimental practice does not reduce the protection afforded public health and safety below that provided by standards promulgated under 30 CFR, Chapter VII, subchapter K, as the soil will be placed, stored and removed in a stable manner. The application of PAM will be according to manufacturer's directions and will be monitored by UT-DOGM.


Chief, Program Support Division
Western Region

8/1/05
Date

U.S. DEPARTMENT OF THE INTERIOR
OFFICE OF SURFACE MINING RECLAMATION AND ENFORCEMENT
FINDING OF NO SIGNIFICANT IMPACT

FOR

Deer Creek Mine

Federal Coal Leases Federal Leases U-06039, U-2810, SL-050862, and SL-051221

EXPERIMENTAL PRACTICE

1. Introduction

PacifiCorp has proposed the use of an experimental practice to protect existing topsoil resources through the use of colored marker fabric to delineate the pre-disturbed topography. This experimental practice would be used on approximately 3.0 acres of the approximately 13 acre disturbed area. Approximately 1.4 acres of the site was previously disturbed by historic coal mining activities. The proposed experimental practice was submitted to the Utah Division of Oil, Gas and Mining (UT-DOGGM) as an integral part of PacifiCorp's Deer Creek Mine application for a permit revision under the Utah State program (30 CFR 944).

Pursuant to Federal regulation under 30 CFR 740.4(b)(2), the Director of the Office of Surface Mining Reclamation and Enforcement (OSM) is responsible for approving experimental practices on Federal lands. The Director, OSM has delegated this authority to the Chief, Program Support Division, Western Region.

2. Statement of Environmental Significance of the Proposed Action

The undersigned has determined that the above-named proposed action would not have a significant impact on the quality of the human environment under section 102 (2)(C) of the National Environmental Policy Act of 1969 (NEPA), 42 U.S.C 4332 (2)(C), and therefore, an Environmental Impact Statement is not required.

3. Reasons

This finding of no significant impact is based on: (1) the technical analysis of the experimental practice proposal and findings of UT-DOGGM, (2) the technical analysis of the experimental practice proposal by OSM Western Region (OSM-WR), and (3) the Environmental Assessment dated June 24, 2005, titled "*Deer Creek Coal Mine, Mining Plan Modification, Federal Coal Leases U-06039, U-2810 and SL-051221, Emery County, Utah*", prepared by UT-DOGGM and OSM-WR, in cooperation with U.S. Forest Service and the Bureau of Land Management. These documents adequately and accurately assess the environmental impacts of the proposed action, and provide sufficient evidence and analysis for this finding of no significant impact. OSM takes full responsibility for the accuracy, scope and content of the attached environmental assessment.



Chief, Program Support Division
Western Region

8/1/05
Date

**RILDA CANYON PORTAL FACILITIES
PROPOSED EXPERIMENTAL PRACTICE**
Technical Analysis

General Site Description

Pacificorp is proposing a new mine site facility in Rilda Canyon approximately 8 miles west of Huntington, Utah. The elevation of the minesite ranges from 7725' at the west end to 7600' at the upper (east) end of the mine yard. Because of the narrowness of the canyon in this area, surface facilities will be confined to a narrow strip along the bottom of the canyon, north of Rilda Creek. Suitable surface area for the minesite will be created by constructing a series of earthen pads adjacent to the canyon bottom. This will be accomplished by excavating cuts and by leveling out the areas adjacent to the bottom of the canyon drainage. The entire mine disturbed area would be 13.1 acres.

Construction of the mine site would involve salvage and protection of topsoil resources on 10 acres of the area prior to construction of the mine facilities. The experimental practice will occupy 3.0. Within these 3.0 acres, there is an undisturbed area of 1.6 acres and the remainder of the 3.0 acres (1.4 acres) contains mine waste that was reclaimed in 1989 with an average of 18 inches of cover soil (Map 500-3). A photo of the Rominger mine side canyon is provided in Volume 11-Appendix Volume – Engineering Appendix G.

The 1.6 acres of undisturbed soils on the slopes around the reclaimed Rominger disturbance is represented by soil sample site RC6 on Map 200-1 (Mt. Nebo Scientific Survey, Dec. 2004). The site description indicates that the soil is on a slope of 60% and has a 0-4 inch topsoil horizon, with a lithic contact at 34 inches. The soil was placed in the Great Group of Haplustepts and Ustorthents and is described as stony sandy loam (20% stones at the surface). [There are no prime farmlands in the vicinity.

The 1.4 acres of disturbed soils in the Rominger side canyon are approximately eighteen inches deep over mixed coal/soil (AMR project report #AMR-015-904M). Sample S-8 is shown on Map 200-1, and a site description confirms 14 inches of topsoil over coal mixed with soil. The soils contain 20% gravels, 15% cobbles, 5% stones, and 5% coal fragments on the surface. The original soil surface was found buried under the coal at a depth of about 5 ft in AMEC pit 13 (discussed below). Disturbed soils of the reclaimed Rominger site were sampled for laboratory analysis by Jim Nyenhuis in December 2004 (site RC5, Volume 11-Appendix Volume Soils- Appendix B) to establish a baseline condition.

Description of the Proposed Experimental Practice

An Experimental Practice is described at the end of Chapter 2, Volume. 11 of the Deer Creek Mining and Reclamation Plan. Energy West Mining proposes a topsoil protection plan that incorporates Experimental Practices (R645-302-200) for in-place soil storage beneath a subsoil stockpile. The experimental practice will occur in Rominger Canyon

where a subsoil pile with dimensions 550 ft long X 250 ft wide X 40 ft deep (on the average) will be constructed to hold 107,000 cu yds of subsoil and where boulders will be stored until use during reclamation (cross sections of the subsoil site are on Map 500-4 sheet 4 of 5).

The 3.0 acres experimental practice area will be covered with marker fabric. The fabric will provide a physical barrier between existing soil and the imported stored subsoil. During final reclamation the marker fabric will be removed and slopes greater than 50% will be treated with polyacrylamide (PAM). The PAM will enhance infiltration of water and stabilize soil aggregates to improve vegetation establishment and minimize erosion of the re-exposed, reclaimed slopes. By utilizing these procedures, the original ground surface configuration including cobbles, rocks, and soil cementation of the profile will be preserved in place. The experimental practice monitoring will provide an indication of the degree of compaction related to the loading of the in place soil through measurements of the bulk density of the in-place soil before and after burial.

Construction Sequence

Step 1. Bulk density of the Rominger Mine soils will occur to a depth of 4 ft. prior to disturbance to provide baseline information on the native and reclaimed surface soils of Rominger Mine Canyon. (Bulk density measurements will be taken again, after re-exposure of the topsoil, to provide an indication of the degree of compaction created by large stockpiles of soil.) The bulk density testing will follow an accepted agronomic procedure described in the following reference:

Soil Science Society of America. 1986. Series No. 9. Methods of Soil Analysis: Physical and Mineralogical Methods. Part 1. Second Edition. Arnold Klute, Ed.

Step 2. Large vegetation will be removed and track equipment will be used to install 2 ft diameter culvert UC10 (Sections R645-301-231.100 and R645-301-231.400 and Volume 11-Appendix Volume- Hydrology Appendix B Table 8, and Map 700-2) to direct surface flows (originating from the watershed above Rominger Canyon) beneath the storage pile.

Step 3. Marker fabric fabric will be laid over the entire surface of the storage area.

Step 4. The subsoil will be placed on top using track equipment.

Ongoing monitoring

Section R645-302-218 indicates that the undisturbed bypass culvert inlet and outlet will be regularly monitored and maintained, as required by R645-301-742.312, to be stable and to provide protection against flooding, etc.

Bulk density sampling of the existing soil surface to a depth of four feet (or lithic contact) prior to and after disturbance will be conducted to obtain information about the depth of compaction resulting from long term storage of soil. The important aspect of the bulk density testing is that the same procedure is used before and after disturbance.

Monitoring will follow an agronomic method, such as listed in Soil Science Society of America. 1986. Series No. 9. Methods of Soil Analysis: Physical and Mineralogical Methods. Part 1. Second Edition. Arnold Klute, Ed., Chapter 13.

Application of PAM to slopes greater than 50% (2h:1v) will be monitored for cover and erosion as described in item 6) Experimental Practice Monitoring, p. 37, Chap 2. The treated slopes will be compared with monitoring of adjacent undisturbed areas to determine effectiveness of the PAM application in encouraging vegetation establishment and limiting erosion.

Reclamation

Slopes steeper than 50% (2h:1v) - At final reclamation, the stored construction fill soil will be removed to the depth marker fabric. Care will be taken not to sub-excavate or disturb the native soil profile. Fill removal will be done by small earth moving equipment. The marker fabric will be removed and the condition of the underlying soil materials observed at this time. Re-exposed soil of the reclaimed Rominger Mine site (lesser slopes) will be tested for nutrient status and bulk density.

Slopes steeper than 50% will be treated with an anionic polyacrylamide (PAM) during seeding to increase cohesion and infiltration of water without disrupting soil structure. Seed mix will be as described in Volume 11, Table 300-8. Bareroot or containerized plant stock will be pre-treated with PAM and used as enhancement plantings on the re-exposed, steep slopes. The Division and Permittee assume that 20 years hence, advances will be made concerning the specifics of PAM application, consequently the plan indicates that details of the PAM application will be worked out prior to implementation.

Slopes less than 50% (2h:1v) - Slopes less than 2h:1v will be sampled for bulk density to a depth of four feet (Section R645-301-242) before and after soil burial. The effect of soil storage on underlying soils will be reported, increasing our understanding of the compaction created by large soil stockpiles.

To relieve soil compaction and increase the ability of the soil to absorb moisture, the re-exposed soils over reclaimed mine waste will be covered with 1 ton per acre of alfalfa hay mulch which will be worked into the soil with gouging. (Fertilizer will be added pending test results and comparison with baseline information.) Gouging will create a pattern of depressions that help control erosion through water retention, minimize siltation, and allow for air and water penetration into the soil horizon. Excess boulders will be randomly placed to cover 5% of the surface. The seed mix described in Table 300-8 will be applied. PAM will not be applied to slopes less than 50%.

Performance Standard For Which the Variance Is Requested

Pacificorp's proposed experimental practice requests variance from Utah performance standard R645-301-251. This performance standard requires that all topsoil, subsoil and topsoil substitutes or supplements will be removed, maintained and redistributed

according to the plan given under R645-301-230 and R645-301-240. Under R645-301-230, regulation R645-301-232.100 requires that all topsoil be removed as a separate layer from the area to be disturbed, and segregated. State regulation R645-301-234.100 requires that materials removed under R645-301-232.100 be segregated and stockpiled when it is impractical to redistribute such materials promptly on regraded areas. Under R645-301-240, R645-301-242.100 requires redistribution of salvaged and stockpiled topsoil. The counterpart Federal regulations are 30 CFR 816.22(a), (c) and (d).

Technical Analysis

The topsoil handling regulations are designed to protect and preserve the existing, available topsoil resource that will be affected by mining operations. The proposed experimental practice to leave in-place topsoil located along the channel bottom and south slope of the right fork is potentially more, or at least as environmentally protective during and after mining, than would be possible under the topsoil handling performance standards. The following are significant elements for environmental protection of the topsoil resource and the effect of the experimental practice versus standard operating procedures.

Topsoil quantity

Part of the site proposed for the experimental practice is areas with undisturbed soils located on slopes of 60% with rock outcrops. Removal of topsoil in these areas would be very difficult limiting the amount salvageable. This loss will not occur with in-place storage, thereby maximizing the amount of topsoil available for revegetation following mining. Further, the in-place topsoil will not be subject to transportation handling losses common in all topsoil salvage operations.

Topsoil contamination

The in-place topsoil will be protected from contamination because the subsoil storage area will be constructed with only non-toxic, non-acid forming subsoil material. Testing of the in-place soils during reclamations will ensure the no contamination has occurred, and if it has identify the appropriate treatments. Both the stockpiled and in-place topsoil would undergo a loss of the microbial activity, although the upper two feet of the stockpile would remain active. However, because of the small size of the mine site, lose of microbial activity in topsoil materials at the mine site should be temporary. Proximity to undisturbed areas will result in rapid invasion of native soil microbes. In addition, the Rominger Canyon Experimental Practice will enhance natural re-colonization by microorganisms with a supernatant from a slurry of soil and water that will be added to the hydroseeder. The soil in the slurry will be taken from adjacent undisturbed topsoil.

Topsoil compaction

Both the in-place and stockpiled topsoil would be subject to compaction. Placement of the fill material will compact the in-place topsoil. The process of stockpiling and redistribution of salvaged topsoil will compact the salvaged

topsoil. While the levels of compaction each material will undergo is unclear, both in-place and stockpiled topsoil will suffer a loss of existing soil structure. In either case the reclamation plan calls for practices, such as roughening or pitting and incorporation of mulch prior to seeding. This will serve to reduce compaction and increase infiltration in both in-place and respread topsoil. Bulk density sampling of the existing soil surface to a depth of four feet (or lithic contact) prior to and after disturbance will be conducted to obtain information about the depth of compaction resulting from long term storage of soil. This will allow the State to evaluate the impact of fill construction on in-place topsoil density. Pacificorp will also implement several husbandry practices including mulching and gouging to reduce compaction during reclamation. They will also use PAM on the steeper slopes to improve soil structure and infiltration.

The use of marker fabric to denote the premine surface within the 3 acre area is another potential benefit of the proposed experimental practice. This practice will facilitate restoration of approximate original contour and slope stability for these areas. It will aid in revegetation efforts by exposing soil that existed in area, but could not be salvaged because of location and size.

The proposed practice represents a potential advance in mining and reclamation technology because, if successful, it would identify an alternative to the standard requirements at R645-301-251 and 30 CFR 816.22 for topsoil salvage, storage and redistribution in environments similar to that encountered at the Rilda Canyon Mine site.

The proposed experimental practice does not reduce the protection afforded public health and safety below that provided by the performance standards. The topsoil resource is still protected and no hazards to the public are created by in-place topsoil storage.

The practice is not larger than necessary. The proposed practice is constrained by the location and layout of the facility area. Not all disturbed areas will be affected by the proposed practice and will be subject to standard topsoil salvage, storage and redistribution requirements. This experimental practice is tried at one other permitted underground coal operation in Utah.

Utah DOGM Review

The State has completed a technical analysis of Pacificorp's proposed experimental practice. The analysis discusses the proposed experimental practice and test plots and evaluates the impacts of the proposed practice, including compaction, microbial activity, contamination and channel geomorphology. The State concludes that it considers it highly unlikely the experimental practice will fail and that the borrow area will be needed. DOGM states that the proposed reclamation plan should result in vegetative cover that meets or exceeds the performance standards.

The Utah DOGM has made the findings required under R645-302-214 (counterparts to 30 CFR 785.13(d)).

Recommendation

Based on my review the proposed experimental practice meets the requirements of 30 CFR 785.13. In accordance with 30 CFR 740.4(b)(2) OSM should approve the proposed experimental practice on Federal lands included in the proposed permit area. In accordance with 30 CFR 785.13(d) OSM should concur with the Utah DOGM findings to approve the proposed experimental practice.

However, this experimental practice is very similar to one previously approved at the West Ridge Mine. DOGM should be informed that we can not approve any further uses of in-place storage of topsoil as an experimental practice. The intent of the experimental practice regulations is to identify new practices that are at least as environmentally protective as those in the existing regulations. Once identified, these practices would then be incorporated into the regulations for future use. Now that there are two trials, that should be sufficient to demonstrate the efficacy of the proposed practice.



Robert Postle, Ecologist
Technical Project Officer

7/1/05
Date



State of Utah
Department of
Natural Resources

MICHAEL R. STYLER
Executive Director

Division of
Oil, Gas & Mining

JOHN R. BAZA
Division Director

JON M. HUNTSMAN, JR.
Governor

GARY R. HERBERT
Lieutenant Governor

05-07-07-06

June 30, 2005

James Fulton, Chief
Office of Surface Mining
1999 Broadway, Suite 3320
P.O. Box 46667
Denver, Colorado 80201-6667

Subject: Request for Concurrence on an Experimental Practice at Proposed Rilda Canyon Facility, PacifiCorp, Deer Creek Mine, C/015/0018, Outgoing File

Dear Mr. Fulton:

The proposed Rilda Canyon Facility for the Deer Creek Mine includes an application to use an experimental practice. In accordance with our regulations at R645-302-210 and OSM Directive Reg-7, attached are the Division technical findings, and we request your concurrence on this proposal.

The Experimental Practice at the proposed Rilda Canyon facility involves topsoil protection on steep slopes and over previously buried mine waste. The proposal will leave soil in-place beneath a subsoil stockpile. We believe the applicant has provided adequate plans for protecting topsoil resources which will accomplish the objectives of SMCRA and will result in better reclamation than would occur using conventional salvage and replacement techniques.

Please contact us if there is any other information that you need to evaluate this project. If you have any questions or need more information please contact me at (801) 538-5306 or Pamela Grubaugh-Littig at (801) 538-5268.

Sincerely,


For Mary Ann Wright
Associate Director, Mining

an
Enclosure
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EXPERIMENTAL PRACTICE AT THE PROPOSED RILDA CANYON FACILITY, DEER CREEK MINE

June 30, 2005

Regulatory Reference: 30 CFR Sec. 785.13; R645-302-210, -302-211, -302-212, -302-213, -302-214, -302-215, -302-216, -302-217, -302-218.

Analysis:

Chapter 2, Soils, incorporates traditional methods of salvaging/stockpiling and an experimental practice method for protecting soils in-place. The Experimental Practice is unique by taking a reclamation approach to topsoil protection on steep slopes and over previously buried mine waste. In addition, the experimental practice includes: 1) measurements of bulk density testing of the in-place soils on slopes less than 2h:1v, before and after burial, to advance understanding of the depth of compaction created by large stockpiles on surface soils; and 2) treatment of slopes greater than 2h:1v with anionic polyacrylamide (PAM) to enhance stability and water retention.

Operations - Experimental Practices

An Experimental Practice is described at the end of Chapter 2, Vol. 11 of the Deer Creek Mining and Reclamation Plan. Energy West Mining proposes a topsoil protection plan that incorporates Experimental Practices (R645-302-200) for in-place soil storage beneath a subsoil stockpile. The experimental practice will occur in Rominger Canyon where a subsoil pile with dimensions 550 ft long X 250 ft wide X 40 ft deep (on the average) will be constructed to hold 107,000 yd³ of subsoil and where boulders will be stored until use during reclamation.

The 3.0 acre experimental practice area will be covered with marker fabric fabric. The fabric will provide a physical barrier between existing soil and the imported stored subsoil. During final reclamation the marker fabric will be removed and slopes greater than 50% will be treated with polyacrylamide (PAM). The PAM should enhance infiltration of water and stabilize soil aggregates to improve vegetation establishment and minimize erosion of the re-exposed, reclaimed slopes. By utilizing these procedures, the original ground surface configuration including cobbles, rocks, and soil cementation of the profile will be preserved in place. The experimental practice monitoring will provide an indication of the degree of compaction related to the loading of the in place soil through measurements of the bulk density of the in-place soil before and after burial.

Existing Soil Resources

The experimental practice will occupy 3.0 acres. (There are no prime farmlands in the vicinity.) Within these 3.0 acres, there is an undisturbed area of 1.6 acres and the remainder of the 3.0 acres (1.4 acres) contains mine waste that was reclaimed in 1989 with approximately 18 inches of cover soil (see attached Map 500-3). The attached photo of the Rominger mine side canyon is from Vol.11-Appendix – Engineering Appendix G.

The 1.6 acres of undisturbed soils on the slopes around the reclaimed Rominger disturbance is represented by soil sample site RC6 on Map 200-1 (Mt. Nebo Scientific Survey, Dec. 2004). The site description indicates that the soil is on a slope of 60% and has a 0-4 inch topsoil horizon, with a lithic contact at 34 inches. The soil was placed in the Great Group of Haplustepts and Ustorthents and is described as stony sandy loam (20% stones at the surface).

The 1.4 acres of disturbed soils in the Rominger side canyon are approximately eighteen inches deep over mixed coal/soil (AMR project report #AMR-015-904M). Sample S-8 is shown on Map 200-1 (Soils Appendix Vol 11.), and a site description confirms 14 inches of topsoil over coal mixed with soil. The soils contain 20% gravels, 15% cobbles, 5% stones, and 5% coal fragments on the surface. The original soil surface was found buried under the coal at a depth of about 5 ft in AMEC pit 13 (Vol 11. Appendix- Engineering). Disturbed soils of the reclaimed Rominger site were sampled for laboratory analysis in December 2004 (site RC5, Appendix B, Vol. 11) to establish a baseline condition.

Under optimal conditions, salvage from the 3.0 acres would yield approximately 3,400 yd³ of soil: based upon 4 inch recovery over 1.6 acres and 14 inch recovery over 1.4 acres. This figure is the maximum potential for the site, since the coal mine waste burial site in Rominger Canyon does not have even coverage and since the steeper slopes have a large amount of rock on the surface and in the profile.

Construction Sequence

Step 1.

Bulk density will be analyzed to a depth of 4 ft. on slopes less than 2h:1v, prior to disturbance to provide baseline information on the native and reclaimed surface soils of Rominger Mine Canyon. The bulk density testing will follow an accepted agronomic procedure described in the following reference:

Soil Science Society of America. 1986. Series No. 9. Methods of Soil Analysis: Physical and Mineralogical Methods. Part 1. Second Edition. Arnold Klute, Ed.

Bulk density measurements will be taken again, after re-exposure of the buried soil, to provide an indication of the degree of compaction created by large stockpiles of soil.

Step 2.

Large vegetation will be removed and track equipment will be used to install 2 ft diameter culvert UC10 (Sections R645-301-231.100 and R645-301-231.400 and Vol. 11- Appendix - Hydrology Appendix B Table 8, and Map 700-2) to direct surface flows (originating from the watershed above Rominger Canyon) beneath the storage pile.

Step 3.

Marker fabric fabric will be laid over the entire surface of the storage area.

Step 4.
The subsoil will be placed on top using track equipment.

Experimental Practices -Operational Monitoring

Ongoing monitoring

Section R645-302-218 indicates that the undisturbed bypass culvert inlet and outlet will be regularly monitored and maintained, as required by R645-301-742.312, to be stable and to provide protection against flooding, etc.

Prior to disturbance and Reclamation Monitoring

Bulk density testing of the existing soil surface to a depth of four feet (or lithic contact) prior to and after disturbance will be conducted on slopes less than 2h:1v, to obtain information about the depth of compaction resulting from long term storage of soil. The important aspect of the bulk density testing is that the same procedure is used before and after disturbance. Monitoring will follow an agronomic method, such as listed in Soil Science Society of America. 1986. Series No. 9. Methods of Soil Analysis: Physical and Mineralogical Methods. Part 1. Second Edition. Arnold Klute, Ed., Chapter 13.

Application of PAM to slopes greater than 50% (2h:1v) will be monitored for cover and erosion as described in item 6) Experimental Practice Monitoring, p. 37, Chap 2, Vol. 11 of the MRP. The treated slopes will be compared with monitoring of adjacent undisturbed areas to determine effectiveness of the PAM application in encouraging vegetation establishment and limiting erosion.

Reclamation - Experimental Practices

Slopes steeper than 50% (2h:1v)

At final reclamation, the stored construction fill soil will be removed to the depth marker fabric fabric. Care will be taken not to sub-excavate or disturb the native soil profile. Fill removal will be done by small earth moving equipment. The marker fabric will be removed and the condition of the underlying soil materials observed at this time.

Re-exposed soil of the reclaimed Rominger Mine site (lesser slopes) will be tested for nutrient status and bulk density.

Slopes steeper than 50% will be treated with an anionic polyacrylamide (PAM) during seeding to increase cohesion and infiltration of water without disrupting soil structure. Seed mix will be as described in Table 300-8, Vol 11. Bareroot or containerized plant stock will be pre-

treated with PAM and used as enhancement plantings on the re-exposed, steep slopes. The Division and Permittee assume that 20 years hence, advances will be made concerning the specifics of PAM application, consequently the plan indicates that details of the PAM application will be reviewed prior to implementation.

For current information on the use of PAM:

<http://kimberly.ars.usda.gov/pampage.shtml>
http://esce.ucr.edu/soilwater/spring_2001.htm
<http://www.hydrosorce.com/clpbbs02.htm>

Slopes less than 50% (2h:1v)

Slopes less than 2h:1v will be sampled for bulk density to a depth of four feet (Section R645-301-242) before and after soil burial. The effect of soil storage on underlying soils will be reported, increasing our understanding of the compaction created by large soil stockpiles.

To relieve soil compaction and increase the ability of the soil to absorb moisture, the re-exposed soils over reclaimed mine waste will be covered with 1 T/ac alfalfa hay mulch which will be worked into the soil with gouging. (Fertilizer will be added pending test results and comparison with baseline information.) Gouging will create a pattern of depressions that help control erosion through water retention, minimize siltation, and allow for air and water penetration into the soil horizon.

Excess boulders will be randomly placed to cover 5% of the surface. The seed mix described in Table 300-8 will be applied. PAM will not be applied to slopes less than 50%.

Analysis of the Proposed Experimental Practice

The soils regulations are intended to protect and preserve topsoil resources for the purpose of revegetation thus providing a stable surface capable of supporting the postmining land use. The proposed experimental practice, including operation and reclamation procedures, provides protection equal to or greater than what would be obtained through traditional methods required in the regulations. The Division has analyzed issues related to the proposed experimental practice, and the applicant has adequately addressed each of these concerns as follows:

- 1. Compaction.** Pad fill material will compact the soil, but to what degree and what depth is unknown. Previous in-place experimental practices have assumed that below eighteen inches, there should be few effects of compaction from the fill. The applicant intends to measure the bulk density of the in-place soil before and after subsoil storage to gain some understanding of the depth of compaction with loading. Compaction will be monitored on slopes less than 2h:1v and will be relieved through

gouging of the surface. This procedure, combined with natural processes (e.g., freeze/thaw), should adequately alleviate compaction and allow vegetation to become established. Compaction will be relieved on steep slopes because the entire soil profile of boulders, rocks, cobbles will remain in place and through the use of PAM which is reported to provide for infiltration of water which will encourage root growth.

2. **Decreased microbial activity.** Soil sterility is a problem whether soil is salvaged and stockpiled for years, or buried in place. Previous experimental practices have assumed that natural inoculation from adjacent undisturbed areas occurs over time. The Rominger Canyon Experimental Practice will enhance natural re-colonization by microorganisms with a supernatant from a slurry of soil and water that will be added to the hydroseeder. The soil in the slurry will be taken from adjacent undisturbed topsoil (Vol. 11, Section R645-301-243).
3. **Preserving configuration.** The experimental practice will not only allow preservation of soils in place, it will also preserve the configuration of boulders, cobbles, stones and cementation that provides structure, support and stability of the soils. This structure is difficult to duplicate in reclamation.
4. **Contamination.** Subsoils were sampled and analyzed during the soil survey (to a depth of six feet) and found to be non-toxic. It is unlikely that native soils would be contaminated by the imported subsoils, since subsoils will be placed against the native soils on a 60 ° slope and water will tend to drain downward into the subsoil fill. The in-place reclaimed mine waste at the bottom of the fill is not likely to be contacted by leachate from the subsoil as the depth of fill will average 40 feet and the average rainfall is 16 inches annually.

Subsoils removed from the experimental practice area at final reclamation will be tested at the time of reclamation to determine whether extremes of pH or salts exist. Extreme values will provide an indication for remedial action of the subsoil (Vol 11, Section R645-301-231.300).

Findings:

The information provided meets the requirements for reclamation of the Experimental Practice. The Division finds that the requirements for approval of the Experimental practice are met and seeks the concurrence of the Office of Surface Mining in accordance with:

R645-302-214.100, the experimental practice encourages advances in coal mining and reclamation technology due to 1) information gained from bulk density testing of the existing surface soils prior to and after storage of the subsoil. 2) enhancement of reclamation technique on steep slopes through the use of anionic polyacrylamide (PAM).

R645-302-214.200, the experimental practice is potentially more, or at least as, environmentally protective, during and after coal mining reclamations, as would otherwise be required, because

- 1) Additional disturbance in the form of a larger topsoil storage area would be required for salvage and storage of the native soil and soil covering the coal mining waste.
- 2) The undisturbed surface soils will be covered the with marker fabric to delineate and protect it in place from contamination and erosion.

R645-302-214.300, The coal mining and reclamation operations are not larger than necessary to determine the effectiveness of the experimental practice: storage of subsoil will take place in a single side canyon, previously disturbed by mining (reclaimed by the Division's AML program). The use of the previously disturbed area allows evaluation of the experimental practice of storing subsoils on undisturbed topsoil and against steep, undisturbed slopes, without creating additional disturbed lands.

R645-302-214.400, The experimental practice does not jeopardize the public health and safety. The soil will be placed, stored and removed in a stable manner. The application of PAM will be according to manufacturers directions. Details of application type and rate will be reviewed with the Division at reclamation.



Photo A:
Rominger Mine

FEDERAL

PERMIT
C/015/0018

July 27, 2005

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING
1594 West North Temple, suite 1210
Salt Lake City, Utah 84114-1210
(801) 538-5340

This permit, C/015/0018, is issued for the state of Utah by the Utah Division of Oil, Gas and Mining (Division) to:

PacifiCorp
201 South Main Street
Salt Lake City, Utah 84140-0021
(801) 220-4618

for the Deer Creek Mine. A Surety Bond is filed with the Division in the amount of \$4,113,000, payable to the State of Utah, Division of Oil, Gas and Mining and the United States Department of Interior, Office of Surface Mining Reclamation and Enforcement (OSM). The Division must receive a copy of this permit signed and dated by the permittee.

Sec. 1 STATUTES AND REGULATIONS - This permit is issued pursuant to the Utah Coal Mining and Reclamation Act of 1979, Utah Code Annotated (UCA) 40-10-1 et seq, hereafter referred to as the Act and the R645 regulations.

Sec. 2 PERMIT AREA - The permittee is authorized to conduct coal mining and reclamation operations, on the following described lands as described in the approved application, situated in the state of Utah, Emery County:

Township 16 South, Range 6 East, SLB&M Emery County, Utah

- Section 1: SE $\frac{1}{4}$.
- Section 10: E $\frac{1}{2}$ E $\frac{1}{2}$ SE $\frac{1}{4}$.
- Section 11: All.
- Section 12: All.
- Section 13: All.
- Section 14: All.
- Section 15: E $\frac{1}{2}$ E $\frac{1}{2}$.
- Section 22: Lots 1, 2, 4, 5, 6, 7, E $\frac{1}{2}$ NE $\frac{1}{4}$, SW $\frac{1}{4}$ NE $\frac{1}{4}$, N $\frac{1}{2}$ SE $\frac{1}{4}$.
- Section 23: N $\frac{1}{2}$, N $\frac{1}{2}$ S $\frac{1}{2}$.
- Section 24: N $\frac{1}{2}$.
- Section 25: E $\frac{1}{2}$ SE $\frac{1}{4}$ SE $\frac{1}{4}$, S $\frac{1}{2}$ SE $\frac{1}{4}$ NE $\frac{1}{4}$ SE $\frac{1}{4}$.

Township 16 South, Range 7 East, SLB&M Emery County, Utah

- Section 6: Lots 5, 6, 7, 8, S $\frac{1}{2}$ SE $\frac{1}{4}$.
- Section 7: All.
- Section 8: NW $\frac{1}{4}$ NW $\frac{1}{4}$.
- Section 18: Lots 1, 2, NE $\frac{1}{4}$.
- Section 19: Lots 2-3, W $\frac{1}{2}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$, SE $\frac{1}{4}$.
- Section 20: E $\frac{1}{2}$ SW $\frac{1}{4}$ NW $\frac{1}{4}$, SE $\frac{1}{4}$ NW $\frac{1}{4}$, S $\frac{1}{2}$ NE $\frac{1}{4}$, S $\frac{1}{2}$.
- Section 21: S $\frac{1}{2}$ N $\frac{1}{2}$, S $\frac{1}{2}$.
- Section 22: SW $\frac{1}{4}$ NW $\frac{1}{4}$, SW $\frac{1}{4}$.
- Section 27: SW $\frac{1}{4}$.
- Section 28: W $\frac{1}{2}$, N $\frac{1}{2}$ NE $\frac{1}{4}$, SE $\frac{1}{4}$.
- Section 29: All.
- Section 30: E $\frac{1}{2}$, Lot 4.
- Section 33: All.
- Section 34: W $\frac{1}{2}$ W $\frac{1}{2}$, W $\frac{1}{2}$ E $\frac{1}{2}$ W, NW $\frac{1}{4}$ W $\frac{1}{4}$, W $\frac{1}{2}$ NE $\frac{1}{4}$ W $\frac{1}{4}$, S $\frac{1}{2}$ S $\frac{1}{2}$.

Township 17 South, Range 6 East, SLB&M Emery County, Utah

- Section 1: Lots 1, 2, 3, SE $\frac{1}{4}$ NW $\frac{1}{4}$, S $\frac{1}{2}$ NE $\frac{1}{4}$, E $\frac{1}{2}$ SW $\frac{1}{4}$, SE $\frac{1}{4}$.
- Section 12: E $\frac{1}{2}$ W $\frac{1}{2}$, E $\frac{1}{2}$.
- Section 13: E $\frac{1}{2}$ W $\frac{1}{2}$, E $\frac{1}{2}$.
- Section 24: E $\frac{1}{2}$ W $\frac{1}{2}$, E $\frac{1}{2}$.
- Section 25: N $\frac{1}{2}$ NE $\frac{1}{4}$,
- Beginning at the SE corner of the NE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 25, T17S, R6E, SLB&M; Thence, north 160 rods, west 116 rods to the center line of the Cottonwood Creek; thence southerly along centerline of said creek to a point 84 rods west of the beginning; thence, east 84 rods to the beginning.

Township 17 South, Range 7 East, SLB&M Emery County, Utah

- Section 2: Lot 12, W $\frac{1}{2}$ SW $\frac{1}{4}$, [SE $\frac{1}{4}$ (SULA #284)].
- Section 3: W $\frac{1}{2}$, N $\frac{1}{2}$ NE $\frac{1}{4}$, SW $\frac{1}{4}$ NE $\frac{1}{4}$, S $\frac{1}{2}$ SE $\frac{1}{4}$.
- Section 4: All.
- Section 5: All.
- Section 6: All.
- Section 7: All.
- Section 8: All.
- Section 9: All.
- Section 10: All.
- Section 11: N $\frac{1}{2}$ NW $\frac{1}{4}$, SW $\frac{1}{4}$ NW $\frac{1}{4}$, Portions of the SE $\frac{1}{4}$ NW $\frac{1}{4}$ west of the Deer Creek fault, W $\frac{1}{2}$ W $\frac{1}{2}$ SW $\frac{1}{4}$, Portions of the E $\frac{1}{2}$ W $\frac{1}{2}$ SW $\frac{1}{4}$ west of the Deer Creek fault.
- Section 14: Portions of the NW $\frac{1}{4}$ NW $\frac{1}{4}$ west of the Deer Creek fault, Portions of the SW $\frac{1}{4}$ NW $\frac{1}{4}$ west of the Deer Creek fault,

Section 15: N¹/₂, SW¹/₄.

Section 16: All.

Section 17: All.

Section 18: All.

Section 19: All.

Section 20: All.

Section 21: All.

Section 22: W¹/₂, W¹/₂ SE¹/₄, W¹/₂ E¹/₂ SE¹/₄, Portions of the E¹/₂ SE¹/₄ SE¹/₄ west of the Deer Creek fault, Portions of the SE¹/₄ NE¹/₄ SE¹/₄ west of the Deer Creek fault.

Section 27: N¹/₂ NW¹/₄, NW¹/₄ NE¹/₄, W¹/₂ E¹/₂ NE¹/₄, Portions of the E¹/₂ E¹/₂ NE¹/₄ west of the Deer Creek fault.

Section 28: N¹/₂ N¹/₂.

Section 29: N¹/₂ N¹/₂.

Section 30: Lots 1, 5, 6, N¹/₂ NE¹/₄, SW¹/₄ NE¹/₄, NW¹/₄ SE¹/₄.

Beltline Corridor

Beginning at a point S 0° 22' E, 142.4 feet from the SW corner of NW¹/₄ of Section 1, T17S, R7E, SLB&M; thence, N 49° 53' 23" E, 2395.4 feet; thence, S 40° 10' 42" E, 101.94 feet; thence, S 49° 52' 03" W, 2481.12 feet; thence, N 0° 22' W, 276.25 feet to the point of beginning.

Waste Rock Site

Beginning 10 feet South of the NE corner of Section 6, T17S, R8E, SLB&M; thence, S 89° 52' 00" W, 1272.000 feet; thence S 0° 08' 00" E, 600.000 feet; thence, S 83° 28' 43" E, 302.035 feet; thence, S 72° 54' 35" E, 314.083 feet; thence, S 63° 06' 41" E, 224.508 feet; thence, S 48° 18' 17" E, 268.404 feet; thence, S 20° 06' 29" W, 1066.848 feet; thence, S 39° 24' 03" W, 855.358 feet; thence, S 41° 10' 40" E, 100 feet; thence N 43° 39' 42" E, 1635.000 feet; thence, N 31° 02' 18" E, 412.959 feet; thence N 22° 58' 45" E, 1310.908 feet; thence, N 89° 40' 41", 740.000 feet; to the point of beginning.

The permittee is authorized to conduct coal mining and reclamation operations on the foregoing described property subject to the conditions of all applicable conditions, laws and regulations.

Sec. 3 COMPLIANCE - The permittee will comply with the terms and conditions of the permit, all applicable performance standards and requirements of the State Program.

Sec. 4 PERMIT TERM - This permit expires on February 7, 2006.

- Sec. 5 ASSIGNMENT OF PERMIT RIGHTS** - The permit rights may not be transferred, assigned or sold without the approval of the Division Director. Transfer, assignment or sale of permit rights must be done in accordance with applicable regulations, including but not limited to 30 CFR 740.13{e} and R645-303-300.
- Sec. 6 RIGHT OF ENTRY** - The permittee shall allow the authorized representative of the Division, including but not limited to inspectors, and representatives of the Office of Surface Mining Reclamation and Enforcement (OSM), without advance notice or a search warrant, upon presentation of appropriate credentials, and without delay to:
- (a) have the rights of entry provided for in 30 CFR 840.12, R645-400-220, 30 CFR 842.13 and R645-400-110;
 - (b) be accompanied by private persons for the purpose of conducting an inspection in accordance with R645-400-100 and R645-400-200 when the inspection is in response to an alleged violation reported to the Division by the private person.
- Sec. 7 SCOPE OF OPERATIONS** - The permittee shall conduct coal mining and reclamation operations only on those lands specifically designated as within the permit area on the maps submitted in the approved plan and approved for the term of the permit and which are subject to the performance bond.
- Sec. 8 ENVIRONMENTAL IMPACTS** - The permittee shall take all possible steps to minimize any adverse impact to the environment or public health and safety resulting from noncompliance with any term or condition of the permit, including, but not limited to:
- (a) Any accelerated or additional monitoring necessary to determine the nature and extent of noncompliance and the results of the noncompliance;
 - (b) immediate implementation of measures necessary to comply; and
 - (c) warning, as soon as possible after learning of such noncompliance, any person whose health and safety is in imminent danger due to the noncompliance.
- Sec. 9 DISPOSAL OF POLLUTANTS** - The permittee shall dispose of solids, sludge, filter backwash or pollutants in the course of treatment or control of waters or emissions to the air in the manner required by the approved Utah State Program and the Federal Lands Program which prevents violation of any applicable state or federal law.
- Sec. 10 CONDUCT OF OPERATIONS** - The permittee shall conduct its operations:
- (a) in accordance with the terms of the permit to prevent significant, imminent environmental harm to the health and safety of the public; and

(b) utilizing methods specified as conditions of the permit by the Division in approving alternative methods of compliance with the performance standards of the Act, the approved Utah State Program and the Federal Lands Program.

- Sec. 11 EXISTING STRUCTURES** - As applicable, the permittee will comply with R645-301 and R645-302 for compliance, modification, or abandonment of existing structures.
- Sec. 12 RECLAMATION FEE PAYMENTS** - The operator shall pay all reclamation fees required by 30 CFR Part 870 for coal produced under the permit, for sale, transfer or use.
- Sec. 13 AUTHORIZED AGENT** - The permittee shall provide the names, addresses and telephone numbers of persons responsible for operations under the permit to whom notices and orders are to be delivered.
- Sec. 14 COMPLIANCE WITH OTHER LAWS** - The permittee shall comply with the provisions of the Water Pollution Control Act (33 USC 1151 et seq,) and the Clean Air Act (42 USC 7401 et seq), UCA 26-11-1 et seq, and UCA 26-13-1 et seq.
- Sec. 15 PERMIT RENEWAL** - Upon expiration, this permit may be renewed for areas within the boundaries of the existing permit area in accordance with the Act, the approved Utah State Program and the Federal Lands Program.
- Sec. 16 CULTURAL RESOURCES** - If during the course of mining operations, previously unidentified cultural resources are discovered, the permittee shall ensure that the site(s) is not disturbed and shall notify the Division of Oil, Gas, and Mining. The Division, after coordination with OSM, shall inform the permittee of necessary actions required. The permittee shall implement the mitigation measures required by the Division within the time frame specified by the Division.
- Sec. 17 APPEALS** - The permittee shall have the right to appeal as provided for under R645-300-200.
- Sec. 18 SPECIAL CONDITIONS** - There are special conditions associated with this permitting action as described in attachment A.

The above conditions (Secs. 1-18) are also imposed upon the permittee's agents and employees. The failure or refusal of any of these persons to comply with these conditions shall be deemed a failure of the permittee to comply with the terms of this permit and the lease. The permittee shall require his agents, contractors and subcontractors involved in activities concerning this permit to include these conditions in the contracts between and among them.

These conditions may be revised or amended, in writing, by the mutual consent of the Division and the permittee at any time to adjust to changed conditions or to correct an oversight. The Division may amend these conditions at any time without the consent of the permittee in order to make them consistent with any federal or state statutes and any regulations.

THE STATE OF UTAH

By: John R. Baya
Date: 7/27/05

I certify that I have read, understand and accept the requirements of this permit and any special conditions attached.

**Authorized Representative of
the Permittee**

Date: _____

Attachment A

SPECIAL CONDITIONS

1. If during entry development, sustained quantities of groundwater are encountered which are greater than 5 gpm from a single source in an individual entry, and which continue after operational activities progress beyond the area of groundwater production, PacifiCorp must monitor these flows for quality and quantity under the approved baseline parameters. PacifiCorp will notify the Division within 24 hours prior to initiation of monitoring.
2. PacifiCorp will submit water quality data for the Deer Creek Mine in an electronic format through the Electronic Data Input web site, <http://linux1.ogm.utah.gov/cgi-bin/appx-ogm.cgi>.
3. Construction of the North Rilda Canyon Portal Facilities may not commence until a mining plan approval is obtained from the Assistant Secretary of Land and Minerals at the Department of the Interior.

State Decision Document

**North Rilda Canyon Portal Facilities
Deer Creek Mine
C/015/0018**

July 27, 2005

**UTAH DIVISION OF OIL, GAS AND MINING
STATE DECISION DOCUMENT AND
TECHNICAL ANALYSIS**

**PacifiCorp
North Rilda Canyon Portal Facilities
Deer Creek Mine
C/015/0018
Emery County, Utah**

July 27, 2005

CONTENTS

- * Administrative Overview
- * Location Map
- * OSM determination that this action does constitute a mining plan modification, dated March 10, 2004, October 22, 2004 and January 20, 2005
- * Permitting Chronology
- * Findings, dated July 27, 2005
- * Permit, issued July 27, 2005
- * Technical Analysis, dated July 14 2005
- * Cumulative Hydrologic Impact Assessment, dated July 14, 2005
- * Experimental Practice Concurrence from OSM upon approval of Environmental Assessment
- * Determination of Completeness, January 27, 2005
- * Affidavit of Publication (Emery County Progress)
- * AVS Recommendation, dated June 24, 2005
- * Public Road Determination, dated July 18, 2005
- * Letters
 - USFWS, letter dated May 16, 2005
 - SHPO, letter dated March 18, 2005
 - U. S. Forest Service Letter, dated July 6, 2005
 - BLM, R2P2, dated February 28, 1991, July 16, 1997, March 25, 2005,

ADMINISTRATIVE OVERVIEW

PacifiCorp
North Rilda Canyon Portal Facilities
Deer Creek Mine
C/015/0018
Emery County, Utah

July 27, 2005

PROPOSAL:

In 1997 the Permittee, PacifiCorp, received approval to expand its mining operations into the North Rilda Area in and adjacent to Rilda Canyon. In 1999, the Mill Fork Tract added 5,562.82 acres to the Deer Creek Mine permit.

PacifiCorp evaluated long-term options to improve access to the coal reserves in the Mill Fork tract. Options considered were:

- Acquisition of Crandall Canyon Mine;
- New portal facilities in Mill Fork Canyon; and
- New portal facilities in Rilda Canyon.

PacifiCorp and Andalex Resources, Inc. were unable, however, to arrive at an agreement that would allow utilization of the Crandall Canyon Mine

From extensive investigation, including in-seam horizontal drilling, PacifiCorp selected new portal facilities in Rilda Canyon as the best option. Initially, the facilities were proposed in an area disturbed by previous mining operations; however, due to concerns related to culverting approximately 1,500 feet of the perennial stream, PacifiCorp chose to move the proposed facility site up-canyon approximately ½ mile.

The proposed North Rilda Canyon Portal surface facilities would be located just below the intersection of the Right and Left Forks of Rilda Canyon. These proposed facilities are designed to minimize surface disturbance, covering approximately 13.1 acres, 9.0 acres at the portal area and two separate soil storage areas covering 3.0 acres and 1.1 acres, respectively.

The proposed facilities would cover a long, slender area approximately 4,000 feet long by 200 feet wide covering 13.1 acres on the canyon floor. Of this area, the support facilities (portals, shop, office, etc.) would cover an area approximately 2,000 feet long by 120 to 250 feet wide (9.0 acres) at the west (up-canyon) end of the site. The remainder of the site to the east of the mine yard area would have hydrologic controls, two topsoil stockpiles, and a road turnaround. All facilities would be entirely on the north side of Rilda Canyon Creek except for one topsoil stockpile. The proposal would use the existing county road and 25 kv power line that run through the site. The county road would be paved.

Proposed facilities would include:

Structures: Office/bathhouse/warehouse building; four (4) vertical retaining walls constructed of 12-inch thick concrete; two (2) other retaining walls in the yard area; water treatment building; mine ventilation fan; 168-stall parking lot; underground vehicle parking garage; steel frame building to house fan motors; steel framed storage sheds to house bagged rock dust, ready-mix concrete, and other dry products; oil shed; fueling dock with 4,000 gallon above-ground diesel fuel storage tank; steel shed for storage of cans of oil and lubricant; rock dust silo; pneumatic pipeline for rock dust; and a sediment pond with supporting drainage structures.

Power: An existing 25 kv power line already provides power at the Left Fork Portal Facility. A transformer would be installed to supply power to the North Rilda Canyon Portal Facilities and there would be diesel generator backups for the new ventilation fan.

Water related facilities:

Culinary system: 10,000-gallon steel water storage tank for treated culinary water.

Sewage system: Waste water from office/bathhouse/warehouse would be separated into gray water and black water. A 20,000-gallon temporary storage tank would hold black water (sewage) until it can be transported by truck to an approved disposal facility. Gray water (discharge from boot wash, showers, floor drains, etc) would be stored before being pumped into an abandoned portion of the underground mine workings.

Runoff system: a two compartmented runoff collection tank with 1) a 7,540 gallon compartment for gray water, and 2) an 18,500 gallon compartment for temporary storage of surface runoff water. Surface runoff would spill over into the gray water compartment of the tank. This system would also include an emergency spillway connected by pipe to the sediment pond; pump station to move surface runoff into collection tank.

Drainage system: two systems, 1) for collection of "undisturbed" or overland runoff water from above the portal site and from adjacent side slopes that bypasses the developed area and moves this runoff into the natural channel, and 2) for collection of runoff and all non-sewage waste water from the disturbed portal area, parking lots, storage areas, bathhouse/office/ warehouse, fan area, etc. to convey it to the runoff collection tank for discharge into the mine. Culverts would direct any overflow to the sediment pond.

Storage: Mining and snow removal material and equipment would be stored on asphalt and gravel surface areas on the cut or embankment fills. A primary covered storage area would be constructed west of the parking garage to store non-coal waste, coal waste, oil, fuel facilities and bulk rock dust. Secondary covered storage areas would be constructed to store crib blocks, roof bolts, conveyor hardware, conveyor belting, beams, etc. Another covered non-coal waste/sand/rock waste storage area would be constructed on the north side of the mine yard between the fan and access portal. Sand and salt for winter road maintenance would also be stored here. Coal and non-coal wastes would be hauled away.

Soil Stockpile Storage Areas: Two topsoil and subsoil stockpile areas not contiguous to the main facilities and on previously disturbed land (approximately 800 feet by 300 feet, 3.0 acres, and 320 feet by 220 feet, 1.1 acres) would be created. The smaller stockpile would be on the south side of Rilda Canyon Creek and accessed via the existing bridge. The larger stockpile would be located on the north side of Rilda Creek in a small ephemeral drainage below the old Rominger Mine.

The projected active life of the facilities is 15-20 years. When the mine shuts down, the site would be reclaimed. Structures would be removed, the site regraded to its original topography, the county road profile reestablished through the site, topsoil from the stockpiles redistributed over the site, and all disturbed areas revegetated. Reclamation would take ten years, two years for the actual demolition and site restoration work and the balance of the time for vegetation to become established before final bond release.

These proposed facilities are associated with coal leases U-06039, SL-050862, U-2810, and SL-051221.

BACKGROUND:

The original permit for the Deer Creek Mine was issued February 7, 1986 for approximately 14,620 acres. The mining plan for Federal leases SL-064607-064621, SL-064900, SL-070645, U-1358, U-02292, U-084923, U-084924, U-083066, U-040151, U-044025, U-014275, U-024319, and U-47979 was approved on October 11, 1985 for the Deer Creek Mine. A Waste Rock Storage Facility was added September 1988. The permit was renewed on February 7, 1991.

The January 8, 1993 mining plan approval (IBC-1) added 120 acres of coal (80 acres in a portion of Lease No. U-47977 and 40 acres in a portion of Lease No. SL-050862). The July 22, 1993 mining plan approval (IBC-2) added 160 acres (80 acres in a portion of Lease U-47977 and 80 acres in a portion of Lease SL-050862).

PacifiCorp submitted an application for the Rilda Canyon Lease Extension, which included Leases U-7653, U-47977, U-06039, and SL-050862 on February 12, 1990 and resubmitted an application on February 8, 1994. This submittal was revised on June 27, 1994, as an incidental boundary change (IBC-3) to include development mining only in U-06039, U-47977, and SL-050862 (approximately 100,000 tons). Included in the revised application was longwall mining the Second, Third and Fourth East panels and development mining in the Third North Mains and the Sixth East Gate. Longwall mining would proceed in areas that were previously approved as incidental boundary changes with mining plan approval dates of January 8, 1993 (IBC-1) and July 22, 1993 (IBC-2). Entry development mining in the Third North Mains and the Sixth East Gates entailed about 40 acres beyond the approved permit boundary in Leases U-06039, U-47977 and SL-050862. IBC-3 was approved July 28, 1994.

The Rilda Canyon Lease Extension to mine in federal leases U-7653, U-47977, SL-050862, part of U-06039, and state lease ML-22509 was approved on December 13, 1994.

A modification to lease U-06039 (not requiring mining plan approval) to mine 42.97 acres (or approximately 100,000 tons) was submitted on May 26, 1995 and approved on June 13, 1995.

Construction of the original surface facilities (Left Fork Fan Portal) in Rilda Canyon was a significant revision to the Deer Creek Mine permit and was submitted on March 29, 1994. The approval to construct surface facilities in Rilda Canyon was granted on July 31, 1995, with nine conditions. All of the conditions were met on November 8, 1995.

PacifiCorp submitted an application for the North Rilda Area (which included Federal Leases U-24317, U-2810, U-06039, SL-051221 and fee coal), for a total of 1960 acres on February 4, 1997. This application was approved on July 15, 1997, which brought the total permitted area of the Deer Creek Mine to approximately 18,706 acres.

In order to access the Mill Fork lease, PacifiCorp acquired a lease modification to lease

U-06039. This modification, consisting of 65.7 acres, was added to the Deer Creek permit on August 14, 2002 as an incidental boundary change.

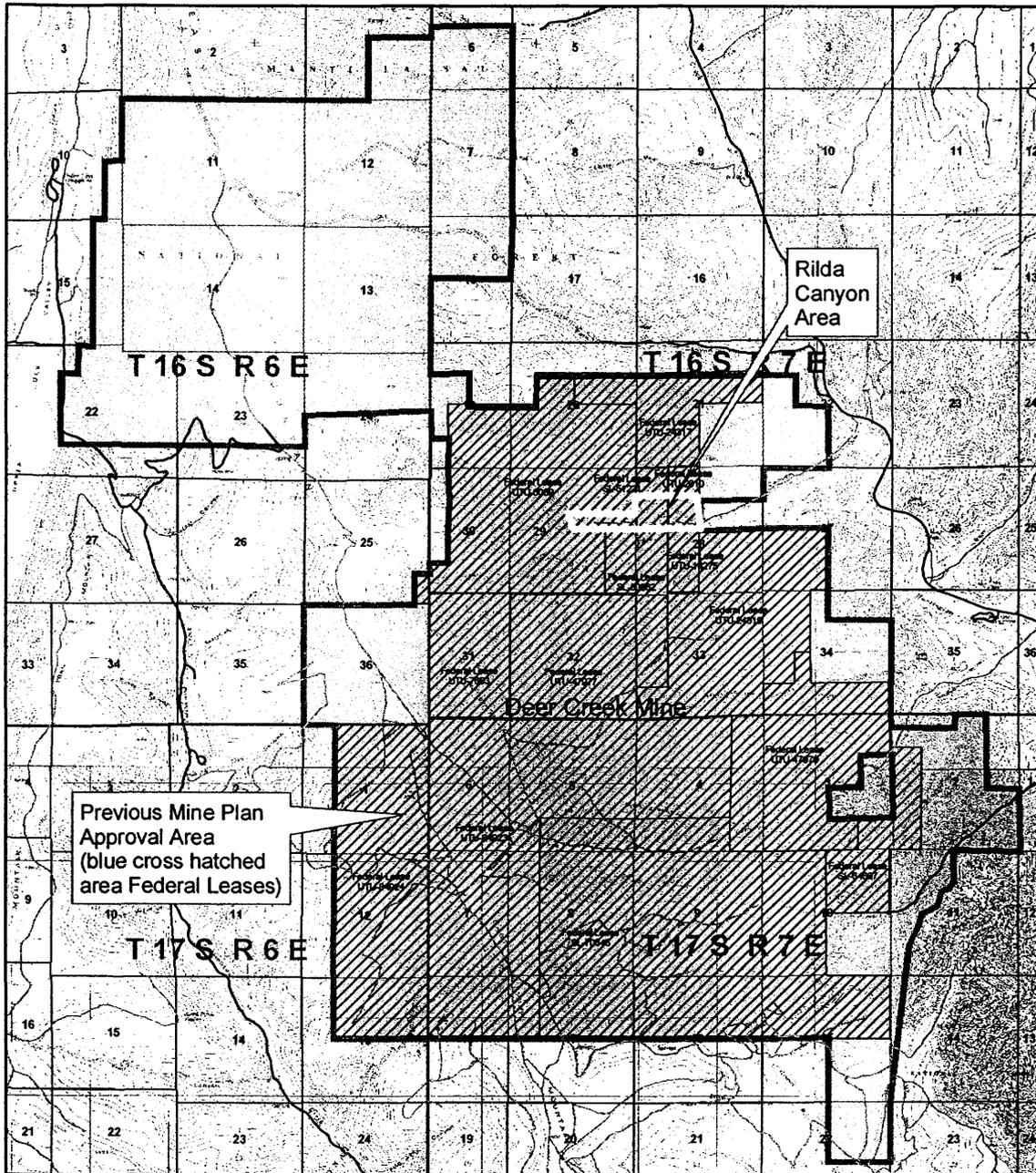
PacifiCorp submitted an application for the Mill Fork Lease (State Lease ML-48258), to the Division of Oil, Gas and Mining on October 29, 2001. The coal tract as described in the lease contains 5,562.82 acres, more or less. This represented about 64 million tons of minable coal to be produced over the life of the mine in this area. Approval on March 5, 2003 for mining in the SITLA Mill Fork lease added 5, 562.82 acres to the Deer Creek Mine. This mining is conducted in the Blind Canyon and Hiawatha seams.

ANALYSIS:

The Division of Oil Gas and Mining has conducted an Administrative and Technical Analysis (TA) of the proposed mine Permit Application Package (PAP) for the proposed Rilda Canyon Portal Facilities. All appropriate State and Federal agencies have been consulted regarding this proposal. The probable hydrologic consequences of the action have been analyzed and a Cumulative Hydrologic Impact Assessment (CHIA) has been prepared. All requirements for public participation have been satisfied. The application meets the requirements of the Utah Coal Regulatory Program.

RECOMMENDATION:

This recommendation is based on the complete PAP, the TA conducted by the Division, the CHIA also prepared by the Division, and the administrative record. PacifiCorp has demonstrated that building this surface facility can be done in conformance with the Surface Mining Control and Reclamation Act, and the corresponding Utah Act and performance standards. The 510 (c) report on the Applicant Violator System was verified for this mine on June 30, 2005 and there are no violations.



Deer Creek Mine Mining Plan Approval Area

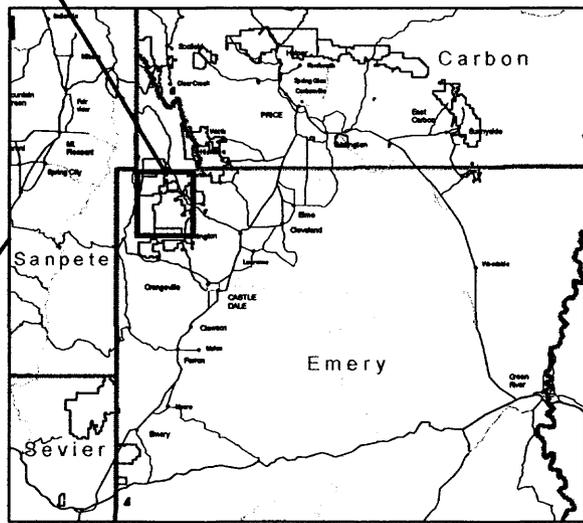
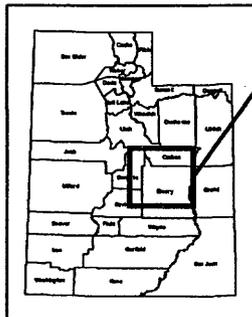
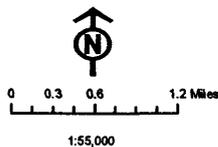
ACT0150018

Emery County, Utah

June 2005

Township 16 South Range 7 & 8 East
Township 17 South Range 6 & 7 East

File: N:\gis\coal\coalareamaps\C0150018Fed.pdf



Locator Map

0031

Pan



United States Department of the Interior

OFFICE OF SURFACE MINING
Reclamation and Enforcement
P.O. Box 46667
Denver, Colorado 80201-6667.

IN REPLY REFER TO:

March 10, 2004

RECEIVED
MAR 15 2004
DIV. OF OIL, GAS & MINING

Mary Ann Wright, Associate Director, Mining
Utah Division of Oil, Gas, and Mining
Coal Regulatory Regulatory Program
1594 West North Temple, Suite 1210
P.O. Box 145801
Salt Lake City, Utah 84114-5801

Alice Carlton, Forest Supervisor
Manti-La Sal National Forest
599 West Price River Road
Price, Utah 84501

Kent Hoffman, Deputy State Director
Bureau of Land Management, State Office
324 South State Street
P.O. Box 45155
Salt Lake City, Utah 84145-0155

*Incoming
4/15/08
Copy Mary Ann,
Alice, Pan*

RE: PacifiCorp "Deer Creek" Mine – Application for Permit Revision, North Rilda Facilities Area

Ladies and Gentleman:

Thank you very much for your prompt reply to my letter of January 28, 2004 requesting your input as to whether the North Rilda Canyon Facilities permit revision meets the requirements of 30 CFR 746.18(d) and therefore constitutes a mining plan modification. After careful review of the pertinent documents and your input, we have determined that the facilities revision does meet the criteria of 30 CFR 746.18(d) and will require a modification to the existing approved mining plan. The reason is that the documentation in the August 1997 mining plan decision document for the two leases where the facilities would be constructed contains a sentence that states "No additional surface disturbance except that related to mining-induced subsidence will result from this action." Therefore this proposal will change the information before the Assistant Secretary.

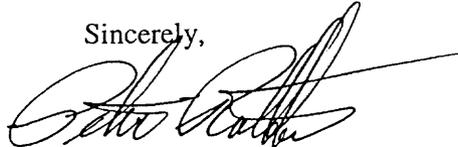
Since OSM, by regulation, must prepare the mining plan decision document and is responsible for determining the scope, content and format of the required NEPA document, OSM will be the lead agency for the preparation of an environmental assessment (EA). Pursuant to the Utah



Cooperative Agreement at 30 CFR 944.30 VI C3 and 30 CFR 740.4(c)(7) the Utah Division of Oil, Gas And Mining will prepare the documentation with OSM assistance where appropriate.

We invite and encourage the Forrest Service and the Bureau of Land Management to be cooperating agencies in the preparation of the EA. We currently have scheduled a meeting to develop the scope, content and format of the EA and a plan for its completion at the Division of Oil, Gas and Mining's offices on March 23, 2004 and hope the Forrest Service and Bureau of Land Management will be able to attend.

Sincerely,

A handwritten signature in black ink, appearing to read "Peter Rutledge", with a long horizontal flourish extending to the right.

Peter Rutledge
Chief Program Support Division

cc: Chuck Samborski
Barry Burkhardt

0133

Coal



United States Department of the Interior

OFFICE OF SURFACE MINING
Reclamation and Enforcement
P.O. Box 46667
Denver, Colorado 80201-6667

IN REPLY REFER TO:

October 22, 2004

Mary Ann Wright, Associate Director, Mining
Utah Division of Oil, Gas, and Mining
Coal Regulatory Program
1594 West North Temple, Suite 1210
P.O. Box 145801
Salt Lake City, Utah 84114-5801

Accounting
2/015/0018
Copy Susan, Wayne,
Spec

RE: PacifiCorp "Deer Creek" Mine -- Revised application for Permit Change C0150018, North Rilda Facilities Area

Dear Mary Ann:

This is in response to Sheila Morrison's request of 9/21/2004 for OSM's determination whether or not the above revised permit change constitutes a Mining Plan Modification.

Please be advised that for reasons stated in my letter dated March 10, 2004, the above subject permit change continues to meet the criteria of 30 CFR 746.18(d) and will require a modification of the existing mining plan. According to the decision conveyed in my above referenced letter, the ongoing work to prepare an environmental assessment needs to continue.

Sincerely,

Peter Rutledge
Chief Program Support Division

cc: Alice Carlton, Forest Supervisor
Manti-La Sal National Forest

Kent Hoffman, Deputy State Director
Bureau of Land Management, State Office

Chuck Samborski
Barry Burkhardt

RECEIVED
OCT 26 2004
10/26

DIV. OF OIL, GAS & MINING



0019

Mark -> Coal



United States Department of the Interior

OFFICE OF SURFACE MINING
Reclamation and Enforcement
P.O. Box 46667
Denver, Colorado 80201-6667

IN REPLY REFER TO:

UT-0016

January 20, 2005

Ms Mary Ann Wright, Acting Director
Utah Division of Oil, Gas, & Mining
Coal Regulatory Program
1594 West North Temple, Suite 1210
P.O. Box 145801
Salt Lake City, Utah 84114-5801

*Incoming OK
1/15/05
Copy Luci, Susan,
Wayne H*

RE: PacifiCorp - "Deer Creek" Mine - Application for a Permit Revision, North Ruda Area
Facilities

Dear Mary Ann:

This in response to the Utah Division of Oil, Gas, & Mining's (UT-DOGM) January 7, 2005, request for a decision, under 30 CFR 944.30, whether the above subject permit revision constitutes a mining plan modification.

As stated in my letters dated March 10, 12004 and October 22, 2004, the above subject permit change continues to meet the criteria of the Federal regulations under 30 CFR 746.18(d) and will require modification of the existing mining plan and Secretarial approval. According to the decisions conveyed in the above referenced letters, the ongoing work to prepare an environmental assessment need to continue.

Sincerely,

Peter Rutledge
Chief Program Support Division

cc: BLM - Utah State Office
BLM - Price Field Office
USFS - Manti-La Sal NF
Denver Field Division

REC'D
M/W
JAN 24 2005 1/25
M.R.

TAKE PRIDE
IN AMERICA

PERMITTING CHRONOLOGY

Pacificorp
North Rilda Canyon Portal Facilities
Deer Creek Mine
C/015/0018
Emery County, Utah

July 27, 2005

March 10, 2004	OSM determination that the addition of the North Rilda Canyon Portal facilities will require mining plan modification.
September 2, 2004	PacifiCorp submits an application for the North Rilda Canyon Portal Facilities.
October 22, 2004	OSM determination that the addition of the North Rilda Canyon Portal Facilities require mining plan modification.
December 6, 2004	PacifiCorp withdraws application to resubmit plan all on-lease.
December 21, 2004	PacifiCorp submits an application for the North Rilda Canyon Portal Facilities.
January 20, 2005	OSM determination that the addition of the North Rilda Canyon Portal Facilities requires a mining plan modification.
January 28, 2005	The permit application is determined administratively complete. PacifiCorp published the Notice of Complete Application (including the Experimental Practice) in the local newspaper and placed a copy of the application in the county courthouse.
February 1, 8, 15 and 22, 2005	Publication for four weeks in the <u>Emery County Progress</u> .
February 15, 2005	The Division sent letters to state, federal and local planning agencies notifying them of the complete permit application and soliciting their comments.
March 16, 2005	Division technical review team met with PacifiCorp.
March 18, 2005	SHPO concurs with the determination of No Historic Properties Affected.

March 22, 2005 Public comment period ended with no comments.

March 25, 2005 BLM issues approval of a modification of the R2P2.

April 1, 2005 PacifiCorp submits additional information to the Division.

May 10, 2005 Division sends technical review to PacifiCorp.

May 16, 2005 Section 7 Consultation Letter from U.S. Fish and Wildlife Service for the Rilda Canyon Portals.

June 2 and 13, 2005 PacifiCorp sends additional information.

June 24, 2005 AVS check completed with issue recommendation.

July 14, 2005 Technical Analysis completed, all regulatory requirements have been met. CHIA completed

July 26, 2005 OGM receives PacifiCorp ridered bond in the amount of \$1,113,000 (total bond is now \$4,113,000 [2008 dollars]).

July 27, 2005 Decision Document completed and Permit issued.

FINDINGS

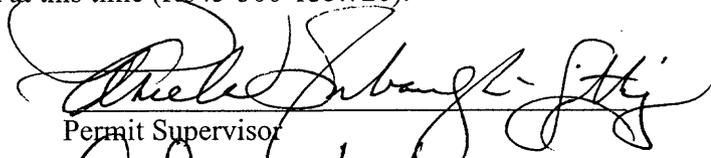
Pacificorp
North Rilda Canyon Portal Facilities
Deer Creek Mine
C/015/0018
Emery County, Utah

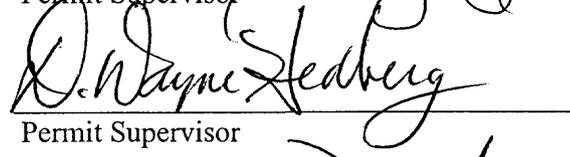
July 27, 2005

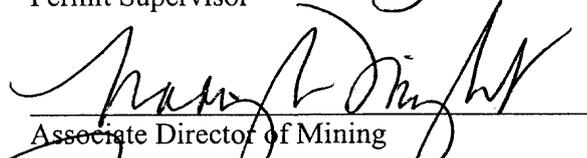
1. The permit application for the extraction of coal from the Mill Fork Lease at the Deer Creek Mine is accurate and complete and all requirements of the Surface Mining Control and Reclamation Act, and the approved Utah State Program (the "Act") are in compliance. See Technical Analysis dated July 13, 2005 (R645-300-133.100)
2. The applicant proposes acceptable practices for the reclamation of disturbed lands. The Division has determined that reclamation, as required by the Act can be feasibly accomplished following the approved plan with the attached permit conditions. See Technical Analysis dated July 13, 2005(R645-300-133.710)
3. An assessment of the probable cumulative impacts of all anticipated coal mining and reclamation activities on the hydrologic balance in the general area has been conducted by the Division and no significant impacts were identified. See CHIA dated June 30, 2005. The Mining and Reclamation Plan (MRP) proposed under the revised application has been designed to prevent damage to the hydrologic balance in the permit area and in associated off-site area (R645-300-133.400 and UCA 40-10-11 (2)(c)).
4. The proposed lands to be included within the permit area are:
 - a. Not included within an area designated unsuitable for underground coal mining operation (R645-300-133.220);
 - b. not within an area under study for designated land unsuitable for underground coal mining operations (R645-300-133.210);
 - c. not on any lands subject to the prohibitions or limitation of 30 CFR 761.11 {a} (national parks, etc), 761.11 {f} (public buildings, etc.) and 761.11 {g} (cemeteries);
 - d. not within 100 feet of a public road except at the location where the public road accesses the property(R645-300-133.220); and
 - e. not within 300 feet of any occupied dwelling (R645-300-133.220).

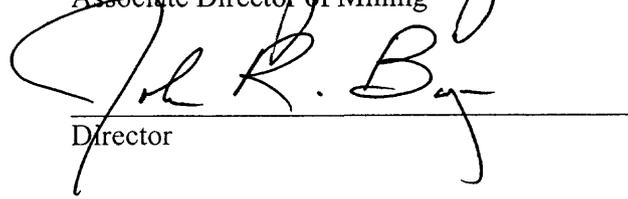
5. The operation would not affect the continued existence of any threatened or endangered species or result in the destruction or adverse modification of their critical habitats as determined under the Endangered Species Act of 1973. See Technical Analysis dated, July 1, 2005 and letter from U. S. Fish and Wildlife Services dated May 16, 2005 (16 USC 1531 et seq.) (R645-300-133.500).
6. The Division's issuance of a permit is in compliance with the National Historic Preservation Act and implementing regulations (36 CFR 800). See Technical Analysis, dated July 1, 2005. See letter from State Historic Preservation Office, dated March 18, 2005. (R645-300-133.600)
7. The applicant has the legal right to enter and conduct coal mining activities through coal leases issued by the BLM (Federal Coal leases, SL-051221, U-06039, U-2810, and SL-050862. (R645-300-133.300)
8. A 510 (c) report has been run on the Applicant Violator System (AVS), which shows that: prior violations of applicable laws and regulations have been corrected; neither PacifiCorp nor any affiliated company, are delinquent in payment of fees for the Abandoned Mine Reclamation Fund; and the applicant does not control and has not controlled mining operations with demonstrated pattern of willful violations of the Act of such nature, duration, and with such resulting irreparable damage to the environment as to indicate an intent not to comply with the provisions of the Act (A 510 (c) report was run on, June 30, 2005, see memo to file dated June 30, 2005). (R645-300-133.730)
9. Coal mining and reclamation operations to be performed under the permit will not be inconsistent with other operations anticipated to be performed in areas adjacent to the proposed permit area.
10. The applicant has posted a surety bond for the Deer Creek Mine in the amount of \$4,113,000 issued by Travelers Casualty and Surety Company of America (Surety Number 103908970) (R645-300-134).
11. No lands designated as prime farmlands or alluvial valley floors occur on the permit area. See Technical Analysis dated July 13, 2005 (R645-302-313.100 and R645-302-321.100).
12. The proposed postmining land-use of this disturbed area is the same as the pre-mining land use (wildlife habitat) and has been approved by the Division and the surface land management agency, the Forest Service. No postmining land-use change has been proposed for the Rilda Canyon Portal Facilities.
13. The Division has made all specific approvals required by the Act, the Cooperative Agreement, and the Federal Lands Program. This action does constitute a Federal Mine Plan Modification. See OSM determination letters dated March 10, 2004, October 22, 2004 and January 20, 2005.

14. All procedures for public participation required by the Act, and the approved Utah State Program have been complied with. The public advertisement was published on February 1, 8, 15 and 22, 2005 in the Emery County Progress. No comments were received. (R645-300-120)
15. No existing structures will be used in conjunction with this application. These are new surface facilities being proposed at this time (R645-300-133.720).


Permit Supervisor


Permit Supervisor


Associate Director of Mining


Director



IN REPLY REFER TO:

United States Department of the Interior

OFFICE OF SURFACE MINING
Reclamation and Enforcement
P.O. Box 46667
Denver, Colorado 80201-6667
December 30, 2005

UT-0016

Mr. Chuck Semborski
Environmental Supervisor
Energy West Mining Company
P.O. Box 310
Huntington, Utah 84528

Dear Mr. Semborski

On December 21, 2005, the Department of the Interior approved a mining plan modification for Federal Leases U-06039, U-2810, SL-050862, and SL-051221 at PacifiCorp's Deer Creek Mine located in Emery County, Utah. This mining plan action relates to Federal lands associated with the Utah Department of Natural Resources, Division of Oil, Gas and Mining (UT-DOGM) State Decision Document for the Rilda Canyon Portal Facilities, PacifiCorp, Deer Creek Mine, C/015/0018, approved on July 27, 2005.

I have enclosed a copy of the mining plan approval document and associated map for this new mining plan. Please read the terms and conditions of the mining plan approval document carefully. Mining and reclamation operations must be conducted in accordance with both the Utah state permit and the approved mining plan.

The December 21, 2005, approval allows you to initiate coal mining operations in Federal Leases U-06039, U-2810, SL-050862, and SL-051221 within the area of mining plan approval.

If you have any questions, please contact me at (303) 844-1400, extension 1500.

Sincerely,

Carl R. Johnston
Utah Federal Lands Coordinator

Enclosure

cc: BLM - Utah State Office
BLM - Price Field Office
Utah Department of Natural Resources
OSM - Denver Field Division

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