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

OK

Michael O. Leavitt
Governor

Robert L. Morgan
Executive Director

Lowell P. Braxton
Division Director

1594 West North Temple, Suite 1210
PO Box 145801
Salt Lake City, Utah 84114-5801
(801) 538-5340 telephone
(801) 359-3940 fax
(801) 538-7223 TTY
www.nr.utah.gov

March 3, 2003

Rick Olsen, General Manager
Canyon Fuel Company, LLC
P.O. Box 1029
Wellington, Utah 84542

Rick

Dear Mr. Olsen:

Re: Five-Year Permit Renewal and Approval of Refuse Pile Revision, Canyon Fuel Company, LLC, Dugout Mine, C/007/039, Outgoing File

The Division of Oil, Gas and mining has reviewed your application for permit renewal as well as your application to add a waste rock disposal site to the Dugout Canyon Mine and has made a decision to approve both of these applications at this time. Enclosed is the revised mining permit for the Dugout Mine and a copy of the State's Decision Document.

Two (2) copies of the permit are included. Please have both copies signed by the responsible official for Dugout Mine and return one to the Division.

Sincerely,

Lowell

Lowell P. Braxton
Director

an

Enclosures

cc: J. Fulton, OSM
Price Field Office

O:\007039.DUG\FINAL\PERMIT\DD_SR02D_RN02.DOC

**UTAH DIVISION OF OIL, GAS AND MINING
STATE DECISION DOCUMENT
For
PERMIT RENEWAL AND ADDITION OF THE
WASTEROCK DISPOSAL FACILITY**

**Canyon Fuel Company, LLC
Dugout Mine
C/007/039
Carbon County, Utah**

March 3, 2003

CONTENTS

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- * Mine Plan Information
- * Technical Analysis for Waste Rock Site

ADMINISTRATIVE OVERVIEW

Canyon Fuel Company, LLC
Dugout Mine
C/007/039
Carbon County, Utah

March 3, 2003

BACKGROUND

Mining in Dugout Canyon had its beginning in 1925 when D. J. Collins hand-developed the Red Glow Mine. After that several other entities conducted small mining operations in the Canyon off and on until approximately 1965. The reserve changed hands several times when finally Sunedco acquired the reserves in the early 1980's and permitted the property in hopes of developing a 5 million ton a year coal mine. The market never materialized and the mine never was developed. The permit was not kept active and was revoked on May 19, 1987. Coastal States Energy Company acquired the properties in 1993 as part of the acquisition of Soldier Creek Coal Company.

An application to permit the Dugout Canyon Mine was initiated by Coastal States Energy Company on March 15, 1996. Canyon Fuel Company, LLC became the applicant on December 20, 1996 when the Atlantic Richfield Companies purchased the Coastal properties. Canyon Fuel was issued the initial permit for the Dugout Canyon Mine on March 16, 1998 shortly after which construction of the mine commenced. The initial mine encompassed 4025 acres of fee and State land of which 10.4 acres would be disturbed. Canyon Fuel Company, LLC determined that additional surface facilities would be needed and in May 1998, submitted an application to add 10 acres of BLM land to the permit. This was granted on October 16, 1998. On March 31, 2000 the Division approved the addition of 3049 acres (2416 acres of federal lease) to the existing permit area, which brought the total permitted acreage of the mine to 7084 acres. Federal Mine Plan approval was issued on August 2, 2000.

PROPOSAL

Canyon Fuel Company, LLC recognized the need for a waste rock disposal site and made application on April 22, 2002 to permit a refuse pile area consisting of 26.8 acres of fee land. This addition to the permit will bring the total permit area of the Dugout Canyon Mine to 7111 acres and the area disturbed to 48.58 acres.

Canyon Fuel Company, LLC made application to the Division of Oil, Gas and Mining for a five year permit renewal for the Dugout Mine on October 18, 2002.

Since these two actions are occurring almost simultaneously, the Division has chosen to issue the revised permit for the refuse pile area and issue the renewal of the Dugout Canyon permit at the same time.

ANALYSIS

Canyon Fuel Company, LLC has submitted a significant revision to add a refuse pile disposal area for the Dugout Mine. The permit change is considered a Significant Revision of the current permit since the addition of the Refuse Pile area represents an increase of greater than 15 percent of the disturbed area currently permitted. The refuse site will be used to deposit underground waste rock from mining activities. Coal waste from the Dugout Canyon Mine is currently disposed of underground or at the approved waste rock disposal facility at either SUFCO or Skyline Mines or at the Banning Loadout (Section 528.300 of the approved MRP). At the present time, underground mining is producing more rock (refuse) than can be stored underground.

The proposed refuse disposal area is located in T14S R12E, N½ NE¼ Section 18. The site is located at an elevation of 5,900 feet on a pediment composed of gravelly alluvial deposits overlying the Mancos Shale. The triangular shaped permit area covers 26.8 acres (Section 114 pages 1-24 and 1-25) of which, 15.8 acres will be disturbed (RA Attachment 2-2). The permit area is immediately adjacent to the county road, approximately 2.5 miles east of the Soldier Creek road intersection. Refuse disposal will consume 5.7 acres. The rest of the disturbed area (10.1 acres) will either be dedicated for topsoil storage, sediment pond, access roads, general storage or remain undisturbed.

The proposed permit change was originally received by the Division on April 22, 2002, and determined Administratively Complete on August 9, 2002. However, additional information was requested from the applicant prior to the commencement of the technical review, which was submitted on August 30, 2002. The applicant also submitted additional information for Chapter 1 and Chapter 5 of the approved MRP on September 26, 2002, which was not included in the October 2002 review. The revision was returned with deficiencies to the Operator on October 10, 2002, and was initially resubmitted to the Division on January 08, 2003, with additional information being submitted on February 7, February 14, and February 20, 2003. A technical analysis (TA) has been completed for the Refuse Pile Revision and all of the requirements for permitting this site have now been met.

The current permit would expire on March 16, 2003, but Canyon Fuel Company, LLC has applied for a renewal of the permit. The permittee has met the requirements for permit renewal and the permit will be extended for another 5 year period. The renewal area encompasses the same permit area and disturbance as is currently approved, with the addition of the above waste rock site. The notice of permit renewal was published in the Sun Advocate on December 19 and 26, 2002 and January 2 and 9, 2003. No comments were received during the public comment period.

RECOMMENDATION

This recommendation is based on the complete permit application package (PAP), the Technical Analysis (TA) conducted by the Division, the Cumulative Hydrologic Impact Assessment CHIA also prepared by the Division, and the administrative record. Canyon Fuel Company, LLC has demonstrated that mining within the permit boundary 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 for this mine has an issue recommendation.

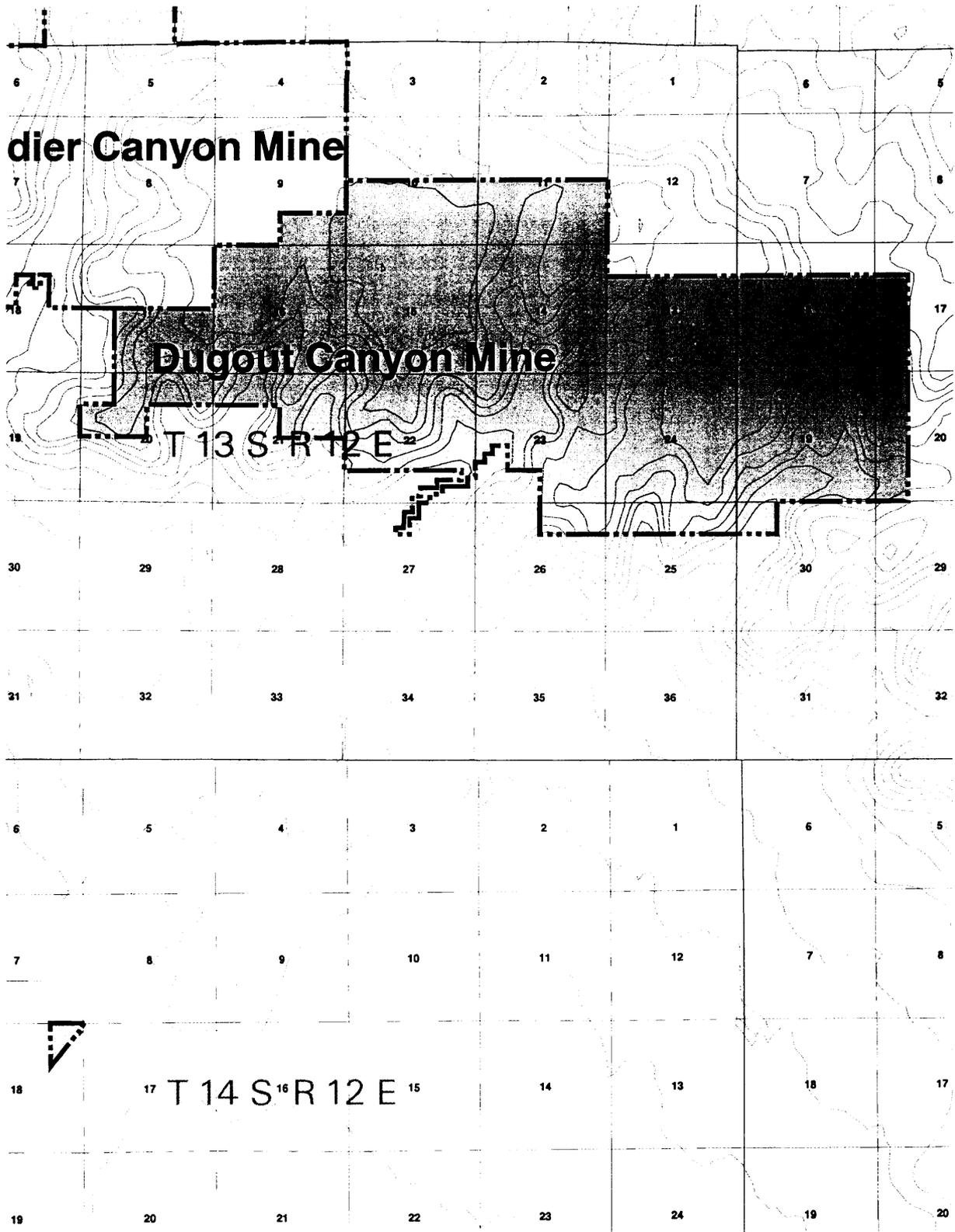
It is recommended that approval be given for the addition of the 26.8 acre refuse pile area to the Dugout Canyon mine and that the renewal of the permit be issued for an additional five year period.

Dugout Canyon Mine

Dugout Canyon Mine

T 13 S R 12 E

T 14 S R 12 E



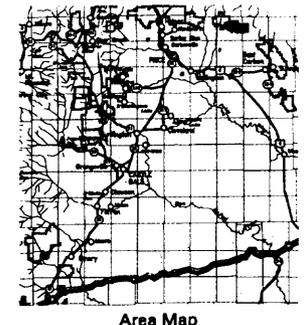
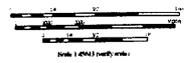
--- Permit Area

General Area Map
Dugout Canyon Mine

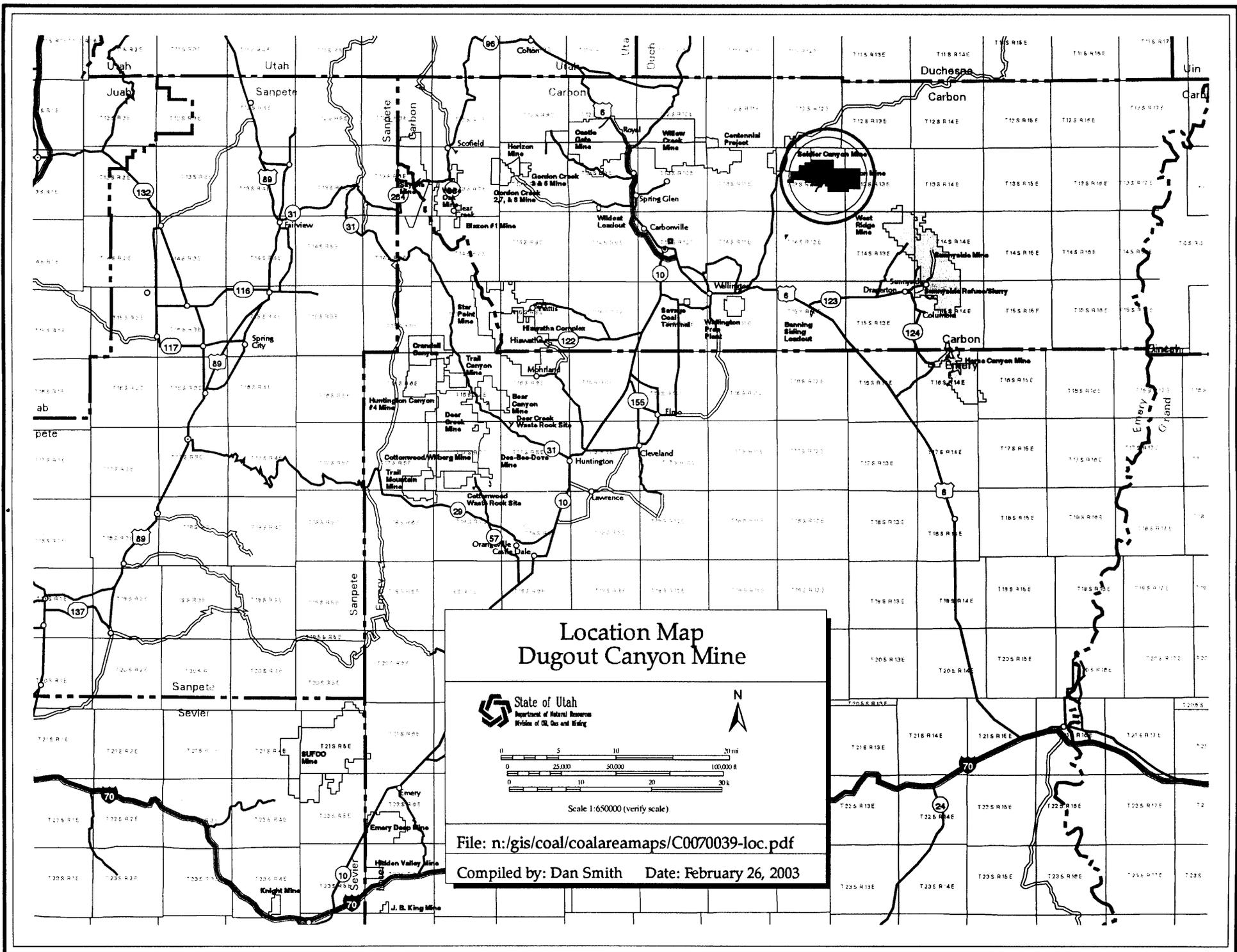
PERMIT AREA MAP

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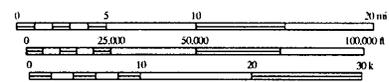
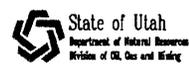
Compiled by: Dan Smith Date: February 26, 2003



Area Map



Location Map Dugout Canyon Mine



Scale 1:650000 (verify scale)

File: <n:/gis/coal/coalareamaps/C0070039-loc.pdf>

Compiled by: Dan Smith Date: February 26, 2003

PERMITTING CHRONOLOGY

Canyon Fuel Company, LLC
Dugout Mine
C/007/039
Carbon County, Utah

March 3, 2003

- April 22, 2002 Canyon Fuel Company, LLC submits application to permit a refuse pile area.
- August 9, 2002 The Application for the refuse pile area is determined to be administratively complete.
- September 10, 2002 The application is transmitted to the Bureau of Land Management.
- October 18, 2002 Canyon Fuel Company, LLC submits application for permit renewal for the Dugout Mine.
- December 9, 2002 Division notifies Canyon Fuel Company, LLC that the Dugout Mine permit renewal application is complete.
- December 19 and 26,
2002 and January 2
and 9, 2003 The Dugout Mine notice of permit renewal and the notice of intent to construct a wasterock storage facility are both published in the Sun Advocate for four consecutive weeks.
- December 11, 2002 Division notifies other federal, state and local agencies about the Dugout Mine permit renewal.
- February 9, 2003 End of public comment period.
- February 24, 2003 Division completes the Technical Analysis (TA) addressing the wasterock storage facility.
- March 3, 2003 Division issues Decision Document approving the wasterock storage facility and renewing the Dugout Canyon Mine permit.

PERMIT RENEWAL FINDINGS

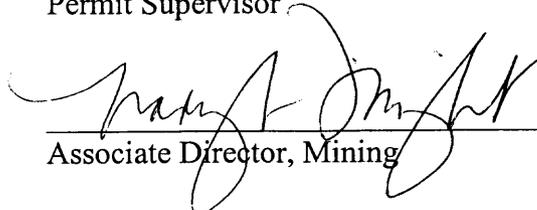
Canyon Fuel Company, LLC
Dugout Mine
C/007/039
Carbon County, Utah

March 3, 2003

1. The permit renewal term will not exceed the original permit term of five years (R645-303-234).
2. The terms and conditions of the existing permit are being satisfactorily met (R645-303-233.110).
3. The present coal mining and reclamation operations are in compliance with the environmental protection standards of the Act and the Utah State Program (R645-303-233.120).
4. The requested renewal will not substantially jeopardize the operator's continuing ability to comply with the Act and the Utah State Program (R645-303-233.130).
5. The permittee has provided evidence of having liability insurance (Federal Insurance Company - policy #3711-00-10)(R645-303-233.140).
6. The permittee has posted a reclamation surety bond performance bond issued by St. Paul Fire and Marine Insurance Company surety bond number 400SA1917 in the required amount of \$3,682,000. This instrument will remain in full effect for the additional permit period. No additional surface disturbances are approved with this renewal (R645-303-233.150).
7. The permittee has submitted all updated information as required by the Division at this time. (R645-233.160).



Permit Supervisor



Associate Director, Mining



Director

FINDINGS FOR PERMITTING REFUSE PILE AREA

Canyon Fuel Company, LLC
Dugout Canyon Mine
ACT/007/039
Carbon County, Utah

March 3, 2003

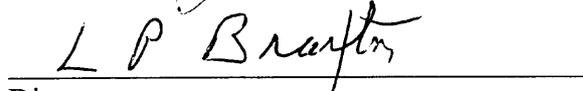
1. The permit application for adding an additional 26.8 acres to the permit area and for expanding the surface disturbed area to 48.58 acres at the Dugout Canyon Mine is accurate and complete and all requirements of the Surface Mining Control and Reclamation Act, and the approved Utah State Program (the "Act") are in compliance. See Technical Analysis dated February 24, 2003. (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. See Technical Analysis dated February 24, 2003. (R645-300-133.710)
3. An assessment of the probable cumulative impacts of all anticipated coal mining and reclamation activities in the general area on the hydrologic balance has been conducted by the Division and no significant impacts were identified. See CHIA dated March 12, 1998 and February 24, 2003 Technical Analysis. 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. within 100 feet of a public road, however Canyon Fuel Company, LLC received approval from the county road commissioner to operate as planned (see Carbon County letter dated September 23, 2002)(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. (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). (R645-300-133.600)
- 7. The applicant has the legal right to enter and complete mining activities in the permit area through ownership of the property (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 Canyon Fuel Company, LLC or 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 , 1998, see memo to file dated February 28, 2003). (R645-300-133.730)
- 9. Mining 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 Dugout Canyon Mine in the amount of \$3,682,000. (R645-300-134)
- 11. No lands designated as prime farmlands or alluvial valley floors occur on the permit area. (R645-302-313.100 and R645-302-321.100)
- 12. The proposed postmining land-use of the permit area is the same as the pre-mining land use and has been approved by the Division.
- 13. The Division has made all specific approvals required by the Act, the Cooperative Agreement, and the Federal Lands Program.

14. All procedures for public participation required by the Act, and the approved Utah State Program are in compliance. The public advertisement was noticed on December 19 and 26, 2002 and January 2 and 9, 2003. No comments were received. (R645-300-120)
15. No "existing structures" will be used in conjunction with this mine area. (R645-300-133.720)


Permit Supervisor


Associate Director of Mining


Director

**STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING
1594 West North Temple
Box 145801
Salt Lake City, Utah 84114-5801
(801) 538-5289**

This permit, C/007/039, is issued for the state of Utah by the Utah Division of Oil, Gas and Mining (DOGM) to:

**Canyon Fuel Company, LLC
6955 South Union Park Center, Suite 540
Midvale, Utah 84047
(801) 596-7111**

for the Dugout Canyon Mine. Canyon Fuel Company, LLC is the lessee of federal coal lease U-07064-027821 of state coal leases ML-42648, ML-42649 and fee-owned property. A performance bond is filed with the DOGM in the amount of \$ 3,682,000, payable to the state of Utah, Division of Oil, Gas and Mining. DOGM 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.
- Sec. 2 PERMIT AREA** - The permittee is authorized to conduct coal mining and reclamation operations on the following described lands within the permit area at the Dugout Canyon Mine situated in the state of Utah, Carbon County, and located:

T. 13 S., R. 12 E., SLBM, Utah

- Section 9: S1/2SE1/4
- Section 10: S1/2
- Section 11: S1/2
- Section 13: All except N1/2N1/2
- Section 14: All
- Section 15: All
- Section 16: All
- Section 17: E1/2SW1/4; SE1/4
- Section 20: E1/2NW1/4; SW1/4NW1/4; N1/2NE1/4
- Section 21: N1/2NW1/4; NE1/4
- Section 22: N1/2; N1/2S1/2;
NE1/4SW1/4SW1/4SE1/4;

- S1/2SW1/4SW1/4SE1/4;
N1/2SE1/4SW1/4SE1/4;
SE1/4NE1/4SW1/4SE1/4;
S1/2NW1/4SE1/4SE1/4;
SW1/4NE1/4SE1/4SE1/4;
N1/2NE1/4SE1/4SE1/4
- Section 23: NW1/4; NE1/4; SE1/4;
NE1/4SW1/4;
NW1/4SW1/4NW1/4SW1/4;
NW1/4NW1/4SW1/4;
N1/2NE1/4NW1/4SW1/4
- Section 24: All
- Section 25: N1/2N1/2
- Section 26: N1/2NE1/4
- Section 27: NE1/4SE1/4NE1/4NW1/4;
S1/2SE1/4NE1/4NW1/4;
SE1/4NE1/4NE1/4NW1/4;
W1/2NW1/4NW1/4NE1/4

T. 13 S., R. 13 E., SLBM, Utah

- Section 17: SW1/4NW1/4; W1/2SW1/4
- Section 18: All except N1/2N1/2
- Section 19: All
- Section 20: W1/2W1/2
- Section 30: NW1/4NW1/4

T. 14 S., R. 12 E., SLBM, Utah

- Section 18: NW1/4NE1/4NE1/4
Portions of NE1/4, SW1/4, SE1/4 of the NE1/4NE1/4;
Portions of the NW1/4SE1/4NE1/4

This legal description is for the permit area of the Dugout Canyon Mine included in the mining and reclamation plan. The permittee is authorized to conduct coal mining and reclamation operations on the foregoing described property subject to the conditions of the leases, including all conditions and all other 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 becomes effective on March 3, 2003 and expires on March 16, 2008.

- Sec. 5 ASSIGNMENT OF PERMIT RIGHTS** - The permit rights may not be transferred, assigned or sold without the approval of the Director, DOGM. 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.
- Sec. 6 RIGHT OF ENTRY** - The permittee shall allow the authorized representative of the DOGM, including but not limited to inspectors, and representatives of OSMRE, 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, R645-400-110, 30 CFR 842.13 and R645-400-220; and,
 - (b) be accompanied by private persons for the purpose of conducting an inspection in accordance with R645-400-100 and 30 CFR 842, when the inspection is in response to an alleged violation reported 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 mining and reclamation plan and permit application and approved for the term of the permit and which are subject to the performance bond.
- Sec. 8 ENVIRONMENTAL IMPACTS** - The permittee shall minimize any adverse impact to the environment or public health and safety through but not limited to:
- (a) accelerated monitoring 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 DOGM 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 PAYMENT** - The permittee 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 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 DOGM. DOGM, after coordination with OSMRE, shall inform the permittee of necessary actions required. The permittee shall implement the mitigation measures required by DOGM within the time frame specified by DOGM.
- Sec. 17 APPEALS** - The permittee shall have the right to appeal as provided for under R645-300.
- Sec. 18 SPECIAL CONDITIONS** - There is a special condition associated with this permit, 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 DOGM and the permittee at any time to adjust to changed conditions or to correct an oversight. DOGM may amend these conditions at any time without the consent of the permittee in order to make them consistent with any new federal or state statutes and any new regulations.

THE STATE OF UTAH

By: James P. Brantly

Date: 3/3/03

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. Canyon Fuel Company, LLC must submit water quality data for the Dugout Mine in an electronic format through the Electronic Data Input web site, <http://hlunix.hl.state.ut.us/cgi-bin/appxogm.cgi>.



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

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Michael O. Leavitt
Governor
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Executive Director
Lowell P. Braxton
Division Director

February 28, 2003

TO: Internal File

FROM: Daron R. Haddock, Permit Supervisor 

RE: AVS Documentation – 510 c Check, Canyon Fuel Company, LLC, Dugout Mine, C/007/039

As of the writing of this memo, there are no NOVs or COs which are not corrected or in the process of being corrected for the Dugout Mine. There are no finalized civil penalties, which are outstanding and overdue in the name of Canyon Fuel Company, LLC. Canyon Fuel Company, LLC does not have a demonstrated pattern of willful violations, nor have they been subject to any bond forfeitures for any operation in the state of Utah.

Attached is documentation from the OSM Applicant Violator System dated February 28, 2003.

O:\007039.DUG\COMPLIANCE\AVS2282003.DOC

Application Evaluation Report Applicant Violator System 28-Feb-2003 10:43:38

State : UT Permit No : ACT007039 Appl No : ACT007039
 Permittee : 142816(CANYON FUEL CO LLC) Seqno : 0
 Applicant : 142816(CANYON FUEL CO LLC)

OSMRE: Comments/Analysis: Date : 27-Feb-2003 Mode : VIEW

There were no violations retrieved by the system.

SRA: Comments/Analysis: Date : 28-Feb-2003 Mode : UPDATE

SAVE(F5) DELETE(F8)
 PRV SCR(F3) QUIT(F4) CHOICES(F10)

CRD KER DDE WINSOCK Node Connected

CLR ↑

UT220 88 ONLINE 18 35

Hold

Start Novell-delivered Applicatio... MS320 [avsdg.osmre...

10:35 AM



IN REPLY REFER TO:

United States Department of the Interior

OFFICE OF SURFACE MINING
Reclamation and Enforcement
1999 Broadway, Suite 3320
Denver, Colorado 80202-5733

February 28, 2003

RECEIVED

MAR 03 2003

DIV. OF OIL, GAS & MINING

Mr. Daron Haddock
Utah Division of Oil, Gas, & Mining
1594 West North Temple, Suite 1210
P.O. Box 145801
Salt Lake City, Utah 84114-5801

RE: Canyon Fuel Company, LLC - "Dugout Canyon Mine - Application for a Significant Permit Revision to Construct a Refuse Disposal Site and an Application for a Permit Renewal"

Dear Mr. Haddock:

This in response to the Utah Division of Oil, Gas, & Mining's (UT-DOG M) February 27, 2003, request for a decision, under 30 CFR 947.30, whether the above subject permit revision constitutes a mining plan modification.

Mining plan approvals by the Secretary of the Interior are required under the Mineral Leasing Act of 1920, 30 U.S.C 181, *et seq.* before coal mining can occur on Federal lands. This letter serves to document OSM's determination whether or not a mining plan approval from the Secretary is required for the above permitting action.

OSM's review of the Refuse Disposal Significant Permit Revision has determined that it proposes to construct a waste rock disposal pile on approximately 27 acres of fee lands to facilitate mining and reclamation operations at the Dugout Canyon mine, Utah State permit ACT/007/039.

Based on a review of the activities associated with the permit revision, OSM has determined that the proposed Significant Permit Revision does not meet the requirements of 30 CFR § 746.11(a) and 746.18(d). Therefore, since no changes in the recovery of Federal coal is involved, the proposed permit revision does not constitute a mining plan action requiring Secretarial approval.

OSM's review of the application for a Permit Renewal has determined that it is to authorize continued underground coal mining and reclamation operations within the approved boundaries of the existing Utah State permit for a period of five (5) additional years. No revisions to the previously approved permit were submitted as a part of the application for a Permit Renewal.

Based on a review of the activities associated with the Permit Renewal, OSM has determined that the proposed Permit Renewal does not meet the requirements of 30 CFR § 746.11(a) and 746.18(d). Therefore, since no changes in the recovery of Federal coal is involved, the proposed permit revision does not constitute a mining plan action requiring Secretarial approval.

Please notify the applicant of our decision on this matter.

OSM's decision does not, however, relieve UT-DOGM from coordinating the review and approval of the Application for a Significant Permit Revision to Construct a Refuse Disposal Site and an Application for a Permit Renewal with other Federal agencies for compliance with other Federal regulations.

Please notify the applicant of our decision on this matter.

Should you have any questions regarding this letter or approval, please contact Carl R. Johnston, Utah Federal Lands coordinator, at (303) 844-1400, extension 1500.

Sincerely,



 Ranvir Singh
Manager, Northwest Branch

cc: Denver Field Division

LEGAL NOTICE

Canyon Fuel Company, LLC, of Salt Lake City, Utah, hereby announces its intention to construct and operate a wasterock storage facility. The facility will be constructed on a previously disturbed gravel pit.

Canyon Fuel Company, LLC, operates the Dugout Canyon Mine which is located thirteen (13) miles northeast of Wellington, Utah, in Dugout Canyon within the west half of Section 23, Township 13 South, Range 12 East, Salt Lake Base Meridian. The currently approved Dugout Canyon Mine mining permit number is C/007/039.

The wasterock storage facility is located approximately 6.5 miles southwest of the Dugout Canyon Mine in portions of the NE1/4, SW 1/4 and SE 1/4 of the NE 1/4; in a portion of the NW 1/4 of the SE1/4, and in the NW1/4 of the NE 1/4 of Section 18, Township 14 South, Range 12 East, Salt Lake Base Meridian. The addition of this area will increase the permit area for the Dugout Canyon Mine by 26.8 acres.

A copy of the permit is available for inspection at the following locations: Utah Division of Oil, Gas and Mining, 1594 West North Temple, Suite 1210, Salt Lake City, Utah 84114 and Carbon County Courthouse, 120 East Main Street, Price, Utah 84501

The address of the applicant is:
Canyon Fuel Company, LLC, 6955 South Union Park Center, Suite 540, Midvale, Utah 84047

Written comments or request for a hearing regarding this application must be submitted within 30 days of the last publication date of this notice, to the Utah Division of Oil, Gas and Mining, Attention Coal Regulatory Program, 1594 West North Temple, Suite 1210, Salt Lake City, Utah 84114-5801.

Published in the Sun Advocate December 19 and 26, 2002, January 2 and 9, 2003.

INCORPORATED

FEB 26 2003

DIV OF OIL GAS & MINING

-s-Marlon L. Bates, Trustee
SCALLEY & READING, P.C.
261 East 300 South, Suite 200
Salt Lake City, Utah 84111
Telephone (801)531-7870
Business Hours: 9:00a.m. to 5:00p.m.
(Loan No. 0044473676 ST 76000-3293)

-s-Jennie Olson
COURT CLERK

Published in the Sun Advocate January 2, 9, 16 and 23, 2003.

LEGAL NOTICE

Canyon Fuel Company, LLC of Midvale, Utah, hereby announces its intent to renew its coal mining permit for the Dugout Canyon Mine under the laws of the State of Utah and the U.S. Office of Surface Mining. The currently approved mining permit is number C/007/039.

Canyon Fuel Company, LLC, operates the Dugout Canyon Mine which is located thirteen (13) miles northeast of Wellington, Utah, with facilities in Dugout Canyon located in the west half of Section 23, Township 13 South, Range 12 East, Salt Lake Base Meridian.

Underground coal mining will take place in coal reserves owned or leased by Canyon Fuel Company, LLC. A legal description of the permit boundary includes:

Township 13 S., Range 12 E., Salt Lake Base and Meridian

- Section 9: S1/2SE1/4
- Section 10: S1/2
- Section 11: S1/2
- Section 13: All except N1/2N1/2
- Section 14: All
- Section 15: All
- Section 16: All
- Section 17: E1/2SW1/4; SE1/4
- Section 20: E1/2NW1/4; SW1/4NW1/4; N1/2NE1/4
- Section 21: N1/2NW1/4; NE1/4
- Section 22: N1/2; N1/2S1/2; N1/2NE1/4SE1/4SE1/4; SW1/4NE1/4SE1/4SE1/4; S1/2NW1/4SE1/4SE1/4; N1/2SE1/4SW1/4SE1/4; S1/2SW1/4SW1/4SE1/4; NE1/4SW1/4SW1/4SE1/4
- Section 23: NW1/4; NE1/4; SE1/4, NW1/4NW1/4SW1/4; N1/2NE1/4NW1/4SW1/4; NW1/4SW1/4NW1/4SW1/4; NE1/4SW1/4
- Section 24: All
- Section 25: N1/2N1/2
- Section 26: N1/2NE1/4
- Section 27: NE1/4SE1/4NE1/4NW1/4; S1/2SE1/4NE1/4NW1/4; SE1/4NE1/4NE1/4NW1/4; W1/2NW1/4NW1/4NE1/4

Township 13 S., Range 13 E., Salt Lake Base and Meridian

- Section 17 SW1/4NW1/4; W1/2SW1/4
- Section 18 All except N1/2N1/2
- Section 19 All
- Section 20 W1/2W1/2
- Section 30 NW1/4NW1/4

Topsoil to be used in reclamation of the Dugout Canyon Mine disturbed areas is being stored in T14S, R12E, Section 8, a storage area permitted to Soldier Canyon Mine.

A copy of the permit renewal application will be available for inspection at the following locations:

Utah Division of Oil, Gas and Mining, 1594 West North Temple, Suite 1210, Salt Lake City, Utah 84114 and Carbon County Courthouse, 120 East Main Street, Price, Utah 84501

The address of the applicant is: Canyon Fuel Company, LLC, 6955 South Union Park Center, Suite 540, Midvale, Utah 84047

Written comments or request for a hearing regarding this application must be submitted within 30 days of the last publication date of this notice, to the Utah Division of Oil, Gas and Mining, Attention Coal Regulatory Program, 1594 West North Temple, Suite 1210, Salt Lake City, Utah 84114-5801.

Published in the Sun Advocate December 19 and 26, 2002 and January 2 and 9, 2003

FOR PUBLICATION

ENO. 166754

OTT N. JOHANSEN

STRICT JUVENILE COURT
COUNTY, STATE OF UTAH

re-named child is pending in this Court, and a
ed your CUSTODY AND GUARDIANSHIP
e hereby summoned to appear before this
b, 2003, at 1:15 p.m. in the courtroom of this
RICE, UTAH 84501. You have the right to be
s.
earing, your custody and guardianship of the
ut further notice to you.
002.

-s-B. Procarione
COURT CLERK

12, 19 and 26, 2002 and January 2, 2003.

NOTICE

y, Utah, hereby announces its intention to
dility. The facility will be constructed on a

put Canyon Mine which is located thirteen
put Canyon within the west half of Section
at Lake Base Meridian. The currently
umber is C/007/039.

mately 6.5 miles southwest of the Dugout
and SE 1/4 of the NE 1/4; in a portion of
the NE 1/4 of Section 18, Township 14
a. The addition of this area will increase
26.8 acres.

he following locations: Utah Division of
Suite 1210, Salt Lake City, Utah 84114
Street, Price, Utah 84501

Park Center, Suite 540, Midvale, Utah

ng this application must be submitted
office, to the Utah Division of Oil, Gas
1594 West North Temple, Suite 1210,

d 26, 2002, January 2 and 9, 2003.

MINE PLAN INFORMATION

Mine Name: Dugout Canyon Mine State ID: ACT/007/039

Permittee: Canyon Fuel Company, LLC County: Carbon

Controlled By: Arch Western Resources, Inc Contact Person(s): Richard Pick

Telephone: (801) 569-4700 Position: President

New/Existing: Both Mining Method: Longwall

Federal Lease No(s): U-07064-027821

Legal Description(s): T. 13S. R. 12E., Sec. 13: S1/2, Sec 23: E1/2E1/2, W1/2SE1/4, NE1/4SW1/4, Sec. 24: All, Sec. 25: N1/2N1/2, Sec. 26: N1/2NE1/4 T.13S. R. 13E. Sec. 18: lots 3, 4, E1/2SW1/4, SE1/4, Sec.19: lots 1-4, E1/2W1/2, NE1/4, NW1/4SE1/4, Sec. 30: lot 1

State Lease No(s): ML-42648; ML-42649

Legal Description(s): ML-42648: T.13S., R12E., Sec 10: S1/2, Sec 11: S1/2, Sec 14 and 15: All, Sec. 17: E1/2SW1/4, SE1/4, NE1/4, Sec 20: E1/2NW1/4, SW1/4NW1/4, N1/2NW1/4, Sec 21: N1/2NW1/4, NE1/4, Sec 22: N1/2, N1/2S1/2, Sec 23: W1/2 NW1/4; ML-42649: T.13S., R.12E., Sec. 9 S1/2SE1/4

Fee Leases (identify): Canyon Fuel Fee

Description(s): T.13S., R12E. Sec 16: All, Sec 23: E1/2NW1/4. W1/2NE1/4

Other Leases or Rights-of-way (identify): BLM Right-of-Way UTU-76601 ,Canyon Fuel Fee for Wasterock site

Description(s): BLM -- T.13S., R12E. Sec 23: NE1/4NW1/4NW1/4SW1/4, N1/2NE1/4NW1/4SW1/4, SE1/4NW1/4NW1/4SW1/4 Canyon Fuel-- T.14 S., R. 12 E. Sec 18: NW1/4NE1/4NE1/4, Portions of NE1/4, SW1/4, SE1/4 of the NE1/4NE1/4; Portions of the NW1/4SE1/4NE1/4

Ownership Data:

<u>Surface Resources (acres):</u>	<u>Existing Permit Area</u>	<u>Proposed Permit Area</u>	<u>Total Life Of Mine Area</u>
Federal	<u>577</u>	<u>0</u>	<u>577</u>
State	<u>920</u>	<u>0</u>	<u>920</u>
Private	<u>5587</u>	<u>26.8</u>	<u>5614</u>
Other			
TOTAL	<u>7084</u>	<u>26.8</u>	<u>7111</u>

Coal Ownership (acres):

Federal	<u>2416.14</u>	<u>0</u>	<u>2416.14</u>
State	<u>3225</u>	<u>0</u>	<u>3225</u>
Private	<u>800</u>	<u>0</u>	<u>800</u>
Other			
TOTAL	<u>6441.14</u>	<u>0</u>	<u>6441.14</u>

The difference between the surface and coal ownership acreage is within the surface subsidence area and the refuse pile and leachfield areas which will not be mined. (approximately 670 acres.

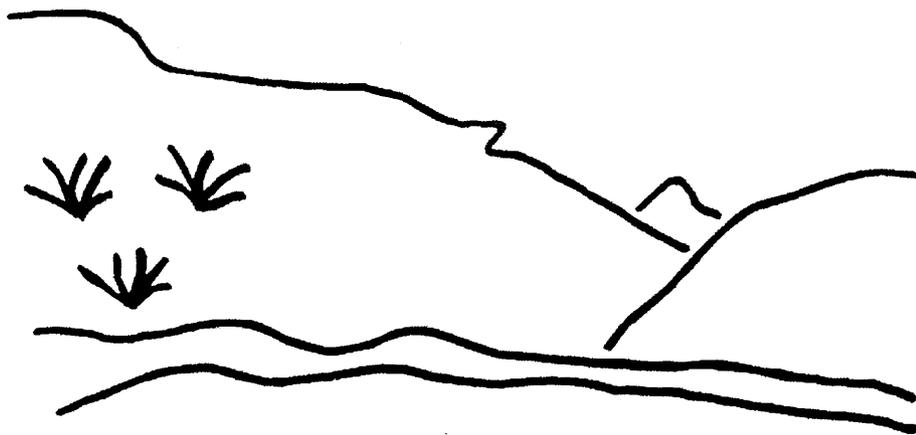
<u>Disturbed Acres</u>	<u>20.31</u>	<u>28.6</u>	<u>48.9</u>
<u>Minable Coal (tons)</u>			
Federal	<u>29 million</u>	<u>0</u>	<u>29 million</u>
Non- Federal	<u>16 million</u>	<u>0</u>	<u>16 million</u>
TOTAL	<u>45 million</u>	<u>0</u>	<u>45million</u>

<u>Recoverable Reserve Data</u>	<u>Name</u>	<u>Thickness</u>	<u>Depth</u>
Seam	<u>Rock Canyon</u>	<u>6' - 10'</u>	<u>600' - 2400'</u>
Seam	<u>Gilson seam</u>	<u>6' - 16'</u>	<u>500' - 2500'</u>

Mine Life: 1998-2018 *
 Average Annual Production: 3.5 - 4.0 Million Tons
 Date Projected Annual Rate Reached: 2001

* While not included in this permit term, Canyon Fuel has indicated its intent to add additional permit area and coal reserves (federal) to the Dugout Canyon Permit in the future. This would extend the life of the mine to beyond the year 2025.

State of Utah



Utah Oil Gas and Mining

Coal Regulatory Program

Dugout Mine
Refuse Pile Amendment
C/007/039-SR02D-1
Technical Analysis
February 24, 2003

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TECHNICAL ANALYSIS

The Division ensures compliance with the Surface Mining Control and Reclamation Act of 1977(SMCRA). When mines submit a Permit Application Package or an amendment to their Mining and Reclamation Plan, the Division reviews the proposal for conformance to the R645-Coal Mining Rules. This Technical Analysis is such a review. Regardless of these analyses, the Applicant must comply with the minimum regulatory requirements as established by SMCRA.

Readers of this document must be aware that the regulatory requirements are included by reference. A complete and current copy of these regulations and a copy of the Technical Analysis and Findings Review Guide can be found at <http://ogm.utah.gov/coal>

This Technical Analysis (TA) is written as part of the permit review process. It documents the Findings that the Division has made to date regarding the application for a permit and is the basis for permitting decisions with regard to the application. The TA is broken down into logical section headings, which comprise the necessary components of an application. Each section is analyzed and specific findings are then provided which indicate whether or not the application is in compliance with the requirements.

Often the first technical review of an application finds that the application contains some deficiencies. The deficiencies are discussed in the body of the TA and are identified by a regulatory reference, which describes the minimum requirements. In this Technical Analysis we have summarized the deficiencies at the beginning of the document to aid in responding to them. Once all of the deficiencies have been adequately addressed, the TA will be considered final for the permitting action.

It may be that not every topic or regulatory requirement is discussed in this version of the TA. Generally only those sections are analyzed that pertain to a particular permitting action. TA's may have been completed previously and the revised information has not altered the original findings. Those sections that are not discussed in this document are generally considered to be in compliance.

INTRODUCTION

INTRODUCTION

Canyon Fuel Company, LLC has submitted a significant revision to add a refuse pile location for the Dugout Mine. The amendment was considered a Significant Revision of the current permit since the addition of the Refuse Pile area would represent an increase of greater than 15 percent of the disturbed area currently permitted. The refuse site will be used to deposit underground waste rock from mining activities. Coal waste from the Dugout Canyon Mine is currently disposed of underground or at the approved waste rock disposal facility at either SUFCO or Skyline Mines or at the Banning Loadout (Section 528.300 of the approved MRP). At the present time, underground mining is producing more rock (refuse) than can be stored underground.

The proposed amendment document was submitted as a 'stand-alone' document, with the exception of the bond calculations that will be included in Appendix 5-6 of the M&RP upon approval. The submittal was originally received by the Division on April 22, 2002, and determined Administratively Complete on August 9, 2002. However, additional information was requested from the applicant prior to the commencement of the technical review, which was submitted on August 30, 2002. The applicant also submitted additional information for Chapter 1 and Chapter 5 of the approved MRP on September 26, 2002, which was not included in the October 2002 review. The amendment was returned with deficiencies to the Operator on October 10, 2002, and was initially resubmitted to the Division on January 08, 2003, with additional information being submitted on February 7, February 14, and February 20, 2003.

The proposed refuse disposal area is located in T14S R12E, N½ NE¼ Section 18. The site is located at an elevation of 5,900 feet on a pediment composed of gravelly alluvial deposits overlying the Mancos Shale. The triangular shaped permit area covers **26.8 acres (Section 114 pages 1-24 and 1-25) of which, 15.8 acres will be disturbed (RA Attachment 2-2)**. The permit area is immediately adjacent to the county road, approximately 2.5 miles east of the Soldier Creek road intersection. Refuse disposal will consume 5.7 acres. The rest of the disturbed area (10.1 acres) will either be dedicated for topsoil storage, sediment pond, access roads, general storage or remain undisturbed.

- There will be no disturbance in soil unit H as shown on Soils Map RA Plate 2-1. Plate 5-1 Storage Area Layout shows the slope, designated soil J will be affected by construction of the sediment pond spillway. Soil Unit J will provide an additional 7 – 10 cu yds of topsoil by Division estimates.
- To avoid an abrupt layer between the refuse and the subsoil, the first six inches of subsoil will be ripped into the refuse prior to application of the remaining subsoil and topsoil.

INTRODUCTION

The Applicant will construct the refuse site immediately after Division approval. All earlier-cited deficiencies have now been adequately addressed. The amendment is approved, and can be incorporated into the currently approved Mine and Reclamation Plan (MRP).

GENERAL CONTENTS

GENERAL CONTENTS

IDENTIFICATION OF INTERESTS

Regulatory Reference: 30 CFR 773.22; 30 CFR 778.13; R645-301-112

Analysis:

The Identification of Interest is in the current Mining and Reclamation Plan of the Dugout Mine. This information in the MRP was reviewed and has not changed. However, the Operator has given information on Page 1-1 and 1-2 related to the applicant, operator, resident agent, contact person, and the person who will pay abandoned mine reclamation fees. This is the same information provided in the MRP.

The officers, directors, and ownership information was incorporated in the MRP August 15, 2001.

The Operator has obtained an MSHA identification number for the refuse pile. The ID number is No. 1211-UT-09-01890-01. This information is on Page 1-4 of this submittal RA attachment 1-1.

Findings:

The information provided adequately addresses the minimum requirements of the General Contents – Identification of Interest section of the regulations.

VIOLATION INFORMATION

Regulatory Reference: 30 CFR 773.15(b); 30 CFR 773.23; 30 CFR 778.14; R645-300-132; R645-301-113

Analysis:

This information is in the current Mining and Reclamation Plan. This information was updated in September 2002.

Findings:

The Applicant has adequately addressed the minimum requirements of the General Contents – Violation Information section of the regulations.

RIGHT OF ENTRY

Regulatory Reference: 30 CFR 778.15; R645-301-114

Analysis:

Canyon Fuel Company, LLC, owns the property on which the refuse pile will be placed. This is stated on Page 1-4 of this submittal.

Findings:

The Applicant has adequately addressed the minimum requires of the General Contents – Right of Entry section of the regulations.

LEGAL DESCRIPTION AND STATUS OF UNSUITABILITY CLAIMS

Regulatory Reference: 30 CFR 778.16; 30 CFR 779.12(a); 30 CFR 779.24(a)(b)(c); R645-300-121.120; R645-301-112.800; R645-300-141; R645-301-115.

Analysis:

The Applicant has submitted maps showing the refuse pile permit area. The Applicant has shown that the permit area is the same as the disturbed area. This is shown on Plate 5-1. The Applicant has advertised in the newspaper and has submitted a copy of the advertisement to the Division. This is addressed in the Public Notice and Comment section in this review.

Findings:

The Applicant has met the minimum requirements of the General Contents – Legal Description and Status of Unsuitability Claims section of the regulations.

PERMIT TERM

Regulatory References: 30 CFR 778.17; R645-301-116.

Analysis:

This information is in the MRP and has not changed.

GENERAL CONTENTS

Findings:

The Applicant has met the minimum requirements of the General Contents – Permit Term section of the regulations.

PUBLIC NOTICE AND COMMENT

Regulatory References: 30 CFR 778.21; 30 CFR 773.13; R645-300-120; R645-301-117.200.

Analysis:

Administrative Completeness by the Division has been given to the Refuse Pile amendment. The Operator has advertised in the newspaper for public comment. A copy of the advertisement has been submitted and included in RA attachment 1-1 of this submittal.

Findings:

The Applicant has adequately addressed the minimum requirements of the Public Notice and Comments section of the regulations.

PERMIT APPLICATION FORMAT AND CONTENTS

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

Analysis:

The Applicant has complied with R645-301.120. The information is in the Mining and Reclamation Plan and this amendment.

Findings:

The Applicant has met the minimum requirements of the General Contents – Permit Application Format and Contents section of the regulations.

REPORTING OF TECHNICAL DATA

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

Analysis:

The information submitted contains names of person or organizations that collected and analyzed the data.

Findings:

The Applicant has met the minimum requirements of the General Contents – Reporting of Technical Data section of the regulations.

MAPS AND PLANS

Regulatory Reference: 30 CFR 777.14; R645-301-140.

Analysis:

The Applicant has submitted maps with a scale of 1" = 100' for the permit area. The Applicant has submitted maps of the location of the permit with adjacent area on RA Figure 1- 1 and 1-1B at a scale distance of 1" = 2000'.

Findings:

The Applicant has adequately addressed the minimum requirements of the General Contents – Maps and Plans section of the regulations.

COMPLETENESS

Regulatory Reference: 30 CFR 777.15; R645-301-150.

Analysis:

The Division has determined that the Refuse Pile significant revision is administratively complete. A determination letter dated August 2, 2002 was sent to the Operator.

Findings:

The Applicant has met the minimum requirements of the General Contents - Completeness section of the regulations.

ENVIRONMENTAL RESOURCE INFORMATION

ENVIRONMENTAL RESOURCE INFORMATION

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

GENERAL

Regulatory Reference: 30 CFR 783.12; R645-301-411, -301-521, -301-721.

Analysis:

The proposed refuse disposal area is located in T14S R12E Section 18. The site is located at an elevation of 5,900 feet on a pediment composed of gravelly alluvial deposits overlying the Mancos Shale. The triangular shaped disturbed site covers approximately 16 acres (RA Attachment 2-2) and is immediately adjacent to the county road. The land is owned by the Applicant. The site has been used as a source of gravel and fill for the county road construction and for the mine site.

Pinyon-juniper and Black sagebrush/galleta grass vegetation communities exist at the site. The soils of the area were evaluated by the Soil Conservation Service (SCS) and serve as the typical pedon of Haverdad loam 1 to 8 percent slopes in the 1988 Carbon County Soil Survey (Appendix S5 of RA Attachment 2-1). The SCS estimated the average annual precipitation to be about 12 – 14 inches.

The Applicant has submitted information on existing surface and subsurface facilities and features; see Page 5-7. No buildings are located in or within 1,000 of the permit area. No underground mining activities will occur in the refuse permit area.

Findings:

The Applicant adequately addresses the minimum requirements of the Environmental Resource Information section of the regulations.

PERMIT AREA

Regulatory Requirements: 30 CFR 783.12; R645-301-521.

Analysis:

There will be no surface or underground coal mining in the proposed permit area.

Findings:

The Applicant has adequately addressed the minimum requirements of the Environmental Resource Information -Permit Area section of the regulations.

HISTORIC AND ARCHEOLOGICAL RESOURCE INFORMATION

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

Analysis:

A cultural resource survey was performed by Senco-Phenix of the area to be disturbed on June 13, 1998 (attachment 4-1). The area was walked with no more than 50 feet between transects.

One historic site (42CB-1243) and two isolated prehistoric findings were discovered. None of these sites or findings is eligible for nomination to the historic register.

There are no cemeteries, public parks, or units of the National System of Trails or the Wild and Scenic Rivers System located within or adjacent to the refuse pile permit area.

Findings:

Information provided adequately addresses the minimum Historic and Archeological Resource requirements of the regulations.

CLIMATOLOGICAL RESOURCE INFORMATION

Regulatory Reference: 30 CFR 783.18; R645-301-724.

Analysis:

Page 7-5 of the submittal indicates that climatological information for the refuse site is found in RA Attachment 7-5. The submittal also includes some climatological information for the higher elevation of the mine site, pages A4-2-1 through A4-2-9 of Appendix 4-1.

Refuse Site

The elevation of the refuse site is approximately 5,900 feet. Precipitation information has been provided from the Price Warehouse at elevation 5,700 feet and from the Wellington station at 5,400 feet. The Wellington station is closer to the refuse site.

ENVIRONMENTAL RESOURCE INFORMATION

Over thirty years (1968 through 1997), the Price area has received an average annual precipitation of nine inches according to the Price Warehouse weather station data from the National Oceanic and Atmospheric Administration (NOAA). At the Wellington station over an eighteen-year period (1980 through 1997), the average annual precipitation was also nine inches.

Data from the Utah Climate Center for the Price station indicates that the months of July through October have the greatest precipitation (with an average of one inch falling in each month). Snowfall is greatest in December and January (between six and nine inches each month). Data from the NOAA for the Wellington Station confirms that seasonally, the late summer and fall months provide the most consistent, highest monthly averages for precipitation. This pattern of precipitation suggests a late summer seeding might be successful. In late summer, the average monthly temperatures are in the mid-seventies (degrees Fahrenheit).

Mine Site

Figure 3 (page A-2-4-6) is an isopleth of the mean annual precipitation for central Utah, showing the refuse site in a location receiving approximately 12 inches precipitation annually. The source of this information is the USGS. For a one-year period from May of 1978 to April of 1979, the annual precipitation amounted to 12.3 inches, with the maximum snow/rainfall occurring from November through March (Table 1, information from the Wellington weather monitoring station).

Figure 4 graphically summarizes the seasonal precipitation for the years 1958 to 1965 from the Sunnyside weather station.

Findings:

The information provided adequately addresses the minimum requirements of the Environmental Resource Information - Climatological Information section of the regulations.

VEGETATION RESOURCE INFORMATION

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

Analysis:

The information provided in the Refuse Pile Amendment refers to previous disturbance caused by the extraction of gravel. This gravel was used to build the adjacent county road. Discussion of future disturbances caused by the proposed mining operations is generally clear and not easily confused with disturbances caused by the previous gravel extraction operations.

In the 2003 Amendment, the vegetation study (Attachment 3-1), maps (Figure 3-1 and 3-2), and photos indicate the area was in fair condition in 1998. Gravel extraction operations, however, negatively affected a portion of the area. Disturbances caused by gravel operations left the proposed refuse site with minimal cover. Plants currently present are introduced, weedy species, such as tumbleweed (see FV_0130; Jerriann Ernsten)

The amendment refers to RA Figures 3-1 and 3-2 for documented vegetation communities (AMD 2003; pg 3-6). Figure 3-1 represents the surrounding vegetation communities. Data was compiled from 1988 photographs and soil surveys. Figure 3-2 shows the area disturbed from gravel extraction operations in 1998. The southeastern margin of the permit boundary area has never been disturbed. Both maps show the area as sage/grass and pinyon/juniper communities.

Two vegetation communities occur in the area and reference site. These communities are black sagebrush/galleta grass and pinyon/juniper (section 321.100). In the 1998 survey of the area, the pinyon-juniper community had 26 percent vegetative cover and 453 woody plants per acre. The grasses in this community included *Bouteloua gracilis* (blue grama; 3.1 %) and *Bromus tectorum* (cheatgrass; 2.1%). Other grasses included *Elymus salinus* (Salina wildrye; 1.9%) and *Hilaria jamesii* (galleta grass; 1.4%). The dominant forbs were *Phlox hoodii* (0.8%) and an unknown forb (2.0%). (RA Attachment 3-1; pgs 5 of PJ surveys).

In the 1998 survey of the area, the black sagebrush/grass community had assorted grass and shrub species that provided 18% and 13%, respectively of the total 37% coverage. Over half of the cover provided by grass was contributed by *Bromus tectorum* (cheatgrass; 4.5%) and *Hilaria jamesii* (6.6%). Almost 75% of the cover provided by shrubs was contributed by *Artemisia arbuscula* (black sagebrush; 7.1%) and *Atriplex confertifolia* (shadscale; 2.6%). The dominant forbs for the black sagebrush/grass community were *Eriogonum* spp. (Buckwheat) and an unknown forb. Other plant types in this community included trees (3.4%) and forbs (1.1%). Total woody plants per acre were 2788. (RA Attachment 3-1; pg 5 of BSB survey).

George S. Cook (1998) of NRCS states that the measured and potential productivity of the reference area is 460 and 500 pounds per acre, respectively. The measured and potential production for the refuse pile is 500 and 550 pound per acre, respectively. These values were obtained using a air-dry method instead of the oven-dried method.

Findings:

The information provided adequately addresses the minimum requirements of the Environmental Resources Information – Vegetation Resource Information section of the regulations.

FISH AND WILDLIFE RESOURCE INFORMATION

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

Analysis:

The Mine Operator plans to conduct raptor surveys at least one-half mile around the permit area every spring beginning 2003 until mine activities are completed. Two raptor nests have been identified within one mile of the proposed refuse site. Nest number 1 is a ferruginous hawk nest, which was identified as dilapidated in 1998 and has not been surveyed since (DWR database). Nest number 2 is also a ferruginous hawk nest not surveyed since 1998 (DWR database). The application states that surveys were conducted in the general area for 1995, 1997, 1998, 1999, and 2002. Only the 2002 survey pertains to the permit area (RA Attachment 3-2; 2002 map).

The application states that the area is within critical deer winter range and elk winter range. DWR maps indicate that it is adjacent to yearlong pronghorn habitat.

The application states that there are no threatened or endangered (T&E) plant and wildlife species within the area to be disturbed. This is based on a letter from DWR (Bill Bates, 1996) in Appendix 3-2 and a vegetation survey report (Patricia Johnston, 1998) in Appendix 3-1. The purpose of the vegetation survey report was to establish plant community data and not survey for T&E plant species. The letter from DWR in Appendix 3-2 concerns a raptor survey in 1996. A letter from U.S. Fish and Wildlife Service (USFWS; Robert Williams), dated April 12, 1996 was found in Appendix 3-2 advising no T&E species. USFWS generally does not provide concurrence six years from the date of the initial application.

Appendix 3-3 of the amendment lists federally listed T&E species that may occur in Carbon county. The mine operator provides a notation of whether potential habitat is available within the permit area for these species. Additionally, the amendment describes that the permit area is currently a disturbed site caused by gravel extraction operations and would not support T&E species.

The amendment does not discuss the survey results of the reference site conducted by George S. Cook in 1998. This survey includes observations of *Sclerocactus wrightiae* (Wright fishhook cactus), which is listed as endangered. This species was not observed in the 1998 survey of the refuse site or in the 2002 survey of the reference area. Furthermore, during a field visit (FV_0130), Jerriann Ernstsén of the Division took a picture of a hooked cactus, but Ben Franklin of DNR (Wildlife Resources) verified that the picture is not the endangered Wright fishhook cactus.

The Utah Natural Heritage Program was asked for any information in their database concerning T&E and sensitive species in proposed refuse area. They reported the following on October 21, 2002:

A sighting of an individual lark bunting in 1952--the species is not listed on the state or federal sensitive species lists, but the Utah Natural Heritage Program is "tracking" the species. There are also 3 recent records for ferruginous hawk nests nearby (within ½ -2.25 mi away). Also, a small portion of the area (NW corner) is identified as a critical value deer winter use area.

Findings:

Information provided adequately addresses the minimum requirements of the Environmental Resources Information - Fish and Wildlife Resource Information section of the regulations.

SOILS RESOURCE INFORMATION

Regulatory Reference: 30 CFR 783.21; 30 CFR 817.22; 30 CFR 817.200(c); 30 CFR 823; R645-301-220; R645-301-411.

Analysis:

The proposed waste rock disposal site was disturbed in 1998 and 1999 for gravel and fill to construct the adjacent county road.

Undisturbed soils surrounding the site fall into the following Soil Conservation Service Map Units:

- 49, Haverdad Loam, alkali 0 – 3% slopes,
- 50, Haverdad loam, moist, 1 to 5% slopes, and
- 66, Mivida gravelly fine sandy loam, 3 to 8 % slopes (see Soils Map RA Plate 2-1 and Appendix S5 of RA Attachment 2-1 Soils Report).

Map Unit 66 would have been the pre-dominant soil prior to disturbance according to the 1988 Carbon County Soil Survey Sheet No.21. The Mivida soil is the State Soil of Utah (see <http://www.ut.nrcs.usda.gov/soils/flashsite>). The Natural Resources Conservation Service describes the Mivida Series as coarse-loamy, mixed, superactive, Mesic Ustic Haplocalcids (formerly classified as Ustollic Calciorthids in the 1988 Carbon County Soil Survey). The typical pedon for the Mivida Series described in the 1988 Carbon County Soil Survey was located in the NW corner of Section 18, T.14 S., R. 12 E, within one half-mile of the waste rock disposal site.

ENVIRONMENTAL RESOURCE INFORMATION

The disturbed soils of the proposed refuse disposal site were surveyed in 1999 by Mr. Daniel Larsen, Soil Scientist with Environmental Industrial Services of Helper, Utah. Using supporting information obtained from 10 pits and twenty-two soil samples, Attachment 2-1 identifies and describes thirteen soil map units at the site. The soil map units are shown on Soils Inventory Map SM-1 in Attachment 2-1. The map units have been reproduced on Soils Map RA Plate 2-1, except that RA Plate 2-1 does not show the soil type L that covers an area of about 50 X 85 feet (approximately 0.1 acres). The plan indicates on page 2-5 that Map unit L was a pile of gravel on top of the soil that has been removed from the site. (However, during a site visit on January 21, 2003, the pile of gravel was still on the site. It is a very small pile and can be removed prior to soil salvage.) Soil characteristics at the site are described in RA Attachment 5-2.

Undisturbed soils remain to a limited extent within the proposed permit boundary. The Haplocalcids (Map Unit 66) are represented by sample site DCW5 or Map Unit I on the southwest edge of the disturbed area and sample location DCW6 or Map Unit D on the west. Mr. Larsen indicates that the texture of the soils places them either in the Strych or Hernandez series. RA Attachment 2-1 and Plate RA-2-1 Soils Map for the proposed refuse site identifies soils immediately adjacent to the north and west permit area boundary as Map Unit 66, suggesting that Map Unit F would have also been a Ustic Haplocalcid.

Strych very stony loam soils can be found within Map Unit 66 (1988 Carbon County Soil Survey). Strych soils are loamy-skeletal, mixed mesic Ustic Haplocalcid (formerly classified as Ustollic Calciorthids in the 1988 Carbon County Soil Survey). Hernandez soils are fine-loamy, mixed, mesic Ustollic Calciorthids. The Hernandez soils are deeper soils than the Strych, with far less stones, cobbles, and pebbles.

Order: Aridisol (formed in desert climate)
Suborder: Calcid (accumulation of calcium carbonate)
Great Group: Haplocalcid (other calcids)
Subgroup: Ustic Haplocalcid
(moisture control section is dry less than $\frac{3}{4}$ of the time when the temperature is above 5 C and aridic soil moisture regime bordering on ustic)

The Haverdad loam series soils (Torrifluents, Map Units 49 and 50) are represented by site DCW10 or Map Unit H along the south and east of the disturbed area.

Order: Entisol (young, little horizonation, little pedogenesis)
Suborder: Fluvents (flood plain)
Great Group: Torrifluents (aridic or torric moisture regime)
Subgroup: Typic Torrifluents (other Torrifluents) or
Subgroup: Ustic Torrifluents
(moisture control section is dry less than $\frac{3}{4}$ of the time when the temperature is above 5 C and aridic soil moisture regime bordering on ustic)

Map Unit J has been outlined between Map Unit H and the gravel pit. The plan indicates on page 2-5 that there will be no disturbance in this soil unit (see also Storage Area Layout RA Plate 5-1). However, Plate 5-1 Storage Area Layout shows the construction of the sediment pond spillway on the slope, designated as soil unit J. The Division estimates this construction to disturb approximately 400 sq ft.

The soil survey for map unit J describes the soils as Strych, Map Unit 66, Mivida gravelly fine sandy loam, 3 to 8 % slopes. The 1988 Carbon County Soil Survey describes this map unit as having a 4-inch surface layer. Therefore a six-inch layer could be salvaged according to R645-301-232.300. Therefore, the Division estimates that the 400 sq ft area could contribute an additional 7 or 10 cu yds of topsoil.

Soil productivity of the area was evaluated in June, 1998, by Mr. George S. Cook, Range Conservationist with the NRCS (Section 321.200). Mr. Cook's letter is found in RA Attachment 3-1. Mr. Cook estimated that the gravel borrow pit, now proposed for the refuse disposal area, had 500 lbs/acre productivity with a potential for 550 lbs/ac.

The application indicates in Section 321.200 that the reference area for the site corresponds to the topsoil storage area surveyed by Mr. Cook in 1998. Mr. Cook reports productivity for a topsoil storage area as 460 lbs/acre with a potential for 500 lbs/ac. The condition was Mid Seral fair. In a telephone conversation on January 31, 2003, Mr. Cook indicated the area he surveyed was located in Sec 8, T 14 S, R 12 E approximately 4-500 feet east and 600 feet south from the NW corner of the NE ¼. The location Mr. Cook surveyed corresponds with that of the reference area identified on RA Figure 3-1.

In the Division's opinion, the reference area soils fall into Map Unit 50, Haverdad loam, 0 to 8 percent slopes, an inclusion of Map Unit 49. This opinion is supported by the sagebrush/grass vegetation type shown on Figure RA 3-1, and observations of the site during a field visit on January 21, 2003. This soil type along with Map Unit 66, Mivida gravelly fine sandy loam, used to exist within the proposed refuse disposal disturbed area before county road construction.

The application describes the dominant grasses as Salina wildrye and galleta grass and the dominant forb as locoweed. Locoweed is a common name for species within three plant genus: Aragalus, Astragalus and Oxytropis.

Findings:

The information provided adequately addresses the minimum requirements of the Soils Resource Information section of the regulations (the pre-mining soil resources).

ENVIRONMENTAL RESOURCE INFORMATION

LAND-USE RESOURCE INFORMATION

Regulatory Reference: 30 CFR 783.22; R645-301-411.

Analysis:

The area to be disturbed has been previously used as a gravel pit, rangeland and wildlife habitat. Adjacent BLM land uses are cattle from November 16 to June 15 for 835 AUM's. Currently the Dugout Canyon Road runs adjacent to the site (section 411.130).

Findings:

The information provided adequately addresses the minimum requirements of the Environmental Resources Information - Land Use Resource Information section of the regulations.

ALLUVIAL VALLEY FLOORS

Regulatory Reference: 30 CFR 785.19; 30 CFR 822; R645-302-320.

Analysis:

Alluvial Valley Floor Determination

Information contained in Section 9 of the submittal adequately addresses and summarizes the potential for alluvial valley floor impacts. Based on information provided in Chapter 9 of the submittal, no impacts will occur to 'designated' alluvial valley floors due to mining and reclamation operations within the permit and adjacent areas.

Findings:

The information provided adequately addresses the minimum requirements of the Environmental Resources Information – Alluvial Valley Floors section of the regulations.

PRIME FARMLAND

Regulatory Reference: 30 CFR 785.16, 823; R645-301-221, -302-270.

Analysis:

As noted in Section 221, the prime farmland status of the area was investigated in April 1996 by the Natural Resources Conservation Service. A letter from the NRCS is located at the end of RA Attachment 3-1 Vegetation Data. In the letter, the State Soil Scientist, William Broderson, writes that the area could not contain important farmlands because there is no developed irrigation system on arid soils.

Two of the soils identified in Appendix S5 of RA Attachment 2-1, soil #50 Haverdad loam and soil Hernandez family soils are potentially prime farmland soils, when irrigated. Soil #50 Haverdad loam is in the land use capability class II-e-2. Soils in the Hernandez family range from land use capability class II-e-2 to III-e-2.

The recent use of the site (1988- 1999) has been for a gravel pit and much of the original soil surface has been lost. The Dugout Canyon Mine is the landowner. The post-mining land use is wildlife habitat and grazing.

Findings:

The Division concurs with the Natural Resources Conservation Service that there is no source of irrigation for farming and therefore no prime farmlands at the site. This information adequately addresses the minimum requirements of the Environmental Resource Information - Prime Farmland section of the regulations.

GEOLOGIC RESOURCE INFORMATION

Regulatory Reference: 30 CFR 784.22; R645-301-623, -301-724.

Analysis:

Included in the current Refuse Pile amendment is a general surface geology map and borehole logs that adequately characterize the area surrounding the Refuse Pile storage area. RA Figure 6-1, Area Geology, has been modified to include a legend identifying the respective geologic units. This previously cited deficiency has now been adequately addressed.

ENVIRONMENTAL RESOURCE INFORMATION

Findings:

The information provided adequately addresses the minimum requirements of the Geologic Resource Information section of the regulations.

HYDROLOGIC RESOURCE INFORMATION

Regulatory Reference: 30 CFR Sec. 701.5, 784.14; R645-100-200, -301-724.

Analysis:

Sampling and Analysis

The sampling conducted and submitted for baseline information is adequate for initial characterization of the hydrologic system. No analysis of surface water or groundwater was conducted as part of baseline data; no flow was documented at the surface sites, and only depth was collected at the groundwater monitoring locations.

Baseline Information

A total of four years of quarterly data has been collected and submitted for surface-water monitoring sites SS-1 and SS-2, and groundwater wells DH-1, DH-2, and DH-3. This is considered adequate information for initial characterization of the hydrologic system.

An earlier deficiency involving discrepancies between the groundwater wells and RA Figure 7-1 have now been rectified. The elevations of the collars of the groundwater wells were inaccurate in the April 2002 submittal. The groundwater wells were resurveyed and now reflect accurate elevations. It can be noted that the depth-to-water information did not change in RA Attachment 7-1 Baseline Data, only the elevations. No modifications were made to RA Figure 7-1. The previously cited deficiency has now been adequately addressed.

Ground-water Information

Additional groundwater information was requested by the Division since the information from the Soldier Canyon Mine is located approximately six (6) miles north of the Refuse Pile Storage area and located in different surface geologic units. Plate 7-1, from the Soldier Canyon M&RP, has been referenced in the text and a copy of the plate is included in the RA amendment for reference information concerning the local aquifer. Section 724.100 – Groundwater Information of the Refuse Pile Amendment has also been modified to include a commitment to initiate monitoring of groundwater well DH-1 that is located on the Refuse Pile site. This adequately addresses an earlier deficiency stating that groundwater information from the Soldier Canyon area was inadequate for characterization.

Surface Water Information

Section 722.200 indicates Dugout Creek is located 1/8 to 1/4 mile from the Refuse Pile area. The scale on RA Plate 7-1 does clearly illustrate the overland distance a discharge would need to travel to enter Dugout Creek. However, Plate RA Plate 1-1 Dugout Canyon Mine Permit Area illustrates that a discharge from the Refuse Pile area would enter an unnamed ephemeral branch of Dugout Creek approximately three (3) miles upstream of the main branch of Dugout Creek (which is also ephemeral in nature at that point).

Baseline Cumulative Impact area Information

Section 728.100 of the Refuse Pile Amendment identifies the potential impacts of storing refuse and other materials in the proposed area on the quality and quantity of surface-water and groundwater.

Modeling

No hydraulic modeling was conducted nor considered necessary for the Refuse Pile storage area.

Alternative Water Source Information

Identification of Alternative Water Source Information is not necessary. A query of the Utah Division of Water Rights database indicates no water rights exist within a 10,000-foot radius of the proposed Refuse Storage area.

Probable Hydrologic Consequences Determination

Section 728.300 of the Refuse Pile Amendment addresses mitigating measures that will be implemented to minimize potential impacts specifically from acid-or-toxic-forming materials, sediment yield, groundwater and surface water availability, potential hydrocarbon contamination, and road salting. Baseline information supporting the determination indicates the Refuse Pile storage area is located in the Mancos Shale which is not considered a to be a regional or local aquifer, is also considered to be relatively impermeable, and the refuse pile area is limited to only a few acres.

Findings:

The information provided adequately addresses the minimum requirements of the Hydrologic Resource Information section of the regulations.

MAPS, PLANS, AND CROSS SECTIONS OF RESOURCE INFORMATION

Regulatory Reference: 30 CFR 783.24, 783.25; R645-301-323, -301-411, -301-521, -301-622, -301-722, -301-731.

Analysis:

Existing Structures and Facilities Maps

There are no existing structures at the proposed refuse site. The Applicant has submitted a surface facilities projected layout of the refuse site. See Plate 5-1 of this amendment. However, the Applicant will have to supply the Division with an As-built surface facility map of the area after construction work is completed. This As-built map must be submitted 30-days after completion of the refuse pile area.

Existing Surface Configuration Maps

Several of the maps in the significant revision have the existing surface configuration. This information meets the requirements of this section.

Permit Area Boundary Maps

RA Plate 1-1 has been added to RA Figure 1-1A and 1-1B included in the April 2002 submittal. The modification includes a scale change (1-inch = 200' to 1-inch = 2000') which adequately locates the permit area relative to the entire mine plan on a regional scale. RA Figure 7-1 identifies the area on a detailed scale (1-inch = 200'). Section 358.500 also commits to installing a fence to delineate the disturbed area from the undisturbed portions of the permit area. This adequately addresses earlier cited deficiencies.

Surface and Subsurface Ownership Maps

A landownership map is located as Plate 1-3 in the MRP.

Surface and subsurface manmade features maps

The Applicant has stated on Page 5-7 that there are no surface or subsurface features within, passing through, or passing over the refuse pile area. Therefore, no map will be required.

Contour Maps

The Applicant has submitted existing (Plate 5-1), operational (Plate 5-2) and final reclamation (Plate 5-3) contour maps. The difference between the operation and final reclamation contours are the thickness of the topsoil.

The maps are on a two-foot contour interval. Reviewing the refuse pile construction contours there are seven contour lines. This would indicate a minimum of a fourteen feet rise in the pile from bottom to top. Page 5-15 in the text addresses only a ten feet construction height. Also on RA Attachment 5-2 (Pile Slope Stability) uses a design of 10 feet in height. Talking to Tom Scuhoski, Engineer at EarthFax Engineering on July 11, 2002 indicated that the refuse pile is incised. The calculation on slope stability is determined by refuse material above ground level. The Applicant must give additional explanation for the determination that the refuse pile height is 10 feet instead of 14 feet. This would eliminate the confusion in this section.

Monitoring Sampling Location Maps

RA Figure 7-1 adequately identifies the location of water monitoring sites.

Findings:

Information provided adequately addresses the minimum requirements of the Environmental Resource Information – Maps, Plans, and Cross Sections of Resource Information section of the regulations.

OPERATION PLAN

MINING OPERATIONS AND FACILITIES

Regulatory Reference: 30 CFR 784.2, 784.11; R645-301-231, -301-526, -301-528.

Analysis:

Facilities and Structures

The Applicant has submitted facilities map Plate 5-1 that includes the sediment pond, storage area, access road, a self-contained topsoil storage area, both disturbed and undisturbed drainage ditches, and a refuse storage area. Routing of the undisturbed drainage has been modified since the original April 2002 submittal. Currently, the undisturbed drainage located upstream is being diverted around the site to the east. This map contains the necessary information. Plate 5-1 is P.E. certified.

Findings:

The Applicant has adequately addressed the minimum requirements of the Operation Plan – Mining Operations and Facilities section of the regulations.

EXISTING STRUCTURES:

Regulatory Reference: 30 CFR 784.12; R645-301-526.

Analysis:

There are no existing structures in this area.

Findings:

The Applicant has adequately addressed the minimum requirements of the Operation Plan – Existing Structures section of the regulations.

RELOCATION OR USE OF PUBLIC ROADS

Regulatory Reference: 30 CFR 784.18; R645-301-521, -301-526.

Analysis:

The Applicant will be transporting refuse material from the Dugout Mine to the Refuse site by way of a Carbon County Road. The Applicant will have to use State-licensed and inspected vehicles to transport waste material from the mine to the refuse site.

Findings:

The Applicant adequately addressed the minimum requirements of the Operation Plan – Relocation or Use of Public Road section of the regulations.

AIR POLLUTION CONTROL PLAN

Regulatory Reference: 30 CFR 784.26, 817.95; R645-301-244, -301-420.

Analysis:

The application indicates that operations will be conducted in accordance with the current Air Quality Approval Order (AO) dated January 5, 1999 (Appendix 4-1). The AO indicates that visible emissions are limited to 20% opacity and fugitive dust will be controlled with water sprays and/or chemically treated. Treatment shall be of sufficient frequency and quantity to maintain a damp surface.

Findings:

The information provided meets the minimum requirements of the Operation Plan – Air Pollution Control Plan section of the regulations.

FISH AND WILDLIFE INFORMATION

FISH AND WILDLIFE INFORMATION

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

Analysis:

Protection and Enhancement Plan

A protection and enhancement plan cannot be developed until all resource data has been provided.

Endangered and Threatened Species

All resource information has not been provided.

Findings:

Information provided in the application is not considered adequate to meet the minimum Fish and Wildlife Information requirements of the regulations. An Operational protection plan cannot be developed until all resource data has been provided.

TOPSOIL AND SUBSOIL

Regulatory Reference: 30 CFR Sec. 817.22; R645-301-230.

Topsoil Removal and Storage

The triangular shaped permit area covers 26.8 acres (Section 114, page 1-24) of which 15.8 acres will be disturbed (RA Attachment 2-2). The refuse storage area will consume 5.7 acres. The rest of the site (10.1 acres) will either be dedicated for topsoil storage, access roads, general storage or undisturbed. The application must provide the acreage of Map Unit H and J that will be undisturbed.

RA Plate 2-1 outlines areas of substitute topsoil salvage and depths of salvage. RA Attachment 2-1 indicates that no soil will be salvaged in map units H and J on the eastern leg of the triangular disturbed area. The plan indicates that the combined acreage of H and J is approximately 11.2 acres (Section 242.100 and RA Attachment 2-2). The acreage to be reclaimed totals 16.1 acres (RA Attachment 2-2). The total permit area would then be $11.2 + 16.1 = 27.3$, within 0.5 acres of the 26.8 acres stated in Section 114 of the plan.

However, the plan does not account for the acreage of disturbance in the area J soils for the construction of the sediment pond spillway. During the week of February 17th, 2003, Mr. Dan Larsen evaluated the soils in Map Units J and H. This soils information will be included with as-built details (personal communication from Vickie Miller on February 18, 2003).

There is no topsoil available for salvage on the previously disturbed site. However, there are areas of suitable substitute topsoil. The application indicates that a soil scientist will be on-site during soil salvage operations.

RA Table 2-2 estimates the volume of salvageable soil as 44,317 cubic yards. The acreage of recovery totals 16.1 acres. Half of the substitute topsoil will come from areas B, C and E described in RA Table 2-1 as gravelly, loam and gravelly, clay loam. Soils in map units B and C are suitable as subsoil (section 3.4 of Attachment 2-1) and will be stored in a subsoil stockpile described in Section 231.100. The least rocky soils and most suitable substitute topsoil in the project area are those in map units D, E, and F. Soils from areas D, E, F, K and G will be stored in a topsoil stockpile (Section 231.100).

Section 232.100 indicates that the figures for substitute topsoil recovery in RA Table 2-2 and RA Attachment 2-2 are "based on an average of" the recommendations for recovery in Table 3.41 of Attachment 2-1 Soils Report. In the case of soil units A, B, C, E, G, K, L and M soil recovery has been over estimated. The total over estimation is approximately 5,840 cu yds. The excess soil will be placed in the subsoil pile. The boulders (unit K) will be stockpiled separately (Section 234.100). Most of the piled gravel (unit L) has been moved from the site, with the remaining gravel to be removed before soil salvage.

Substitute topsoil will be stockpiled in the northwest corner of the disturbed area (RA Plate 5-1 and Plate 2-2). Subsoil and topsoil will be stockpiled separately (Section 234.100). Each pile will be signed. As built drawings of the soil stockpiles will be provided for the site. The 30,542 cu yds of subsoil will be stored on 2.1 acres. The 13,775 cu yds of topsoil will be stored on 1.3 acres. A road will pass along the eastern edge of the substitute topsoil stockpiles. A ditch and berm will surround the piles.

The soil will be placed in 1.5 to 2 foot lifts with track equipment. The soil stockpile will be twenty feet deep and at least 200' wide. The stockpile will be stabilized with interim seed mix (grasses) described in Section 341.200. The plan indicates in Section 242.200 that soils will be handled when they are in a loose or friable condition.

Findings:

The information provided adequately addresses the minimum requirements of the Operations Plan - Topsoil and Subsoil section of the regulations.

FISH AND WILDLIFE INFORMATION

VEGETATION

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

Analysis:

The plan lists an interim seed mixture and specifies that it will be used on the topsoil stockpile and any other areas requiring stabilization prior to final reclamation. The plan states that all areas not actively being utilized will be planted with an interim seed mixture until establishment and final grading.

Findings:

Information provided in the application adequately addresses the minimum requirements of the Operation Plan - Vegetation section of the regulations.

ROAD SYSTEMS AND OTHER TRANSPORTATION FACILITIES

Regulatory Reference: 30 CFR Sec. 784.24, 817.150, 817.151; R645-301-521, -301-527, -301-534, -301-732.

Analysis:

Road Classification System

The Applicant has classified the access road to the refuse pile and the temporary road to construct the refuse pile as primary roads. This road will be utilized throughout the year for fifteen years. The Applicant has shown only a portion of the road to be reclaimed as indicated on Plate 5-3. Therefore, it is to be retained for a post-mining land use.

Plans and drawings

The Applicant has a plan including a detailed description of each road to be used or maintained within the proposed permit area. The description references RA Figure 5-2.

The designs for the access road comply with R645-301-534 thru R645-301-534.340.

Performance standards

Per regulation R645-301-527.230, the Applicant has included a maintenance plan described in text on Page 5-11 of this amendment.

Primary road certification

Detailed design plans has been prepared by, or under the direction of, and certified by a qualified, registered, professional engineer. David Spillman badge #151610 certified the primary road designs.

Findings:

Information in the proposal adequately addresses the requirements of the Operation Plan – Road Transportation and Other Transportation Facilities section of the regulations.

SPOIL AND WASTE MATERIALS

Regulatory Reference: 30 CFR Sec. 701.5, 784.19, 784.25, 817.71, 817.72, 817.73, 817.74, 817.81, 817.83, 817.84, 817.87, 817.89; R645-100-200, -301-210, -301-211, -301-212, -301-412, -301-512, -301-513, -301-514, -301-521, -301-526, -301-528, -301-535, -301-536, -301-542, -301-553, -301-745, -301-746, -301-747.

Analysis:

Refuse piles

Coal mine-waste consisting of shale, sandstone, and sediment pond waste will be stored in the refuse pile (Section 536.200). RA Attachment 5-4 and the MRP Appendix 5-7 contain laboratory analysis of waste material that is representative of the type of material to be disposed at the waste rock site:

- A 1995 analysis of the Rock Canyon Seam and the Gilson Seam, roof and floor.
- A 1998 analysis of waste rock.
- A 2001 analysis of sediment pond clean-out material.
- A 2002 analysis of rock from the Gilson Well development.

The Rock Canyon coal sample, the Sodium Adsorption Ratio, pH and Available Water Capacity are rated poor. Both the Rock Canyon and the Gilson Roof coal samples are sodic since the Exchangeable Sodium Percentages of both exceed 15% (i.e., 17% and 25%, respectively). The Gilson Seam coal and roof have little carbonate buffering capacity. The pulverized material has a texture of sand, sandy loam or loam.

Appendix 5.7 of the MRP contains the analytical results of waste rock samples taken in 1998. This waste also had little buffering capacity. This waste has a fair rating for Electrical Conductivity (EC = 4.36 mmhos/cm). The 2001 analysis of the sediment pond clean out material has a high EC (6.84 mmhos/cm) reflecting the probable use of salts on road surfaces during the winter.

FISH AND WILDLIFE INFORMATION

The proposed refuse pile has the capacity for 48,900 cu yds (72,600 Tons at a unit weight of 1.10 lb/ft³) of coal mine-waste (RA Attachment 5-3). The life of the site is estimated at 15 years (Section 536.100) with a production of 5,000 Tons/yr. Geotechnical characteristics of this waste are described in RA Attachment 5-2. The waste has a Unified Soil Classification of GP-GM (gravel sand silt mixture).

A representative sample will be collected of every 2000 cu yds (or 2,970 Tons) to be analyzed for the full suite of parameters required by Table 6 of the 1988 Division Guidelines for Management of Topsoil and Overburden for Underground and Surface Coal Mining (Section 536.200). The full suite of parameters includes: Sodium Adsorption Ratio, particle size analysis, Total and Nitrate-nitrogen, % Organic Carbon, Exchangeable Sodium and Available Water Capacity. This rate of sampling amounts to 24 samples for the completed 6 acre site. This information would be best supplied with the Annual Report for the Dugout Canyon Mine site.

Findings:

The information provided adequately addresses the minimum requirements of the Operation Plan - Spoil and Waste Material section of the regulations.

HYDROLOGIC INFORMATION

Regulatory Reference: 30 CFR Sec. 773.17, 774.13, 784.14, 784.16, 784.29, 817.41, 817.42, 817.43, 817.45, 817.49, 817.56, 817.57; R645-300-140, -300-141, -300-142, -300-143, -300-144, -300-145, -300-146, -300-147, -300-147, -300-148, -301-512, -301-514, -301-521, -301-531, -301-532, -301-533, -301-536, -301-542, -301-720, -301-731, -301-732, -301-733, -301-742, -301-743, -301-750, -301-761, -301-764.

Analysis:

Ground-water monitoring

The proposed groundwater monitoring outlined in the Refuse Pile amendment, Section 731.200 – Water Monitoring, has been modified per the Division request. Since DH-1 is screened within alluvial sediments, the Operator has committed to conducting water quality analysis for eight (8) consecutive quarters beginning in first quarter 2003, after which water quality analysis will be conducted once annually. The parameters to be analyzed are outlined in Table 7-4 of the currently approved M&RP. This commitment adequately addresses an earlier cited deficiency.

Surface-water monitoring

The proposed surface-water monitoring outlined in section 731.200 of the Refuse Pile amendment adequately addresses the surface drainage in the area.

Acid and toxic-forming materials

The encountering of Acid- or toxic forming materials is not anticipated at the mine. The commitment to routine sampling of the refuse will likely identify any such materials. If any acid- or toxic materials are identified, they will be covered with a minimum of 4-feet of cover.

Water quality standards and effluent limitations

The sedimentation pond is designed as a total containment structure. The applicant makes the commitment that all discharges of water will comply with all Utah and federal water quality laws and regulations (section 751).

Diversions

Diversion design was based on a 100-year, 6-hour precipitation event. The Division has been recommending diversions be designed to contain the runoff from a 10-year, 24-hour event; which in this case is essentially equivalent.

Section 742.300 provides a general discussion of the requirements and design of the diversions, and all diversion and culvert calculations area presented in RA Attachment 7-4 and RA Tables 7-3 and 7-4. The need for the lining of channels was set at a peak velocity of 5 feet/second (fps). The 5 fps velocity criteria for lining channels was based on the alluvial silts and fine gravels anticipated in the area. The basis for 5 fps is referenced in Section 762.100 of the Refuse Pile amendment.

Sediment control measures

Forms of sediment control measures include silt fences, riprap, contemporaneous re-vegetation, vegetative sediment filters, a sediment pond, and other measures that reduce overland flow velocities, reduce runoff volumes or trap sediment. The applicant makes a commitment that these structures will be maintained to remain functional.

Siltation structures

The primary siltation structure within the permit area will be a sediment pond. Another siltation structure on the Refuse Pile area is labeled the 'Containment Area' in the northwest portion of the disturbed area. The Containment Area is comprised of the topsoil storage area that is totally surrounded by berms. Any failure of the 'containment area' would report to the sediment pond. Designs for the berms surrounding the topsoil storage area are included in RA Attachment 7-4 – Diversion and Culvert Design Calculations. Section 732.200 – Sedimentation Ponds of the Refuse Pile amendment, commits to installing a clean-out marker in the sediment pond. The information provided adequately addresses earlier cited deficiencies.

FISH AND WILDLIFE INFORMATION

Sedimentation ponds

All calculations and design maps for the proposed sediment pond are included in the amendment and are P.E. certified. The pond is designed as a total containment structure to fully contain the runoff from a 100-year, 24-hour precipitation event (2.8 inches).

Findings:

The information provided adequately addresses the minimum requirements of the Operational Plan – Hydrologic Information section of the regulations.

SUPPORT FACILITIES AND UTILITY INSTALLATIONS

Regulatory Reference: 30 CFR Sec. 784.30, 817.180, 817.181; R645-301-526.

Analysis:

The Applicant has submitted facilities map Plate 5-1 which includes sediment pond, storage area, access road, topsoil storage, culvert (DC-1), and refuse storage area. This map contains the necessary information. Plate 5-1 is P.E. certified.

Findings:

The Applicant adequately addressed the minimum requirements of the Operation Plan – Support Facilities and Utility Installation section of the regulations.

SIGNS AND MARKERS

Regulatory Reference: 30 CFR Sec. 817.11; R645-301-521.

Analysis:

The Applicant has addressed this portion of the R645-301 Coal Rules. An identification sign will be displayed at the refuse pile. This sign will have all the required information.

Findings:

The information provided adequately addresses the minimum requirement of the Operation Plan – Signs and Markers section of the regulations.

MAPS, PLANS, AND CROSS SECTIONS OF MINING OPERATIONS

Regulatory Reference: 30 CFR Sec. 784.23; R645-301-512, -301-521, -301-542, -301-632, -301-731, -302-323.

Analysis:

Affected area maps

RA Plate 5-1 Storage Area Layout shows the refuse storage area, an access road, the sediment pond, two storage areas and a location for soil stockpiling. The layout of the area dedicated to stockpiling is shown on RA Plate 2-2 Soil Stockpiles.

Section 358.500 indicates that a fence around the disturbed portion of the permit (16 acres) will exclude and protect the undisturbed acreage of soil map units H and J from operations.

Mining Facilities Maps

The Applicant has submitted facilities map Plate 5-1 that includes sediment pond, storage area, access road, topsoil storage, and refuse storage area. This map contains the necessary information. Plate 5-1 is P.E. certified.

Findings:

The information provided adequately addresses the minimum requirements of the Operation Plan – Maps, Plans, and Cross Sections of Mining Operations section of the regulations.

RECLAMATION PLAN

RECLAMATION PLAN

GENERAL REQUIREMENTS

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

Analysis:

The Applicant will reclaim the refuse pile area but the road from the county road will not be reclaimed. It will be considered a primary road. The sediment pond at the lower end of the refuse pile will be reclaimed.

All engineering maps related to the reclamation of the refuse pile are P.E. certified.

The refuse pile will have a 3H:1V outslope. The final controls can be seen on Figure 5-3.

The Applicant has submitted a timetable to reclaim the refuse pile area. This is on RA Figure 5-1. The table is labeled "Months From Start of Reclamation". The project from start to finish of this project would take almost 24 months. This would be an extremely long time to complete this project. Page 5-21 explains in detail for having the 24 months reclamation period for the refuse pile area.

Findings:

Information in the proposal adequately addresses the minimum requirements of the Reclamation Plan – General Requirements section of the regulations.

POSTMINING LAND USES

Regulatory Reference: 30 CFR Sec. 784.15, 784.200, 785.16, 817.133; R645-301-412, -301-413, -301-414, -302-270, -302-271, -302-272, -302-273, -302-274, -302-275.

Analysis:

The post-mining land use will be wildlife habitat and livestock grazing. This will be achieved through reclamation activities. The surface owner is the same as the Permittee. The suitability of the land to support the post-mining land use cannot be assessed until other items baseline and reclamation deficiencies are addressed.

Findings:

Information provided adequately addresses the minimum requirements of the Reclamation Plan – Postmining Land Uses section of the regulations.

PROTECTION OF FISH, WILDLIFE, AND RELATED ENVIRONMENTAL VALUES

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

Analysis:

The operator states that because the mine-permit area is currently an unimproved disturbed area, that interim and final reclamation will enhance the area. These improvements will add foraging and nesting habitat for wildlife. If additional foraging habitat is needed to guide wildlife away from mine operations the operator will consult with DWR for best-use methods.

In the Protective measures section of the MRP, the Operator addresses raptor protection and in-house wildlife training. The raptor protection measures in the MRP have been replaced with the measures stated in the Amendment. Current measures include yearly surveys until the completion of mine activities and consultations with DOGM if raptor nest are located within the permit area. The operator does not include forage or habitat improvements for raptors. In-house wildlife training steps include informing mine-related staff about wildlife protection, work area boundaries, and equipment fluid handling.

RECLAMATION PLAN

Findings:

Information provided adequately addresses the minimum requirements of the Reclamation Plan - Protection of Fish, Wildlife, and Related Environmental Values section of the regulations.

APPROXIMATE ORIGINAL CONTOUR RESTORATION

Regulatory Reference: 30 CFR Sec. 784.15, 785.16, 817.102, 817.107, 817.133; R645-301-234, -301-412, -301-413, -301-512, -301-531, -301-533, -301-553, -301-536, -301-542, -301-731, -301-732, -301-733, -301-764.

Analysis:

The area around the refuse pile will be reclaimed back to Approximate Original Contour. The refuse pile itself will be approximately ten feet higher than the original ground prior to placement of the refuse.

Findings:

Information provided in the proposal adequately addresses the minimum requirements of the Reclamation Plan – Approximate Original Contour Restoration section of the regulations.

BACKFILLING AND GRADING

Regulatory Reference: 30 CFR Sec. 785.15, 817.102, 817.107; R645-301-234, -301-537, -301-552, -301-553, -302-230, -302-231, -302-232, -302-233.

Analysis:

General

There will be some backfilling and grading to this area. The sediment pond will be breached and the embankments will be pushed into the pond, creating a gentle slope. The diversion ditches will be filled-in by pushing the downstream berm into the ditches. This would create a free draining surface.

Steep Slopes

The Operator has indicated on Pages 5-16 and 5-25 that prior to seeding all areas with a slope of 3h:1v or steeper will be roughened using a trackhoe. These slopes are on the refuse pile as stated on 5-16.

Findings:

Information provided adequately addresses the minimum requirements of the Reclamation Plan – Backfilling and Grading section of the regulations. Prior to final approval, the applicant must supply the following information in accordance with:

TOPSOIL AND SUBSOIL

Regulatory Reference: 30 CFR Sec. 817.22; R645-301-240.

Analysis:

Redistribution

Section 242.100 and RA Attachment 2-2 outlines four feet of cover (3.5' of subsoil and .5' of topsoil) over the refuse pile. This will require approximately 32,073 cu yds of subsoil and 4,582 cu yds of substitute topsoil (total of 36,700 cu yds of soil). The remainder of the site (9.92 acres) will be covered with six inches of substitute topsoil (7,610 cu yds). In fact, approximately 1.5 acres of the refuse pile will receive greater than six inches of topsoil under this plan, as the plan for recovery of 13,775 cu yds will satisfy the requirement for 12,583 cu yds of substitute topsoil with excess.

Prior to redistribution, the substitute topsoil will be sampled and analyzed for pH, EC, total Carbon, SAR, Phosphorus, Nitrate-nitrogen and water holding capacity (Section 243).

Where operations have created compaction, the ground will be ripped to a depth of 1.5 to 2.0 feet (Section 242.200). The plan indicates on page 2-14 (Section 242.200) that the surface of the reclaimed refuse pile will be ripped prior to placement of soil and again after placement of the first lift of subsoil. The second ripping will be to a depth of twelve inches and will serve to eliminate an abrupt boundary between the two layers, promoting rooting into the refuse.

The substitute topsoil will be spread using track-mounted equipment only. Erosion will be controlled with gouging (Section 242.200) and 1 Ton/acre hay incorporation as described in Section 341.200 (page 3-11).

Findings:

The information provided adequately addresses the minimum requirements of the Reclamation Plan - Reclamation Topsoil and Subsoil section of the regulations.

RECLAMATION PLAN

ROAD SYSTEMS AND OTHER TRANSPORTATION FACILITIES

Regulatory Reference: 30 CFR Sec. 701.5, 784.24, 817.150, 817.151; R645-100-200, -301-513, -301-521, -301-527, -301-534, -301-537, -301-732.

Analysis:

Reclamation

The Applicant will reclaim a portion of the road to the refuse pile. The 600 ft. from the County road will not be reclaimed. This section of road will be used in the post-mining land use; wildlife habitat and livestock.

Retention

The Operator will not leave any temporary roads after reclamation. However, the road from the refuse pile to the county road approximately 600 feet will be retained after reclamation. This road is classified as a primary road having all of the required road designs.

Findings:

Information in the proposal adequately addresses the minimum requirements of the Operation Plan – Hydrologic Information section of the regulations.

HYDROLOGIC INFORMATION

Regulatory Reference: 30 CFR Sec. 784.14, 784.29, 817.41, 817.42, 817.43, 817.45, 817.49, 817.56, 817.57; R645-301-512, -301-513, -301-514, -301-515, -301-532, -301-533, -301-542, -301-723, -301-724, -301-725, -301-726, -301-728, -301-729, -301-731, -301-733, -301-742, -301-743, -301-750, -301-751, -301-760, -301-761.

Analysis:

Discharge structures

Section 762.100 discusses the reclamation of channels RWS-1 and RWS-2, which includes portions of the channels that will have riprap installed as part of final reclamation. RA Plate 7-3 has been modified to indicate which portions of the channels will have riprap installed, and a cross section diagram illustrating the proposed riprap design is located in RA Attachment 7-4 – Refuse Pile Drainage section. This information adequately addresses earlier cited deficiencies.

Findings:

The information provided adequately addresses the minimum requirements of the Reclamation Plan – Hydrologic Information section of the regulations.

REVEGETATION

Regulatory Reference: 30 CFR Sec. 785.18, 817.111, 817.113, 817.114, 817.116; R645-301-244, -301-353, -301-354, -301-355, -301-356, -302-280, -302-281, -302-282, -302-283, -302-284.

Analysis:

Revegetation: General Requirements

Section 341.200 lists the final seed mixture. This seed mixture includes species that are represented in the existing communities. The list includes black sagebrush, Wyoming sage, shadscale, rubber rabbit brush, scarlet globe mallow, Palmer penstemon, sheep fescue, blue grama, bottlebrush squirreltail, indian rice grass, and galleta grass. Replanting community-dominant species are important although the Division agrees that the pinyon and juniper can be allowed to naturally invade.

The seed mixes include warm and cool season grasses. For final reclamation, the warm season grasses will be hydroseeded with mulch and tackifier sometime in June or July. The cool season grasses will be broadcast without mulch or tackifier sometime in late fall.

The area proposed for the refuse pile is dry and difficult to reclaim. The Soldier Creek mine has a history of cheatgrass invasion on disturbed areas. The operational and final contours of the refuse pile should be designed to maximize soil moisture and minimize evaporation and solar heat. The loss of water may be reduced because gravel extraction left a depression in the earth about 4 feet deep in the southwest portion of the site where refuse will be placed. As a consequence of filling in the hole, the surface area of the refuse pile with south and west exposures will be reduced. Instead of a calculated pile with south and west sides of ten feet, some portion of the sides will probably be closer to 6'. (Personal communications during a field visit with Vicky Miller, see FV_0130.) The reduced south and west solar exposure will help reduce water loss.

Revegetation: Timing

The vegetation survey found warm season grasses that will need to be seeded separately and prior to the cool season species.

RECLAMATION PLAN

Revegetation: Mulching and Other Soil Stabilizing Practices

The final reclamation plan includes extreme roughening, mulching with certified noxious weed free hay (1 ton per acre), then planting with seeds and transplants.

Revegetation: Standards For Success

The application addresses standards for success using the UDOGM guidelines.

Findings:

Information provided in the application adequately addresses the minimum requirements of the Reclamation Plan - Revegetation section of the regulations.

STABILIZATION OF SURFACE AREAS

Regulatory Reference: 30 CFR Sec. 817.95; R645-301-244.

Analysis:

The soils of the site are Haverdad loam (#50) and the Hernandez family and the Strych series soils. These soils have erosion factors between 0.28 and 0.37 according to the 1988 Carbon County Soil Survey. Even at the relatively mild slope of 3h:1v proposed for the refuse disposal site, these exposed soils will be highly susceptible to erosion from water. Wind erosion is also a concern for these soils once they are disturbed.

The application indicates on page 3-9 that 1 Ton/ac of hay mulch will be applied to the topsoil. The approved MRP Section 340 indicates 2000 lbs of wood fiber mulch will be applied with a tackifier to the seeded site.

The application indicates the site will be roughened with gouging (Section 242.200). This information supercedes information found in the MRP Chapter 3 that indicates that the gouging technique will be limited to slopes to steep to retain a mulch application (page 3-44).

The site will mulched according to the methods described in Chapter 3 of the approved MRP. Rills and gullies in excess of nine (9) inches will be filled and reseeded (Section 244.300).

Section 341.200 indicates that 1 Ton/acre of hay will be gouged into the surface to help reduce wind and water erosion.

Findings:

The information provided adequately addresses the minimum requirements of the Reclamation Plan – Stabilization of Surface Areas section of the regulations.

CESSATION OF OPERATIONS

Regulatory Reference: 30 CFR Sec. 817.131, 817.132; R645-301-515, -301-541.

Analysis:

Upon the permanent cessation of coal mining and reclamation operation at the Dugout Canyon Mine, Canyon Fuel Company, LLC, will close, backfill, or otherwise permanently reclaim all affected areas in accordance with the R645 regulations and this reclamation plan.

Findings:

Information provided adequately addresses the minimum requirements of the Reclamation Plan – Cessation of Operations section of the regulations.

MAPS, PLANS, AND CROSS SECTIONS OF RECLAMATION OPERATIONS

Regulatory Reference: 30 CFR Sec. 784.23; R645-301-323, -301-512, -301-521, -301-542, -301-632, -301-731.

Analysis:

Affected area boundary maps

There will be no impacts due to the fact that no mining of any type will occur in this area.

Bonded area map

The bonded area is the permit area and the Applicant has met this requirement. This map is P.E. certified.

Reclamation backfilling and grading maps

The Applicant has submitted Plate 5-4 giving information on the backfilling and grading for the refuse pile area.

RECLAMATION PLAN

Reclamation facilities maps

There will be no facilities after final reclamation. No map will be required.

Final Surface Configuration Maps

Plate 5-3 and 5-4 address the reclamation surface configurations. These maps are P.E. certified.

Reclamation surface and subsurface manmade features maps

There will be no surface or subsurface manmade features; therefore, this map will not be required.

Findings:

Information provided adequately addresses the minimum requirements of the Reclamation Plan – Maps, Plans, and Cross Sections of Reclamation Operations section of the regulations.

BONDING AND INSURANCE REQUIREMENTS

Regulatory Reference: 30 CFR Sec. 800; R645-301-800, et seq.

Analysis:

Determination of Bond Amount

Currently the Division holds a reclamation bond for \$3,682,000 for the Dugout Mine. The Division has reduced the reclamation cost estimate during the review of other amendments. The current reclamation cost estimate calculated by the Division is for \$2,141,000 in 2007 dollars

The reclamation amount for the refuse pile is minor in comparison to the current bond amount. The bond is sufficient to cover the addition of the reclamation pile. Since the current bond exceeds the current reclamation cost estimate no further action need be taken in regards to the bond.

Findings:

Information provided adequately addresses the minimum requirements of the Reclamation Plan – Bonding and Insurance Requirements section of the regulations.

CUMULATIVE HYDROLOGIC IMPACT ASSESSMENT (CHIA)

Regulatory Reference: 30 CFR Sec. 784.14; R645-301-730.

Analysis:

The applicant has provided the necessary information and taken the necessary steps to minimize the potential impacts to the surrounding hydrologic regime. The Division has determined that the addition of the Dugout Refuse Pile amendment will have no to minimal impact on the hydrologic regime or cumulative hydrologic impact area (CHIA).

Any potential impact caused by surface runoff is mitigated through the sedimentation pond that is designed to contain all the runoff from the site from a 6-hour /100-year storm event. In the event the sedimentation pond does discharge, the receiving stream is an ephemeral branch of Dugout Creek that needs to travel in excess of three (3) miles to reach the main branch of Dugout Creek (which is also ephemeral in nature at that point).

No groundwater or surface-water rights exist in the area that would be potentially impacted. No 'economic or regional' aquifer exists in the vicinity of the Refuse Pile area, and any potential impacts to any localized groundwater are being monitored by a groundwater well (DH-1) located down-gradient of the Refuse Pile. Also, considering the marginal water quality associated with the Mancos Shale bedrock in the area, degradation to the existing groundwater is unlikely.

No modification to the Division's - Book Cliff Area II CHIA document (containing Soldier Canyon Mine and Dugout Canyon Mine) is necessary. The Refuse Pile area is already included within the CIA area.