

August 3, 2004

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

Re: SITLA Lease, Canyon Fuel Company, LLC, Dugout Canyon Mine,
C/007/0039, Task ID #1915, Outgoing File

Dear Mr. Olsen:

The above-referenced amendment has been reviewed. There are deficiencies that must be adequately addressed prior to approval. A copy of our Technical Analysis is enclosed for your information. In order for us to continue to process your application, please respond to these deficiencies by November 2, 2004.

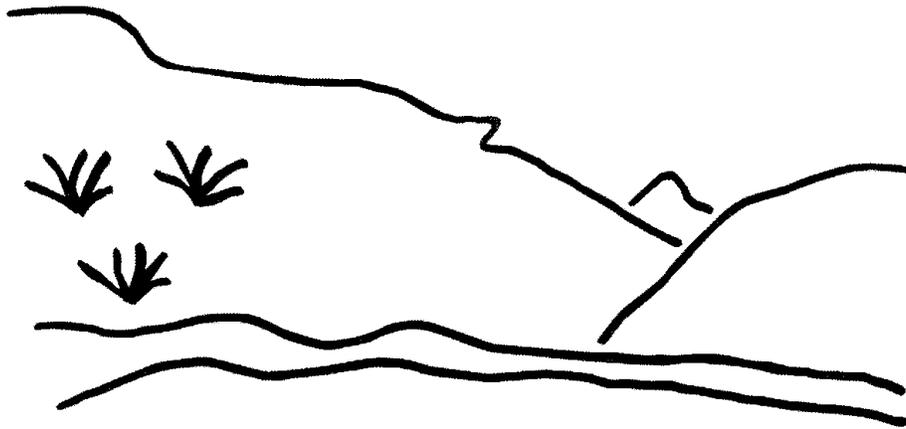
If you have any questions, please call me at (801) 538-5268 or Gregg Galecki at (801) 538-5260.

Sincerely,

Pamela Grubaugh-Littig
Permit Supervisor

an
Enclosure
cc: Price Field Office
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State of Utah



Utah Oil Gas and Mining

Coal Regulatory Program

Dugout Mine
SITLA Lease
C/007/0039, Task ID #1915
Technical Analysis
August 2, 2004

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TECHNICAL ANALYSIS

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 permittee 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.

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TECHNICAL ANALYSIS

INTRODUCTION

INTRODUCTION

On January 14, 2004, the Utah Division of Oil, Gas & Mining (Division) received and application to add a SITLA (State & Institutional Trust Land Administration) Lease (ML-42649) to the Canyon Fuel Company, LLC (CFC) Dugout Canyon Mine plan. The SITLA lease adds approximately 2,360 acres to the permit area, with zero acres of additional surface disturbance proposed. An Administrative Completeness Review (ACR) was required due to the size of the proposed expansion of permit area. The proposed SITLA lease (ML-48435) expansion is located in T13S R13E Sections 17, 20, 21, 28, 29, and 30 (partial and entire sections). Approximately 200-acres SITLA land was previously included in the permit area. The Completeness review was returned to CFC deficient on February 24, 2004 (Task ID #1808), and then again on April 14, 2004 (Task ID #1884). The application was determined complete on May 18, 2004, when the current technical review began (Task ID #1915). The following analysis is a review of the information germane to the proposed amendment only. The application is currently considered deficient and does not meet the minimum requirements of the regulations. Modifications outlined below must be answered prior to incorporation into the currently approved Mine and Reclamation Plan (MRP).

The Division is implementing, over time, a plan to develop a Master Technical Analysis for all coal mine permits. This review includes careful examination of biological- and cultural-related information in Environmental Resources sections for the Dugout MRP and stand-alone amendments. There is some review of Operations sections as it pertains to subsidence and high-value habitats.

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INTRODUCTION

SUMMARY OF DEFICIENCIES

SUMMARY OF DEFICIENCIES

The Technical analysis of the proposed permit changes cannot be completed at this time. Additional information is requested of the permittee to address deficiencies in the proposal. A summary of deficiencies is provided below. Additional comments and concerns may also be found within the analysis and findings made in this Draft Technical Analysis. Upon finalization of this review, any deficiencies will be evaluated for compliance with the regulatory requirements. Such deficiencies may be conditioned to the requirements of the permit issued by the division, result in denial of the proposed permit changes, or may result in other executive or enforcement action and deemed necessary by the Division at that time to achieve compliance with the Utah Coal Regulatory Program.

Accordingly, the permittee must address those deficiencies as found within this Draft Technical Analysis and provide the following, prior to approval, in accordance with the requirements of:

Regulations

- R645-300-124.330**, Relocate confidential and non-confidential information to appropriate document files..... 14
- R645-301-112.400**, Provided updated Ownership and Control information with respect to the changes involving Itochu Coal International, Inc..... 9
- R645-301-121.200**, 1)The Permittee must identify each major line-type used on maps in the legend, 2) Plate 7-3 is confusing and based on sparse and old information. To avoid confusion, the Permittee should remove the map from the MRP, and instead provide a discussion in Section 724.100 of the subsurface water resources or lack thereof..... 32
- R645-301-121.200**, Provide a complete and orderly Nickens report or remove the report from the application. • Provide the missing pages in a wildlife report. • Provide a current TES species list in the MRP (such as the one in the list in the Degassification stand-alone).. • Provide a reference to the current Mexican Spotted Owl report (EIS 2003/2004; in Methane Degassification Amendment) in the MRP (section 332) or add the report as an appendix in Chapter 3..... 13

SUMMARY OF DEFICIENCIES

R645-301-322, -320, Provide the information requested concerning raptors including coordinating the mine plan with potential cliff habitat. 27

R645-301-322.200 Provide requested information for the wildlife monitoring commitments and mitigation efforts..... 27

R645-301-322.200, Provide requested information for the follow up study on the effects of mining on wildlife..... 27

R645-301-323.100, Provide vegetation-related map titles and numbers, reference area names, and map locations in section 323..... 32

R645-301-332, -320, Provide the information requested concerning bats including a schedule that estimates timelines of expected bat surveys. 27

R645-301-332, Describe the requested raptor protection measures in section 332. 27

R645-301-332, R645-301-320, Provide the requested information related to subsidence and high-value habitats near springs, drainages, and Pace Creek. 39

R645-301-333, Provide all data equations and justifications with supporting documentation leading to the overall sum of water depletions/additions for all mining operations and explorations..... 39

R645-301-525.510, and R645-301-731, The Permittee must include plans for mitigation of any damage that may occur to Pace Creek from subsidence..... 30

R645-301-724.100, The Permittee must include a discussion of the non-spring related subsurface water resources, or lack thereof in the SITLA Lease..... 30

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GENERAL CONTENTS

IDENTIFICATION OF INTERESTS

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

Analysis:

The application contains information relative to identification of interests in Volume 1, Chapter 1, pages 1-2 and 1-3, sections 112.100, 112.200 and 112.300. Section 112.100 describes the location of the Dugout Mine operation, as well as the corporations that comprise Canyon Fuel Company, LLC.

The applicant's name, address, phone number, designated resident agent, employers identification number and the name and address of the person responsible for the payment of the abandoned mine reclamation fees is shown on pages 1-2 and 1-3, section **112.200, Applicant and Operator.**

Section **112.300, (Officers of the Applicant)** of the application, (Volume 1, Chapter 1, pages 1-3 through 1-11), lists the Corporations comprising Canyon Fuel Company, as well as the officers of each of those corporations. The permittee submitted updated / revised information (pages 1-5 through 1-13, TASK ID# 1884) for this section with the March 24, 2004 submittal. Unfortunately, as of the date of this document (July 27, 2004), the permittee had notified the Division that a change in ownership within the Corporation had occurred. It is the Division's understanding that ARCH Coal, International has purchased that portion of the Company that was previously owned by Itochu Coal International, Inc.

Section **112.400, Coal Mining and Reclamation Operation Owned or Controlled;** in the initial submittal, the permittee submitted pages 1-11, through 1-13 listing the five Utah mining operations permitted by the State of Utah, Division of Oil, Gas and Mining for Canyon Fuel Company.

R645-301-112.400 requires that "any coal mining and reclamation operation owned or controlled by either the applicant or by any person who owns or controls the applicant must be listed". The Division interprets this to mean any other mining operations in the United States of America. "Pertinent information which must be listed for each of those operations includes the following: name, address, identifying numbers, including employer identification number, Federal or State permit number and MSHA number, the date of issuance of the MSHA number, and the regulatory authority"; and (112.420) "ownership or control relationship to the applicant, including percentage of ownership and location in the organizational structure". The updated

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information received on March 30, 2004 by the Division of Oil, Gas and Mining (March 24, 2004 submittal) (page 1-13, Section **112.400**) states that all of the mining operations owned or controlled by the applicant be listed. This has been clarified on page 1-13. However, ownership of Arch Coal has recently changed. It will be a few months until the Ownership and Control information will be finalized. This information will, once again, need to be finalized prior to permit approval.

Section 112.500, Legal or Equitable Owner of the Surface and Mineral Properties (Volume 1, Chapter 1, page 1-13 and 1-14) lists the legal and equitable owners of the surface and minerals properties to be affected by the Dugout Canyon mining operation during the duration of the permit period. The State of Utah, School and Institutional Trust Lands Administration is identified as the owner of the mineral rights to State Lease ML-48435-OBA, located in T13S, R13E, SLBM, all or parts of Sections 17, 19, 20, 21, 28, 29, and 30. The address of SITLA is also listed. All surface ownership above the SITLA mineral leases is by the heirs of the Milton and Ardith Thayn Trust, Sunnyside Star Route, Price, Utah, 84501. This information is also listed in the application, section 112.500. There is no area within the lands to be affected by surface operations and facilities or within the area of coal to be mined that is under a real estate contract. The aforementioned information is depicted on Plate 1-1, SURFACE OWNERSHIP, and Plate 1-2, COAL OWNERSHIP provided within the application. Both Plates are P.E. certified by a professional engineer, registered in the State of Utah.

Section 112.600, Owners of Record of Property Contiguous to Proposed Permit Area lists the owners of record for surface and mineral properties contiguous to the proposed permit area. These are also depicted on Plates 1-1, and 1-2 described above. The names and addresses of the individuals or business entities having mineral or surface ownership are listed on Page 1-14, (Volume 1, Chapter 1 of the Task ID #1808 submittal).

Section 112.700, MSHA Numbers (Volume 1, Chapter 1, page 1-15 of the submittal) contains all MSHA identification numbers relative to the facilities associated with the Dugout Canyon Mine. MSHA No. 42-01890 is the Mine associated with the Rock canyon seam. Number 42-01888 is the number given the Mine in the Gilson seam. Number 1211-UT-09-01890-01 is the MSHA number assigned to the Dugout Canyon Mine waste rock disposal facility.

Section 112.800, Interest in Contiguous Lands, (Volume 1, Chapter 1, Page 1-15), contains information regarding the permittee's interest in the coal reserves adjacent to the current Dugout Canyon Mine permit area. The reserves are owned by the State of Utah, School and Institutional Trust Lands Administration, and are the subject of the permit amendment designated as Task ID #1808. Section 112.800 states that upon Division approval, the permittee intends to begin mining the coal reserves associated with State Lease ML-48435-OBA.

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Findings:

The information provided does not meet the minimum requirements of the General Contents – Ownership and Control Information section of the regulations. Prior to approval, additional information must be provided in accordance with:

R645-301-112.400, Provided updated Ownership and Control information with respect to the changes involving Itochu Coal International, Inc.

VIOLATION INFORMATION

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

Analysis:

Violation information is contained in Section **113 Violation Information**, page 16, of Chapter 1, Volume 1 the SITLA Lease Amendment. Neither Canyon Fuel Company nor any major stockholder of the Company having an equitable or legal interest has ever had a State or Federal mining permit suspended or revoked or a security deposit in lieu of a bond revoked.

Volume 1, (Task ID #1808), Chapter 1, page 1-16, Section 113 and TABLE 1-2 (See **TABLES and FIGURES**, Chapter1), list all violations of all of the ARCH Coal Company operations from 2000 through 2003. This appears to be acceptable.

Findings:

The Information provided adequately addresses the minimum requirements of the General Contents – Violation section of the regulations.

RIGHT OF ENTRY

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

Analysis:

Right of Entry information is contained in the submittal, Volume 1, Chapter 1, section 114, pages 1-16 through 1-22. The legal description relative to the SITLA lease addition is contained on page 1-19, State Lease ML-48435-OBA, containing approximately 2,500 acres.

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Page 1-18 of the submittal contains the legal description of the coal lease which was approved as a U. S. Department of the Interior, Bureau of Land Management right-of-way in T13S, R12E, SLBM, Sections 22, 23, and 27. This right of way, (BLM Rt. of Way UTU-77985) contains 57.5 acres and was the right of entry granted to develop the leach field and the associated pipeline for the Mine site. This right-of-way also contains approximately five thousand feet of the Carbon County Road accessing the Mine. The involved acreage has been included within the Dugout Canyon Mine permit area since September of 2000.

Page 1-19 also contains a legal description that refers to a BLM Parcel, containing 2.5 acres. The land is contained in T13S, R12E, SLBM, Section 23. Task ID #1808 includes the legal description information for this parcel to update the mining and reclamation plan. This acreage has also been included within the Mine's permit boundary since September of 2000.

Findings:

The information provided adequately addresses the minimum requirements 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:

Information relative to any status of unsuitability is contained in Volume 1, Chapter 1, Page 1-22, Section **115 Status of Unsuitability Claims**. Based upon information provided by the submittal, none of the areas that have been or are being proposed for permitting for coal extraction are within an area that has been designated, or under study for being designated unsuitable for mining.

CFC does not propose to conduct mining activities within three hundred feet of any occupied dwelling. Chapter 5, section **527.200 Description of Transportation Facilities**, page 5-39 of the approved mining and reclamation plan contains information relative to the Carbon County road which was constructed by that entity to access the Dugout Canyon Mine from the Soldier Canyon road, (Utah Highway 53). The road existed for many years, and was upgraded by the County to handle the increased traffic volume and weights needed for coal haulage. The road is maintained via a toll charge paid by Canyon Fuel Company.

All agreements between the County and Canyon Fuel Company for the road are in place. The County road ends at the Mine site disturbed area perimeter; the in place agreements negate

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any concern by the Division relative to the permittee conducting coal mining activities within 100 feet of the right of way of this public road, (R645-103-234).

Findings:

The information provided adequately addresses 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:

The State of Utah mining permit, issued by the DOGM was renewed on March 3, 2003, and remains in effect for a period of five years, (expiration on March 3, 2008). All mining activities are being conducted within the term of an active permit.

Findings:

The information provided adequately addresses 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:

The submittal contains information relative to 2,500 acres of surface owned by the heirs of the Milton and Ardith Thayn Trust, and mineral ownership held by the State of Utah, School and Institutional Trust Lands Administration. The Division considers the lease application a significant revision to the mining and reclamation plan. The permittee has published a public notice meeting the requirements of R645-301-117.200 in the *Sun Advocate*, Price, Utah on December 19 and 26, and on January 2 and 9, 2003.

Volume 1, Chapter 1, page 1-22, section **117, Insurance, Proof of Publication, and Facilities and Structures Used in Common** of the Task ID #1808 submittal contains a

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reference to information contained in Appendix 1-2 of the approved mining and reclamation plan. The following has been noted:

- 1) The general liability insurance certificate contained in the currently approved mining and reclamation plan (Appendix 1-2) was updated with the March 30, 2004 (TASK ID # 1884) submittal. The coverage period has been extended until July 31, 2004.
- 2) The proofs of publication contained in Appendix 1-2 are relevant to the SITLA lease / Task ID #1884 submittal.
- 3) Page 1-22 of the submittal does not have any discussion relative to any facilities or structures that are within the current mine permit area, or within the additional acreage being proposed within the SITLA lease. Volume 2, Chapter 5, page 5-33 of the Task ID #1808 submittal contains information indicating that two facilities are used in common to facilitate coal mining and reclamation operations. These are the County road previously discussed, and a UP&L power distribution line. The UP&L line provides electrical energy for the Dugout Canyon operation and does not sit on any of the surface that will be affected by secondary coal extraction activities (See PLATE 4-1, LAND USE comparing it to PLATE 1-2, COAL OWNERSHIP) within the 2,500 acres contained in the SITLA lease. The permittee has verbally stated these facts.

Findings:

The information provided adequately addresses the minimum requirements of the General Contents - Public Notice and Comments section of the regulations.

PERMIT APPLICATION FORMAT AND CONTENTS

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

Analysis:

For the overall Dugout Mine project, there are the “Dugout Canyon Mining and Reclamation Plan”, *stand-alone* amendments, and exploration amendments. Currently, there are at least three stand-alone amendments:

- “Dugout Canon Mine – Leach Field Addendum A-1” (LFA, March 2001)
- “Refuse Pile Amendment – Dugout Canyon Mine” (RPA, January 2003)
- “Methane Degassification Amendment” (MDA, 2003/2004).

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These stand-alones provide exclusive information and attachments for the proposed projects.

Note, the Permittee withdrew the 2003 (spring) submittal for the MW06 and MW08 degassification wells.

There were two submittals for the Degassification Amendment. The Division reviewed the submittal for G1-G3 wells in 2003 and reviewed an amendment to this stand-alone for G4-G6 wells in 2004. The Permittee provided attachments for the vegetation and raptor surveys for G1, G2, G3, G4, G5, and G6 degas well sites with the 2004 submittal.

The Division reviewed an exploration amendment (DUGO104 and DUGO204) within the proposed SITLA lease area in 2004.

The SITLA Lease Amendment is not a stand-alone document. The Permittee will incorporate approved information to the MRP.

The Nickens (1984) archeological report has pages that are missing, duplicated, blank, or out of order. The Permittee must provide a complete and orderly Nickens report or remove the report from the application (R645-301-121.200).

The *Study To Determine The Effects Of Coal Development On Wildlife In Southeastern Utah* (1979-1981; MRP-Appendix 3-2) has the following missing pages: 1-10 and 12-14 (R645-301-121.200).

Findings:

The Division considers information in the application inadequate to meet the minimum Permit Application Format and Contents section of the General Contents regulations. Prior to approval, the Permittee must act in accordance with the following:

R645-301-121.200, Provide a complete and orderly Nickens report or remove the report from the application. • Provide the missing pages in a wildlife report. • Provide a current TES species list in the MRP (such as the one in the list in the Degassification stand-alone).. • Provide a reference to the current Mexican Spotted Owl report (EIS 2003/2004; in Methane Degassification Amendment) in the MRP (section 332) or add the report as an appendix in Chapter 3.

REPORTING OF TECHNICAL DATA

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Analysis:

The Permittee must relocate the cultural and historic information from the Refuse Pile Amendment (2003) and Methane Degasification Amendment (2003/2004) to the Confidential File. Furthermore, compile the newly submitted cultural reports (SITLA Lease Amendment, March 2004) into the Confidential File.

The Permittee must relocate the biology-related information from the Confidential File to the MRP. This information is public information. (R645-300-124.330).

Findings:

The Division considers information in the application inadequate to meet the minimum Reporting of Technical Data section of the General Contents regulations. Prior to approval, the Permittee must act in accordance with the following:

R645-300-124.330, Relocate confidential and non-confidential information to appropriate document files.

MAPS AND PLANS

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

Analysis:

The SITLA Lease submittal contains several plates (maps) that are relative to topics that must be evaluated as part of the DOGM approval process. The submitted plates include the following:

- 1) Plate 1-1, SURFACE OWNERSHIP
- 2) Plate 1-2, COAL OWNERSHIP
- 3) Plate 1-4, DUGOUT CANYON MINE PERMIT AREA
- 4) Plate 2-1, NATIVE SOIL TYPES PRESENT IN DUGOUT CANYON MINE PERMIT AREA
- 5) Plate 3-1, VEGETATION
- 6) Plate 3-2, WILDLIFE
- 7) Plate 3-3, POTENTIAL LOCATIONS OF CLIFF ESCARPMENTS WITHIN PERMIT BOUNDARY AND ADJACENT AREA
- 8) Plate 4-1, LAND USE

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- 9) Plate 5-7, PROPOSED MINE SEQUENCE AND PLANNED SUBSIDENCE BOUNDARY
- 10) Plate 6-1, GEOLOGY OF DUGOUT CANYON MINE PERMIT AREA
- 11) Plate 6-4, ROCK CANYON SEAM OVERBURDEN THICKNESS
- 12) Plate 6-5, ROCK CANYON SEAM / GILSON SEAM INTERBURDEN MAP
- 13) Plate 6-6, ROCK CANYON SEAM ISOPACH MAP (CONFIDENTIAL)
- 14) Plate 6-7, GILSON SEAM THICKNESS ISOPACH MAP (CONFIDENTIAL)
- 15) Plate 7-1, HYDROLOGIC MONITORING STATIONS
- 16) Plate 7-2, WATER RIGHTS
- 17) Plate 7-3, CASTLEGATE POTENTIOMETRIC SURFACE
- 18) Plate 7-6, DUGOUT CREEK WATERSHED UPSTREAM FROM SURFACE FACILITIES

As noted elsewhere in this document, the maps have been certified by an Utah registered professional engineer. Information on the plates is relative to the different disciplines involved in the DOGM permitting activity. Only those documents that are relative to the topics discussed within this memo can be commented on. All appear to be adequate.

Findings:

The information provided adequately addresses the minimum requirements of the General Contents – Maps and Plans section of the regulations.

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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.

HISTORIC AND ARCHEOLOGICAL RESOURCE INFORMATION

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

Analysis:

Before Canyon Fuel Company, LLC. (CFC) submitted the SITLA Lease Amendment, the Confidential File, Refuse Pile Amendment (2003), and Methane Degasification Amendment (2003/2004) contained cultural/historic-related documents of Dugout. These documents provide results for surveys west of the proposed SITLA lease area. The Division, therefore, requested additional information that focuses on the SITLA lease area. In response, CFC submitted numerous documents dating from 1980 to the present (currently all in the SITLA Lease Amendment). Only two of these recently submitted documents pertain directly to the SITLA lease area:

- John Senulis May 2004 An Intensive Cultural Resource Survey And Inventory Of The 2004 Dugout Canyon Mine Exploration Drill Holes And Access Roads.
 - o Permit number: UO4SC440p; SPUT-474
 - o Location: Near the proposed exploration hole (DUG0104) and along access road. The author did not consider the other 2004 drill hole projects (DUG0204, DUG0304, and G6) because those areas had not been previously surveyed.
 - o Method:
 - Class I – Literature search (same as the April 2004 report).
 - Class III – Intensive field survey of the 400 x 400 foot proposed disturbed site and 30 meter right-of-way for the access road.
 - o Findings: No cultural resources were observed within the survey area.
 - o Recommendation: The drill project will not affect cultural resources and should receive archeological clearance without stipulation.
 - o SHPO communications: The Division will initiate the Consultation process with SHPO prior to the approval of this amendment.
 - o DOGM: Comments concerning the Class I survey are the same as for the April 2004 report. No comments concerning the findings for the Class III survey.

- John Senulis April 2004 Dugout Canyon Permit Extension (U04SC0326).
 - o Permit number: No permit number.

- o Location: Dugout Canyon Mine area.
- o Method: Class I – Literature search.
- o Findings: Brief overview of major results from the following reports - AERC (1980), Metcalf-Zier (1983), and Senco-Phenix (2001, 2003a, 2003b). The author describes five sites and mentions that none are eligible.
- o Recommendation: None of the five sites are recommended for nomination for the NRHP. Further surveys of the area will unlikely provide positive results for eligible cultural or historic findings. The area within the SITLA lease area is steep with narrow canyons, which were not favored by prehistoric peoples. Mining related operations were conducted in these canyons, but sites observed to date are not recommended for NRHP. The project does not include surface disturbance and should receive archeological clearance without stipulation.
- o SHPO communications: The Division will initiate the Consultation process with SHPO prior to the approval of this amendment.
- o DOGM: This report pertains to the SITLA Lease Amendment only because it mentions the unlikelihood of eligible artifacts within the proposed permit area because of local terrain.

Although the Permittee has conducted many cultural evaluations over the years, there are only two ground surveys (Senco-Phenix, June 2001 and May 2004) conducted within the proposed SITLA lease area. Both surveys were relatively limited in size and not far into the permit boundary (2000' east of the permit boundary). Regardless, both surveys show that there are no sites recommended for the NRHP within the SITLA lease area.

Mr. Senulis considers that the SITLA project will have no effect on cultural or historic properties (April and May 2004). Although much of the SITLA lease area has never been surveyed, he supports there is little chance of finding eligible properties because historic peoples did not prefer steep terrain such as within the project area. He also stresses that the project does not include surface disturbance. Mr. Senulis does not recommend conducting further surveys at this time.

The Division contacted Kenny Wintch (SITLA archeologist; Spring and Summer 2004) several times concerning the SITLA lease area. The Division discussed the nature of the project and clarified that there are only two surveys within the proposed area. The Division stressed that there are no plans for surface disturbance except surface disturbances caused by subsidence. Mr. Wintch supported the consultant's recommendation of no further surveys. The Division assesses that the Permittee should not conduct additional surveys or evaluations for this amendment because:

- No planned surface disturbances.
- No known NRHP eligible sites.
- Little probability of unknown NRHP eligible sites.

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The Division supports a finding of “no effect” to cultural or historic properties and that the permit should receive clearance.

Findings:

The Division considers information in the application adequate to meet the minimum Historic and Archeological Resource Information section of the Environmental Resource Information regulations. However, the Division will send a finding of “no effect” to SHPO for Consultation. Final decision concerning the SITLA lease area will come after the Division receives a response from SHPO.

VEGETATION RESOURCE INFORMATION

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

Analysis:

This project does not include surface disturbances for mine facilities or access corridors. The Division, therefore, does not require a quantitative vegetation survey for assessing reclamation success for this project. The only consideration at this time is the need for localized vegetation evaluations for habitats of high value (i.e., streams, drainages, and springs) located within the zone of subsidence.

The documents that indirectly relate to the SITLA project include evaluations that focus on reference areas or range sites with habitats of high value. These evaluations (NRCS, EarthFax, and USFS) may be important in the event that habitats of high value occur within the zone of subsidence. (Operations section details these subsidence-related considerations. Refer to R645-301-332; R645-301-322.220).

The proposed SITLA lease area includes the following community types: sage (S), mixed conifer (MC), Douglas fir (DF), quaking aspen (QA), deciduous stream bank and riparian (DSR), and ponderosa (PP). Relative proportions of community types within the proposed SITLA area are:

- Primary: S, MC, and DF.
- Secondary: QA and DSR.
- Tertiary: PP.

The MRP provides summaries of quantitative vegetation analysis for all community types in the disturbed area, which does not include the DSR community type. None of the descriptions (pg.3-3 to 3-9) relate to the proposed SITLA area.

Findings:

The Division considers information in the application adequate to meet the minimum Vegetation Resource Information section of the Environmental Resource Information regulations.

FISH AND WILDLIFE RESOURCE INFORMATION

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

Analysis:

The following list provides summary information of the reports that directly or indirectly pertain to the proposed SITLA lease area:

- MRP - Appendix 3-2: DWR (1979-1981) Study To Determine The Effects Of Coal Development On Wildlife In Southeastern Utah.
- MRP - Appendix 3-3: Viert (1981) Revised Final Fish And Wildlife Plan For The Proposed Sage Point.
- MRP - Appendix 3-3: Barnum (1996) Letter to Richard White.
- MRP - Appendix 3-3: Bates (1996) Letter to Vicki Bailey.
- MRP - Appendix 3-3: Perkins and Peterson (1997) Bat Survey For The Dugout Canyon Mine.
- MRP - Appendix 3-3: DWR (2003) Raptor Survey.

- Methane Degasification Amendment – Attachment 3-2: DWR (2003) TES species lists for Carbon County.
- Methane Degasification Amendment – Attachment 3-2: Tom Paluso (2003) Mexican Spotted Owl Survey Dugout and Pace Canyon.

GENERAL WILDLIFE

The *Study To Determine The Effects Of Coal Development On Wildlife In Southeastern Utah* (1979-1981; MRP-Appendix 3-2) provides baseline data for wildlife populations, condition, and behavior within the Sage-point Dugout Canyon project (T13 and 14S; R11, 12,

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and 13E). The goal of the study was to return to the sample sites after mining operations began to compare the effects of mining on wildlife. Reviewers should note that there are missing pages from this report: 1-10 and 12-14 (see R645-301-121.200 for deficiency).

This study provides clear methods and results for the baseline of wildlife populations, condition, and behavior. The goal was to return to the study sites after mining operations began. As far as the Division can determine, the only follow up was the *Revised Final Fish And Wildlife Plan For The Proposed Sage Point* (Aug. 1981). This document, however, is not the follow up study to determine the effects of mining on wildlife.

The Division does not know the status of the follow up study to determine the effects of mining on wildlife. The Permittee must include brief details of the agreement to conduct the follow up study in the MRP narrative in section 322. As far as the Division can decipher, the Permittee would conduct the follow up study if DWR could not return (specified in the Aug. 1981 report). The Permittee must briefly describe the project plan and status. If it is no longer in effect, provide a letter from the overseeing agency showing the authorization to cease the monitoring program. If it is still in effect, include a plan for the follow up study and provide dates and overseeing agency (or contractor). (R645-301-322.200).

The *Revised Final Fish And Wildlife Plan For The Proposed Sage Point* (Aug. 1981; MRP-Appendix 3-3) is a plan to provided means to minimize negative effects of surface disturbance through monitoring activities, revegetation projects, and mitigation programs.

Key to this plan is the statement (pg. 4-1) that CFC will conduct wildlife and resource monitoring if DWR does not return to implement the planned follow-up study (DWR, 1982). This report mentions coordination efforts between CFC and DWR for wildlife monitoring to continue through the end of the extended responsibility period. Assessment of successful wildlife rehabilitation projects include monitoring re-vegetated areas and comparing wildlife usage between reclaimed and control areas (probably areas selected in the DWR 1982 report).

The report specified that monitoring will occur at a greater frequency for high value habitats and “more important wildlife groups” (pg. 4-2 of the report). Wildlife monitoring will begin after substantial vegetation has returned to reclaimed sites. Yearly monitoring will occur for more important wildlife groups and at least every five years for less imports groups. Monitoring will continue until CFC successfully mitigates impact. Page 4-3 provides specific monitoring methods and time schedules for some of the wildlife groups. The “environmental coordinator” will submit monitoring results to DOGM and DWR. This coordinator will establish successful mitigation.

The Division does not know the status of the monitoring commitments. Canyon Fuel Company (CFC) must include details of the commitments in the MRP narrative in section 322.

CFC must briefly describe the project plan and status. If it is no longer in effect, provide a letter from the overseeing agency showing the authorization to cease the monitoring program. If it is still in effect, include a list of the species monitored, a timetable of previous and future monitoring dates (species specific), and the agency (contractor) overseeing the project. (R645-301-322.200).

The letter drafted by Bill Bates (1996, DWR; MRP-Appendix 3-3) details elk and deer range. The accompanying maps apparently do not include the proposed SITLA lease area. The letter indicates that a wildlife map, such as Plate 3-2 (MRP), does not clearly show the feeding migration patterns of these ungulates. To truly define the possible impacts of mining to these animals, it is necessary to coordinate with DOGM and DWR for specifics of each site. This necessity is especially critical as it pertains to the follow up wildlife study and monitoring program described above. It is also critical to communicate with DOGM and DWR when amendments include surface disturbances or changes in access routes or access usage.

During the review for the exploration holes in the proposed SITLA lease area, CFC changed plans to drill (starting second week of June 2004) during the exclusionary period for mule deer. CFC contested the exclusionary period, so DWR reevaluated the site. Their conclusion was that the area around the drill hole sites had been heavily logged since DWR originally mapped the wildlife habitat for that area. DWR waived the exclusionary period for the mule deer calving for the drill hole project (DUGO104 and DUGO204) for 2004.

The Bat Survey For The Dugout Canyon Mine (1997, Perkins and Peterson; MRP-Appendix 3-3) is a study to determine bat species and numbers as well as roosting and foraging habits near a portion of Dugout Creek. Two-thousand feet of this creek was culverted. Results of the study were positive for bats. Observations did not include the spotted or big-eared bats. The authors state that the culvert project will not impact the spotted and big-eared bat populations. The premise of their statement is that the project does not include subsidence to cliffs. The proposed SITLA lease area, however, has cliffs within the subsidence zone. The Permittee commits to conducting future bat surveys (along with raptor surveys) in cliff habitat within permit boundary before subsidence (MRP pg. 3-18).

The Permittee must coordinate efforts with the Division and DWR to conduct a bat survey two years before undermining potential cliff habitat (use Plate 3-3 as a reference; R645-301-322.100). The success of this action will depend on the Permittee's awareness of mine scheduling coupled to habitat locations within the zone of subsidence. The Permittee should refer to a mining map overlaid with potential cliff habitat. The Permittee must provide a schedule that estimates timelines of expected bat surveys. These surveys will help determine the need for a protection and mitigation plan(s) (R645-301-332, R645-301-322).

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The Perkins and Peterson report recommended a mitigation project for the resident bat populations (not spotted or big eared) that the culvert project might impact. The mitigation project included replanting 7,500' of disturbed riparian streambank by hydroseeding and transplanting willows.

JBR Environmental Consultants also conducted a bat survey in June 2002 for the Degas Wells MW-6 and -8 (amendment withdrew). The amendment paraphrased the results that showed no observations for TES species. The amendment never included a copy of the report. The Permittee mentioned (personal communications 8/11/03) that the bat survey in 2002 was originally required because Dugout planned to mine under escarpments. The Permittee changed plans and never mined in areas of concern. The Permittee stated that there was no bat habitat in the relocated area of the degas wells. The requirement for a bat survey included in the amendment did not apply.

The Permittee commits to conduct yearly raptor surveys within a one-mile buffer zone of the surface facilities area (MRP pg. 3-24). The Division, in consultation with DWR (Tony Wright, June 8, 2004) also requires the Permittee to conduct raptor surveys at least two years prior and one year following potential disturbance. The Division and DWR consider that subsidence and subsidence-related events may impact cliff habitat. The Permittee must make modifications to pages 3-33 and 3-34 to reflect the most current requirement concerning subsidence and nest protection.

The Permittee must coordinate efforts with the Division and DWR to monitor raptors at least two years before undermining potential cliff habitat (use Plate 3-3 as a reference). The success of this action will depend on the Permittee's awareness of mine scheduling coupled to habitat locations. The Permittee must refer to a mining map overlaid with potential cliff habitat. (R645-301-332, R645-301-322). This would allow the agencies to determine, in advance, which nests require a protection or mitigation plan. Statements such as those on page 3-32 are only as effective as level of coordination and communication among the parties.

Tony Wright (DWR, personal communications on June 8, 2004) stated that DWR flew over the SITLA lease area in 2004 including Sections 17 and 20 as requested by the Division. Tony Wright also evaluated the site near the DUGO104 and DUGO204 exploration sites for dense canopy habitat, which is essential for Northern goshawks (personal communications June 8, 2004). Logging in the area had compromised the dense canopy habitat making the area unsuitable for goshawks. The Permittee will conduct ground surveys for goshawks in areas planned for disturbance for mining facilities that have suitable habitat. The SITLA Lease Amendment does not include surface disturbance.

The letter drafted by Barry Barnum (1996, Utah Fuel Company; MRP-Appendix 3-3) details a raptor nest protection plan as it relates to subsidence. Mr. Barnum directed to cover

nests located in cliffs expected to subside from underground mining. The covers are to remain in place until sensitive areas are safe from subsidence. The letter, however, does not detail which seasons/months the Permittee should cover/uncover the nests before and following undermining.

The Permittee states they will evaluate raptor nests on a case by case basis and will mitigate using the best technology available. If DWR still recommends covering the nests, the Permittee must provide a table showing individual nest numbers (obtained from flyover results) and years of expected undermining. Details must also include the months recommended by DWR to cover the nests as well as a statement that the Permittee will contact the Division before any protection efforts. The Permittee must apply this agreement to all cliff nests located within the subsidence zone. (R645-301-332).

The 2003 raptor survey covered some of the Dugout Canyon Mine properties, including Section 30 of the proposed SITLA lease area. The flyover map shows a wide diversity of raptor species including redtail hawk, prairie falcon, raven, and golden eagle. The results of the 2003 survey showed six nest that were either tended or active. None were in T13S R13E Section 30. The active nests included one prairie falcon (#6) and two raven nests (#14 and 1303). There were no active or tended golden eagle nests in 2003. DWR states that one possible reason for the low nesting activity of all raptors over the past few years is drought.

The 2004 raptor survey apparently covered all of the SITLA area - DWR had not compiled the data at the time of the conversation.

Threatened and Endangered Species

In order for a person to conduct official surveys, they must fulfill the following sequential requirements: belong to the permit holding corporation, take the species-specific course and exam, submit the application for permit to the USFWS, and record name to the corporate permit records.

The Degasification Amendment contains a copy of the corporate TES permit (exp. 12/31/05) with Mel Coonrod as principal officer. The corporate permits shows that Tom Paluso is authorized to conduct MSO surveys.

The Division will not consult with USFWS for the SITLA Lease Amendment because there is no plan for surface disturbance. It may be necessary to conduct TES surveys depending on future changes to the SITLA Lease Amendment.

The Methane Degasification Amendment – Attachment 3-2 provides a current TES species list. There is no general threatened, endangered and sensitive species (TES animal and plant) official evaluation that focuses on the SITLA lease area. The main concern that the

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Division has is the possibility of impact to plant and animal species because of subsidence. The Division contacted the Utah Division of Wildlife Resources (DWR) to determine if they had a concern for TES, sensitive, or candidate species within the proposed lease area. DWR did not have records of occurrence for any threatened, endangered, or sensitive species in T13 S, R13 E, S17, 19-21, 28-30. They mentioned, however, that there are recent records of occurrence in the vicinity for ferruginous hawk (over 2 miles from area) and historical records of occurrence for Northern goshawk (approximately 4 miles from area).

The Permittee has conducted site-specific TES surveys over the years. The Methane Degasification Amendment mentions that the bald eagle is the only TES species likely to exist within the exploration area. The eagles may use the area, but usually only during winter months and not during this scheduled project. In addition, for the Degasification Amendment, Dr. Collins conducted a literature search on TES plant species. His results showed that the area includes suitable habitat only for canyon sweetvetch (*Hedysarum occidentale* var. *canone*). Collins did not mention Tufted cryptantha, Helenium hymenoxys, or Graham beardtongue in his literature or survey results. This surveyor ground-truthed (June 2003) for TES plant species and observed no TES species growing at any of the degas well sites or reference areas.

The Permittee provided the following information concerning TES species in the Degas Wells MW-6 and -8 (Attachment 3-2; withdrew). Although the survey was not comprehensive and included surveys for TES species not listed for Carbon County, it provided some important resource data. EIS surveyed for twenty-seven plant and two animal species. These species are included on federal threatened and endangered (TE) list for Carbon and Emery counties or on sensitive lists for the area. For the sites evaluated, the results showed “no observation” for all TES species. The survey, however, showed suitable habitat for the following species:

- Last chance townsendia (*Townsendia aprica* – USFS SS; Emery)
- Tufted cryptantha (*Cryptantha caespitosa* - CS; Carbon)
- Canyon sweetvetch (*Hedysarum occidentale* var. *canone* – USFS SS; Manti-LaSal/Carbon)
- Helenium hymenoxys (*Hymenoxys helenioides* – CS; Carbon, Emery)
- Bicknell milkvetch (*Astragalus consobrinus* - USFS SS; Manti-LaSal/Emery)
- Basalt milkvetch (*Astragalus subcinereus* – BLM SS; W.Emery)
- Sedge fescue (*Festuca dasyclada* – USFS SS; Manti-LaSal/Emery)
- Graham beardtongue (*Penstemon deaveri* – Utah Heritage Program; extreme northeastern corner of Carbon County)

[Parenthetical information shows species name and DOGM research results for management responsibility; county or forest location.]

Four of the eight species are within Carbon county: tufted cryptantha, canyon sweetvetch, helenium hymenoxys, and Graham beardtongue. The other four species (not in Carbon County)

in the list were probably included as an oversight. A June 24, 1995, survey for canyon sweetvetch found this sensitive species along Dugout Creek approximately one-half mile below the gate. The Division is aware of a large population in the permit area in Fish Creek Canyon, and the plant could occur in other parts of the permit area including the proposed SITLA lease area. EIS also surveyed for the loggerhead shrike and burrowing owl. The inventory found no suitable habitat for these animal species.

The Final Report: Assessing the impact of scale on the performance of GIS habitat models for Mexican Spotted Owl (David Willey, October 22, 2002 [Incoming 2003; Degas Wells MW-6 and -8; Attachment 3-3]) evaluates the performance of the 1997 and 2000 models developed by Dr. Willey et. al. for predicting MSO habitat. The study included four project areas near Price, but did not include the Dugout mine area. Had the study included the Dugout area, the Permittee could have substituted this study for the required ground-truthing survey.

The Division requested a ground-truth survey for MSO in 2003 for the Degassification Amendment. The Permittee may have conducted a ground-truthing survey, but only submitted a report for a two-year calling survey in 2003 and 2004. The Division reminds the Permittee that a calling survey is only required after ground-truthing results are positive for MSO. The USFWS does not require a two-year calling survey if ground-truthing results are not positive for MSO.

Tom Paluso of Environmental and Engineering Consultants (EIS) conducted the calling survey (May 20 - June 18, 2003 and spring of 2004) for MSO birds within a half-mile radius around the G1-G6 degas well area. The calling procedure included calling at seven different points with points no greater than 0.5 mile apart. The consultant called for 20 minutes using three different calling types. For both the 2003 and 2004 surveys, results showed no MSO responses within a half-mile radius around the G1-G6 degas well area. The results, however, showed responses from Great Horned Owl (5/20/03) and Northern Saw-whet (5/20/03, 6/11/03, 5/5/04, 5/13/04, 5/20/04, and 5/29/04).

The area surveyed for the MSO covers the SITLA Exploration surface disturbance areas and areas along Pace Creek. This survey does not include all potential cliff habitat within the proposed SITLA lease area. The primary concern is the loss of cliff habitat because of subsidence. The Division will consult with DWR over this matter. If DWR recommends ground-truthing cliff habitat over expected undermining, the Permittee must submit a survey program similar to the raptor survey program mentioned above. The Permittee must also submit a protection and enhancement plan if the results are positive for MSO. The Division again reminds the Permittee that if the ground-truthing survey is positive for MSO, then the USFWS requires a two-year calling survey before disturbance (subsidence in the case). The Division will provide the Permittee with the agency decision before the Permittee responds to this SITLA Amendment (2004). A protection/mitigation plan may be required. (R645-301-332, R645-301-320).

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Findings:

The Division considers information in the application inadequate to meet the minimum Fish and Wildlife Resource Information section of the Environmental Resource Information regulations. The MSO requirements are not listed below because the Division is currently consulting with DWR. The Division will present decisions as soon as they become available. Prior to approval, the Permittee must act in accordance with the following:

R645-301-322.200, Provide requested information for the follow up study on the effects of mining on wildlife.

R645-301-322.200 Provide requested information for the wildlife monitoring commitments and mitigation efforts.

R645-301-332, -320, Provide the information requested concerning bats including a schedule that estimates timelines of expected bat surveys.

R645-301-322, -320, Provide the information requested concerning raptors including coordinating the mine plan with potential cliff habitat.

R645-301-332, Describe the requested raptor protection measures in section 332.

GEOLOGIC RESOURCE INFORMATION

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

Analysis:

The geology is covered in Chapter 6 of the currently approved MRP. The description of the geology, both permit and adjacent areas are addressed and updated with a modified Plate 6-1. Cross sections 6-4 through 6-7 have also been updated to include the SITLA lease. On Plate 6-1, Geology of Dugout Canyon Mine Permit area, the only modification was to change the 'future expansion' area into the permit area. No other modifications were necessary.

Findings:

The information provided adequately addresses the minimum requirements of the Environmental Resources – 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:**Baseline Information**

The Permittee has provided updated baseline water-monitoring information in Appendix 7-7 and on the Division's Electronic Water Monitoring Database. Within the SITLA lease, the Permittee has monitored the following sites for baseline:

<u>SITE</u>	<u>LOCATION</u>	<u>TYPE</u>	<u>MONITORING PERIOD (to date)</u>
RC-1	Rock Canyon	Surface point	3/2000 – 10/2003
PC-1	Pace Creek	Surface point	4/1978 – 10/1979
PC-1A	Pace Creek	Surface point	9/1999 – 10/2003
200	North Horn Fmn.	Spring	3/2000 – 10/2003
203	North Horn Fmn.	Spring	3/2000 – 10/2003
259	North Horn Fmn.	Spring	3/2000 – 10/2003
260	Colton Fmn.	Spring	3/2000 – 10/2003

Ground Water

There are several springs within the SITLA Lease, but most of them lie outside of the potential subsidence zone.

Only one spring that the Permittee monitors (260) lies within the potential subsidence zone of the SITLA Lease. Of the 31 times Canyon Fuel has monitored that spring, the majority (19) had a flow between 10 and 20 gpm. The minimum and maximum flows were .053 gpm and 33 gpm respectively. The average flow was 13.65 gpm with a median of 12 gpm. There are no water rights associated with Spring 260. This spring emanates from the Colton Formation.

Springs SC-93 through SC-96 also lie within the potential subsidence zone. Soldier Creek Coal Company monitored each of these springs in 1995-1998. None ever flowed over 6 gpm during that time. There are no water rights associated with any of these springs, however there is one for the channel near SC-93, 94, and 95. All four of these springs emanate from the North Horn Formation.

There is a cluster of springs in the northwest corner of Section 20 T13S, R13E, SLBM inside of the permit area, but outside of the potential subsidence zone. They are: SC-107 through SC-112, 258, and 259. The Permittee monitors Spring 259 and had previously monitored SC-

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107 through SC-112 in 1995-1998. None of the SC springs ever flowed more than 9 gpm. The Permittee has recorded 17 flow samples at Spring 259 since 2000. Thirteen of those were 0 gpm. The remaining 4 ranged from 8.21 gpm and 9.69 gpm and were recorded in 2000 and 2001, before the current drought started. It had flows of 0.11 and 0.09 gpm in 1999. There are two water rights associated with this cluster of springs: 91-1735, and 91-1733. Springs 259, SC-107, and SC-108 emanate from the North Horn Formation; while SC-109 and SC-112 emanate from the Flagstaff Formation.

There are some springs, associated with Pace Creek, which also lie inside the permit area, but outside of the potential subsidence zone. They are: SC-97, SC-98, 203, 204, and 205. The Permittee recorded flows of up to 2 gpm at SC-97 and SC-98 in 1995-1998. They monitor Spring 203 and have 31 recorded flow samples since 2000. The average flow has been 4.11 gpm with a minimum of 0.009 gpm and a maximum of 22.6 gpm. Water Right 91-4970 is associated with Spring 203. All of these springs emanate from the North Horn Formation.

Springs 200, 201, 202, and 226 also lie inside the permit area but outside the potential subsidence zone. They are associated with Rock Creek. The Permittee's monitoring in 1998-1999 showed that 201, 202, and 226 had very little flow (<0.5 gpm). The Permittee monitors Spring 200 and has 18 recorded flow samples since 2000. Fourteen of those were 0 gpm. The remaining flows were 2.2 gpm, .005 gpm, and two occurrences of 0.0013 gpm. Water Right 91-1729 is associated with Spring 200. Springs 200, 201, and 226 emanate from the North Horn Formation; while Spring 202 emanates from the Castlegate Sandstone.

The Permittee does not provide a discussion of other subsurface water in the SITLA Lease. However, they have conducted extensive exploration in the area and apparently have not encountered any water while drilling. The Permittee needs to provide a discussion of the subsurface water resources, or lack thereof, in the amendment.

Surface Water

There are two major surface-water drainages within the SITLA Lease. They are Pace Creek and Rock Creek.

Baseline data show that Rock Creek acts ephemerally within the SITLA Lease, flowing only in response to snowmelt and summer storms. Mining should have no effect on Rock Creek, since it lies entirely outside of the anticipated subsidence zone.

Pace Creek flows perennially in parts of the permit area and intermittently in others. Even the perennial portions fluctuate seasonally as evidenced by the data in Appendix 7-7 and the Division's Electronic Water Database. In Section 724.400, the Permittee states: "Flows in spring/early summer are typically several times greater than in late summer/fall. Also, it is

interesting to note that in 2002 and 2003 there have been periods when there is no flow at station PC-2 and flows measured in late summer/fall at PC-1A have been significantly less than in previous years. The drop in flow is undoubtedly related to the prolonged drought the area has been suffering through since 1999.” The Permittee also indicates that Pace Creek’s base flow seems to come from springs in the Castlegate Sandstone, Price River, Flagstaff/North Horn, and Colton Formations, with the majority coming from springs in the North Horn and Flagstaff Formations.

A portion of Pace Creek lies within the subsidence zone and the Permittee will need to provide plans to mitigate any effect subsidence may have on the channel. The Permittee feels that any cracks or other damage will self-repair quickly, however they must provide a plan to mitigate any damage that does not self-repair. A monitoring plan should be included, to ensure that the Permittee notices and can mitigate the effects as soon as possible after they occur. Mitigation should implement the Best Technology Currently Available (BTCA).

Baseline Cumulative Impact Area Information

Sufficient information is available in the application and from Federal and State agencies to complete the CHIA.

The Dugout Mine belongs to the Book Cliffs Area II CHIA. The addition of the SITLA Lease will not change the CHIA boundaries since it was included in the previous CHIA.

Probable Hydrologic Consequences Determination

The Permittee provides a Probable Hydrologic Consequences determination (PHC) in Section 728.300 of the MRP. There are few changes to the PHC in this amendment. One significant change is that Pace Creek could be subsided where longwall mining will occur beneath it. As discussed above, the Permittee needs to discuss mitigation plans for Pace Creek in the event that subsidence causes damage to the channel.

Findings:

The information found in the PAP is inadequate. Before approval, the Permittee must provide the following in accordance with:

R645-301-724.100, The Permittee must include a discussion of the non-spring related subsurface water resources, or lack thereof in the SITLA Lease.

R645-301-525.510, and R645-301-731, The Permittee must include plans for mitigation of any damage that may occur to Pace Creek from subsidence.

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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:

Monitoring and Sampling Location Maps

Plate 7-3 depicts the water monitoring locations for the entire mine, including the SITLA Lease. However, the Permittee has not defined some line types used on the map in the legend. The Permittee needs to define all line-types used in Plate 7-3 in the legend.

Subsurface Water Resource Maps

The Permittee depicts the potentiometric surface of the Castlegate Sandstone on Plate 7-3. However, the map could be deceiving since the information is for 1982 and is based on just three wells. The Division feels that it would be better to remove the map from the MRP since it just causes confusion.

The Permittee shows all water rights, including those associated with springs, on Plate 7-2.

Surface Water Resource Maps

The Permittee does not present any maps clearly depicting surface water resources in the SITLA lease. It is difficult to distinguish between roads and streams/channels on Plate 7-1, since line types for neither are included in the legend. The Permittee should clearly depict all surface water resources in the area on Plate 7-1.

Coal Resource and Geologic Information Maps

Geologic information already existed on Plate 6-4 (Rock Canyon Seam Overburden Thickness), Plate 6-5 (Rock Canyon Seam / Gilson Seam Interburden map), Plate 6-6 (Rock Canyon Seam Isopach map – “Confidential”), and Plate 6-7 (Gilson Seam Thickness Isopach map – “Confidential”) however these plates were updated with additional information obtained with mining and additional exploration drilling. The permit boundary was also modified to include the ‘area of future expansion’ at the permit area.

Archeological Site Maps

There is an archeological map for the northwestern corner of proposed SITLA lease area. John Senulis May 2004 *An Intensive Cultural Resource Survey And Inventory Of The 2004 Dugout Canyon Mine Exploration Drill Holes And Access Roads*. The Permittee will place all maps in the SITLA Lease Amendment and stand-alone amendments in the Confidential File as required above.

Vegetation Reference Area Maps

Plate 3-1 in the MRP provides the vegetation communities. The MRP does not provide a vegetation map that shows all the reference areas. The Division typically requests two vegetation maps: one that shows the entire area (Plate 3-1 is adequate) and one that details the reference and proposed disturbed areas. The second map must show the location and boundary of the newly assigned reference and proposed disturbed areas. The Division recommends to follow DOGM Vegetation Information Guidelines (pg. 3) that requires the second map drawn at a scale, such as 1"=400'. Because the Dugout Mine is spread over an expansive area, especially when considering the refuse pile, the Division request that the Permittee provide the following: map titles and numbers, reference area names, and map locations (MRP or title of stand-alone amendment). This information will provide the Division with a consolidated list in the MRP of all the reference areas for the mine and where to locate related maps. As it is, maps showing the required reference areas are in many different documents. Place this information in section 323. (R645-301-323.100).

Findings:

The Division considers information in the application inadequate to meet the minimum Maps, Plans, and Cross Section Resource Information section of the Environmental Resource Information regulations. Prior to approval, the Permittee must act in accordance with the following:

R645-301-121.200, 1)The Permittee must identify each major line-type used on maps in the legend, 2) Plate 7-3 is confusing and based on sparse and old information. To avoid confusion, the Permittee should remove the map from the MRP, and instead provide a discussion in Section 724.100 of the subsurface water resources or lack thereof.

R645-301-323.100, Provide vegetation-related map titles and numbers, reference area names, and map locations in section 323.

OPERATION PLAN

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MINING OPERATIONS AND FACILITIES

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

Analysis:

Information for the requirements of this section is provided by the Task ID #1808 submittal (SITLA Lease application), in Volume 2, Chapter 5, Section **526.100 Mine Structures and Facilities** (pages 5-33 through 5-48). All text changes being proposed are insignificant, and merely add the name “Dugout” in certain areas for clarification purposes. There are no new mine facilities or support facilities being permitted via the SITLA lease application.

Findings:

The Information provided adequately addresses 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 associated with the surface (owned by heirs of the Milton Thayn Trust) over the SITLA lease. All surface lands associated with the SITLA lease are utilized for grazing, (See PLATE 4-1).

Findings:

The information provided in the current MRP adequately addresses 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 only public road in use by Canyon Fuel Company, LLC. is the County road connecting the Mine to the Soldier Canyon road (Utah Highway 53). This requirement is not applicable to the SITLA lease submittal.

Chapter 5, section **527.200 Description of Transportation Facilities**, page 5-39 of the approved mining and reclamation plan contains information relative to the Carbon County road which was constructed by that entity to access the Dugout Canyon Mine from the Soldier Canyon road, (Utah Highway 53). The road existed for many years, and was upgraded by the County to handle the increased traffic volume and weights needed for coal haulage. The road is maintained via a toll charge paid by Canyon Fuel Company.

All agreements between the County and Canyon Fuel Company for the road are in place. The County road ends at the Mine site disturbed area perimeter; the in place agreements negate any concern by the Division relative to the permittee conducting coal mining activities within 100 feet of the right of way of this public road, (R645-103-234).

Findings:

Information provided in the currently approved MRP adequately addresses the minimum requirements of the Operation Plan – Relocation or Use of Public Roads section of the regulations.

PROTECTION OF PUBLIC PARKS AND HISTORIC PLACES

Regulatory Reference: 30 CFR 784.17; R645-301-411.

Analysis:

There are no known public parks or historic places within the proposed SITLA lease area that require protection.

Findings:

The Division considers information in the application adequate to meet the minimum Protection of Public Parks and Historic Places section of the Operation Plan regulations.

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COAL RECOVERY

Regulatory Reference: 30 CFR 817.59; R645-301-522.

Analysis:

The requirements of this section have been addressed within the approved mining and reclamation plan, Chapter 5, page 5-22.

Findings:

Information provide in the currently approved MRP adequately addresses the Operation Plan – Coal Recovery section of the regulations.

SUBSIDENCE CONTROL PLAN

Regulatory Reference: 30 CFR 784.20, 817.121, 817.122; R645-301-521, -301-525, -301-724.

Analysis:

Subsidence Control Plan

The permittee's approved mining and reclamation contains the subsidence control plan for the Dugout Canyon Mine. Plate 5-7 submitted as part of Task ID #1808 indicates that one new subsidence monitoring station will be installed in each longwall panel within the SITLA lease. This concurs with the currently approved MRP.

Notification

Task ID #1808, SITLA Lease application contains a one-word modification to the section **525.300 Public Notice of Proposed Mining** section. That revision merely adds the word "approximate" to the requirement of notifying surface landowners of the date when undermining of their ownership will occur. This is a minor revision.

Findings:

The information provided adequately addresses the minimum requirements of the Operation Plan – Subsidence Control Plan 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

The submittal, Task ID #1808, makes several very minor revisions to Chapter 5 of the mining and reclamation plan in Volume 2, Chapter 5, pages 5-48, 49, and 50. There are no changes proposed to the methods of handling or disposal of any types of coal-mine waste generated by the Dugout Canyon Mine. The only proposed changes are changes in text adding references to the Dugout Canyon Mine and its associated waste rock facility. These changes are insignificant to the waste-handling plan.

Findings:

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

FISH AND WILDLIFE INFORMATION

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

Analysis:

Protection and Enhancement Plan

All of the information concerning the biology-related operation plan for the SITLA Lease Amendment is in the MRP. The Permittee did not provide additional information.

The Permittee must provide information on the follow-up wildlife study to determine the effects of mining and the wildlife-monitoring project. The details for these two requirements are above in the Environmental Section.

As detailed above, the Permittee commits to conduct future bat surveys in cliff habitat within permit boundary before subsidence (MRP pg. 3-18). Details for survey-timing requirements are above in the Environmental Section. If there is cliff habitat within the

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subsidence zone for the proposed SITLA lease operations, the Permittee must provide a protection or mitigation for bat populations.

The Permittee implemented a vegetation mitigation project in exchange for impacting local bat populations around 1997. The project may be still on going with the need to transplant additional willows. The MRP details this mitigation project (pg. 3-19 through 3-20).

The Environmental Section provides details for timing and location requirement of raptor surveys as well as requests additional information for the proposed protection plan such as the plan described by Barnum (1996, MRP).

The Division is currently consulting with DWR over the MSO requirements (if any) for the SITLA Lease Amendment. A protection/mitigation plan for potential habitat within the subsidence zone may be required.

Endangered and Threatened Species

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

The Permittee must address possible adverse affects to these four fish species by first calculating the amount of water used by all mining operations. (R645-301-333). The "Windy Gap Process" provides a guideline to calculate water consumption for coal mining. The Permittee may obtain the "Windy Gap Process as it Applies to Existing Coal Mines in the Upper Colorado River Basin" (Discussion Paper) from the Division (801-538-5214). The Permittee must also include equations for water consumed from dust suppression programs. In brief, consumption values must at least include the following:

- Mining consumption
- Ventilation consumption
- Coal producing consumption
- Ventilation evaporation
- Sediment pond evaporation
- Springs and seep effects from subsidence

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- Alluvial aquifer abstractions into mines
- Alluvial well pumpage
- Deep aquifer pumpage
- Postmining inflow to workings
- Coal moisture loss
- Direct diversions
- Dust suppression (not mentioned in Windy Gap).

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

Bald and Golden Eagles

There are many raptor nests within the Dugout properties including golden eagles. There are no known bald eagle nests. This project will not include any surface disturbance for facilities, but cliff habitat occurs within the subsidence zone. Sections above detail measures to survey and protect golden eagle and other raptor nest.

Wetlands and Habitats of Unusually High Value for Fish and Wildlife

Mining operations will result in subsidence within the permit area. The MRP does not adequately address the impacts of or provide a mitigation plan for the subsidence to streambank habitat. The area has plenty of springs, unnamed drainage in Section 20 and 29, and Pace Creek. There are stretches of Pace Creek that are ephemeral (DWR; personal communication 2004) and others that are perennial. The Division is concerned that subsidence may impact wildlife dependent on streambank habitat.

The Division does not consider that Permittee could adequately address impact to wildlife given that there is limited to no information for these high-value areas. For example, there is no related data on vegetation, amphibians, or mollusks for these areas. DWR states that the surrounding area makes it likely that amphibians (probably tiger salamander) would be impacted if ponds associated with springs in the area were lost. Springs may also serve as refuge for isolated populations of mollusks. Historical records for one rare mollusk (*Physella virgata*) exist for Carbon County. Loss of macroinvertebrates may be an issue to consider when looking at impacts on animals such as bats and birds. The Permittee must describe short-term and possible long-term impacts to species dependent on the springs, creeks, and drainages. This information must go into section 332. (R645-301-332, R645-301-320).

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The Permittee states that damage caused by subsidence to these high-value habitats will naturally heal. This assumption is not adequate and the Permittee must provide a mitigation plan for the subsidence to streambank habitat. The plan must include detail of the project, dates of implementation, location of project, and overseeing agencies for the project. This information must go into section 332. The Permittee must coordinate with the Division to determine data requirements and to develop a mitigation plan. (R645-301-332; R645-301-320).

There are many concerns centered on subsidence within the proposed SITLA lease area. The Permittee may state that there is no probable impact to plants and wildlife in high-value habitats because of the amount of overburden. The Permittee must present ground-truthing data clearly showing that subsidence within the same geological formations at the Dugout mine support the selected degree of angle of draw as well as stated degree of impact. It is not clear, how the statements on pages 5-28 through 5-31 relate to control measures or adequately address impacts to high-value habitat caused by subsidence.

Findings:

The Division considers information in the application inadequate to meet the minimum Fish and Wildlife Information section of the Operation Plan regulations. The Division will visit the bat-mitigation site to evaluate the progress and to see the installation of the “habitat enhancement structures within Dugout Creek upstream from the proposed disturbed area” as requested by DWR. Prior to approval, the Permittee must act in accordance with the following:

R645-301-333, Provide all data equations and justifications with supporting documentation leading to the overall sum of water depletions/additions for all mining operations and explorations.

R645-301-332, R645-301-320, Provide the requested information related to subsidence and high-value habitats near springs, drainages, and Pace Creek.

VEGETATION

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

Analysis:

The mitigation plan for subsidence of springs, drainage, and Pace Creek may include a vegetation component. The Division in coordination with DWR and the Permittee will develop the details of the methods and plant species.

Findings:

The Division considers information in the application adequate to meet the minimum Vegetation section of the Operation Plan 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:

Groundwater Monitoring

The Permittee does not propose any changes to the groundwater-monitoring plan in this amendment. They will continue to monitor springs within the SITLA Lease according to Table 7-4 of the MRP. The sites they will continue to monitor in the SITLA Lease are: 200, 203, 259, and 260.

Surface Water Monitoring

The Permittee does not propose any changes to the surface water-monitoring plan in this amendment. They will continue to monitor streams within the SITLA Lease according to Table 7-5 of the MRP. The sites they will continue to monitor in the SITLA Lease are: PC-1A, and RC-1.

Acid- and Toxic-Forming Materials and Underground Development Waste

The Permittee provides acid and toxic analyses of samples taken above and below the Rock Canyon and Gilson Coal Seams in Appendix 6-2 (confidential files). The analyses indicate that there are no acid- or toxic-forming materials present. The Permittee states in Section 731.300 that they will periodically monitor for acid- and toxic-forming materials and dispose of them properly if found.

Stream Buffer Zones

Since the Division is granting permission to the Permittee to mine under Pace Creek as outlined in the amendment, stream buffer zone markers are not required in that area.

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Findings:

Information provided in the amendment meets the minimum requirements of the Hydrologic Operation Information 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 extraction of coal from the 2,500 acres of mineral resource associated with the SITLA lease will not change the currently approved reclamation plan. This is because there are no new facilities being proposed on the surface lands associated with the SITLA lease.

Findings:

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

This has been addressed within the approved mining and reclamation plan. The Task ID #1808 submittal adds verbiage to include the Dugout Canyon waste rock facility, (Volume 2, Chapter 5, page 5-77). This is a minor revision that does not affect the previously approved plan relative to grading activities or final surface configuration.

Findings:

The information provided adequately addresses the minimum requirements of the Reclamation Plan – Backfilling and Grading section of the regulations.

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:

The requirements of this section are addressed within the approved mining and reclamation plan, (See Chapter 5, pages 5-54 through 5-57 of the approved MRP).

Retention

All surface ownership within the 2,500 acre SITLA lease is by the heirs of the Milton and Ardith Thayne trust. All roads in that area will be retained, with the exception of any degasification well roads that were developed to access the well sites, (G-3, and G-2).

Findings:

The information provided adequately addresses the minimum requirements of the Reclamation Plan – Road Systems and Other Transportation Facilities 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:

All requirements of this section have been addressed within the approved mining and reclamation plan. Although some text revisions have been made within the Task ID #1808 submittal, (See Volume 2, Chapter 5, Pages 5-33, 35, 48, 49, and 50), none of the text modifications change any of the previous commitments made and approved by the Division. There will be no backfilling or grading necessary to reclaim any of the surface areas within the SITLA lease, due to the fact that there are no surface facilities to be reclaimed.

Certification Requirements.

All plates (maps) submitted as part of the Task ID #1808 document (SITLA lease) have been certified by a Utah registered professional engineer, (Mr. David G. Spillman, Manager of Technical Services for Canyon Fuel Corporation, Inc.).

CHIA

CUMULATIVE HYDROLOGIC IMPACT ASSESSMENT (CHIA)

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

Analysis:

The Division will complete the CHIA once the Permittee has submitted all required information for the PHC.

Findings:

The Division has not completed the CHIA.