

0004

OK C/007/047 Incoming #2989



SALT LAKE AREA OFFICE
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June 13, 2008

Mr. Joe Helfrich
Department of Natural Resources
Division of Oil, Gas and Mining
1594 West North Temple, Suite 1210
Salt Lake City, Utah 84116

Dear Mr. Helfrich,

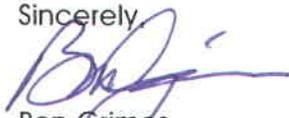
RE: C/007/0047 – Response to DOGM Determination of Administrative Completeness Review dated April 24, 2008

In response to the Division's ACR review comments, please accept the attached package including:

1. C1 & C2 forms
2. Redline/Strikeout versions of the revised application text pages addressing the issues. This version does not include the Table of Contents revision, List of Figures revision, revised Maps, and the Insurance Certificate.
3. Final versions of the revised application text pages with the revised text, the Table of Contents revision, List of Figures revision, revised Maps, and the Insurance Certificate.

Please call me at 435-650-7075 if you have any questions.

Sincerely,


Ben Grimes

CC: G.Hunt, C.Wisdom, P.Ax

File in:
C/0070047, 2008, Incoming
Refer to:
 Confidential
 Shelf
 Expandable
Date 06/30/08 For additional information

RECEIVED
JUN 13 2008
DIV. OF OIL, GAS & MINING

APPLICATION FOR COAL PERMIT PROCESSING

Permit Change New Permit Renewal Exploration Bond Release Transfer

Permittee: Carbon Resources, LLC

Mine: Kinney No. 2

Permit Number:

C/007/0047

Title: MRP Application Completeness Issues Responses

Description, Include reason for application and timing required to implement:

Responds to DOGM Determination of Completeness, dated April 24, 2008.

Instructions: If you answer yes to any of the first eight questions, this application may require Public Notice publication.

- | | |
|---|---|
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 1. Change in the size of the Permit Area? Acres: _____ Disturbed Area: _____ <input type="checkbox"/> increase <input type="checkbox"/> decrease. |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 2. Is the application submitted as a result of a Division Order? DO# _____ |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 3. Does the application include operations outside a previously identified Cumulative Hydrologic Impact Area? |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 4. Does the application include operations in hydrologic basins other than as currently approved? |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 5. Does the application result from cancellation, reduction or increase of insurance or reclamation bond? |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 6. Does the application require or include public notice publication? |
| <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | 7. Does the application require or include ownership, control, right-of-entry, or compliance information? |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 8. Is proposed activity within 100 feet of a public road or cemetery or 300 feet of an occupied dwelling? |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 9. Is the application submitted as a result of a Violation? NOV # _____ |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 10. Is the application submitted as a result of other laws or regulations or policies? _____ |

Explain: _____

- | | |
|---|--|
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 11. Does the application affect the surface landowner or change the post mining land use? |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 12. Does the application require or include underground design or mine sequence and timing? (Modification of R2P2) |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 13. Does the application require or include collection and reporting of any baseline information? |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 14. Could the application have any effect on wildlife or vegetation outside the current disturbed area? |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 15. Does the application require or include soil removal, storage or placement? |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 16. Does the application require or include vegetation monitoring, removal or revegetation activities? |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 17. Does the application require or include construction, modification, or removal of surface facilities? |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 18. Does the application require or include water monitoring, sediment or drainage control measures? |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 19. Does the application require or include certified designs, maps or calculation? |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 20. Does the application require or include subsidence control or monitoring? |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 21. Have reclamation costs for bonding been provided? |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 22. Does the application involve a perennial stream, a stream buffer zone or discharges to a stream? |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 23. Does the application affect permits issued by other agencies or permits issued to other entities? |
| <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | 24. Does the application include confidential information and is it clearly marked and separated in the plan? |

Please attach three (3) review copies of the application. If the mine is on or adjacent to Forest Service land please submit four (4) copies, thank you. (These numbers include a copy for the Price Field Office)

I hereby certify that I am a responsible official of the applicant and that the information contained in this application is true and correct to the best of my information and belief in all respects with the laws of Utah in reference to commitments, undertakings, and obligations, herein.

<u>Clay Wisdom</u>	<u>C.F.O.</u>	<u>6-12-08</u>	
Print Name	Position	Date	Signature (Right-click above choose certify then have notary sign below)

Subscribed and sworn to before me this 12th day of June, 2008

Notary Public: Barbara A. Mast, state of Utah ^{New} MEXICO

My commission Expires: 3/15/10

Commission Number: _____

Address: 13 Range Road

City: Edgewood State: nm Zip: 87015



For Office Use Only: <div style="border: 1px solid black; height: 100px; width: 100%;"></div>	Assigned Tracking Number: <div style="border: 1px solid black; height: 100px; width: 100%;"></div>	Received by Oil, Gas & Mining <div style="text-align: center; color: red; font-weight: bold; font-size: 1.2em;">RECEIVED</div> <div style="text-align: center; color: black; font-weight: bold; font-size: 1.2em;">JUN 13 2008</div> <div style="text-align: center; color: red; font-weight: bold; font-size: 0.8em;">DIV. OF OIL, GAS & MINING</div>
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2.1 LEGAL, FINANCIAL, COMPLIANCE AND RELATED INFORMATION

2.1.1 General Legal, Financial, Compliance and Related Information

This section of the Kinney No. 2 Mine permit application provides relevant information on the ownership and control of the permit applicant and operator, ownership and right of entry for the properties which will be affected by the mining and reclamation operations, compliance history for the applicant/operator and associated officers and directors, and other important information. Information in this section was developed in accordance with applicable regulatory requirements (R645-301-100) for coal mine permitting in the State of Utah.

2.1.1.1 Applicable Regulatory Sections Addressed

Specifically, this section addresses Rules R654-301-110 through 150. The following cross-references headings and corresponding information presented in this section to the applicable regulatory provisions:

<u>Permit Section</u>	<u>Regulatory Provisions Addressed</u>
2.1.1	
2.1.1.1	Introductory Information
2.1.1.2	Introductory Information
2.1.2	
2.1.2.1	R645-301-112.100 through 230
2.1.2.2	R645-301-112.300 through 350
2.1.2.3	R645-301-112.400 through 420
2.1.2.4	R645-301-112.500 through 800
2.1.2.5	R654-301-112 900
2.1.3	R645-301-112.700 and Reference Information
2.1.4	
2.1.4.1	R645-301-113.100 through 250
2.1.4.2	R645-301-113.300 through 400
2.1.4.3	R645-301-113.100 through 300
2.1.5	
2.1.5.1	R645-301-114.100 through 230
2.1.5.2	R645-301-114.300
2.1.6	
2.1.6.1	R654-301-115.100 through 200
2.1.6.2	R645-301-115.300
2.1.7	R645-301-116.100 through 220
2.1.8	
2.1.8.1	R645-301-117.100

File in:

- Confidential
- Shelf
- Expandable

2.1.8.2	R645-301-117.200`
2.1.8.3	R645-301-117.300
2.1.9	R645-301-118
2.1.10	R645-301-121 through 123
2.1.11	R645-301-131 through 132
2.1.12	R645-301-141 through 142.400
2.1.13	R645-301-150
Maps	R645-301-112.500 and 600
Exhibits	R645-301-112.300 through 420, 114.100 through 230, and 117.100 through 300

2.1.1.2 Sources for legal, Financial, Compliance and Related Information

Legal, financial, compliance, and related information presented in this section has been obtained from records and other information maintained by CR.

2.1.2 Identification of Interests

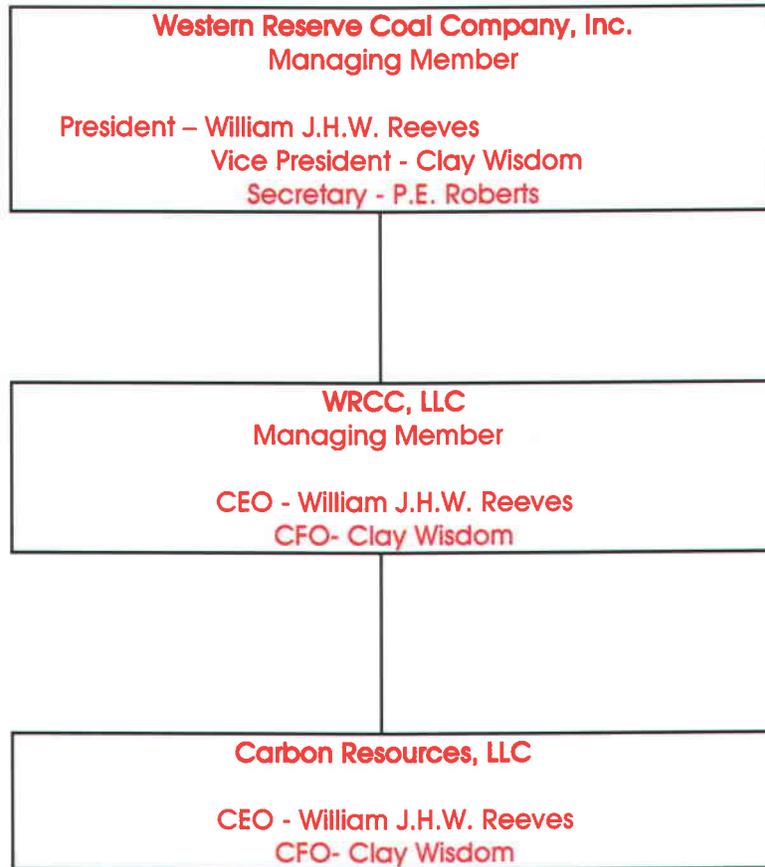
Coal ownership for the permit area is held by Carbon County and is leased to Western Reserve Coal **Company**, Inc. effective March 6, 1997, (lease document recorded in the Carbon County Recorders Office in Book 385, Page 396), as amended December 31, 2002, (recorded in the Carbon County Recorders Office in Book 523, Page 522). The coal is subleased from Western Reserve Coal **Company** to WRCC, LLC, (which sublease is recorded in the Carbon County Recorder's Office in Book 607, Page 768) the owner of Carbon Resources, LLC, and subleased from WRCC, LLC to Carbon Resources, LLC (which sublease is recorded in the Carbon County Recorder's Office in Book 607, Page 771). **An organization chart can be found on Figure 2.1.2-1.**

The Kinney No. 2 Mine permit surface area encompasses a block of approximately 452.5 acres. Of this surface acreage, 15.3 acres are owned in fee by Carbon Resources, the remaining 437.2 acres are owned by Evangelos George Telonis, ETAL., of this, 22.8 acres are held by Carbon Resources as an Easement from George Telonis, ETAL.

The area of surface disturbance is confined within the 38.1 acres (combined Fee and Easement) owned or controlled by Carbon Resources, of which only 27.3 acres are planned to be disturbed by mining operations. The coal to be mined lies beneath the George Telonis, ETAL. Fee surface land and is owned by Carbon County which in turn has leased it to Western Reserve Coal, Inc,

Lands adjoining the permit boundary are owned by private owners, and the Utah Department of Transportation.

**Figure 2.1.2-1
Organization Chart**



2.1.2.1 Applicant Information

This application for a Mining and Reclamation Permit for the Kinney No. 2 Mine is submitted by Carbon Resources, LLC (CR) as the permit applicant. CR is a Nevada limited liability company, authorized to do business in the State of Utah.

The following is the business address, phone number, and employer identification numbers Western Reserve Coal Company, Inc., WRCC, Inc, and Carbon Resources, LLC.

Western Reserve Coal Company, Inc.
P.O. Box 11789
Albuquerque, New Mexico 87192
Phone: (505) 286-1253

WRCC, LLC
P.O. Box 11789
Albuquerque, New Mexico 87192
Phone: (505) 286-1253

Carbon Resources, LLC
P.O. Box 11789
Albuquerque, New Mexico 87192
Phone: (505) 286-1253
Tax ID No. Confidential (See Exhibit 2.1.2.2-1)

Correspondence regarding the Kinney No. 2 Mine Permit and related operations should be directed to:

Carbon Resources, LLC
P.O. Box 11789
Albuquerque, New Mexico 87192
Attention: Clay Wisdom

~~Carbon Resources, LLC currently maintains administrative and operations at:~~

~~— P.O. Box 11789
— Albuquerque, New Mexico 87192~~

CR, as the mine operator, will be responsible for payment of the Abandoned Mine Land Reclamation Fee. CR's Resident Agent is:

Ronald C. Barker
2870 S. State Street
Salt Lake City, UT 84225-3624

2.1.2.2 Ownership and Control

The following summarizes Corporate Information, provides the name, business address, telephone number, and employer identification number and list of officers and directors, with their titles, (social security numbers are confidential and can be found in Exhibit 2.1.2.2-1, Confidential Information, and the date that they assumed position of responsibility.

Chief Executive Officer

William J.H.W. Reeves
Box 954 Sandia Park
New Mexico 87047
Social Security Number Confidential (See Exhibit 2.1.2.2-1)
505-286-7985

Chief Financial Officer

Clay Wisdom
P.O. Box 950 Sandia Park
New Mexico 87047
Social Security Number Confidential (See Exhibit 2.1.2.2-1)
505-286-1253

Manager

Gregory L. Hunt
~~16577 Columbine Lane~~
~~Cedaredge, CO 81413~~
Social Security Number Confidential (See Exhibit 2.1.2.2-1)
~~970-856-9477~~

2.1.2.3 Other Coal Mining Operations Under Common Ownership or Control

The individuals and entities listed in Section 2.1.2.1, Applicant Information have no current or past ownership or control of any coal mining and reclamation operations in the United States. There are no coal mining operations associated with either of these individuals or entities that are included in the Applicant Violator System.

2.1.2.4 Surface and Mineral Ownership

The legal and equitable owners of record of surface lands associated with those areas to be mined by underground coal mining activities or of surface lands to be affected by surface operations and facilities incidental thereto (lands within the permit area) are shown on the Regional Surface Ownership Map, Map 4.5.1.2-1, and are listed below:

Carbon Resources, LLC
P.O. Box 11789
Albuquerque, New Mexico 87192
Evangelos George Telonis Trust
c/o Nick Sampinos
190 North Carbon Ave.
Price, Utah 84501

In addition to the designated owners of lands within the permit area identified above, the owners of record of all surface areas contiguous to the permit area are shown on the Regional Surface Ownership Map 4.5.1.2-1, and are listed below:

Hilda M. Hammond
2912 Redwood Ave.
Costa Mesa California 92626-3719

Utahna Pace Jones, Trust
HC 35 Box 510
Helper, Utah 84526-0000

LH2 Enterprises, Inc.
6338 South Happiness Circle
West Jordan, Utah 84084-0000

Utah Department of Transportation
4501 South 2700 West
Salt Lake City, Utah 84114-1200

The legal and equitable owners of record of the coal to be mined within the permit area are shown on the Regional Coal Ownership Map, (Map 4.5.1.2-2), and are listed below:

Carbon County
120 East Main Street
Price, Utah 84501

(Lease from Carbon County dated March 7, 1997, as amended December 31, 2002)

Carbon Resources, LLC
P.O. Box 11789
Albuquerque, New Mexico 87192

Peabody Natural Resources
701 Market Street
St. Louis MO 63101

In addition to the designated owners of minerals within the permit area identified above, the owners of record of minerals contiguous to the permit area are shown on the Regional Coal Ownership Map (MAP 4.5.1.2-2), and are listed below:

Pit-Min, Inc.,
an Ohio Corporation, of Cincinnati, Hamilton County, State of Ohio
Address Unknown

Hilda M. Hammond
2912 Redwood Ave.
Costa Mesa California 92626-3719
Utahna Pace Jones, Trust
HC 35 Box 510
Helper, Utah 84526-0000

2.1.2.5 Provision for Updating Information

Upon notification of permit approval and prior to permit issuance CR will, as applicable, update, revise, or indicate that the identification of interests and ownership information presented in the preceding sections has not changed.

2.1.3 Other Permits and Approvals

The following permits and approvals will be required to initiate and conduct mining and related operations for the Kinney No. 2 Mine:

Federal Permits and Approvals

USDI – Office of Surface Mining Reclamation and Enforcement (OSMRE), Review, approval, and oversight of the UDOGM Mining and Reclamation Permit

USDL – Mine Safety and Health Administration (MSHA), Issuance of an MSHA I.D. number, approval of mine ventilation and roof control plans, and oversight and enforcement of applicable health and safety provisions under the Coal Mine Health and Safety Act of 1966.

U.S. Commerce Department – Bureau of Alcohol, Tobacco, and Firearms, Approval of Federal permits for transportation, storage, and handling of explosives. Powder and cap magazines are depicted on Map 4.5.1.2-3, Mine Surface Facilities Map.

State Permits and Approvals

Utah Division of Oil, Gas and Mining (UDOGM) – Approval of Mining and Reclamation Permit and enforcement of applicable provisions under the Surface Mining Control and Reclamation Act of 1977

Utah Division of Water Quality (UDWQ) – Approval of Surface Water Discharge Permits and enforcement of applicable provisions under the Utah Pollution discharge Elimination Program (UPDES) in compliance with the Federal Water Pollution Control Act of 1977

Utah Division of Air Quality (UDAQ) – Approval of Air Emission Permits and enforcement of applicable provisions under the Utah Air Pollution Control Program in compliance with the Federal Clean Air Act of 1970
Utah State Engineer – Approval of Pond Construction and Water Well Construction Permits and surface and ground water appropriations.

County and Local Permits and Approvals

Carbon County – Conditional Use Permit for mining operations
Scofield Town – Building Permit

CR either has applied or is in the process of applying for all required permits and approvals. Copies of permit applications are included or will be provided for insertion in Exhibit 2.1.3-1, Other Permits. Documentation of approval for all required permits will be submitted to UDOGM on receipt for replacement of applications in Exhibit 2.1.3-1.

The Mine will operate under the name "Carbon Resources LLC - Kinney No. 2 Mine". The MSHA identification number for the mine will be obtained prior to November 2008.

2.1.4 Compliance Information

2.1.4.1 Permit Suspension or Revocation or Bond Forfeiture

Neither the applicant, affiliate nor persons controlled by or under common control with the applicant has had a Federal or State mining permit suspended or revoked in the five (5) years previous to the date of this application. Likewise, no mining bond or similar security deposited in lieu of bond has been forfeited by any affiliated entities or persons.

2.1.4.2 Summary of Notices of Violation, Unabated Cessation Orders, and Unabated Air and Water Quality Violation Notices

The Kinney No. 2 Mine will be a new operation, therefore, no notices of violation (NOV), cessation orders (CO), or air or water quality violation notices have been issued in conjunction with this operation.

2.1.4.3 Provision for Updating Compliance Information

Upon notification of permit approval and prior to permit issuance CR will, as applicable, update or revise the compliance information presented in this section.

2.1.5 Right of Entry

CR's right of entry for surface lands and coal extraction is based on it's ownership of part of the surface and on an agreement with the major property owner, Evangelos George Telonis, ETAL, and on ownership of the Carbon County Coal Lease covering the permit area.

2.1.5.1 Right of Entry Documentation

The following describes fee surface, leased surface, and lease coal, held by CR and coal leases held by CR:

Fee Surface

Title to 15.3 acres of surface lands adjacent to the highway.

Title recorded in the Carbon County Court House Book 657 Page 128.

Located in Section 32, T 12 S, R 7 E, SLB&M as follows:

Beginning at a point which lies North, a distance of 1320.00 feet from the southeast corner of Section 32, Township 12 South, Range 7 East, Salt Lake Base & Meridian, thence S 89°59' W a distance of 920.00 feet, more or less to the intersection of the east right-of-way boundary of the State Road 96; thence in a Northerly direction along said east right-of-way boundary a distance of 270.00 feet; thence in a Northeasterly direction along said highway boundary a distance of 317.10 feet; thence N 45°32' E along said highway boundary a distance of 465.40 feet; thence in a Northeasterly direction along said highway boundary a distance of 733.00 feet, more or less to the intersection of said highway boundary, and the East boundary of Section 32; thence South a distance of 1475.00 feet, more or less to the point of beginning. Containing 16.33 acres, more or less.

Excepting a parcel more particularly described as follows:

Commencing at the Southeast quarter of said Northeast quarter of the Southeast quarter of said Section 32, running thence North along the section line 330 feet, more or less to a point 50 feet North of the railway track of the Union Pacific Railway running across said land; thence in a Southwesterly direction parallel with and 50 feet distance from center line of said track, 412.5 feet, more or less to the South line of said Northeast quarter of the Southeast quarter; thence East 132 feet, more or less to the point of beginning. Containing 1 acre, more or less.

Total acreage of the parcel is 15.33 acres.

Leased Surface

Lease and Easement Agreement with Evangelos George Telonis, ETAL for 22.88 acres of surface land.

Recorded in the Carbon County Court House Book 666, Page 106, dated 2/15/08.

Located in Section 33, T 12 S, R 7 E, SLB&M as follows:

Beginning at a point on the east Right-Of-Way line of the Utah State Highway 96, said point being further described as being S00°14'01"E, 1652.62 feet along the west section line of Section 33, Township 12 South, Range 7 East, Salt Lake Base & Meridian in Carbon County, Utah and N90°00'00"E, 235.93 feet from said west line of Section 33; thence along said east right-of-way line the following three courses, N11°02'21"E, 75.98 feet; thence N18°41'18"E, 180.40 feet; thence N10°47'24"E, 82.52 feet; thence along the Telonis north property line N90°00'00"E, 285.41 feet; thence S01°17'17"W, 175.81 feet; thence S26°57'44"W, 450.28 feet; thence S0°14'01"E, 1947.79 feet; thence S90°00'00"W, 400 feet to the west line of the Telonis property, which is the west line of said Section 33; thence N0°14'01"W, 2200.00 feet along said section line being also the west line of the Telonis property; thence N90°00'00"E, 235.93 feet to the point of beginning. Containing 22.88 acres.

Leased Coal

Coal ownership for the permit area is held by Carbon County and is leased to Western Reserve Coal, Inc. effective March 6, 1997, (lease document recorded in the Carbon County Recorders Office in Book 385, Page 396), as amended December 31, 2002, (recorded in the Carbon County Recorders Office in Book 523, Page 522). The coal is subleased from Western Reserve Coal to WRCC, LLC, (which sublease is recorded in the Carbon County Recorder's Office in Book 607, Page 768) the owner of Carbon Resources, LLC, and subleased from WRCC, LLC to Carbon Resources, LLC (which sublease is recorded in the Carbon County Recorder's Office in Book 607, Page 771).

Township 12 South, Range 6 East, SLB&M

Section 24: E1/2SE1/4
Section 25: E1/2E1/2
Section 36: N1/2N1/2; S1/2S1/2

Township 12 South, Range 7 East, SLB&M

Section 5: NW1/4NW1/4; SE1/4SW1/4
Section 8: NW1/4NW1/4; SW1/4NW1/4
Section 30: SW1/4
Section 31: NW1/4NW1/4; SE1/4SW1/4; S1/2NE1/4; N1/2SE1/4
Section 32: SW1/4NW1/4; W1/2SW1/4
Section 33: S1/2NW1/4; SW1/4NE1/4; N1/2S1/2; S1/2SE1/4; S1/2SW1/4
Section 34: All
Section 35: All
Section 36: All

Township 13 South, Range 6 East, SLB&M

Section 1: W1/2
Section 12: NW1/4NW1/4; SW1/4SW1/4

Township 13 South, Range 7 East, SLB&M

Section 3: NW1/4
Section 4: All
Section 5: E1/2E1/2
Section 9: N1/2NW1/4
Section 16: SE1/4NW1/4; E1/2SW1/4; SW1/4NE1/4; W1/2SE1/4
Section 21: SE1/4; E1/2SW1/4
Section 28: E1/2; E1/2W1/2
Section 33: E1/2NE1/4; SW1/4NE1/4; NE1/4SE1/4

2.1.5.2 UDOGM Authority to Adjudicate Property Right Disputes

The information presented in this section and submittal of this information as a part of this permit application does not grant, convey, or obligate UDOGM to become involved in or to adjudicate any related property right disputes.

2.1.6 Status of Unsuitability Claims

2.1.6.1 Areas Designated Unsuitable for Mining

Based on available information and to the best of the applicant's knowledge, the permit area is not within and does not include any area designated or under current study for designation as unsuitable for mining.

2.1.6.2 Operations Within 300 Feet of an Occupied Dwelling or Within 100 Feet of a Public Road

Mining operations will be conducted within 100 feet of Utah State Highway 96, which is a public road. In compliance with the applicable regulatory provisions of Rules R645-103-234.100 through 400, CR has contacted and obtained approval from the Utah Department of Transportation (UDOT) for access to Highway 96, and will initiate a formal request for public hearing with UDOGM. A notice of public hearing will be published at least two weeks in advance of the hearing in a local paper of general circulation and opportunity was provided in the hearing for the public and any affected owners to present information relating to protection of their interests. Copies of the public notice and hearing documentation and written findings relative to mining within 100 feet of a public road, will be submitted to UDOGM on receipt for insertion in Exhibit 2.3, Public Notice and Proof of Publication, Hearing Notices and Documentation.

This permit application provides general information relative to the location, sequence, timing, and affected areas for all anticipated mining and reclamation operations over the life of the mine. The proposed timetable for each phase of mining and reclamation is discussed in Sections 4.5, Engineering Design and Operation Plans, and 5.4, Reclamation of Mining Disturbance, and illustrated by the Mine Plan Layout & Production Schedule Map, (Map 4.5.1.2-5).

This application is for an initial permit term of five years beginning from the date of permit approval and issuance. Since the proposed mining and reclamation operations will extend beyond this initial permit term.

2.1.7 Permit Term

This permit application provides general information relative to the location, sequence, timing, and affected areas for all anticipated mining and reclamation operations over the life of the mine. The proposed timetable for each phase of mining and reclamation is discussed in Sections 4.5, Engineering Design and Operation Plans, and 5.4, Reclamation of Mining Disturbance.

2.1.8 Insurance, Proof of Publication

2.1.8.1 Certificate of Insurance

CR will obtain and provide UDOGM with the certificate of insurance prior to initiation of development and mining activities. On receipt, a copy of the certificate of insurance will be submitted to UDOGM for insertion in Exhibit 5.4.3-1, Bonding and Insurance Information, as evidence that CR has a public liability insurance policy in force for the Kinney No. 2 Mine and related operations. The insurance policy will meet all applicable regulatory requirements for minimum coverage, will be maintained in full force during the permit term and all subsequent renewals, and will include a rider providing for notification to UDOGM of any termination or substantive changes in the policy.

2.1.8.2 Proof of Publication

Upon receipt of notification that UDOGM has determined the permit application to be administratively complete, CR will place the advertisement in the Sun Advocate for publication at least once per week for a period of four weeks. A copy of the proof of publication for the public notice will be provided to UDOGM no later than four weeks after the last date of publication for insertion in Exhibit 2.3, Public Notice and Proof of Publication, Hearing Notices and Documentation. Any public notices and proof of publication documentation for future permit revisions will also be inserted in Exhibit 2.3.

2.1.9 Filing Fee

This permit application was accompanied by the required filing fee.

2.1.10 Permit Application Format and Contents

The information presented in this permit document represents a compilation of relevant historic information and recent site environmental and planning information developed specifically for the Kinney No. 2 Mine. Within the constraints of applicable regulatory information requirements, CR has endeavored to present permit information in a clear and concise manner.

Permit information has been formatted to address applicable regulatory information requirement in a logical organized manner. Permit format and organization is also designed to facilitate both initial agency review and future use and revision of the permit documents a reference for permit commitments and requirements and as the plan basis for ongoing mining and reclamation operations. Permit format and organization is similar to previous permits submitted to the UDOGM, and is formatted to comply with the electronic permit guidelines.

Any references or assumptions which serve to clarify or qualify the information provided are presented and discussed and any technical data utilized as the basis for permit discussions has been reviewed and validated to verify that any conclusions presented have a sound technical basis. The descriptions of legal, financial, compliance, and related Information and environmental resources and the discussions of operation and reclamation plans are supported by relevant tables, figures, maps and exhibits which are included as part of the permit

application document. Other information which is either readily available or is too voluminous for inclusion in the permit document has been referenced, as appropriate.

The required notarized verification by a responsible CR official that the information presented in this permit application is true and correct to the best of that individual's information and belief is included on the transmittal which accompanied the permit application submittal.

2.1.11 Reporting of Technical Data

CR has reviewed sampling, testing, and analysis information developed in conjunction with this permit application and has confirmed that the information was collected, developed, and analyzed by or under the supervision of a competent qualified professional in the discipline under consideration. All laboratory analyses were performed by experienced laboratory personnel using accepted standardized analysis methods.

In order to assure appropriate documentation, technical data presented in this application includes the name(s) of the persons or organizations directly responsible for its collection and analysis, dates of collection and analysis, and a description of collection and analysis methodologies where appropriate.

This application reflects the efforts of numerous individuals and organizations. Considerable time, expense, and many man-hours have been devoted to the collection, analysis, and presentation of technical data and other information contained in this permit application. Those individuals are identified and listed by organization as follows:

Carbon Resources LLC

J.H.W. Reeves	CEO
M. Clay Wisdom	CFO

Geo-Hunt Consulting LLC

Gregory L. Hunt, M.S.	Geologist
Eric Robeck, M.S.	Geologist

Rock Logic LLC

Brad Lindsey, B.S.	Geologist
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Hansen, Allen & Luce, Inc, Engineers

David Hansen, PhD, P.E.	Hydrology, Engineering
Tyler Shelley, E.I.T	Hydrology
David Bruse	Land Technologist
Ben Grimes, P.L.S.	Surveying, Permitting Specialist

Mt Nebo Scientific

Patrick D. Collins, PhD

Botanist

Bruce Chesler BA Soil Science
Rollins, Brown & Gunnell Engineers

Soils Scientist

Brad Price, P.E.

Geotechnical Engineering

Randall Peterson, P.E.

Mining Engineering

Risun Technologies

William Simmons, P.E.
Bill Whitney, P.E.

Facilities Engineer
Facilities Engineer

Gault Group, Inc.

Major N. Kindsfater, B.S.

Environmental Engineer, Air Quality

2.1.12 Maps and Plans

All maps included in the permit application document are based on either U.S. Geological Survey Mapping or site specific mapping developed using surveyed aerial control and accepted aerial photogrammetry methods. Maps showing overall permit area and regional information are presented at an AutoCAD scale of 1:1, with produced maps at a general scale of 1" = 1,000', or 1"=2,000' for larger areas, and smaller areas down to 1"=100'. Maps presented electronically as an integral part of the permit document have been produced in electronic PDF format. Original AutoCAD files of the appropriate maps are included for use by UDOGM in permit review. Electronic AutoCAD files of the maps will not be provided in hard copies of the permit document for public review, however, hard copies of the maps are provided in these copies of the permit application. The maps also clearly designate the limits of anticipated surface disturbance under this permit application. Rule R645-301-512 and a number of other regulatory provisions specify that certain designated maps and cross-sections be completed under the direction of and certified by a qualified, registered professional engineer, or land surveyor. Those permit maps which have been certified in compliance with applicable regulatory provisions are identified in Section 4.5.1.8, Certification, Inspection, Reporting, and Emergency Procedures.

2.1.13 Permit Completeness

The information provided in this permit is designed to adequately address and effect compliance with all applicable regulatory provisions. The summaries of applicable regulatory sections addressed included at the beginning of each permit section provide documentation

that all regulatory provisions have been addressed and also serve as a ready reference to verify the completeness of the permit application.

4.5 ENGINEERING DESIGN AND OPERATING PLANS

4.5.1 General Description of Engineering Designs and Operating Plans

This section describes and presents engineering designs and operating plans for the proposed mining and related operations and associated structures and facilities. It also provides detailed information and designs for the environmental control and mitigation measures which will be utilized to prevent or minimize potential mining related environmental impacts. Information in this section was developed in accordance with applicable regulatory requirements (R645-301-500) for coal mine permitting in the State of Utah.

4.5.1.1 Applicable Regulatory Sections Addressed

Specifically, this section addresses Rules R645-301-510, 520, 530 and 560. Reclamation plans and related performance standards (Rules R645-301-540 and 550) are addressed in Section 5.5. The following cross-references headings and corresponding information presented in this section to the applicable regulatory provisions;

Permit Section	Applicable Regulatory Provisions
4.5.1	
4.5.1.1	General Introductory Information
4.5.1.2	R645-301-521.130 through 133, and 150 through 152
4.5.1.3	R645-301-521.110 through 125
4.5.1.4	R645-301-521.111 through 124
4.5.1.5	R645-301-521.140 through 143 and 160 through 190
4.5.1.6	R645-301-513.100 through 800
4.5.1.7	R645-301-553.500 and 731.600
4.5.1.8	R645-301-512.100 through 260, 514.100 through 330, and 515.100 through 322
4.5.1.9	R645-301-521.100 through 132, 521.140 through 170
4.5.2	
4.5.2.1	R645-301-521
4.5.2.2	R645-301-522, 523.100 through 220, 524.100 through 800, and 525.100 through 300
4.5.2.3	R645-301-526.100 through 300, 527.100 through 250, 528.100 through 322, and 529.100 through 400
4.5.2.4	R645-301-531 through 537.250
Maps	R645-301-512.100 through 260, 514.100 through 330, and 515.100 through 322
Exhibits	R645-301-512.100 through 200, 513.100 through 800, 524.100 through 800, 528.320 through 322, 530 through 534.340, 536.100 through 900.

4.5.1.2 Surface and Mineral Ownership and Right of Entry

Sections 2.3.2, Identification of Interests, and 2.3.5, Right of Entry, provide detailed information on surface and coal ownership and right of entry and the Surface Ownership Map and Coal Ownership Map. (Maps 4.5.1.2-1 and 4.5.1.2-2, respectively) show ownership blocks and boundaries. The Kinney No. 2 Mine permit area encompasses an area of approximately 456 acres, of which 16.8 is fee surface, 22.95 (less UDOT R-O-W) is leased, and the remaining 416.24 acres are private land.

4.5.1.3 Previous Mining and Related Disturbance

As described in Section 3.4.4, Previous Mining Activity, extensive historic mining activity has occurred throughout the proposed permit area with resulting development of underground mine workings in many areas and disturbance of limited surface areas for mine portals; coal stockpiles; coal handling, processing, and loadout facilities; and mine support facilities. Mining related underground workings are shown and labeled on Map 3.4.1.4-2, Previous Mining Activity Map. The surface disturbance area from the various historic mines is shown on Map 3.4.1.4-2, Previous Mining Activity, and on Map 3.4.1.4-1, Regional Land Use Map.

Some of the previous historical mining related disturbance is of particular significance with respect to its relationship to the proposed mining operations. The most obvious area of significance is the previous underground mine development and production which has resulted in depletion of discrete coal reserve blocks in the targeted mineable coal seam. CR has utilized available maps of the previous underground workings to eliminate the previously mined reserves from consideration under the proposed mining plans and to establish the proposed mining layout and sequence. Extensive previous surface disturbance was also a factor in selecting the proposed mine surface facilities area. By utilizing an area which has been previously substantially disturbed, CR can effectively avoid much of the disturbance and related environmental impacts associated with any new surface disturbance.

4.5.1.4 Existing Configuration, Conditions, Structures, and Facilities

As discussed in Section 3.4.2. Land Use Information, the rugged natural topography of the area may generally be characterized as a small, high elevation valley, with high plateaus to the east and west, narrow ridgelines cut by deep drainages with steep, narrow drainage valleys over most of the proposed permit and adjacent area. Existing site topography, structures, and facilities, are shown on Map 3.4.1.4-1, Regional Land Use Map.

Most of the structures and facilities associated with previous historic mining have been removed and some of the previously disturbed areas have been reclaimed. Those structures which remain include an old fan house, a small, one-room concrete structure, and several foundations. The remaining historic structures are identified and described in Section 3.4.3, Cultural and Historic Resources.

4.5.1.5 Affected Areas and Timing of Disturbance

Areas potentially effected by the proposed mining and related operations will include any areas subject to direct mining related surface disturbance. Anticipated mining and related surface disturbance will involve a very limited total surface area and, to the extent reasonably practicable, has been planned to maximize the utilization of previously disturbed areas.

For the proposed mining and related activities, surface disturbance areas will include the following:

- Mine Office Pad
- Operations Pad
- Parking/Storage Pad
- Storage Area Pad
- Portal Pad
- Coal Pile Pad
- Loadout Pad
- Sedimentation Pond
- Topsoil Pile
- Development Waste Temporary Storage Area (Underground Development Waste)

New mine surface facilities to support the proposed mining and related operations will be constructed in an area which has been largely previously disturbed by historic mining activities. The proposed new facilities will include mine portals; shop, warehouse, and administration/bathhouse buildings; a coal handling system including a spec coal stockpile, a non-spec coal stockpile and conveyor systems; and associated roads and ancillary facilities. **An area has been designated for temporary storage of underground development waste, no coal processing waste will be generated as there is no coal preparation plant planned.** The location of the proposed new facilities is also shown on Map 4.5.1.2-3, Mine Surface Facilities Map. Reclamation bonding calculations based on the applicable regulatory bonding requirements will be based on the total area of direct mining related surface disturbance including the proposed facilities areas as described above. Construction of the proposed new surface facilities is scheduled to begin immediately on receipt of required permit approvals and to be completed in approximately one to two years.

4.5.1.6 Compliance with Other Applicable Regulations

The proposed mining and related operations have been designed and will be operated and maintained to effect full compliance with all applicable Federal, State, and local laws and regulations. Specifically, CR will comply with applicable regulatory requirements relating to the following designated activities/structures under the authority of the noted jurisdictional agencies:

Federal Agencies

Office of Surface Mining Reclamation and Enforcement (OSMRE) – Compliance with the Surface Mining Control and Reclamation Act (SMA) under the Utah State Program as administered by UDOGM

Environmental Protection Agency (EPA) – Compliance with applicable air, water and hazardous materials requirements under programs administered by the Utah Division of Air Quality (UDAQ), Utah Division of Water Quality (UDWQ), and the Utah Department of Health

U.S. Commerce Department, Bureau of Alcohol, Tobacco, and Firearms – Permits for procurement, transportation, storage, and use of explosives

Mine Safety and Health Administration (MSHA) – Compliance with applicable requirements relating to coal processing waste dams; impoundments and sedimentation ponds; plans for underground disposal of development waste, coal processing waste, or excess spoil; refuse piles; reclamation and closure of mine openings; any discharges into underground mines; mining within 500 feet of an active underground mine; and plans for extinguishing coal mine waste fires

U.S. Fish and Wildlife Service (USFWS) – Compliance under the Endangered Species Act, Bald Eagle Protection Act, and Migratory Bird Act

State Agencies

Utah Division of Oil, Gas, and Mining (UDOGM) – Compliance under the State of Utah Coal Mining Rules

Utah Division of Air Quality (UDAQ) – Compliance with applicable air quality permitting and operational requirements

Utah Division of Water Quality (UDWQ) – Compliance with applicable water discharge permitting, operational, monitoring, and reporting requirements

Utah State Engineer – Compliance with well and pond design and construction requirements and water rights requirements

Utah Department of Transportation (UDOT) – Highway modification and driveway permits

Utah Division of Wildlife Resources (UDWR) – Compliance with applicable wildlife protection measures

Utah State Historic Preservation Office (SHPO) – Compliance with applicable provisions of the National Historic Preservation Act

Local Agencies

Carbon County – Compliance with applicable requirements for special use, building, and water and sewer permits

Scofield Town – Compliance with applicable requirements for building, sewer and water permits

Specific compliance requirements and corresponding design, operations, maintenance, monitoring, reporting, and reclamation measures for mining and related activities are described in detail for each activity or structure in the following sections of this operations plan. Information on required permits and approvals is provided in Section 2.1.3, Other Permits and Approvals.

4.5.1.7 Proposed Variances from Regulatory Standards

Applicable regulatory provisions provide for variances from regulatory requirements and performance standards in order to reflect and accommodate site specific conditions and unique environmental or operating considerations

Due to previous mining and other disturbance of the area there is not sufficient available spoil to completely backfill all highwalls and return the area to AOC. One highwall remains as a result of previous mining at the old Kinney Mine portal face-up. This highwall was partially reclaimed by the Utah AML program in the 1980's. Given that the Kinney No. 2 Mine development activities effectively constitute re-mining of the previously disturbed areas which included an area adjacent to the preexisting highwall, variances from both the general AOC and the specific highwall elimination provisions of the regulations are not required consistent with applicable regulatory provisions dealing with re-mining of previously mined areas (R645-301-553.500 through 524) and AOC (R645-301-553.600 through 653). Justification for this conclusion is provided under the detailed discussion of backfilling and grading in Section 5.4.2.3, Reclamation Practices.

4.5.1.8 Certification, Inspection, Reporting, and Emergency Procedures

Rule R645-301-512 specifies that certain designated cross-sections, maps, and plans be prepared by or under the direction of a qualified Registered Professional Engineer (PE) and that certain maps and design plans be certified by a PE or Registered Land Surveyor. Consistent with this requirement, the following components of this permit application meet the regulatory supervision and certification requirements:

- Previous Mining Activities Map, (Map 3.4.1.4-2)
- Mine Surface Facilities Map, (Map 4.5.1.2-3)
- Regional Hydrology Map, (Map 3.7.1.3-1)
- Drainage and Sediment Control Plan (Map 4.7.2.1-2)
- Regional Geology Map, (Map 3.6-1)
- Hiawatha Overburden Isopachs & Mining Blocks (Figure 3.6-9)
- Geologic E-W X-Section A-A' (Figure 3.6-5)
- Geologic E-W X-Section B-B' (Figure 3.6-6)
- Geologic E-W X-Section C-C' (Figure 3.6-7)
- Geologic E-W X-Section D-D' Figure 3.6-8
- Mine Plan Layout & Production Schedule (Maps 4.5.1.2-5)
- Drainage and Sediment Control Plan, Map 4.7.2.1-2

- Sedimentation Pond No. 1, (Map 4.7.2.1-3)
- Mine Surface Facilities Area, Pre-Mining Topography Map, (Map 4.5.1.2-4)
- Mine Surface Facilities Area – Pre Mining, Mining & Post Mining Cross-Sections, (Maps 4.5.2.3-1A – 4.5.2.3.-1D)
- Exhibit 4.5.2.1-1 Geotechnical Investigations

In order to assure that designed structures are constructed according to the design plans and to verify that designed structures and facilities continue to function as designed, Rule R645-301-514 specifies that the following structures and facilities be inspected by a qualified Registered Professional Engineer or a qualified professional specialist under a professional engineer's direction and outlines specific inspection requirements:

- Excess spoil fills
- Coal refuse piles
- Impoundments

No excess spoil fill, or coal refuse pile is planned for the Kinney No. 2 Mine. Specific inspection and reporting practices for the proposed sediment pond is described in detail in the following sections of this operations plan.

Certain situations involving accidents, emergencies, or unforeseen circumstances may require immediate or timely reporting to provide for appropriate coordination of required control and mitigation measures. Under applicable regulatory requirements, these situations are specifically identified as including the following:

- Slides which may have potential adverse effects on public health and safety, property, or the environment
- Excess spoil fills
- Impoundment hazards
- Accidental releases of potentially hazardous or toxic materials including petroleum products
- Temporary cessation of mining operations

Reporting and emergency measures for potential slides are specifically addressed in Section 4.6 Geologic Protection; for impoundment hazards and accidental releases of potentially hazardous or toxic materials in Section 4.7, Hydrologic Resource Protection; and for temporary cessation of mining operations in Section 4.5.2.5, Temporary Cessation.

4.5.1.9 Mapping of Engineering and Mine Planning Information

Information presented on the regional and mine area engineering and planning maps includes:

- Proposed mine permit and disturbance boundaries
- Existing land configuration
- Existing and proposed surface structures and facilities
- Location, extent, and sequencing of proposed underground mine development

- Drainage and sediment control plans and designs for associated structures
- Existing and proposed roads and utility installations

The pre-mining topography of the mine site and area can be seen on Map 4.5.1.2-4, Pre-Mining Topography.

4.5.2 Engineering Designs and Operating Plans

In developing the engineering designs and operating plans for the mining and related operations, CR has reviewed and evaluated all existing available information on site geology, coal occurrence and characteristics, and environmental resource values. This information along with sound engineering principals has been combined to develop designs and plans which will provide for safe, efficient, and effective mining operations while minimizing potential related environmental impacts and effecting full compliance with all applicable regulatory requirements. The following sections describe the specific design methods, operating measures, and associated control and mitigation practices which will be utilized to accomplish these objectives.

4.5.2.1 General Description of Mine Construction and Development Activities

The new mine facilities access road will generally follow the alignment of the undeveloped dirt road which begins near the south end of the proposed operations on Highway 96, and Mine construction and development will involve those activities necessary to complete the surface facilities and systems and to develop mine portals, main entries, and the entire underground infra-structure which will be required to support the proposed underground mining operations. From an environmental standpoint, the mine construction and development phase will be important due to the fact that essentially all direct mining related surface disturbance will occur during this phase. Mine construction and development activities will be conducted in a manner that prevents or controls erosion and siltation, water pollution, and damage to public or private property; and to the extent possible using the best technology currently available, minimizes damage to fish, wildlife, and related environmental values, and minimizes additional contributions of suspended solids to streamflow or runoff outside the permit area. Any contributions of suspended solids from mine disturbance areas will not exceed applicable effluent limitations under Utah or Federal law.

Construction/Development Schedule - Required highway modifications will occur prior to mine development and entirely within the existing Highway 96 right of way and will be conducted under approved plans developed in consultation with the Utah Department of Transportation (UDOT). All other proposed construction and development activities will proceed as soon as operationally feasible following receipt of required permit approvals. Construction and development activities proceeding immediately and continuing over the next 18 to 24 months.

Construction/Development Activities and Associated Control and Mitigation Measures - Required mine construction and development activities will proceed in a logical sequence to assure effective environmental protection and engineering control of these activities. The

following general sequence of activities will be applicable for all proposed mine construction and development activities:

- Establish preliminary access
- Construct required drainage and sediment control structures
- Recover and stockpile available soil or substitute materials
- Construct required roads
- Proceed with required site grading, excavation, and cut/fill operations
- Complete required foundation preparation work
- Construct required structures and facilities
- Complete required utility installations
- Develop mine portals, and main entries
- Complete infra-structure for underground operations (includes electrical systems, water distribution, communications, ventilation, mine drainage systems, and conveyors)
- Systems testing and commissioning

The following sections describe each of these construction/development activities and the associated control and mitigation measures which will be utilized to minimize potential related environmental impacts and assure that each activity is conducted in conformance with approved designs and plans.

Establish Preliminary Access - Preliminary access for the proposed construction and development activities will be made at the location of the pre-mining dirt road to the site, and utilizing the other existing roads on the site. Preliminary access routes will only be utilized for a very brief period to facilitate initial drainage construction and soil removal activities, consequently, associated environmental control and mitigation measures will be limited to alternative sediment control such as silt fences, straw bales, sediment traps, berms and watering on an as needed basis.

Construct Required Drainage and Sediment Control Structures - Due to the importance of effective water quality protection, required drainage and sediment control structures will be constructed prior to any other significant site disturbance. Drainage construction will be a phased process with construction of the sedimentation pond, and principal undisturbed drainage diversion ditches and disturbed area collection ditches occurring as the first activities in the construction phase. Temporary sediment controls to be utilized during initial construction will include the use of silt fence, straw bales, berms, temporary ditches and sediment traps. Temporary controls will be utilized to effectively control runoff and sedimentation until designated structures can be completed. As progressive construction activities are extended to other areas, the associated drainage structures will be developed and connected to the existing drainage system prior to other area disturbance. Detailed descriptions of drainage design and construction procedures are presented in Section 4.5.2.3, Mine Structures and Facilities, and the proposed drainage control system is shown on Map 4.7.2.1-3, Drainage and Sediment Control Plan. These structures have been designed and will be constructed, operated, and maintained to provide effective drainage and sediment control during both construction/development activities and subsequent mining and related operations. Construction of all drainage and sediment control structures will be monitored by qualified individuals under the supervision of a Registered Professional Engineer and specific designed structures including the sedimentation pond will be

inspected according to design plans certified as required by applicable regulatory provisions.

Recover and Stockpile Available Soil and Substitute Materials - Once the required drainage structures are in place to effectively control surface runoff and minimize additional sediment contributions, construction will proceed with recovery of available soil and substitute materials from the proposed surface disturbance areas. Soil and substitute recovery will involve removal of existing materials which will be utilized as vegetative growth media during future site reclamation activities. These materials will be removed using either tractor scrapers or an equipment team composed of a tracked dozer, wheel loader, and rear dump truck, and will be transported and placed in temporary stockpiles for future reclamation use. The coal fines identified during the soils investigation will be removed and sold as discussed previously. The previously constructed drainage and sediment control structures will provide effective water quality control for soil removal operations and periodic watering of soil removal areas and haulage roads will be utilized to control dust emissions. A detailed discussion of soil and substitute recovery and stockpiling practices is presented in Section 4.2, Soil Handling Plans, and proposed soil/substitute stockpile locations are shown on Map 4.5.1.2-3, Mine Surface Facilities Map.

Construct Required Roads - Construction of required roads will be included in a phased manner as the site is developed. Seven primary access roads will be required in conjunction with the proposed mining and related activities as follows:

- Main Access Road – P1 - From Highway 96 to the Operations Pad
- Office Access Road – P2 – From P1 to the Mine Office Pad
- Portal Access Road – P3 – From P1 to the Portal Pad
- Storage Access Road – P4 – From P3 to Storage Area Pad
- Loadout Access Road – P5 – From the Operations Pad to the Loadout Pad
- Sediment Pond Access Road – P6 – From the Loadout Pad to the Sediment Pond
- North Access Road – P7 – From the Loadout Pad to the Private Property to the North

Primary roads which will be utilized in conjunction with the proposed mining and related operations as well as existing roads which are not related and will not be utilized in conjunction with the proposed activities are shown on Map 3.4.1.4-1, Regional Land Use Map, and Map 4.5.1.2-3, Mine Surface Facilities Map. Roads existing prior to mining, and roads to be left for post mining land use are shown on Map 4.5.1.2-4, Pre-Mining Topography Map. All roads have been designed and will be constructed and maintained to prevent or control damage to property; erosion, siltation, and air pollution; and minimize disturbance and impacts to fish, wildlife, and related environmental values. Construction of primary roads will be monitored and construction according to the design plans certified consistent with applicable regulatory provisions. Detailed discussions of road design, construction, and maintenance practices are presented in Sections 4.5.2.3, Mine Structures and Facilities, and 4.5.2.4, Design Standards and Requirements.

Proceed With Required Site Grading, Excavation, and Cut/Fill Activities - Cut/fill operations and grading will be required to establish final design grades for the proposed mine surface facilities. Design grades for the proposed mine facilities area reflect an overall cut/fill balance so that no excess spoil disposal will be required. Cut/fill slopes have been designed at grades of approximately 0.8H:1V to 3.0H:1V dependent on material to minimize erosion

potential and provide for effective long-term stability as recommended by Rollins, Brown and Gunnel Geotechnical Engineers in their geotechnical investigations report, Exhibit 4.5.2.1-1, Geotechnical Investigations. Required site construction earthwork will involve the use of tracked dozers, tractor scrapers, wheel loaders, backhoes, and trucks to establish final design grades and all earthwork operations will be supervised and monitored by a qualified individual familiar with construction earthwork. Consistency with design plans will be monitored and checked using conventional engineering survey methods. Drainage from areas disturbed or otherwise affected by site grading activities will be controlled by either temporary controls or the previously constructed drainage and sediment control system and watering will be utilized to minimize potential fugitive dust emissions.

Complete Required Foundation Preparation Work - Once design grades have been established through completion of site earthwork and grading, work will proceed with preparation and installation of foundations for all proposed major structures and facilities. CR has completed geotechnical investigations to evaluate site foundation conditions as a basis for foundation and facility design. Foundation investigations, as described in Exhibit 4.5.2.1-1, Geotechnical Investigations, included completion of 6 borings, and 14 test pits at the locations of proposed major facilities, penetration tests, and collection, laboratory analysis, and evaluation of the representative material types encountered by the test borings and pits. Findings and recommendations are presented in the final report found in Exhibit 4.5.2.1-1. Proposed mine facilities, structures, roads and the sedimentation pond have been designed according to these findings and recommendations.

Foundation preparation activities will generally involve excavation and removal of any potentially deleterious material including but not limited to organic material, debris, coal or carbonaceous materials, and wet or frozen materials and compaction of the upper three feet in the foundation area. In any areas where the surficial materials have been identified as having any limitations relative to use as foundation materials, appropriate remedial measures including over excavation and recompaction or replacement with more suitable materials will be implemented. Foundations will generally be spread footings with floating slabs, which will be used for most of the major buildings and structures, concrete pier type footings for the conveyor support structures, or slab type foundations for the electrical substation and other minor structures. Foundation construction will be monitored under a construction quality assurance program implemented under the CR facility construction contract to assure compliance with design plans and specifications. Specific foundation designs are discussed for individual facilities in Section 4.5.2.3, Mine Structures and Facilities.

Construct Required Structures and Facilities - Construction of the major required structures and facilities will involve fabrication and erection of the following designed structures:

- Maintenance shop and warehouse building
- Administration/Bathhouse facility
- Coal handling system (includes coal conveyors and transfer points, stacking tubes, coal stockpiles, coal reclaim system, usher building and truck loadout building)
- Miscellaneous structures

All mine support buildings will be constructed with fixed concrete foundations, a structural steel framework, and pre-fabricated sheet steel siding and roofs or will be concrete precast structures. Internal design and construction will vary for each facility dependent on use.

Conveyor structures and supports will be pre-fabricated steel frames supported by steel trusses which will be anchored by concrete piers. Conveyor transfer points will consist of a steel framework supporting conveyor head and tail pulleys, drive units, and any required chutework and dust control equipment. The coal stacking tubes will be steel tubes set on heavy reinforced concrete slab foundations. The coal reclaim system will consist of several steel chutes and vibratory feeders supported by reinforced concrete foundation structures feeding to a heavy steel tunnel structure which will house the coal reclaim conveyor and associated support equipment. Facility construction will be monitored under a construction quality assurance program implemented under the CR facility construction contract to assure compliance with design plans and specifications. All proposed mine structures and facilities are shown on Map 4.5.1.2-3, Mine Surface Facilities Map, and detailed facility descriptions and operating/maintenance plans are presented in Section 4.5.2.3, Mine Structures and Facilities.

Complete Required Utility Installations - Concurrently with construction of the major structures and facilities, CR will complete required utility installations including electrical power distribution, raw and potable water systems, and the sanitary sewer system. The mine electrical power distribution system will consist of a substation located near the mine portal area; transmission lines running from the substation to each of the major facilities, the mine fan installation, the major conveyor drive installations, and connecting to the underground mine electrical system; and related electrical transformers and switchgear.

Water systems will provide both raw and potable water for sanitary use in the mine facilities, fire-fighting reserve, mine water requirements, and dust control sprays in coal handling areas. A 50,000 gallon raw water storage tank along with associated piping, control valves, and control/monitoring systems will be constructed on the north end of the mine portal area and will connect to a distribution network running through the mine facilities area and connecting to the underground mine water system. Water for this tank and the mine water system will be provided by Scofield Town. The potable water system will connect to the existing Scofield Town water system and will supply potable water to the maintenance shop, warehouse, and administration building/bathhouse facility. All facilities served by the potable water system will also be connected to a main sewer line running from the mine facilities area to the Scofield Town sewer system near the southwest corner of the mine site. The location of all existing and proposed utility installations are shown on Map 4.5.1.2-3, Mine Surface Facilities Map, and utilities are described in greater detail in Section 4.5.2.3, Mine Structures and Facilities.

Develop Mine Portals, and Main Entries - Portal development can be initiated following completion of required drainage and sediment control structures, access roads, and the portal pad area. In order to initiate portal development as early as possible in the construction/development process, temporary electrical connections, a temporary water supply, and temporary ventilation measures may be employed. Portal development will be initiated with erection of pre-fabricated steel portal structures to protect workers from any rocks falling off the steep slope above the face-up area. To the extent operationally feasible, portal and mine development will occur in the Hiawatha Seam from the point where it outcrops in the face-up area. In the event the coal seam does not exist at the face-up area, rock slopes will be constructed to access the coal seam. Portal development will involve development using conventional methods of a five entry system. One or more continuous miners will be utilized to drive the development entries and conventional roof bolters will be utilized to provide roof control during development operations. Blasting may

be necessary for development of the portals and will be conducted according to the blasting plan addressed in Exhibit 4.5.2.1-2, Kinney No. 2 Mine Blasting Plan. Development rock from these activities will be temporarily stockpiled in the portal area and will be periodically loaded into rear dump tracks and hauled to temporary stockpile areas until it can be returned to the mine, where it will be placed in areas specifically designated for this purpose.

Mine development waste consisting of a mixture of rock and coal materials will be temporarily stored at an area on the loadout pad as shown on Map 4.5.1.2-3, Surface Facilities. This material is not coal processing waste since no coal preparation plant is planned, however this material may not be saleable as regular coal product due to a high content of rock. The area designated is capable of containing approximately 3,900 tons of material. This material will be sold as a low quality coal product to local coal preparation facilities, or will be deposited in other facilities permitted by the UDOGM.

Entry No. 2 will be a Temporary Portal entry and will be used for the installation of a temporary auxiliary fan. This temporary configuration will initially consist of up to 2 - 100 HP auxiliary exhausting fans and ductwork to provide adequate airflow for initial portal face development operations and to sustain mains development until the main mine fan is installed. Intake air will be heated by MSHA approved propane heaters as needed. All MSHA rules and regulations will be complied with as well as prudent safe operating practice. As lower cost natural gas becomes available to the local area intake air heaters may be converted according to improve the cost economics of the operation.

It is anticipated that these auxiliary fans will be required for an interim period of time while setting up the main mine fan installation and establishing the initial airways of the mine. Once progress has developed airways to the point and construction is complete so that the permanent fan can be placed in service the auxiliary fans will be taken out of service or will be used at the face in series or parallel with the mine fan to assist with face ventilation there.

The main mine fan will be installed on the northern-most portal entry to replace the temporary system (the auxiliary fans) and construction and installation will begin as soon as possible. The mine fan is shown on Map 4.5.1.2-3, Surface Facilities Map. This fan will be adequate for the duration of mining and will provide statutory fresh air volumes to working areas of the mine within the permit application as shown in Map 4.5.1.2-5, Mine Plan Layout and Production Schedule. The fans together with full or temporary stoppings and/or curtains will provide adequate ventilation volume and control for all initial portal and main entry development work and draw fresh air to the working places of the mine to places where coal and/or rock is cut mined and loaded.

Upon the completion of all five portal entries, development of the main entries will proceed with extension of the portal entries to the Southeast on an approximate bearing of South 102 Degrees East i.e., "S102E Portal Mains".

At some point during development of the main entries, the main mine fan installation will be completed, ventilation will switch over to the permanent ventilation system, and the temporary mine fan will be removed. All mine development and mine operations activities will be conducted in full compliance with all applicable state and federal regulatory requirements for health, safety, and environmental protection at all times.

Portal No. 5, the southernmost portal, is positioned such that it is not possible to construct the portal pad to include the portal as can be seen on Map 4.5.1.2-3, Surface Facilities and Map 4.7.2.1-3, Drainage and Sediment Control Plan. The entry (No 5) will be constructed from inside the main by cutting back toward the outcrop. At the appropriate location, a short air shaft will be driven to the surface for intake air. The air shaft will be lined with a steel structure to support the walls of the shaft, and the steel structure will be covered with solid steel from approximately 15 feet below the ground surface to approximately 5 feet above the ground surface, and then grouted between the steel and the ground adjacent to seal the annulus from surface water infiltration. Runoff from the very small runoff area covered by the air shaft will be contained by a total containment berm as shown on Map 4.7.2.1-3.

Once development of all five portal entries is completed, development of the main entries will proceed with extension of the portal entries to the east. At some point during development of the main entries, the main mine fan installation will be completed, ventilation will switch over to the permanent ventilation system, and the temporary mine fan will be removed. All mine development activities will be conducted in full compliance with applicable regulatory requirements for health, safety, and environmental protection. CR will monitor all mine development activities to assure compliance with both applicable regulatory provisions and mine plans. The location and configuration of the mine portals, and main entries are shown on Map 4.5.1.2-3, Mine Surface Facilities Map, and Map 4.5.1.2-5, Mine Plan Layout and Production Schedule Map, and additional discussion of development and mining methods and practices is provided in Section 4.5.2.2, General Description of Mine Plans, Mining Methods, and Related Design Requirements.

Complete Infra-Structure for Underground Operations - Installation of required mine utility systems, as previously described, will occur during development of the mine portals and main entries. Once these utilities are in place, CR will complete and connect the infrastructure required to support underground mining operations. This infrastructure will include the underground electrical power and mine water distribution systems, required communications systems, the mine ventilation system, mine drainage systems, and the underground coal handling system. The systems are identified and discussed in Section 4.5.2.3, Mine Structures and Facilities

Systems Testing and Commissioning - As the specific components of the overall mine operations and support system are completed, they will be inspected and tested to assure consistency with design plans and safe and effective operation consistent with both the design plans and their intended purpose. Testing will include both no-load testing to identify any problems and allow repair or modification to address the problems and load testing to verify system reliability and performance under design operating conditions. Where systems rely on or are integrated with other operating systems, progressive testing will be completed to verify that all systems work together as an integrated whole. Final testing and commissioning of all mining and support systems will occur prior to initiation of full-scale mining operations.

4.5.2.2 General Description of Mine Plans, Mining Methods, and Related Design Requirements

The mine plans and proposed mining methods described in this section reflect CR's detailed review and evaluation of all existing available geologic and coal quality data, consideration

of related environmental factors such as hydrologic considerations. This broad base of relevant information was utilized to develop a number of conceptual mine plan alternatives which were then evaluated relative to consistency with CR's overall project objectives. These objectives include the following:

- Maximize recovery and utilization of the available coal resource
- Optimize coal production efficiency and economics
- Facilitate potential future development of nearby coal reserves
- Provide a safe, healthy, secure working environment
- Minimize potential adverse environmental impacts

~~On completion of mining, provide for restoration of an productive, self-sustaining postmining land use~~

Based on CR's detailed review and evaluation of possible alternative mining scenarios, the plans presented in this section were selected as the best combination of mine layout, mining method, and mine sequencing in order to achieve the noted objectives and provide for organized sequential mining operations.

Areas and Sequencing of Mine Development

The proposed mining operations will target recovery of remaining minable coal reserves contained in the Hiawatha coal seam. This coal seam and other seams in the area have been previously mined in the area with access to the seams from portals at the coal outcrop. Previous mining areas are delineated for each seam on both Map 3.4.1.4-2, Previous Mining Activities Map, and Map 4.5.1.2-5, Mine Plan Layout & Production Schedule Map. Target minable coal reserves identified in this plan reflect consideration of practical mineral ownership, geologic, environmental, and mining constraints which may limit access to and recovery of coal reserves which otherwise might be considered as recoverable reserves. Generally, the proposed coal extraction limits are shown on Map 4.5.1.2-5, Mine Plan Layout & Production Schedule Map exclude all previously mined areas, any areas where CR does not have existing rights to mine the coal. Proposed mining limits and the alignment of mine entries reflect consideration of those areas where historic mining removed the reserves and geological features that dictate mine layout and design. As indicated, considerable minable coal reserves remain in the area which can be effectively recovered while avoiding the existing abandoned mine workings. A maximum effective cover of approximately 1,000 feet exists in the permit boundary area and therefore there is no limit to coal recovery due to cover depth.

The proposed mine development and production sequence, as illustrated by Map 4.5.1.2-5, Mine Plan Layout & Production Schedule Map reflects orderly sequential development of available minable reserve areas, and the development/production requirements necessary to meet CR's current overall annual coal production targets. It should be noted that coal production requirements as outlined by Table 4.5-1, Projected Annual Coal Production, are based on current marketing projections for the first permit term. Additional coal reserves east and south of the proposed permit boundary are controlled by CR as shown on Map 4.5.1.2-2, Regional Coal Ownership Map. These reserves are planned to be mined at a future date under a major permit revision completed as soon after the first permit approval as possible. The projected mine life is anticipated to be 20 years including the eastern and southern reserves controlled by CR. Unanticipated fluctuations in coal market demand and

other factors may result in some variance between projected and actual annual and total production rates. At the time of the permit mid-term review and permit renewal, CR will re-evaluate coal production projections and make appropriate adjustments as necessary.

Proposed coal development and production is expected to occur as shown on Map 4.5.1.2-5, Mine Plan Layout & Production Schedule Map, and Table 4.5-1, and as outlined by the following general sequence:

2008 – Complete permitting and approval.

2009 - Development of the main mine portals in the Hiawatha Seam
Complete MSHA mine and ventilation plans

2009 - 2010 - Development of Hiawatha Seam S102E Portal Mains entries

2010 – Development of N13E Panel A entries

Set-up N13E Panel A

Mine N13E Panel A

Set-up N13E Panel

Mine N13E Panel B

Develop First Fault crossing FC1 Rock Slope Raises and slopes construction

Mine S79W Mains A

N11W Panel A

Ongoing engineering (mine and site design), permitting (permit revision work) for adjacent coal blocks and completion of any remaining backfill work in N13E Panels A and Panel B;

In simplified terms, mining will begin with the Hiawatha Seam (2009 through 2210).

Use and Conservation of Coal Resources

Maximum resource recovery has always been and will continue to be one of CR's primary objectives as a matter of sound resource management and efficient mining and economic practice. Conservation and maximum utilization of the available coal resource will involve mining to the minimum practical seam thickness and maximizing overall coal recovery consistent with sound engineering and mining practices.

Proposed mining methods will result in extraction of minable coal reserves down to a minimum practical mining thickness of 5 feet which is below the lower limit for the continuous mining equipment which will be utilized. The average mining height in the permit area is expected to be 8 ft. in the Hiawatha seam which is the only targeted mineable seam in the permit area. At the current time, the quality, market price, and effective cost of mining the type of coal that occurs in this area at thicknesses less than 5 feet renders such operations economically infeasible. If, however, future changes in mining technology or market conditions make it feasible to mine seams below the present 5 foot cut-off, mining plans may be modified to accommodate the resulting expanded mining operations.

Mining Methods and Equipment

The Kinney No. 2 Mine will be an underground mine utilizing development mining methods for primary coal. No pillar extraction is planned for the first 5 year permit term. Both mine plans and the proposed mining methods are designed to maximize recovery of the minable coal resource while limiting dilution of the coal by unmarketable waste, and to optimize mining operations to achieve maximum operational efficiency while assuring safe operating conditions. CR has and will continue to use sound engineering judgment and proven mining techniques in designing the overall mine layout; selecting appropriate pillar sizing, entry widths, and entry height; and in selecting suitable mining and support equipment and systems.

The following criteria listed in order of importance have been used to design the mine openings, select the mining methods and to layout the mine workings:

Maximum Overall Ultimate Safe Recovery of Coal to determine the extraction rate and the width of the openings;

Provisions for expedient development and for the use of large shuttle cars (25 ton) for hauling coal (60 deg chevrons);

Provisions for handling, stowage and backfill of development rock and provisions for wrap-around bleeder to ventilate fill areas and to allow monitoring them for spontaneous combustion until they can be completely sealed from the mine atmosphere;

Provisions for the drainage and collection of insitu mine water and for reuse for dust suppression;

Provisions for the future expansion of the mine into adjacent reserves blocks;

Provisions for the development of Rock Development at Fault crossings; and

Provisions to accommodate future long-term best extraction methods (i.e., shortwall or longwall mining methods in adjacent coal reserves) that will maximize the ultimate safe life of mine recovery rates

CR currently projects an annual production rate of 0.18 to 0.49 million tons of coal per year for the first permit term from the Kinney No. 2 Mine. The long term goal is to revise the permit to include all coal reserves held by CR, and possibly additional unleased Federal reserves to increase production and sustain the mine over a 20 year mine life. Annual production may fluctuate dependent on changes in coal market conditions and other factors. Coal production for the first 5 year permit term is shown on Table 4.5-1, Projected Annual Coal Production.

**TABLE 4.5-1
PROJECTED ANNUAL COAL PRODUCTION**

YEAR	COAL (TONS)
2009	180,349
2010	491,514
2011	Additional reserves under revised permit ¹
2012	Additional reserves under revised perm ¹
2013	Additional reserves under revised perm ¹

1. See Map 4.5.1.2-2, Regional Coal Ownership for additional reserves controlled by CR.

Underground mining is a relatively complex process involving a number of inter-related activities which are designed to optimize coal production and handling, minimize environmental damage, and assure safe and healthy working conditions for the miners. The proposed mining operations will involve the following activities:

Mining Activities

- Mine development
- Coal extraction
- Coal haulage
- Development rock handling

Support Activities

- Ground control
- Mine ventilation
- Mine drainage
- Maintenance and miscellaneous support activities

The mining activities are discussed in the following sections. Ground control is an integral part of mining and is addressed in the discussion of mining activities. Other associated support activities are discussed separately under individual sub-headings.

Mine Development - Mine development involves excavation and construction of the underground openings, or entries, required to access the minable coal reserves, provide for efficient production of those reserves, facilitate haulage of both coal and mine development rock, and provide for effective ventilation of the mine workings. Development activities will include development of mine portals, main entries, and sub-mains. All mine development activities including both development methods and actual physical dimensions of development entries have been designed to provide for long-term stability during active mining operations and to effect full compliance with all applicable regulatory provisions. CR will generally complete most development in the minable coal seam to minimize mine

development rock generation and provide some economic offset of development costs through production of marketable coal.

Mine development will involve the use of continuous miners to advance the development entries, electric or diesel shuttle cars to remove the excavated coal or waste rock, and electric roof bolters to provide required roof support. Fault crossings may require blasting to develop the crossing entries.

Development of slopes and raises may take advantage of modern raise boring technology which involves drilling a pilot hole using conventional surface or underground long-hole drilling equipment, connecting a rotary cutterhead on the lower level to a drive unit on the upper level, and progressively boring the required mine opening by advancing the rotating cutter-head toward the drive unit.

The main entries will be the primary mine access and supply routes for the minable coal seam, providing access and ventilation for all other underground mine workings and carrying the principal coal haulage conveyor. Typical main entry development may vary from a three to a seven entry configuration, however, most main entry development will consist of five parallel entries with crosscuts at regular intervals. Typical sub-main development may vary from a three to a seven entry configuration, however sub-main development in general will consist of five entries with crosscuts at regular intervals. Development of bleeder entries, which will be used to bleed off naturally occurring methane gas prior to mining and to route any continuing methane drainage to exhaust entries during and following mining, may consist of three to five entries. Figures 4.5-1 and 4.5-2, Typical Mine Entry Development Configuration, illustrate the normal anticipated development configuration along with typical design dimensions and Map 4.5.1.2-5, Mine Plan Layout & Production Schedule Map shows anticipated development requirements for the minable coal seam.

Coal Extraction - CR plans to utilize the room development (first mining) mining method as the primary coal extraction and production technique. In these areas, conventional room development mining methods will be utilized with continuous miners, shuttle cars, and roof bolters as the primary production equipment. The following sections describe the two proposed coal extraction methods.

Conventional room development mining, using continuous miners, is one of the primary underground coal mining method utilized in many mines and offers the benefits of low capital cost for the required mining equipment and considerable flexibility. Continuous miners can negotiate technically disturbed areas of the mine and adapt to seam variations and uneven reserve blocks. Continuous mining equipment is also relatively mobile and can easily be moved to different locations within the mine allowing relatively quick adjustments and continued production if ground control, water or other problems prevent further mining in an active mining area. Room development mining involves development of underground mine openings (entries and cross-cuts) with intermediate pillars to support the mine roof during active mine advance. Each mining area developed using this method then becomes a "room" with a grid of supporting pillars.

Conventional room development mining (first mining) methods will be used for essentially all mine development work except slopes and fault crossings. Room development mining involves the use of a continuous miner to cut the coal and progressively advance each entry

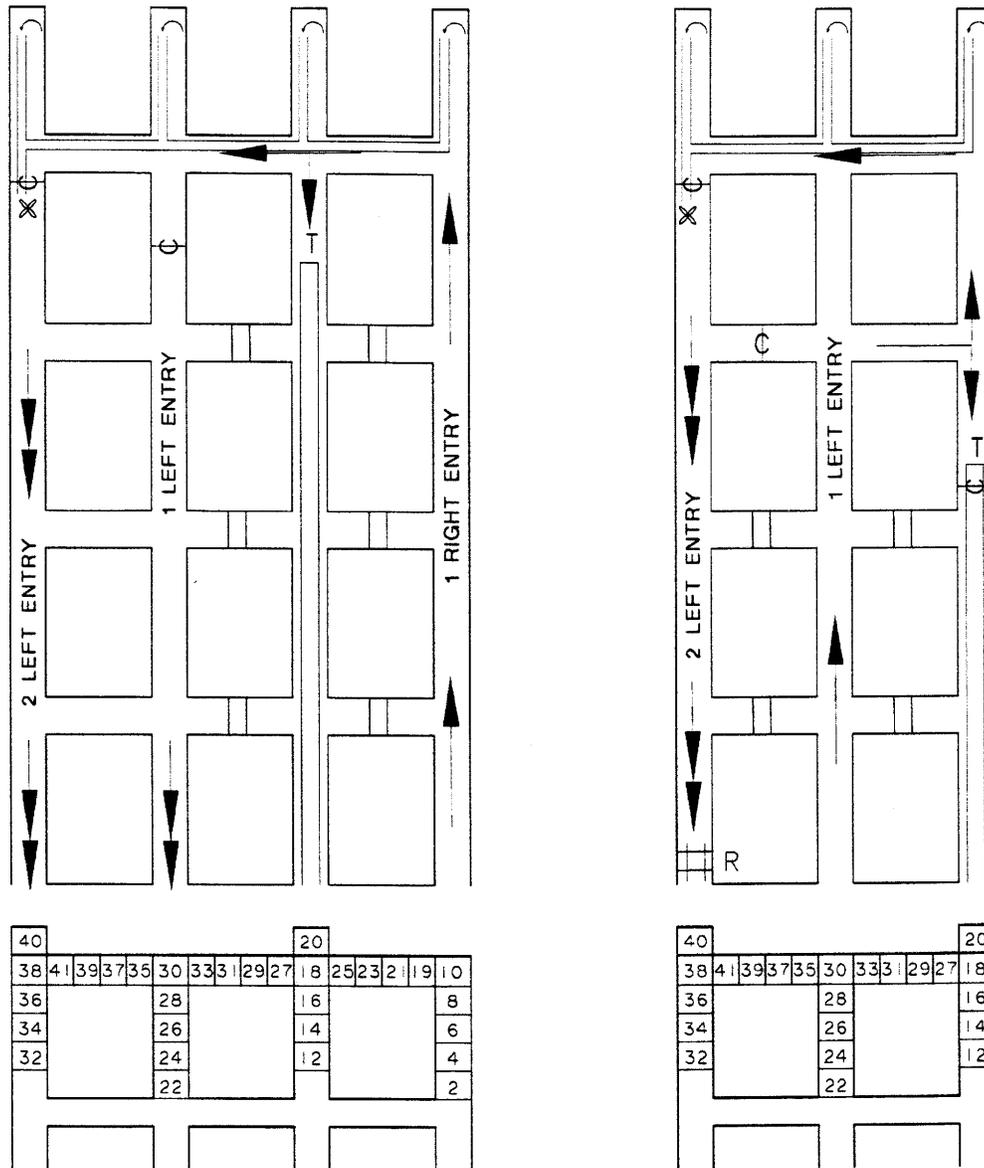
and cross-cut in a pre-determined development sequence. The cut coal is collected by the gathering pan on the continuous miner and discharged from the miner tailpiece by conveyor to a waiting electric shuttle car. The shuttle car will transport the coal to a feeder-breaker which will be centrally located in each continuous miner section or development area. The feeder-breaker will then feed the coal to a section belt for transport to the mine coal haulage conveyor system. As a safety consideration consistent with applicable MSHA regulations, the continuous miner is not allowed to advance under unsupported roof so following each cut an electrically powered roof bolter will install roof bolts and any other support required under the an MSHA approved roof control plan in preparation for the next cut. During bolting operations, the continuous miner will move to a nearby face and take a full cut and miner and bolting operations will proceed in staggered sequence as development progresses. The following primary equipment required to support room and pillar mining operations:

- Continuous miner
- Shuttle cars
- Roof Bolter
- Feeder Breaker
- Section power center
- Mantrip vehicle
- LHD scoop
- Portable rock duster
- Section conveyor
- Miscellaneous support equipment

Coal Haulage - Marketable coal resulting from either underground mine production or mine development activities must be transported from the underground mine workings to the surface where it will be transfer to the surface coal handling system and be routed to the coal loadout. The mine coal haulage system will consist of several interconnected components to transport the coal to the surface. In conventional room development areas or production sections coal will be transported by electric or diesel shuttle car to a feeder-breaker which will feed a 42 inch section conveyor belt. From the active mining or development areas the section or panel belts will transfer the coal to either secondary haulage belts in the sub-mains or the primary coal haulage belts in the main entries. Secondary belts from the sub-mains will feed to the primary main haulage belt which will carry the coal to the surface. The section belts will move with progressive mining advance and will be 42 inch conveyors with modular components, take-ups, and drives capable of handling 1200 TPH. The secondary conveyor belts will remain in place for an extended time and will typically be 42 inch roof hung conveyors with modular tail section and intermediate booster drives capable of handling 1200 TPH.

Coal haulage between the various mining levels (between faults) will involve the use of main haulage belts on the intermediate access slopes which will transfer the coal to the main haulage belt on the next level above, or below. These belts will typically be 42 inch roof hung conveyors with modular tail sections and intermediate booster drives as needed capable of handling 1200 TPH. All coal transfer points will be partially or fully enclosed to Figures 4.5-1, Typical Mine Entry Development Configuration to minimize coal

TYPICAL MINE ENTRY DEVELOPMENT (THREE AND FOUR ENTRY)

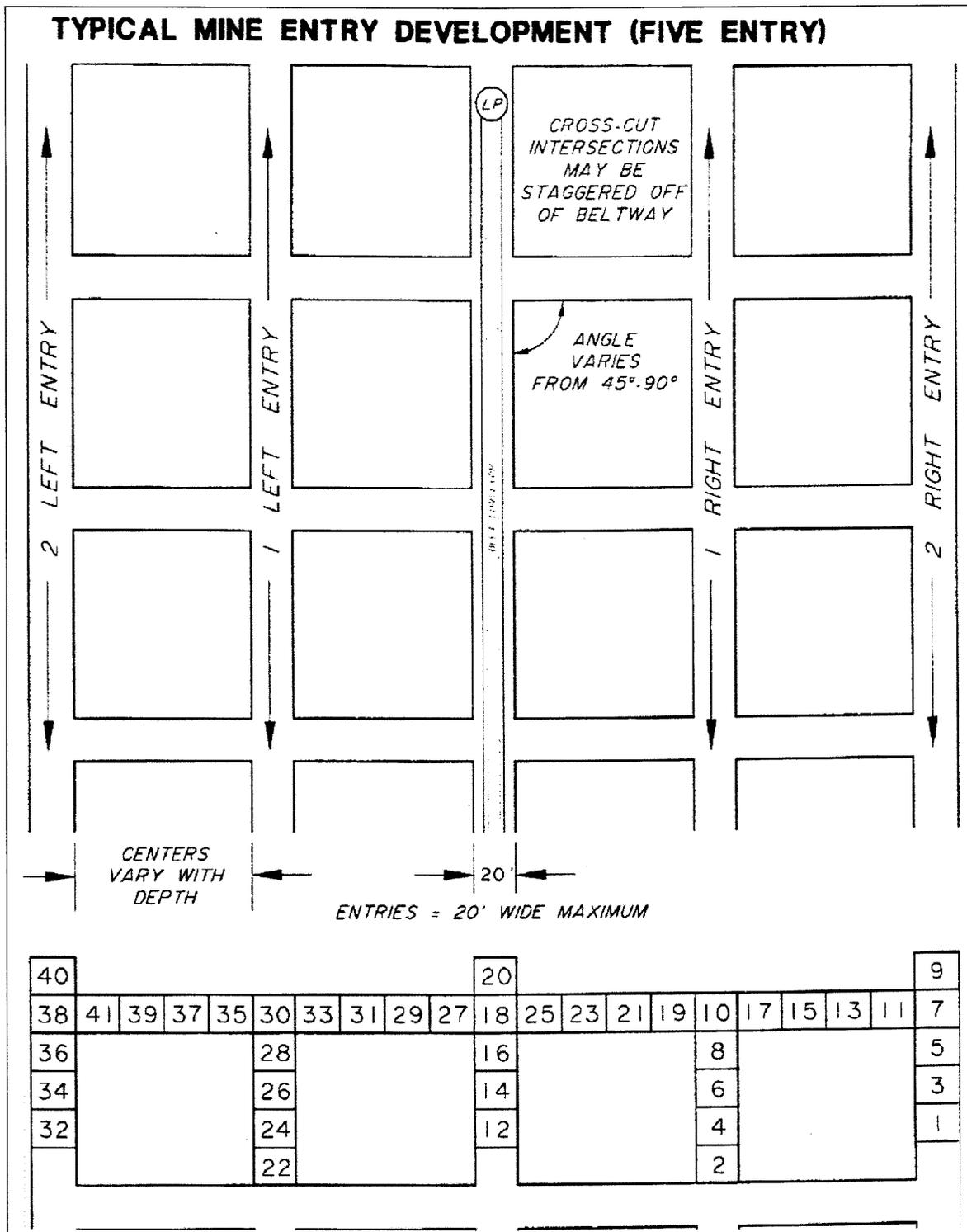


TYPICAL CUT SEQUENCE

LEGEND

- | | |
|---|---|
| <p>→ INTAKE AIR</p> <p>← RETURN AIR</p> <p> PERMANENT STOPPING</p> <p>⊖ CHECK CURTAIN</p> | <p>T BELT TAILPIECE</p> <p>⊗ AUXILIARY FAN</p> <p>⊞ R REGULATOR</p> |
|---|---|

Figures 4.5-2, Typical Mine Entry Development Configuration



breakage and dust generation, and contain both the coal stream and any associated coal dust. Consistent with safety considerations and applicable MSHA regulations, all underground coal haulage belts will be located in separate entries where they are isolated from both intake and return airways.

Mine Development Rock Handling - Several mining and related activities may result in production of significant quantities of mine development rock materials potentially including rock, carbonaceous shale, floor clay, and parting material. Operations which may result in generation of mine development rock will include general mine development, slope/raise development, room development mining operations, and development of overcasts for ventilation or coal haulage. Where mine development rock materials are encountered in mining operations or where the rock materials are integral to the coal seam in development areas or room development mining sections they will be recovered and handled with the coal during mining and coal haulage and will later be removed in the coal handling process. Where it is operationally feasible to separate these materials they will be removed and handled separately using the same equipment and haulage systems that will be utilized for conventional room development operations.

Continuous mining equipment is generally capable of excavating and handling most sedimentary units typically associated with coal deposits. On those occasions when considerable quantities of development rock may be generated by mining and related operations, the coal haulage system may be run during a scheduled rock development materials handling shift until it is cleared of coal and then the rock materials will be fed into the system for haulage to the surface. Surface coal handling systems have been design to also effectively handle mine rock development materials as discussed in detail in Section 4.5.2.3, Mine Structures and Facilities, and will route any mine rock development materials to the rotary breaker facility where the rock will be separated out and routed to a temporary mine rock development materials stockpile for later transfer back into the mine and placed in specific areas developed for this purpose. Any minor quantities of mine rock development materials generated in conjunction with ongoing mining and related operations will be temporarily stockpiled in inactive areas underground until they can be recovered and transported to the surface during a scheduled rock development materials handling shift.

Disposal of Coal Mine Development Rock in Designated Areas Underground - Two special areas have been designated underground as mine development rock disposal sites for the emplacement of mining generated rock (see Map 4.5.1.2-5, Mine Plan Layout & Production Schedule Map,). Both areas are within practical operating proximity of the rock slope development area and also close to the Surface portal area where Mine Development waste may be temporarily stored as "off-spec" product coal. Disposal Area 1 is the area known as "N13E Panel A" and it is located on the North side of the Portal Mains. It is separated from the adjacent Disposal Area "N13E Panel B" with a 140 ft wide Barrier Pillar which adds to the long-term integrity of the backfill area stability. Both of these disposal areas are strategically located, life of mine fill emplacement areas designed for the emplacement of all types of mine development rock containing or not containing coal. Both areas will be ventilated before, during and after backfill emplacement operations and at all times according to MSHA standards and according to MSHA approved ventilation and roof control plans for the mine.

As discussed previously, mine development waste consisting of a mixture of rock and coal materials will be temporarily stored at an area on the loadout pad as shown on Map 4.5.1.2-3, Surface Facilities. This material is not coal processing waste since no coal preparation plant is planned, however this material may not be saleable as regular coal product due to a high content of rock. The area designated is capable of containing approximately 3,900 tons of material. This material will be sold as a low quality coal product to local coal preparaion facilities, or will be deposited in other facilities permitted by the UDOGM.

Mine Ventilation - The mine ventilation system has been designed to provide sufficient quantities of air and airflow rates in active working areas to sufficiently dilute any coal dust or methane gas present so that potentially explosive dust/gas/air mixtures do not develop and to provide sufficient fresh air flow to assure safe and healthy working conditions for the miners.

During portal development small auxiliary fans will be used to ventilate the working places. These fans will be used for primary ventilation only for a short time period during initial development. Once portal development progresses to the point where full ventilation crosscuts have been established, a temporary mine fan will be installed on the northernmost portal entry and this fan along with conventional full or temporary stoppings will provide adequate ventilation volume and control for the initial portal and main entry development. This fan will be used for approximately one year, or until development has progressed to the point where a second continuous miner can be placed in service. Use of the temporary mine fan will allow Carbon Resources the time to complete the permanent main mine ventilation fan installation and associated structures.

Permanent ventilation for the permit area will be provided by a 6 ft diameter exhausting axial vane fan with a 300 HP motor operating at 1160 rpm (or equivalent). Temporary or auxiliary fans will be used in either blowing or exhausting mode with vet tubing to assist mining while setting up airways for the permanent ventilation system.

The main mine fan installation will include fan drive units, fan shroud structures, blow-out doors, heaters, and fan control systems located on Portal No. 1, as shown on Map 4.5.1.2-3, Mine Surface Facilities Map. The main mine fan will provide adequate ventilation for all development and mine workings planned during the first five years of mining.

Effective ventilation of mine workings will involve control of airflow within the mine workings to provide adequate airflow volumes and flow rates in all active working areas. Airflow will be controlled, under mine ventilation plans submitted to and approved by MSHA, by maintaining a pressure differential which will force the air to follow a pre-determined path through the mine workings. The pressure differential and desired airflow will be maintained by isolating intake and return airways with air-tight stoppings and utilizing the network of mine entryways to effectively route both clean (intake) and used (return) air through the mine.

The mine fan is not intended to be a life of mine fan per se. However, it is sufficient for all of the needs for this permit application and from this standpoint it is deemed to be permanent. From the longer-term viewpoint with respect to the life of the reserves it is more or less a temporary installation and will need to be replaced at some future date as the permit is revised and the mine is extended.

As shown, mine intake air from this fan will enter through the underground mine workings through the Intakes Portal Openings No. 4 and No. 5 Entries. Intake air will be drawn through the mine to the working places and mining faces by the network of main, sub-main, and bleeder entries the negative pressures exerted by the exhausting fan. Air will be coursed through the mine and controlled by both permanent and temporary stoppings, curtains and regulators. From mine working areas, exhaust airflow will be carried by bleeder, sub-main, and main entry exhaust airways discharging from the Mine Portal No. 1 entry through the fan.

The mine ventilation system will meet all applicable MSHA requirements and according to an MSHA approved Ventilation Plan. The Ventilation plan will provide continuous effective ventilation of the active mine workings at all times. The Ventilation plan will also provide for regular inspections as required by CFR 30 Part 75 regarding pre-shift and on shift inspections and fire-boss inspections of outby workings.

Based on the planned extent of the mine workings, anticipated methane liberation and dust generation rates, and probable mining conditions the primary ventilation fan will provide adequate ventilation capacity for at least the first five years of mine development and production. It is expected that subsequent mine expansion will require development of additional ventilation facilities to assure continued effective airflow and ventilation of the underground workings. These will be addressed in future revisions of the permit as needed.

Dewatering and Mine Drainage Control - Given the relatively low overall permeability of the geologic sequence, limited recharge, extensive historic mining in the area both north and south of the proposed Kinney No. 2 Mine in multiple seams, and consequent lack of a significant ground water aquifer in the area to be mined, ground water inflow to the active mine workings is expected to be limited. Ground water accumulations in abandoned underground workings in the area may result in localized increases in the amount and availability of ground water, particularly in down-dip areas to the north and east. CR is not expecting any significant amounts of water to be encountered during the permit term, other than possible minor amounts of perched localized water.

Any significant ground water inflows to the active mine workings will be controlled by intercepting the water near the point of inflow with either shallow ditches or sumps and transferring the water to either abandoned mine areas or temporary holding areas. Minor ground water inflows will not be addressed unless they interfere with mine operations or pose a potential safety hazard. Mine drainage will be transferred within the mine utilizing a series of ditches in combination with intermediate sumps and submersible pumps and pipelines. If adequate quantities of mine drainage are available to justify use of mine drainage as a supply source for operational mine water requirements, temporary holding areas within the mine may be developed and utilized as mine drainage storage areas and clarification basins.

Maintenance and Miscellaneous Support Activities - A number of support activities including rock dusting; extension of mine electrical, communications, and water systems; equipment maintenance and repair; and material and equipment supply and storage are necessary to maintain safe, efficient underground operations, to prevent or minimize potential mining related environmental impacts, and to effect ongoing compliance with applicable regulatory provisions and requirements. Generally, mining support activities will occur either concurrently and as a part of ongoing mining operations or on a scheduled or as needed basis. Many of the necessary mining support functions including electrical distribution, mine

ventilation, underground communications, and health and safety considerations are governed and monitored by MSHA under applicable provisions of the Coal Mine Health and Safety Act of 1969, and will be conducted under specific MSHA plan approvals. The following briefly describe planned support activities which CR will undertake in conjunction with the proposed Kinney No. 2 Mine mining activities:

Rock dusting - Rock dusting will occur in all applicable development areas and mining sections and will involve mechanical or pneumatic distribution of powdered limestone to cover exposed coal surfaces to limit generation distribution of potentially explosive mixtures of coal dust in the mine environment

Extension of mine utilities - Recognizing that mining advance will be a continuous ongoing process, mine utilities including electrical, communications, and water systems have been designed and will be installed to facilitate extension with mining advance. Typically, these systems will consist of modular components which will permit progressive connection of additional segments either in a series or parallel configuration.

Equipment maintenance and repair - Normally, equipment maintenance will occur in the working area during scheduled maintenance shifts. Minor repairs will occur in the working area either in conjunction with scheduled maintenance or, if immediate repairs are required, during temporary shut-down periods on scheduled operating shifts. If major repairs or equipment overhauls are required, the equipment may be transported to either centralized underground or surface shop areas. All underground maintenance and repair activities will be conducted in compliance with applicable health and safety requirements

Material and Equipment Supply and Storage - Materials and equipment required in conjunction with underground mining operations will generally be supplied from the surface warehouse and storage facilities. Limited quantities of certain consumable supplies including roof bolts, timbers, hydraulic fluid, rock dust, electrical cable, and similar materials may be stored in temporary underground storage areas near active working areas.

In addition to the specific production equipment previously listed for development mining, or first mining, a variety of maintenance and support equipment and systems will be required in conjunction with the proposed underground mining operations including the following:

- Personnel carriers
- Supply tractors and trailers
- Lubrication trailers
- Rock dust distribution system
- Electrical distribution system
- Underground communications systems
- Personnel first aid and safety equipment
- Miscellaneous equipment

Pillar Sizes

The primary means of support for any underground mine plan is the pillar itself and the Kinney No. 2 Mine is no exception. CR has taken special care and precaution to ensure that all of the pillars within the permit application area are sized with dimensions to provide

sufficient stiffness to withstand post mining vertical stresses and deterioration for the prescribed duty intended to so that they will stand for the long-term full life of the mine with a high degree of integrity and confidence in safety against mining bumps.

Based on comparison with the empirical data from mine maps of historic production at this location and based on experience at other mines in the area¹, CR has selected a conservative rate of extraction and pillar configuration for the given the depth of cover², geotechnical considerations of the coal and overburden, and other conditions³ present.

Planimetric extraction rates are limited to less than 45% with-in the permit application area by design with a view toward long term stability, safety and utility service for the Kinney No. 2 Mine.

Pillars dimensions in the mains are set at 65 ft wide by 100 ft long (i.e. 75 by 120 ft entry and oss centers with 20 ft. wide openings).

This will ensure a stable opening and permit productive place change mining operations with mining and bolting.

Pillars in the 2 adjacent panels are 55 ft wide by 100 ft long (i.e. 65 ft by 120 ft entry and crosscut centers respectively). W/h ratio for mains pillars is $65/8 = 8.125$. Pillars of this shape are stronger than the "intermediate range" of the empirical pillar classification and, considering that it is not adjacent to any active retreat pillaring or caving activity and that it is under relatively shallow cover it is expected to provide ample support serve the duty intended for the five entries throughout the duration of the life of the mine.

W/h ratio for pillars in the two designated backfill panels is $65/8 = 6.88$. This ratio is well within the "intermediate range" of empirical classification. The 60 degree chevron called for in the back-fill panels is not expected to result in failure of the pillar corners at the intersections until after backfill has taken place. However, if failure should occur, secondary support will be installed to decrease the effective roof span and support the pillar where it is needed.

Adequate and ample barrier pillars will be left between new workings and mined-out workings as shown and as otherwise needed.

Approach of Old Workings

CR has obtained the maps of old mine workings in the Hiawatha Seam in the Permit application area. However, these maps may or may not be accurate and reliable and the workings are abandoned and sealed and so can not be accessed to verify their reliability. In areas where new mining activities are likely to approach within 500 ft of abandoned, sealed or unventilated mined out workings MSHA rules CFR 30 Part 75 will be strictly followed concerning the approach of old workings.

¹ RE: Columbine Mine and Skyline Mine maps; See also Empirical Methods for Coal Pillar Design – Christopher Mark PhD.

² The maximum depth of cover in the permit application area above the Hiawatha Seam is 1000 ft. The average depth of cover is about 700 ft for most of the workings and for the mains. The minimum depth is zero at the outop portal location.

³ Other conditions include dynamic conditions present with the structural complexities of the area (i.e. faulting).

CR will work with MSHA and the state of Utah to devise plans to precisely locate old mine workings prior to approaching them that will safeguard all persons. This may involve drilling ahead with an in-mine drill, possibly injecting concrete into old workings to pre-stabilize them and other measures to prevent inundation and/or the introduction of gob gas to the active mine atmosphere should the drilling reveal the old mine workings will be unavoidably encountered in the planned mains.

Development rock backfill will be placed into designated panel areas and will further serve to encapsulate pillars. This will passively stabilize pillars in those areas with some confinement. Development rock backfill areas will be ventilated until they are filled and have been monitored for products of combustion for a period of 1 year after backfill operations are complete. If no significant products of combustion have been found the area will be sealed and monitored according to an approved ventilation plan.

If products of combustion are found in the area, the area will be promptly sealed and injected with an inert heavy gas such as Carbon Dioxide CO₂ specific gravity = 1.53. Once sealed and injected with CO₂, no mining will be planned down dip that may breach into these sealed areas. Monitoring of gas in the area will be a continuing part of an approved ventilation plan.

Finally, CR will commit the professional resources necessary to actively examine actual pillar and rib conditions in areas adjacent to old workings and evaluate the need for additional roof or pillar support and other geo-mechanical needs on a periodic and as needed basis. Carbon Resources is dedicated to effectively addressing any need for design changes in pillar size or changes required for the safe operation of the Kinney No. 2 Mine.

Maintenance of mine openings will involve regular inspections of the openings and surrounding surface areas, removal of any material or debris from the immediate area of the openings, and repair or replacement of ground control, protective structures, or other structures associated with the mine openings. Mine openings and the immediate surrounding areas will be kept clear of equipment, materials, and supplies, and no coal, mine waste, or potentially flammable materials will be placed or stored in the immediate vicinity.

Explosive Storage and Blasting

Due to the potential explosion hazards related to both methane and coal dust blasting, any underground blasting activities will be limited and will be conducted in full compliance with applicable MSHA requirements. Limited surface blasting will be necessary in conjunction with the proposed construction activities and on an occasional basis during operations. Construction related blasting requirements may include the drilling and blasting activities necessary to construct the various pads, and for the proposed surface conveyor system, and limited blasting to fragment resistant rock in order to establish the design facilities area configuration, and small-scale blasting to fracture any large rocks so that they can be moved during the construction/development phase. Occasional operational blasting requirements may include small-scale surface blasting to fracture large rocks that may fall or roll from the adjacent steep cliffs and slopes into operating areas or onto roads, clear clogged chutes, or address potentially hazardous rock or slope conditions. Because of the nature of the required blasting, construction related blasting activities may require the use of

more than 5 pounds of explosive, however, it is anticipated that operational blasting will generally not require more than 5 pounds of explosive.

Any surface blasting required in conjunction with the underground mining operation will be conducted in compliance with applicable provisions of Rule R645-301-524. All blasting will be conducted by a certified blaster and the responsible blaster will either carry documentation of blaster certification or the appropriate certificates will be retained on file at the mine or construction office. The responsible blaster and at least one other person will be present for all blasts and the responsible blaster or an individual under his direct supervision will load, connect, and initiate all blasts. Because the proposed Kinney No. 2 Mine surface facilities, where any required surface blasting would occur, are located within 1,000 feet of State Highway 96, and within 500 feet of abandoned coal mines in the areas, a general blasting plan is included in this permit application. Given the general nature of the blasting plan, it provides a framework for all anticipated blasting activities, however, if a blast will require more than five pounds of explosives, CR will submit specific blast design information to UDOGM prior to the blast. Persons responsible for blasting operations will be familiar with site conditions and the explosive handling and blasting procedures as outlined by Exhibit 4.5.2.1-2, Kinney No. 2 Mine Blasting Plan.

Explosives and detonating caps will be stored separately in secure locked structures and explosive storage and handling will be conducted in accordance with all applicable State and Federal standards under current valid Bureau of Alcohol, Tobacco, and Firearms permits. It is anticipated that portable skid-mounted explosive magazines will be utilized and that any required explosives may be supplied and handled by an independent explosives contractor. Given this consideration and very limited anticipated operational blasting requirements, explosives may not be maintained on site at all times. For construction related blasting operations and any temporary or long term explosive storage during the operations phase, the designated explosive storage area will be located as shown on Map 4.5.1.2-3, Mine Surface Facilities Map providing adequate distances from surface structures and facilities as designated by the applicable regulatory requirements.

Subsidence Control

Coal extraction by underground mining typically results in a void where the coal has been removed, and possibly partial collapse of the immediate overlying units, deformation of the units above the mined area, and potential deformation or settlement of the overlying ground surface, termed subsidence. Subsidence typically only occurs at the surface where pillars are extracted, or where longwall mining methods remove substantial blocks of coal. No second mining, or pillar extraction, or longwall mining that would result in subsidence is planned for the Kinney No. 2 Mine, therefore no subsidence is anticipated. Portals have been designed to be stable indefinitely, with a combination of steel, wood, and concrete support structures that will prevent subsidence of the shallow cover over the mine entries near the surface.

4.5.2.3 Mine Structures and Facilities

The proposed underground mining and related activities will require limited surface support facilities. The facilities to be utilized in conjunction with the proposed operations will include new facilities to be constructed in the proposed Kinney No. 2 Mine surface facilities area.

These facilities will provide the necessary infrastructure for effective management and handling of personnel, equipment, materials and supplies, and both coal and mine development rock materials, and will include a number of structures specifically designed to control or mitigate potential mining related impacts.

Construction of required surface structures and facilities has previously been discussed in Section 4.5.2.2, General Description of Mine Plans, Mining Methods, and Related Design Requirements. The surface structures and facilities will be operated, maintained, and ultimately reclaimed in a manner that prevents or controls erosion and siltation, water pollution, and damage to public or private property; and to the extent possible using the best technology currently available, minimizes damage to fish, wildlife, and related environmental values, and minimizes additional contributions of suspended solids to streamflow or runoff outside the permit area. Any contributions of suspended solids from mine disturbance areas will not exceed applicable effluent limitations under Utah or Federal law.

Required surface facilities are shown and identified on Map 4.5.1.2-3, Mine Surface Facilities Map, and include the following:

- Conveyor SB-1
- Conveyor Transfer Tower
- Conveyor SB-2
- Non-Spec Coal Pile & Stacking Tube
- Conveyor SB-3
- Spec Coal Pile & Stacking Tube
- Conveyor SB-4
- Screening & Crushing Building
- Sediment Pond Road – Primary P6
- Truck Loadout Building
- Loadout Road – Primary P5
- Storage Sheds – 5 each
- Shop – Warehouse
- Fueling Facility
- Main Access Road – Primary P1
- Office Road – Primary P2
- Portal Access Road Primary P3
- Storage Area Access Road P4
- Mine Office – Bathhouse
- Topsoil Stockpile
- Water Tank
- Electrical Substation
- Sedimentation Pond
- North Access Road – Primary P7
- Explosives Magazine
- Explosives Cap Magazine
- **Development Waste Temporary Storage Area**

The following sections describe design and construction details and operation and maintenance plans for the identified structures.

Drainage and Sediment Control Structures

The drainage and sediment control structures which will be constructed and utilized in conjunction with the proposed mining and related activities will effectively route natural drainage through the mine surface disturbance area, intercept and route undisturbed drainage from upslope areas around surface disturbance areas, and collect and route disturbed area drainage to sedimentation structures to allow settlement of suspended solids prior to discharge to the natural drainages. Drainage and sediment control structures required under the proposed plans will include Sedimentation Pond 1, a number of undisturbed drainage diversion ditches, disturbed area collection ditches, drainage culverts, containment berms, and various alternative drainage and sediment control measures including small sediment basins, silt fences, straw bales, and other localized control measures as appropriate. The proposed drainage and sediment control structures are shown on Map 4.7.2.1-2, Drainage and Sediment Control Plan Map, and design information and calculations are discussed in Section 14.7 Hydrologic Resource Protection and PHC, and the background information and calculations are included in Exhibit 4.7.2.2-1, Runoff Control Design Details.

Design - The design and location of all required drainage and sediment control structures is based on maximum anticipated storm runoff flows, site topographic conditions, and standard hydrologic design practices and addresses full compliance with all applicable regulatory provisions. Recognizing that the area is subject to relatively high-intensity, short-duration storm events and that due to the rugged terrain and limited vegetation runoff is frequently rapid and concentrated, essentially all structures have been over-designed to provide an additional margin of safety.

The applicable UDOGM regulatory provisions specify that all impoundments must be designed to contain or treat the runoff resulting from the 10-year, 24-hour storm event and that spillways for MSHA ponds must be capable of discharging runoff flows from the 100-year, 6-hour event and non-MSHA ponds must have designed principal and emergency spillways with a combined capability of discharging the 25-year, 6-hour storm event. However these spillways were designed to safely discharge the 100-year, 6-hour event to provide additional safety due to the close proximity of the sedimentation pond to the highway. The applicable regulations also specify that temporary and permanent diversions of miscellaneous flows be designed for the 2-year and 10-year, 6-hour events, respectively and that temporary and permanent diversions of perennial and intermittent streams be designed for the 10-year and 100-year, 6-hour storm events, respectively.

Hansen Allen and Luce, Engineers (HAL) completed a runoff evaluation for representative watershed areas using the Army Corps of Engineers Hydrologic Modeling System (HEC-HMS) Version 3.1.0 computer modeling software to determine conditions for design of the proposed Kinney No. 2 Mine drainage and sediment control structures. Sedimentation Pond 1 has been designed to contain or treat the runoff from the 10-year, 24-hour storm event and total design capacity includes storage for at least five years accumulation of sediment. The pond spillway structures have been designed to safely pass the runoff from the 100-year, 6-hour storm event.

Temporary diversion ditches in disturbed areas are designed to safely pass the peak discharge from the 10-year, 6-hour storm event. All diversions have been designed and will be constructed to remain stable under design flow conditions. All collection ditches have been conservatively sized to carry the peak runoff flows from the 25-year, 24-hour storm event in order to provide a significant margin of safety and accommodate the brief, high-intensity storms common to this area. In order to assure effective collection and routing of disturbed drainage flows and minimize both erosion and sedimentation, required culverts have been sized to safely pass the peak flow from the contributing inlet ditches with a significant factor of safety and culvert inlets, outlets, diversion channels, and those areas where one or more channels intersect have been designed and will be constructed using properly sized and placed riprap or other erosion control materials, as required. In all cases, ditch designs also included an evaluation of the need for channel protection to prevent or minimize erosion. The general criteria for channel protection was any flows greater than or equal to 4 feet per second would require channel protection in the form of riprap or grouted riprap to maintain adequate safety factors. Appropriate riprap sizing was determined using riprap design calculation spreadsheet prepared by HAL. Designs for all required ponds and ditches include adequate freeboard to provide a reasonable margin of safety. Designs for the permanent Kinney No. 2 Mine drainage structures and facilities have been prepared by or under the direction of and certified by a qualified Registered Professional Engineer in accordance with Rules R645-301-742.324. Culvert sizing is consistent with the ditch design basis (i.e., 10-year, 6-hour and 100-year, 6-hour storm flows, respectively for temporary and permanent diversions), the minimum culvert size to be used is 18 inch diameter due to potential clogging and maintenance considerations, however all have been over-designed to provide an additional measure of safety, and culvert installations will include a pre-fabricated inlet structure and riprap protection at both the headwall and discharge points.

In order to assure effective conveyance of undisturbed drainage flows and minimize both erosion and sedimentation, required culverts have been sized to safely pass the peak flow from the contributing inlet ditches with a significant factor of safety and culvert inlets, outlets, diversion channels, and those areas where one or more channels intersect have been designed and will be constructed using properly sized and placed riprap or other erosion control materials, as required. Specific information on culvert design and erosion protection measures is also provided in Exhibit 4.7.2.2-1, Runoff Control Design Details.

Sedimentation Pond 1 has been designed and will be constructed to meet the following regulatory design criteria:

- Located as close as possible to the disturbed area and out of perennial streams unless approved by the Division
- Provide adequate sediment storage
- Provide adequate detention time to meet applicable effluent standards
- Provide a non-clogging dewatering device
- Minimize short circuiting
- Facilitate periodic sediment removal
- Foundation structures will be stable under all conditions of construction and operation

In addition, Sedimentation Pond 1 design has been prepared by or under the direction of and certified by a qualified Registered Professional Engineer in accordance with Rules R645-301-512.200 and 240.

In all cases, the design basis for the proposed drainage and sediment control structures meets or exceeds the applicable regulatory design requirements. Designs for drainage and sediment control structures, along with a discussion of design assumptions, methodology, and design calculations are presented in Section 24.7 Hydrologic Resource Protection and PHC, and the background information and calculations are included in Exhibit 4.7.2.2-1, Runoff Control Design Details.

Construction - As previously noted in Section 4.5.2.1, General Description of Mine Construction and Development Activities, the required drainage and sediment control structures will be constructed prior to any other significant site disturbance, and as soon as possible in the overall site construction plan. As a first step to construction, a silt fence will be placed at the extreme western edge of all site construction running from the southwest corner of the site adjacent to the highway and adjacent to the old railroad bed from the pre-existing access road into the site running northward to the northwest corner of the site. Construction of required undisturbed runoff diversion ditches and disturbed area collection ditches will involve removal and placement in stockpile of soil or clean soils materials, excavation of the design ditch configuration, placement of riprap and bedding material or geotextile where required, and seeding of ditch sideslopes with the temporary revegetation seed mix. The constructed ditch configuration is illustrated by the typical design configuration figures included on Map 4.7.2.2-2, Runoff Control Details. Culvert installation will involve excavation and grading of the culvert foundation area, placement and compaction of gravel or similar bedding materials, placement and adjustment of the culvert and inlet structure to the design grade and alignment, placement and compaction of suitable fill materials around and over the culvert, placement of rock protection in the culvert headwall and discharge areas, and installation of debris fences upgradient of culverts where required. Culvert installation practices are illustrated by the typical design configuration figures included on Map 4.7.2.2-2, Runoff Control Details.

Construction of sedimentation pond impoundments will involve recovery and placement in stockpile of soil or substitute materials, preparation of embankment foundation areas, excavation of impoundment basin areas and construction of embankment structures, installation of principal and emergency discharge structures; grading of embankment outslopes, and seeding of outslopes with the temporary revegetation seed mix to minimize erosion. Impoundments will be inspected at regular intervals during construction and on completion of construction by a professional engineer or specialist experienced in impoundment construction. An impoundment inspection report certified by a Registered Professional Engineer will be provided to UDOGM promptly following each inspection. The report will verify construction in accordance with design plans and will note and discuss any apparent instability, structural weakness, or other hazardous conditions. A copy of the report will be retained on file at the minesite for inspection by authorized agency representatives.

Required foundation preparation will include removal of any vegetative material, coal, potentially acid-forming coal waste, frozen material, or other deleterious materials from embankment foundation areas and excavation of any keyways specified in the design. Embankment construction will involve controlled placement and compaction in horizontally continuous lifts no greater than 12 inches in thickness of suitable embankment fill material. Fill material will not contain any significant quantities of coal, vegetative material, frozen material, or other deleterious materials. Fill will be placed and spread using either tractor scrapers or rear dump trucks and tracked dozers and design compaction of 95 percent of maximum dry density will be achieved by compacting each successive lift with a sheepfoot

or vibratory roller. Compaction will be periodically checked during construction using standard compaction testing procedures and if testing reveals inadequate compaction, the lift or lifts in question will be ripped and reworked until adequate compaction is achieved. During compaction, water trucks may be utilized as necessary to achieve optimal moisture content for effective compaction. The actual construction height for all pond embankments will be 5 percent greater than the design height to provide for long-term consolidation and settling of the embankment.

Installation of principal and emergency discharge structures will occur at appropriate stages in the embankment construction process. Installation of vertical riser structures will include compaction of an adequate base area for the foot of the riser and installation, alignment, and placement and compaction of fill material around the lower portion of the riser structure. Installation of horizontal discharge structures will involve basically the same construction procedures previously described for culvert installations, including preparation of a base area, placement and compaction of bedding material, placement and alignment of the discharge pipe, and placement and compaction of fill material around the pipe.

Operation and Maintenance - Operation and maintenance of drainage and sedimentation control structures will involve periodic inspection of all ditches and culverts, quarterly inspection and annual certification of impoundments and related structures, ongoing discharge monitoring for all impoundments, and any necessary maintenance or repair of problems noted during the inspections.

Ditches have been designed and will be constructed to provide an adequate cross-sectional flow area to pass runoff flows from the design storm event. During active operations, normal siltation and minor erosion may result in changes in ditch configuration. As discussed previously, however, all ditches have been designed for the 25-year, 24-hour storm event rather than the 2-year or 10-year, 6-hour event as required, therefore, minor siltation will not affect the capacity of the ditches to perform as designed. CR's ditch inspection and maintenance procedures will focus on identification and repair of any significant ditch erosion, removal of any trash or debris from ditches, and maintenance of an adequate cross-sectional flow area, regardless of actual ditch configuration, to pass the design flows. In practice this will mean that CR will not modify, recut, or clean out a ditch simply because the physical ditch dimensions are not the same as the original design or originally constructed configuration so long as the actual ditch configuration is adequate to pass the design flow. Culvert maintenance will involve removal of trash or debris from culvert inlets and any upgradient debris fences, repair of any significant erosion at culvert inlets, outlets, or of the cover material, and repair or replacement of any damaged culverts.

Sedimentation pond maintenance and operation procedures will include ongoing sampling and discharge monitoring under applicable provisions of a UDWQ permit; quarterly inspections of pond embankments, impoundment areas, discharge structures, and inlet/outlet structures and areas and reporting; notification of any hazardous conditions and development of emergency remedial control measures; maintenance or repair of any problems noted during the inspections; and periodic removal of accumulated sediment. The sedimentation pond has been designed and will be operated and maintained to effectively retain storm runoff to allow settlement of suspended solids prior to discharge. Control of potential water quality impacts from pond discharge is monitored through compliance with applicable effluent standards under a UDWQ discharge permit. Effluent

sampling and reporting will occur as outlined in Section 4.7, Hydrologic Resource Protection and PHC, and under the provisions of the UPDES permit which will be included in Exhibit 2.1.3-1, Other Permits when it is received.

The sedimentation pond will be inspected quarterly by a qualified person for any indication of structural weakness or other hazardous condition, instability, and any erosion or other problems; the depth and elevation of any impounded water will be measured; based on the depth measurements storage capacity will be estimated; and any required structural monitoring will be performed. Copies of the quarterly inspection reports discussing each of the noted inspection categories and verifying that the pond has been constructed and maintained as designed will be prepared, certified by a qualified Registered Professional Engineer, and submitted promptly to UDOGM. Copies of the inspection reports will also be maintained on file at the minesite. Any minor problems noted during the inspection will be addressed in a timely manner. This may involve repair of any minor localized erosion, clean-out or minor repair of discharge structures, reseeding of embankment slopes, mowing weeds which may interfere with pond inspection, or other minor maintenance and repair as necessary. If the inspection identifies any structural weakness or other conditions which could pose a hazard to the public, the person who conducted the inspection will notify UDOGM promptly of the hazardous condition and any emergency procedures which may be appropriate to protect the public and address the hazardous condition. In consultation with and with approval from UDOGM, appropriate remedial measures will be implemented as soon as is reasonably practicable to address any hazardous condition.

The pond has been designed to provide adequate capacity for at least three years accumulation of sediments, however, the pond will periodically need to be cleaned out to removed the accumulated sediment in order to maintain adequate stormwater storage capacity consistent with design requirements. A fixed staff gauge in the pond will be used to monitor sediment accumulation. Generally, it is anticipated that the sedimentation pond will be essentially dry during late summer or early fall each year and the gauges will be checked during the corresponding pond inspections. In the unlikely event that the staff gauges cannot be checked during a dry period, an alternative means of monitoring sediment accumulation levels will be utilized.

Before sediment accumulations reach the point where they would encroach on stormwater storage capacity, CR will schedule and implement measures to remove the accumulated sediments. The pond has been designed to facilitate access for pond clean-out with a concrete ramp for equipment access to the pond bottom. The pond will have a reinforced concrete bottom to facilitate cleaning by equipment without damaging the pond integrity. Generally, clean-out would be scheduled during a relatively dry period when any pond water levels would be low. Any water remaining in the pond would be pumped into water trucks for use in minesite dust control. The sediments would be allowed to dry so that they could be readily removed and they would then be removed and transported to a temporary storage area located on one of the mine pad areas until dry, then would be transported into the mine and placed in the areas designated for mine development rock as discussed in Section 4.5.2.2 General Description of Mine Plans, Mining Methods, and Related Design Requirements.

Description of Individual Structures - The following sections provide more detailed information for specific drainage and sediment control structures:

Sedimentation Pond 1 - Sedimentation Pond 1, which will be located at the northern end of the mine site, as shown on both Map 4.7.2.1-3, Drainage and Sediment Control Plan Map, and Map 4.5.1.2-3, Mine Surface Facilities Map, will be the only sedimentation pond for the proposed mine surface facilities area. The vast majority of disturbed area runoff and minor amounts of undisturbed area runoff from those facilities and areas upgradient from the pond location will be routed to Pond 1. The total contributing drainage area for Pond 1 is approximately 28 acres. The pond has been designed to provide adequate total retention capacity at an elevation of 7686.90 feet of 3.15 acre-feet which includes a 5.3 year accumulation of sediment (1.12 acre-feet) based on sediment discharge modeling for the contributing drainage areas and the 10-year, 24-hour storm runoff (2.06 acre-feet) from the contributing drainage areas.

Pond 1 is designed with vertical risers (primary spillway and emergency spillway) connected to a horizontal discharge culvert running through the pond embankment and discharging to a culvert crossing beneath Highway 96 and thus to the area west of the highway. One orifice in the primary spillway vertical riser at an elevation of 7683.80 feet, will be used to dewater the pond and discharge stormwater inflows. The top of the riser will be at an elevation of 7686.90 feet, at the invert of the emergency spillway. The orifice outlet will be fitted with gooseneck pipe extension to act as oil skimmer to prevent discharge of any minor amounts of oil or other petroleum products which may enter the pond and the top of the riser will be fitted with a trash rack. The Pond 1 emergency spillway will be a 24 inch diameter pipe, with a crest elevation of 7686.90 feet. The invert elevation of the emergency spillway and pond embankment are designed to provide a minimum freeboard of 2.0 feet. In order to provide access for clean-out and haulage of accumulated pond sediments a primary road (P6) will be constructed from the Loadout Pad to the pond.

Map 4.7.2.1-3, Sedimentation Pond 1 Sections & Details shows the proposed Pond 1 layout and provides specific pond design information including the primary discharge, sediment storage volume, 10-yr 24-hr runoff volume, 100-yr 6-hr runoff volume, primary and emergency spillways, and pond embankment, and design details for the discharge structures. Figure 4.7.2.2-1, Pond 1 Stage-Volume Curve shows the stage storage curve; storage capacity information; design elevations for the pond bottom, sediment storage elevation. A detailed description of pond design assumptions and methodology, actual pond design calculations, and additional design information are provided in Section 34.7 Hydrologic Resource Protection and PHC, and the background information and calculations are included in Exhibit 4.7.2.2-1, Runoff Control Design Details. Pond construction, operation, and maintenance practices will be consistent with the previous descriptions presented in this section. Sedimentation Pond 1 will be a new pond and pond construction will involve both excavation of a portion of the pond basin and construction of a compacted fill embankment.

Alternative Drainage and Sediment Control Measures - Alternative drainage and sediment control measures will be utilized for initial construction activities as discussed in Section 4.5.2.1, General Description of Mine Construction and Development Activities, and in areas where the isolated nature of the area or specific site conditions would result in excessive disturbance for full scale drainage and sediment control or where full-scale controls are infeasible. Alternative drainage and sediment controls will be utilized in the following specific areas:

- Initial Construction Areas
- Topsoil Stockpile
- Main Access Road (Primary Road P1), a short section at the entrance from Highway 96

Detailed descriptions of these areas, discussion of the alternative sediment control measures to be implemented, and requests for individual small area exemptions, as appropriate, are included below. It should be noted that alternative sediment controls for road fill and embankment outslope areas will consist of silt fencing and will only be required as a interim control measure until temporary vegetative cover is established.

Initial Construction Areas – Initial construction will be done before runoff controls are possible, therefore alternative controls will be used to control sedimentation off of the site. Controls to be used may include one or more of the controls discussed in Section 4.7, including, silt fencing, straw bales, berms, sediment traps, vegetative filters, mulch, and other effective appropriate drainage controls. Before construction begins, a silt fence will be placed at the extreme western edge of the site running parallel to the old railroad grade and including the area from the existing access road to the site and then running south to the southwest corner of the mine permit area adjacent to Highway 96.

Topsoil Alternative Materials Stockpile - The topsoil/alternative materials stockpile is located adjacent to Highway 96 at the south end of the mine site, where the runoff from the site cannot be routed to the sedimentation pond. Since the stockpile will be vegetated with interim vegetation and should stabilize within a two to three year period, there should be little sediment loss. Runoff from the stockpile will be controlled by a berm at it's western edge as can be seen on Map 4.7.2.1-3, Drainage and Sediment Control Plan. This berm will catch runoff and sediment from the face of the stockpile. A silt fence, or straw bale outlet from the lowest point of the berm near the highway culvert will filter any runoff from the pile prior to flowing into a sediment trap near the inlet end of the highway culvert. A silt fence, or straw bale outlet from the sediment trap will catch any overflow from the trap prior to discharge into the environment and thus into the highway culvert.

Main Access Road - Primary Road P1 – A short section of the access road approximately 115 feet long from it's intersection with Highway 96 eastward to a cattle guard cannot be routed to the Sedimentation Pond 1. Runoff from this small road section will be controlled by sediment traps on each side of the road as shown on Map 4.7.2.1-3, Drainage and Sediment Control Plan. A silt fence, or straw bale outlet from the sediment trap will catch any overflow from the trap prior to discharge into the highway side ditches.

Soil Stockpiles

Soil stockpiles will be utilized for temporary storage of those materials which will be used as vegetative growth media in reclaiming mining related disturbance. Stockpile location and construction will, to the extent operationally feasible, minimize exposure to wind and water erosion and protect the soil resource from loss, contamination, or further disturbance prior to final use for site reclamation. One new soil/substitute stockpile will be constructed using available material from the proposed Kinney No. 2 Mine surface facilities area. The new soil stockpile will be located at the southwest corner of the mine permit area adjacent to Highway 96 as shown on Map 4.5.1.2-3, Mine Surface Facilities Map. A cross section of the topsoil stockpile can be seen on Map 4.5.2.3-1A, Mine Surface Facilities Area, Pre-Mining,

Mining & Post-Mining Cross Sections. This area is isolated from the proposed surface disturbance and operations, and is located generally upwind from the mine facilities, and as far away from the coal piles as possible. The proposed soil stockpile will cover an area of approximately 2.1 acres and can contain a maximum of approximately 54,760 cubic yards of material (see documentation in Exhibit 3.1.1.3-1, Soils Information).

To isolate the topsoil/alternative materials from highway salt, a 6 foot thick base constructed with clean fill material from subsoil materials will be placed at ground level, upon which the topsoil/alternative materials will be placed (see Map 4.5.2.3-1A, Mine Surface Facilities Area, Pre-Mining, Mining & Post-Mining Cross Sections). This elevates the topsoil/alternative materials above a point which could be contaminated by salt from highway salting operations by UDOT. The topsoil/alternative materials will be placed in horizontal lifts over the base material, and will be placed on the face of the fill for the Mine Office Pad. The detail can be seen on the mining Cross-Section A-A'. As can be seen on this section, the topsoil/alternative materials pile can be built up from the 6 foot base material to the toe of the Mine Office Pad fill before the Mine Office Pad fill is started, then the topsoil/alternative materials pile can be built up concurrently with the fill for the Mine Office Pad. Temporary stockpiling of subsoils and topsoil/alternative materials may be necessary to stage construction of both the topsoil/alternative materials, and the Mine Office Pad fill.

Basic soil handling and stockpile construction practices are described in Section 4.2.2, Soil Salvage, Handling, and Storage. The stockpiled material will be protected from erosion, contamination, and loss by placement in a controlled manner with sideslopes at 2H:1V or less, seeding with a temporary vegetative cover, posting with durable signs reading "Soil Stockpile - Keep Off", and the use of appropriate drainage control measures as discussed previously.

Roads

In conjunction with the proposed mining and related operations CR will construct, operate and maintain a number of new roads and will operate and maintain several existing roads. Both new and existing roads will be utilized to access existing and proposed facilities and for transportation of personnel, equipment, and supplies. All roads are classified as primary roads. The primary road classification includes any road used for transporting coal or spoil, roads which are used frequently for periods exceeding 6 months, and roads which will be retained to support the postmining land use. All roads will be utilized on a frequent, long-term basis to support the proposed mining and related operations. Proposed roads which will be used in conjunction with the proposed mining and related operations include the following:

Proposed Roads in Kinney No. 2 Mine Facilities Area

- PR-1 Primary mine access road for the proposed surface facilities area
- PR-2 Primary mine access road to Mine Office Pad
- PR-3 Primary mine access road to the Portal Pad
- PR-4 Primary mine access road to the Storage Area Pad
- PR-5 Primary mine access road to the Loadout Pad
- PR-6 Primary mine access road to Sedimentation Pond No. 1
- PR-7 Primary mine access road to the North Access Road

All proposed roads are shown on, Map 4.5.1.2-3, Mine Surface Facilities Map. Road profiles can be seen on Maps 4.5.2.3-2A through 4.5.2.3-2C, Mine Road Profiles.

Design and Construction - All roads have been or will be located and constructed to the extent operationally feasible in the most stable areas available and outside of the channel of intermittent or perennial streams. Road design and construction plans will prevent damage to public or private property; minimize the potential for downstream flooding or sedimentation; reflect consideration of the size of vehicles which will be using the road, traffic volume, and normal speeds; and to the extent possible, using the best technology currently available, minimize adverse impacts on fish, wildlife and related environmental values.

All roads have been designed to provide for effective drainage, long-term stability, and safe vehicle operations under varying weather conditions. Design and construction of all primary roads will be certified by a qualified Registered Professional Engineer as meeting these criteria. All roads will meet MSHA safety requirements including either a berm or guard rail on the outside edges where the slope is downward.

Design and construction practices for specific roads will be dependent primarily on site conditions and the nature and frequency of anticipated use. The primary mine access road (PR-1) will provide access to the mine surface facilities and will be utilized for transportation of personnel, equipment, coal, and supplies. Because it will handle a relatively heavy traffic volume and must provide safe operating conditions year-round, Road PR-1 will be a paved asphalt road with all-weather travel surface from Highway 96 to the Shop-warehouse building. Primary Road P2 will also be paved to the Mine Office building; in addition, the Mine Office Pad will be paved. The other primary roads will also be utilized on a year-round basis but the associated traffic levels will be significantly lower so these roads have been designed and will be constructed with an adequate compacted road base and gravel or similar durable granular surfacing.

Road construction will involve cut and fill earthwork operations using tractor sapers, tracked dozers, and motor graders. No potential acid or toxic-forming materials will be utilized in road construction or as road surfacing materials. Cut and fill slopes will be established at maximum grades up to 0.8H:1V, with the steepest grades in rock dependent on the characteristics of the rock in conjunction with the geotechnical recommendations found in Exhibit 4.5.2.1-1, Geotechnical Investigations. Typical road construction practices, road configuration, and dimensions are illustrated by Figure 4.5-3, Typical Primary Road Configuration. Road gradients will vary from flat to a maximum of approximately 14.5% percent for the main roads and any required road embankments will be constructed and compacted in a controlled manner to provide a minimum static factor of safety of 1.3. Only one road (P6), which accesses Sediment Pond 1 has a gradient above 14.5%, at 18.8%. This road will be used on a limited basis to access and clean out the sediment pone. All road cut and fill slopes will be revegetated as soon as reasonably practical following construction using the temporary revegetation seed mixture to stabilize the slopes and minimize erosion potential. Road surfaces will be graded or owned to prevent accumulations of water on the road surface and adequately sized ditches and culverts will be installed and maintained to effectively carry road and other disturbed area drainage. Adequate cover will be provided over all culvert crossings to prevent damage or collapse of the culverts and culverts have been designed and will be installed to prevent plugging, erosion at the culvert inlet or outlet, and any drainage over the road surface. The locations of all proposed ditches are shown

on Map 4.7.2.1-3, Drainage and Sediment Control Plan Map, and ditch designs are included in Section 4.7, and in Exhibit 4.7.2.2-1, Runoff Control Design Details.

Operation and Maintenance - Operation and maintenance procedures for all mine roads are designed to provide a smooth operating surface, assure safety, and minimize dust emissions. Road maintenance will involve periodic grading to provide a smooth surface, remove rocks or debris, and maintain effective drainage; repair and resurfacing as necessary; inspection, clean-out, and repair of ditches and drainage structures; and watering or application of surfactants to control dust during dry periods. Generally, speeds on roads and in active operating areas will be limited to 15 miles per hour by posted speed limits both as a safety consideration and to minimize dust emissions from unpaved roads. In the unlikely event that any road is damaged by a catastrophic event such as an earthquake or flood, CR will make appropriate repairs as soon as reasonably practicable and will limit the use of the road or provide an alternate access if unsafe conditions exist.

Description of Individual Structures - The following sections provide more detailed information for specific roads and associated structures:

Primary Road P1 will receive the most traffic, therefore it will be paved. From Highway 96 to the cattle guard as shown on Map 4.7.2.1-3, Drainage and Sediment Control Plan, the road will be owned in the center with drainage flowing to the sides in both directions. The purpose of the cattle guard is not to control cattle, but to provide a drainage trench to catch runoff containing fines from the road, preventing them from being washed downgradient on the road and bypassing Sedimentation Pond 1. Below the cattle guard, drainage from the road will flow to sediment traps on both sides of the road as shown on Map 4.7.2.1-3, Drainage and Sediment Control Plan. For the remainder of Primary Road P1, the design will be as shown on Figure 4.5-3, Typical Primary Road Configurations for sloping terrain and level terrain.

All other roads will be constructed as shown on Figure 4.5-3, Typical Primary Road Configurations for sloping terrain and level terrain.

Excavated Slopes

Site grading and excavation for the mine facilities and road construction activities will require some slope excavation work. Slope excavation areas stand out on Map 4.5.1.2-3, Mine Surface Facilities Map due to the closely spaced contours. In some areas, required slope excavations will occur in weathered rock or other competent material where the potential for any consequent upslope stability problems is minimal. Cut slopes have been designed at gradients varying from 2H:1V to 0.8H:1V, dependent on rock type and construction requirements. Slope excavation will involve removal of material using tracked dozers, tractor scrapers, or backhoes to achieve the design slope configuration. In most cases, it is anticipated that required excavation can be accomplished without the need for blasting to loosen the material, however if blasting is required, any blasting operations will be conducted in accordance with the blasting plans previously described in Section 4.5.2.2, General Description of Mine Plans, Mining Methods, and Related Design Requirements.

During progressive excavation activities, the excavated slopes will be graded or scaled to establish a stable configuration and remove any loose material which could pose a

potential hazard. Where slope excavation occurs in material which can be revegetated, the finished slopes will be seeded with the temporary seed mixture as outlined in Section 5.3, Revegetation and Habitat Restoration Plans, to stabilize the graded surface and minimize runoff and potential erosion. In the portal face-up area, where a potential rock fall hazard exists, wire mesh, or chain link fencing material may be anchored to the steep rock wall with roof bolts and concrete-steel portal structures will provide additional protection for both personnel and equipment. Maintenance of excavated slope will include periodic inspection of slope areas and removal of loose rocks or other potential hazards.

Excess Spoil Material

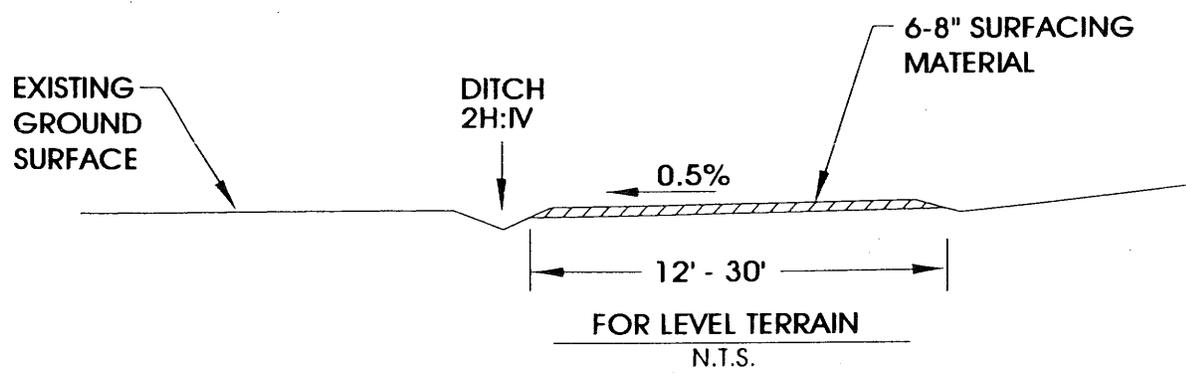
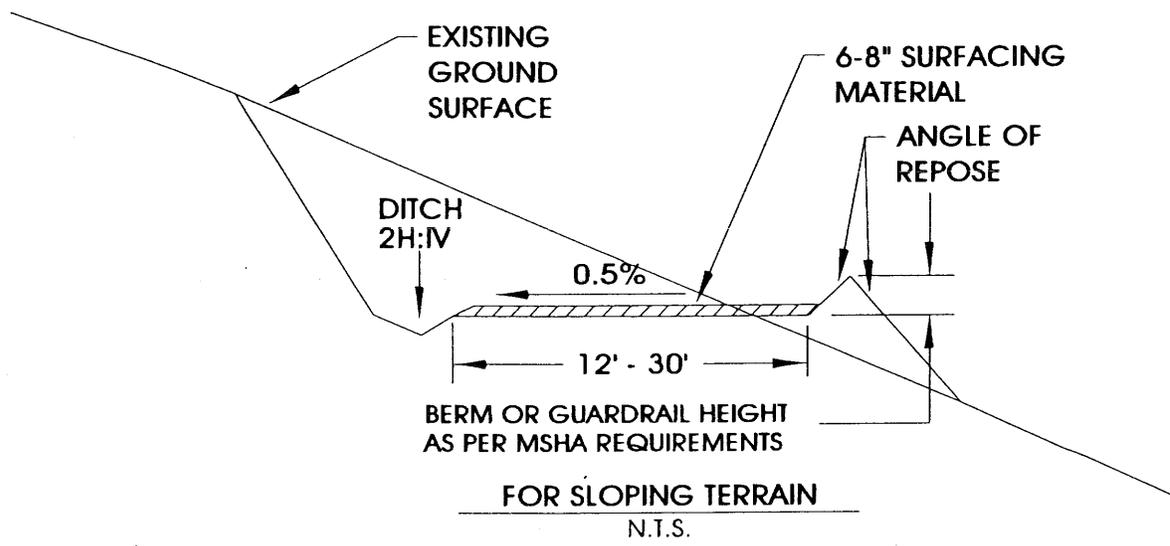
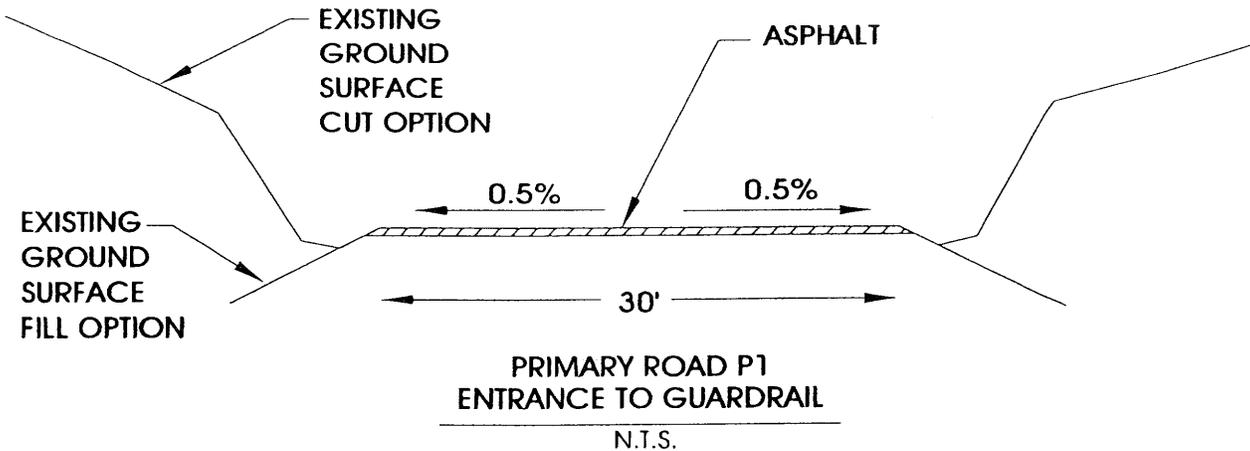
As an underground mining operation, the proposed mining and related activities will not result in generation of spoil materials. In addition, all related surface disturbance required for construction of the necessary surface support facilities has been carefully planned to balance material cuts and fills so that no excess material is generated. Since no excess spoil will be generated as a result of the proposed construction or operations activities, regulatory provisions relating to handling and disposal of excess spoil are not applicable.

Mine Openings

The proposed underground mining operations will require several mine openings which will provide underground access for personnel, equipment, and supplies; be utilized for conveyor haulage of both coal and limited quantities of mine development rock; and will serve as mine intake and return airways for ventilation of the underground mine workings. Mine openings required in conjunction with the currently proposed and anticipated future operations will include a 5 entry system.

Because the mine openings will provide long-term access for the proposed operations, they have been located and designed to facilitate effective access and assure long-term stability. As described in Section 4.5.2.1, General Description of Mine Construction and Development Activities, the mine portals will be developed in the Hiawatha Coal Seam using continuous miners and conventional room development (first mining) methods. The portal entries will be approximately 20 to 25 feet wide and 6 to 10 feet high. Appropriate sizing of the support pillars along with supplemental roof control, including roof bolts and other roof support systems, will provide for effective ground control and long-term stability of mine entries in the portal area. The portal entries will be protected from potential rock fall hazards by steel portal structures on concrete foundations which will provide a full protective canopy on the manway and belt entry portals.

Figure 4.5-3 Typical Primary Road Configuration



LEGEND

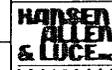


Carbon Resources LLC

KINNEY NO. 2 MINE

TYPICAL PRIMARY ROAD
CONFIGURATION

DRAWN BY: B.G. DATE: 1/08
APPROVED BY: G.H. DATE: 1/08



23 S. Carbon Ave., Suite 21
Price, UT 84501

FILE:

THESE ROAD CONFIGURATION SECTIONS ARE BASED ON THE GEOTECHNICAL INVESTIGATION RECOMMENDATIONS FOR CUT & FILL SLOPES, AND ON STANDARD ROAD DESIGN CRITERIA. DETAILED DESIGNS WILL BE FORTHCOMING UPON FINAL DESIGN OF MINE FACILITIES.

FIGURE 4.5-3

Maintenance of mine openings will involve regular inspections of the openings and surrounding surface areas, removal of any material or debris from the immediate area of the openings, and repair or replacement of ground control, protective structures, or other structures associated with the mine openings. Mine openings and the immediate surrounding areas will be kept clear of equipment, materials, and supplies, and no coal, mine waste, or potentially flammable materials will be placed or stored in the immediate vicinity.

Mine Development Rock

Mine development, ongoing mining operations, and ancillary operations such as development of overcasts for mine ventilation and coal haulage will result in production of mine development rock including carbonaceous shale, weathered coal, floor clay, and parting material. Where it is operationally feasible to separate these material from the coal during development and mining, the mine development rock will be removed and handled separately from the coal. Where separation is not operationally feasible, mine development rock will be handled with the coal and will be removed in the surface facilities, separated from the coal product and temporarily stockpiled until it can be returned to the mine as discussed previously.

As discussed previously, mine development waste consisting of a mixture of rock and coal materials will be temporarily stored at an area on the loadout pad as shown on Map 4.5.1.2-3, Surface Facilities. This material is not coal processing waste since no coal preparation plant is planned, however this material may not be saleable as regular coal product due to a high content of rock. The area designated is capable of containing approximately 3,900 tons of material. This material will be sold as a low quality coal product to local coal preparaion facilities, or will be deposited in other facilities permitted by the UDOGM.

Generally, the same mining equipment and haulage systems used for coal production will be used to remove and handle mine development rock. Continuous miners, electric shuttle cars, and LHD scoops may be used to load and haul mine waste to the mine conveyor system. Normally mine development rock haulage will occur on a scheduled rock handling shift when the conveyor belt system will be cleared of coal. Typically, any development rock produced during periods other than on a scheduled development rock handling shift will be temporarily stockpiled in an inactive area underground for later handling and haulage from the mine. Once the mine rock is placed on a belt at the loading point, it will be transferred to the main haulage belt running from the mine. From the main haulage belt, the mine rock will transfer to the surface coal haulage system which will carry the rock to the primary usher building.

The surface coal haulage system has been designed to facilitate mine development rock handling in two ways:

One; The stacking tube at the off spec coal stockpile can be emptied by a direct feed chute in its base allowing rock to bypass the coal stockpile and feed directly to Conveyor SB-3. In the primary crusher building a flop-gate and diversion chute will allow mine development rock to bypass the primary crusher and feed directly to the truck loadout where it can be transported to a segregated location on the off speck coal pile prior to returning the rock to the mine.

Two; Development rock may simply be dumped onto the off spec coal pile, via the flop gate atop the stacking tube, if circumstances are favourable. That is, if there is sufficient rock volume to warrant temporarily converting the entire off spec coal pile to a temporary development rock storage pile prior to returning the rock to the mine.

Noncoal Waste Disposal

Noncoal wastes generated in conjunction with mining and related activities will including but not limited to used oil and lubricants, garbage, paper waste, machinery parts, tires, cable, wood waste, and other miscellaneous debris. All smaller noncoal solid wastes will be collected and stored in dumpsters or similar closed containers. Larger solid waste materials including such items as used equipment, machinery parts, tires, and cable will be temporarily stored in designated sap yards located in areas as shown on Map 4.5.1.2-3, Surface Facilities Map. Dumpsters will be located primarily near buildings during mine operations, however, during construction they may be located throughout the disturbed area. Used oil will be handled according to Utah State and EPA requirements. Any waste other used oil and lubricants and any used oil not meeting the applicable EPA requirements will be collected and stored in either closed drums or in the waste oil storage tank located in the maintenance shop building. Temporary storage areas for used oil and lubricants will provide full containment to prevent accidental release of petroleum products to the surface drainage system.

CR does not currently plan or anticipate that any materials classified as "hazardous waste" will be utilized or generated in conjunction with the proposed mining and related operations. In the unlikely event that hazardous materials storage or disposal become necessary, CR will comply with all applicable storage, labelling, and documentation requirements, and disposal will occur off-site at a licensed hazardous waste disposal facility.

A contract disposal service will regularly collect and haul the noncoal solid wastes from the dumpsters to the permitted Carbon County municipal landfill, or to the East Carbon Development Corporation (ECDC) facility. Dependent on the market for sap materials, the larger noncoal solid waste and sap will be collected periodically either by a salvage contractor for salvage and recycling or by a contract disposal firm which will haul these material off-site and dispose of it in a suitable disposal site. Any used oil, lubricants, or other potentially combustible materials will be collected and either recycled or disposed of by a licensed disposal contractor in accordance with all applicable Utah and EPA regulations. No noncoal wastes will be disposed of on site during active operations.

Mine Ventilation

The primary mine ventilation fan will be large diameter blowing axial vane fans capable of delivering over 600,000 cubic feet per minute of fresh air to the underground mine workings. From mine working areas, exhaust airflow will be carried by bleeder, sub-main, and main entry exhaust airways discharging from the mine portals. The mine ventilation system has been designed using accepted mine ventilation design and engineering practices to meet all applicable MSHA requirements and provide for continuous effective ventilation of the active mine workings. Based on the planned extent of the mine workings, anticipated methane liberation and dust generation rates, and probable mining conditions the primary ventilation fan should provide adequate ventilation capacity for at least the first five years of mine development and production. Subsequent mine advance and expansion may require

development of additional ventilation facilities to assure continued effective airflow and ventilation of the underground workings.

Mine ventilation facilities will include steel fan doors, the primary ventilation fan and electric drives, fan control and monitoring systems, fan shroud structure with pressure relief panels, dual propane-fired fan heaters, the mine fan electrical substation, and propane storage tanks. The location and configuration of these structures are shown on Map 4.5.1.2-3, Mine Surface Facilities Map. Operation and maintenance of the mine ventilation system will involve regular inspection and monitoring of the ventilation fans and associated systems and structures to assure that they continue to operate at all times as designed and in compliance with applicable MSHA requirements. The mine fans will be controlled and monitored by automated systems which will provide a warning of any fan malfunctions.

Mine Drainage Control and Dewatering

As described in both Sections 3.7.2, Ground Water Information, and 4.5.2.2, General Description of Mine Plans, Mining Methods, and Related Design Requirements, potential mine inflows are expected to be minimal and there will be sufficient storage capacity in both the existing abandoned underground mine workings and in inactive working areas that transfer of mine drainage to the surface water system is unlikely.

Coal Handling Systems and Facilities

The coal handling system will consist of both the underground coal haulage system and the surface coal handling components which will transfer the coal from the mine to the truck loadout. Components of the surface portion of the coal handling system are shown on Map 4.5.1.2-3, Mine Surface Facilities Map and include the following:

- Conveyor SB-1
- Conveyor Transfer Tower
- Conveyor SB-2
- Non-Spec Coal Pile & Stacking Tube
- Conveyor SB-3
- Spec Coal Pile & Stacking Tube
- Conveyor SB-4
- Screening & crushing Building
- Sediment Pond Road – Primary P6
- Truck Loadout Building
- **Development Waste Temporary Storage Area**

Design - The coal handling system has been designed using the best current technology and accepted engineering practices to provide the coal and mine development rock carrying capacity to readily handle the maximum projected mine production volumes with sufficient excess carrying capacity to handle potential surges in system feed rates. System design also provides the storage capacity to address any normal fluctuations in coal production, shipping schedules, or market demand and reflects the design and construction considerations necessary to minimize potential adverse environmental impacts, including but not limited to minimizing erosion and additional contributions of sediment to surface runoff.

The Surface Coal Haulage System which consists of:

The MB-1 conveyor discharge onto the tail loading section of SB-1 located in the transfer tower. MB-1 will be elevated to accommodate mine vehicle and equipment traffic to pass beneath it where MB-1 it exits the mine and will be enclosed to mitigate airborne dust and spillage onto the roadway. From MB-1 coal will be transferred to a series of 42" overland surface conveyors beginning with SB-1. At the transfer building, a coal sampling system will be installed between the head pulley of MB-1 coming from the mine and the tail pulley of SB-1 that will transfer coal overland to conveyor SB-2 located in the enclosed Conveyor Gallery atop the two stacking tubes. Depending on whether ROM product is determined to be spec coal or non-spec coal Overland Conveyor SB-1 will divert discharge ROM coal through a flop-gate to direct the segregation to the appropriate stockpile stacking tube (i.e., spec or off-spec).

ROM Coal will be reclaimed using programmable vibrating apron pan feeders via Reclaim Conveyor SB-3. The design capacity of the non-spec coal stockpile is 17,000 tons and is separated from the spec coal pile with a 10 ft high concrete wall. Similarly, design capacity for the spec coal stockpile is also 17,000 tons total capacity with a practical 12,000 tons live capacity with equipment. The off spec pile will accommodate classification and sorting of 6,000 tons on either side of a dividing wall using a front end loader or dozer to sort coal from rock into the feed area for either of the two apron feeders that reclaim from the off-spec pile.

The off-spec pile will be managed and reclaimed so that rock and coal is kept segregated by size and type in the pile as much as practicable for product blending through ratio feeding at the apron feeder and/or rock disposal using dozers, front end loaders, grizzlies for classification and sorting, with common surface coal handling equipment.

Coal will feed to Reclaim Conveyor SB-3 from vibrating pan feeders located in a reclaim tunnel beneath the ROM stockpiles. Spec coal and non-spec coal will be delivered by conveyor SB-3 to a primary double deck vibrating screen that will screen oversize material of 8" - 2" to a primary crusher that will reduce coal to a nominal 2" minus size. Coal from the crusher will pass to conveyor SB-4. Coal that passes the screen at 2" minus will be diverted from the crusher by a chute to conveyor SB-4. Conveyor SB-4 will transport 2" minus coal to the truck load out structure.

Construction - Construction of the coal handling system will involve excavation and grading to establish the conveyor alignment; excavation and grading of the spec coal, and non-spec stockpile area; construction of conveyor support structure, stacking tubes, and reclaim tunnel foundations; erection and installation of modular conveyor support structures, idler support frames, feeders and chutes, and transfer points; and installation of conveyor drives, take-ups, idlers, belting, covers, control systems, and dust control equipment. The conveyor alignment, and other facilities will be as shown on Map 4.5.1.2-3, Surface Facilities.

The conveyor components including support structures, idlers, take-ups, drives, belting, covers, transfer points, and dust control components will be standard off-the-shelf components supplied by major conveyor manufacturers. Support structures, take-ups, drives, and transfer points will be mounted on either poured concrete footing or spread footings as appropriate based on the nature of the installation and site conditions. Conveyor covers will be conventional half-shell covers which bolt onto the conveyor framework and are removable for maintenance access and all transfer points will be

partially or fully enclosed and will incorporate water sprays or surfactant applicators to control fugitive dust emissions. All conveyors have been designed and will be installed to provide adequate clearance for passage of big game animals under the conveyor support structures.

Operation - The underground coal handling system will transport the coal from the working sections to the coal stacking tubes. The underground coal haulage system will consist of 42 inch section and panel conveyors with a capacity of 1,200 tons per hour. The main haulage conveyor will carry the coal to the surface where it makes one transfer to Conveyor SB-1 which will then transfer the coal to the coal stacking tubes. Depending on if the ROM product is spec coal or non-spec coal Overland Conveyor SB-2 will discharge ROM coal through a flop gate directly to the non-spec coal stockpile stacking tube or onto conveyor SB-3 that will discharge spec coal into the spec coal stockpile stacking tube. The coal stacking tubes will be pre-fabricated structural steel or reinforced concrete mounted on reinforced concrete foundations directly adjacent to the reclaim tunnel. Openings in the sides of the stacking tubes will have flexible covers and discharge coal to create a conical ROM coal stockpile surrounding the stacking tubes. The ROM coal reclaim tunnel will be constructed of cast in place reinforced concrete with a 48" diameter buried culvert which daylight from the rear of the tunnel for emergency egress to the outside and as well as for ventilation to the reclaim tunnel. The reclaim tunnel will be equipped with vibrating apron-type pan feeders to discharge ROM coal from the stockpiles to the reclaim conveyor belt SB-3. A coal sampling system between MB-1 and SB-1 will be provided at the transfer structure to verify spec and non-spec coal. Spec and non-spec coal will be stored in separate stockpiles.

Four vibrating apron feeders in the reclaim tunnel directly under the coal stockpiles will serve as the blending mechanism for the mine whereby spec coal and non-spec coal will be drawn from the spec coal stockpile and the non-spec stockpile in proportioned quantities as specified by a Programmable Logic Control System (PLC) designed for this operation. At times ROM coal blending will not be utilized whereas the vibrating pan feeders under the non-spec coal stockpile will not be operated. With the versatility of feed rates from these feeders coupled with the PLC any combination of spec and non-spec coal can be delivered to screening, crushing and truck load out.

At times mine development rock from the mine will be hauled from the workings using the conveying system. Development rock material would be directed to a portion of the non-spec coal stockpile using the coal conveying system where it will be culled from the stockpile into haul trucks using a front end loader. The coal haulage system will direct ROM coal to the spec coal and non spec coal stockpiles where it will be reclaimed using programmable vibrating pan feeders and Reclaim Conveyor SB-4. The design capacity of the non-spec coal stockpile will be 17,000 tons. Design capacity for the spec coal stockpile will be 17,000 tons.

The surface coal handling system will transport the coal from the stacking tubes to the crushing and screening building using conveyor belt SB-3 where the coal will be sized to product size, generally $\frac{3}{4}$ " minus. This system will also provide for the handling of mine development rock material resulting from ongoing mine development and production operations. Coal will feed to Conveyor SB-4 from vibrating feeders located in a reclaim tunnel beneath the coal stockpiles. Conveyor SB-4 will carry the coal to the truck loadout, which will in turn load the coal into trucks.

All surface coal handling conveyors will be 36 inch conveyors with a capacity of 1,000 tons per hour. Operation of the surface coal handling system is graphically illustrated by Figure 4.5-4, Coal Handling Flow Sheet.

Maintenance - Maintenance of the coal handling system will include regular inspect and repair of conveyor belts, support structures, transfer points, drive components, and dust control systems; lubrication of idlers and drive components; adjustment of belt take-ups to maintain proper belt tensions; periodic replacement of critical conveyor components under a regular preventative maintenance program; and periodic cleanup of any coal or waste spillage at feed points, transfer points, and under the conveyors.

Coal Stockpiles - Two separate coal stockpiles will be utilized in conjunction with the proposed mining and related operations; the 12,500 ton spec coal stockpile, and the non-spec coal pile which is designed to be 9,500 tons. The coal stockpiles have been designed to provide storage and surge capacity to accommodate anticipated normal fluctuations in coal production, coal blending, shipment schedules, minor market fluctuations, and any unanticipated temporary shutdowns of components of the coal production, handling, and processing systems. The coal stockpiles have been located and designed to minimize potential adverse environmental impacts including but not limited to fugitive dust emissions, and sedimentation due to drainage from the piles or pile areas. Both coal stockpiles reflect similar design with the coal delivered to the pile by Conveyor SB-1 and SB-2.

The adjacent cut slope east of the spec coal, and non-spec coal stockpiles will not be vegetated so that coal can be pushed back against the slope to provide additional storage capacity when necessary. The coal stacking tubes will be pre-fabricated concrete or reinforced steel tube mounted on a reinforced concrete foundation with a direct discharge chute in its base. Openings in the sides of the stacking tubes with flexible covers will create conical coal stockpiles surrounding the tubes. The coal reclaim tunnel under the stacking tubes will be a sub-grade reinforced concrete structure supporting vibratory feeders which will draw coal from the base of the piles and feed it through gaged feed chutes to Conveyor SB-3.

Operation and maintenance of the coal stockpiles will involve controlled discharge to the piles and movement of coal within the pile using tracked dozers or wheel loaders to keep the coal within the defined pile limits, maximize storage capacity when necessary, and provide for effective feed to the reclaim points. Coal piles will be periodically inspected for any excessive oxidation or burning coal and if any is found it will be separated from the main stockpile and extinguished either by burying the coal with dirt or by using a mine water truck to spray the coal with water.

Coal Crushing - Spec coal and non-spec coal will be delivered by conveyor SB-3 to a primary double deck vibrating screen in the crushing and screening building that will screen oversized material of 8" - 2" to a primaryusher that will reduce coal to a nominal 2" minus size. Coal from theusher will pass to conveyor SB-4. Coal that passes the screen at 2" minus will be diverted from theusher by a chute to conveyor SB-4. Conveyor SB-4 will transport 2" minus coal to the truck load out structure. Planned operation of the surface coal handling system from the mine portal to the truck load out is graphically shown on Figure 4.5-4A, Coal Handling Flowsheet, and Figure 4.5-4B, Schematic Elevation Looking East.

Maintenance - The coal crushing and screening process is controlled and monitored by an automated process system which adjusts and maintains flow rates and monitors each component of the system to assure maximum coal recovery and identify any system malfunctions in a timely manner. In addition to the automated control and monitoring system, CR will have a regular inspection and preventative maintenance program for the crushing and screening facilities and equipment which will include regular inspection, clean-up, lubrication, repair, and periodic replacement of critical operating components. Potential fugitive dust emissions from crushing, stockpiling, and conveying will be controlled by partial or full enclosures on all transfer points and at theusher, by baghouses, or water sprays or surfactant applicators, sub-grade coal reclaim systems, and the use of stacking tubes in stockpile areas.

Loadout Facilities

The coal product from the coal crushing and screening building will be transferred to the truck loadout facility which will weigh the coal and load it into trucks for delivery to utility, industrial, and other coal users. The truck loadout facility is designed to load on road coal trucks for transport to market. Conveyor SB-4 transfers 2" minus coal from the screening and crushing building where it is discharged through a flop gate chute to (2) 50 ton coal silos. The truck loading facility is designed to allow the loading of double tandem coal trailers. Coal will be discharged directly to the trailers. Operation of the coal loading facility will be connected to the surface facilities Control Instrumentation and PLC that will include load cells at the coal silos to regulate surge capacities at the loading facility. Discharge and loading of the coal will be provided by the drivers of the coal haul trucks. Coal will discharge from the silos to the trucks through a regulated discharge telescoping chute that will extend to the top of the truck trailer to provide controlled loading and contain fugitive dust. The truck loading facility will allow for truck traffic to pass around and under the load out silos for loading.

Support Structures and Facilities

A number of structures and facilities will be required to support the proposed mining and related operations. These structures and facilities will generally be used to provide storage, maintenance, and support services for mine personnel, equipment, and materials and supplies and will specifically include the following:

- Storage Sheds – 5 each
- Shop – Warehouse
- Fueling Facility
- Mine Office – Bathhouse
- Water Tank
- Electrical Substation
- Explosives Magazine
- Explosives Cap Magazine

These structures and facilities are shown on Map 4.5.1 .2-3, Mine Surface Facilities Map, and are described in the following sections.

Figure 4.5-4A Coal Handling Flow Sheet

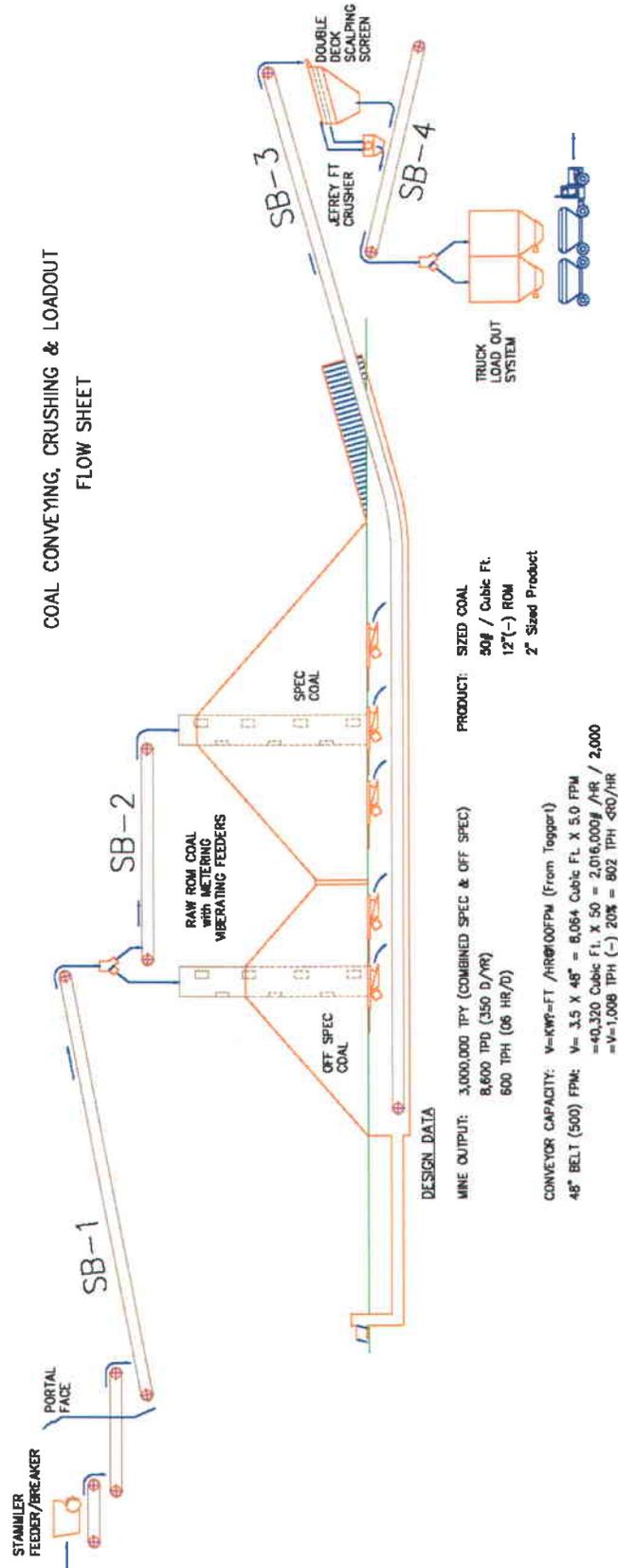
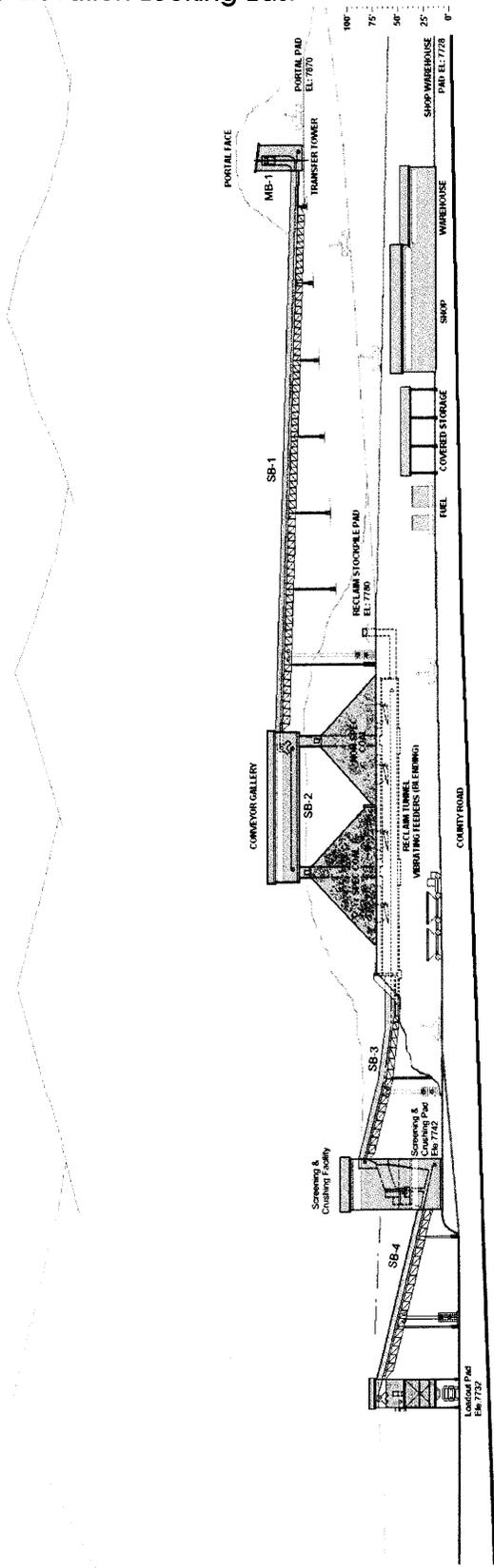


Figure 4.5-4B Schematic Elevation Looking East



SCHEMATIC
 Scale is Approximate
SITE ELEVATION LOOKING EAST

+++++
 0' 25' 50' 75' 100'

Design and Construction - All support facilities are located within or in close proximity to the associate operations areas. Mine support buildings are steel frame buildings with concrete footers, spread footings, or slab foundations and metal exterior walls. These buildings have been designed for ease of erection, long-term structural integrity, and minimal maintenance. To the extent possible, building locations, configuration, and exterior colors have been selected to minimize visual contrasts with surrounding natural areas.

Building construction will generally involve grading and preparation of foundation areas, excavation and installation of foundations, building erection, interior and exterior finish work, and connection of utilities. Storage areas will generally be open graded areas providing outside storage for miscellaneous large parts and supplies. Both building sites and storage areas will be graded to assure effective drainage, with drainage from these areas flowing to the designed disturbed area collection ditches previously described in the sub-section titled Drainage and Sediment Control Structures. Due to the anticipated level and frequency of use, employee parking areas adjacent to the Administration/Bathhouse building will be surfaced with asphalt paving materials and other frequent use areas including the area around the maintenance shop and warehouse facilities will be surface with gravel or similar durable granular material.

Operation and Maintenance - General operation and maintenance of support structures and facilities will involve regular grading of facility areas and inspection, cleaning, and repairs as required. In addition to the equipment required for mine production operations the following equipment will be utilized for surface support, maintenance and general utility use:

- Tracked dozers
- Wheel loaders
- Rear dump trucks
- Motor grader
- Water truck
- Street Sweeper
- Fork lifts
- Skid steer loaders
- Mobile cranes
- Bucket truck
- Fuel/Lube truck
- Air compressors
- Welders
- Generators

Specific operation and maintenance requirements for individual facilities are described in the following descriptions of individual facilities.

Description of Individual Structures - The following sections provide more detailed information for specific support structures and facilities:

Office-Bathhouse Building - The Office-Bathhouse building will provide office space for mine management, accounting/payroll, engineering, environmental, production, and safety staff; meeting and training rooms; and shower and changing facilities for mine employees. The

Office-Bathhouse facility will be a two-story steel frame building approximately 60 feet wide by 160 feet long and 30 feet high at the peak of the roof with concrete slab floor and steel siding and roof. An asphalt paved parking area will be provided on the pad for the building. The configuration and layout of the Office-Bathhouse facility is illustrated by Figures 4.5-5A through 4.5-5D, Office-Bathhouse Building.

Maintenance Shop Facility - The Maintenance Shop facility will be located immediately adjacent to the mine portals in the portal area and will provide cleaning and repair facilities for both underground production and surface support equipment. The Maintenance Shop will be a steel frame building with reinforced spread footing foundation and heavy reinforced slab floor, and steel siding and roof. The main shop building will be approximately 75 feet wide by 175 feet long and 32 to 42 feet high at the roof peak. The configuration and layout of the Maintenance Shop is illustrated by Figures 4.5-6A through 4.5-6C, Warehouse & Shop Facility. The Maintenance Shop will include the following service and support areas:

- Drive-in equipment wash bay and clean-out sump
- A split bay for light vehicle and small equipment maintenance
- Welding bay
- Electrical repair bay
- Belt repair bay
- Machine shop
- Battery charging area
- Maintenance office, computer area, and restrooms
- Waste oil heating boiler
- Compressor room
- Storage area for waste oil, fuel oil, and mixing tanks
- Bulk oil and lubricant storage area
- Metal storage area
- Equipment fueling station

Equipment coming into the shop for periodic preventative maintenance, repair, or rebuild will first be washed in the wash bay. The wash bay may have both fixed spray heads and flexible high pressure hoses to clean coal, dirt, grease and oil from the equipment prior to equipment inspection, maintenance, and repair. Drainage from the wash bay will go to collection sump which has been designed to collect oil and grease. A float operated pump will transfer water from the decant sump to the portal area collection sump which will also be equipped with an oil skimmer.

Within the Maintenance Shop, all petroleum products including oil, hydraulic fluid, grease and other lubricants, and used oil will be handled by a pressurized collection/distribution system running through the shop facility. Oil, hydraulic fluid, and lubricants will be stored in bulk in large tanks within storage containment areas and will be distributed to hose reel systems in each repair/maintenance bay area. Any parts washing stations will use non-toxic citrus-based solvents and uses only propylene glycol based anti-freeze so handling and disposal of these materials is not a concern. Used oil will also be collected in each bay by a negative pressure hose system with the used oil being transferred to used oil storage tanks in a storage containment area and then handled and disposed of according to Utah and EPA requirements.

There will be two separate used oil storage and feed tanks with all used oil from the shop going to one designated tank. Once the storage tank reaches capacity it will be sampled and tested for compliance with applicable EPA standards for waste oil. Any used oil which does not meet used oil specifications will be collected by a license contract disposal firm and hauled off-site for recycling or proper disposal. All petroleum storage tanks will be located within curbed concrete containment areas providing sufficient containment capacity for the entire contents of the largest storage tank within the containment area. Storage tanks, associated piping, and containment areas will be inspected on a regular schedule for any deterioration, damage, leakage, spills, or water accumulations. Any problems will be promptly addressed with repairs, replacement, recovery of spilled product, and removal of any accumulated water. Any water accumulations which contain petroleum residues will either be recovered and transferred to the wash bay sump or will be recovered by a licensed disposal contractor.

Warehouse Facility - The Warehouse facility will provide storage for small equipment parts and operating supplies. The warehouse will be in conjunction with the Shop building. The configuration and layout of the Warehouse is illustrated by Figure 4.5-6A through 4.5-6C, Warehouse & Shop Facility. Larger equipment parts and supplies such as mine timbers, cable, culvert, and roof bolts will be stored in the equipment storage areas and drum lubricants and tires will be stored in a covered storage area near the Maintenance Shop.

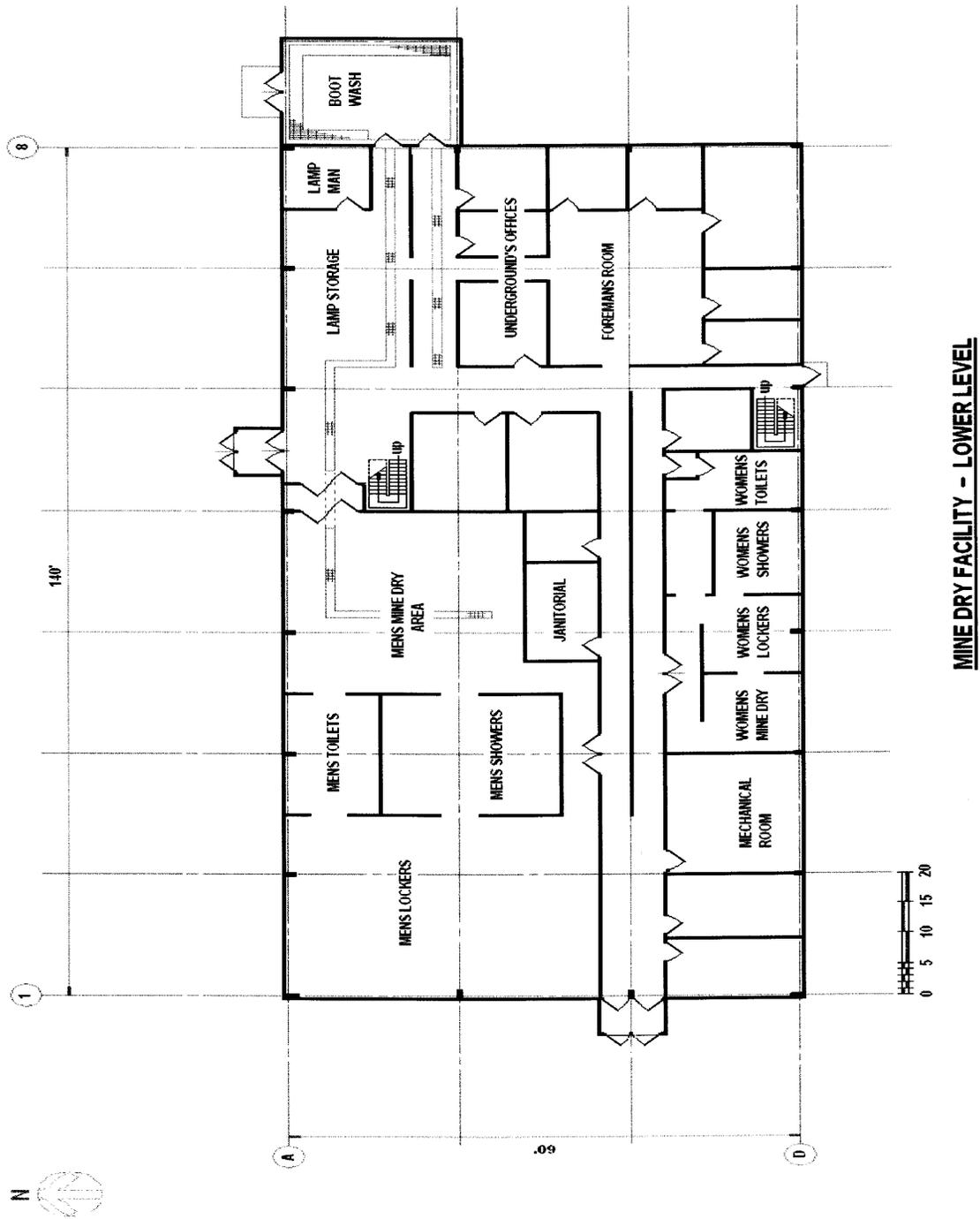
Utilities

The proposed mining and related operations will utilize new utility installations including electrical distribution, telephone, potable and raw water, and sewer systems. The proposed underground mining and related surface disturbance activities have been planned, designed, and will be conducted in a manner which minimizes the potential for damage or destruction of utility installations, or disruption of services provided by those utilities existing within the permit area unless otherwise approved by the owner of the utility.

Heat for the buildings will initially be provided by propane, and may be converted to more cost efficient natural gas if it becomes available.

All existing and proposed utility installations are shown on Map 4.5.1.2-3, Mine Surface Facilities Map. It should be noted that all utilities either are or will be owned, constructed, operated, and maintained by the respective utility companies up to the actual point of service which in the case of electricity will be the main mine substation and in the case of telephone, potable water, and sewer service will be to the metering point which will be located at the mine permit boundary line.

Figure 4.5-5A Office - Bathhouse Configuration



MINE DRY FACILITY - LOWER LEVEL

Figure 4.5-5B Office - Bathhouse Configuration

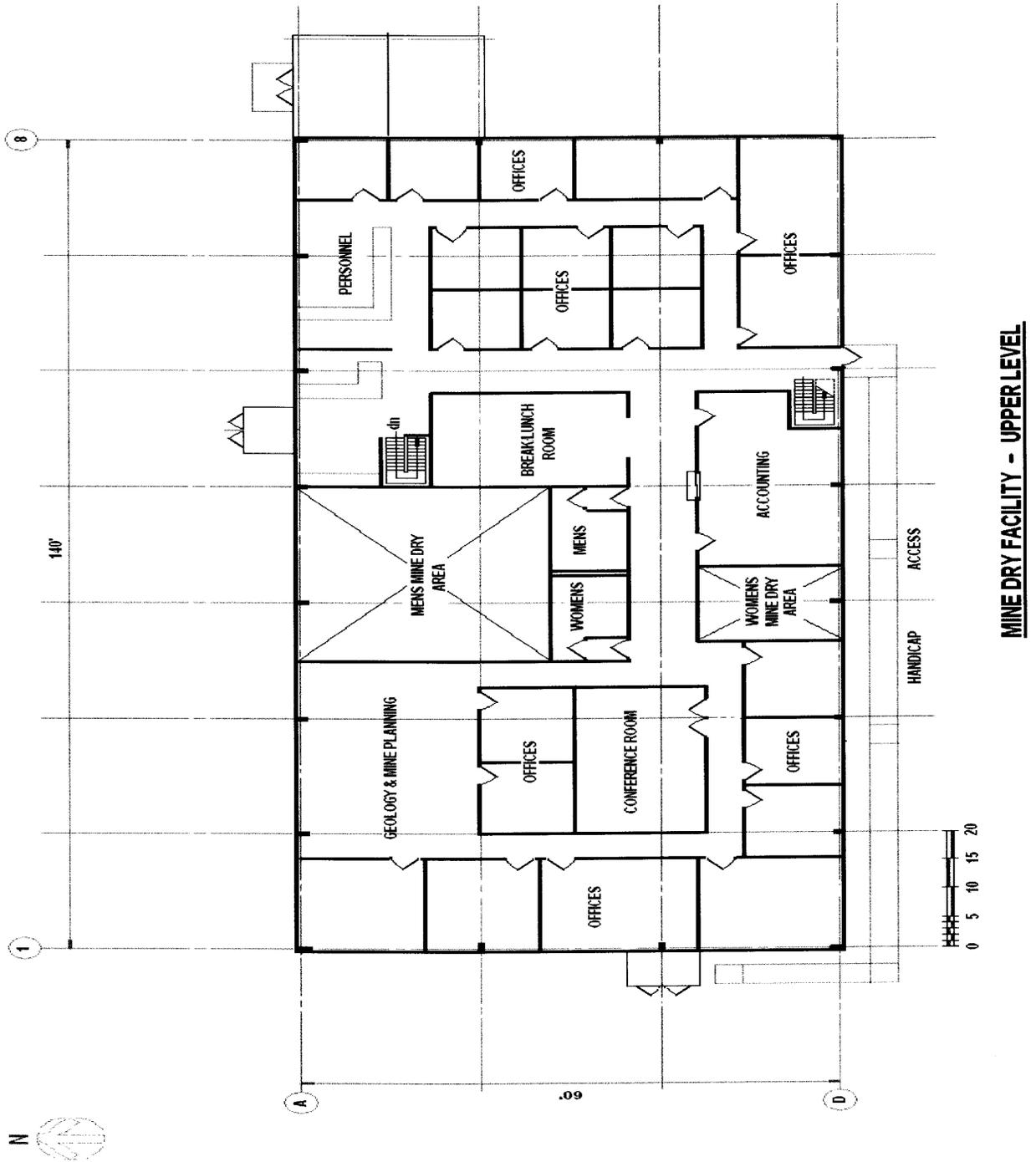
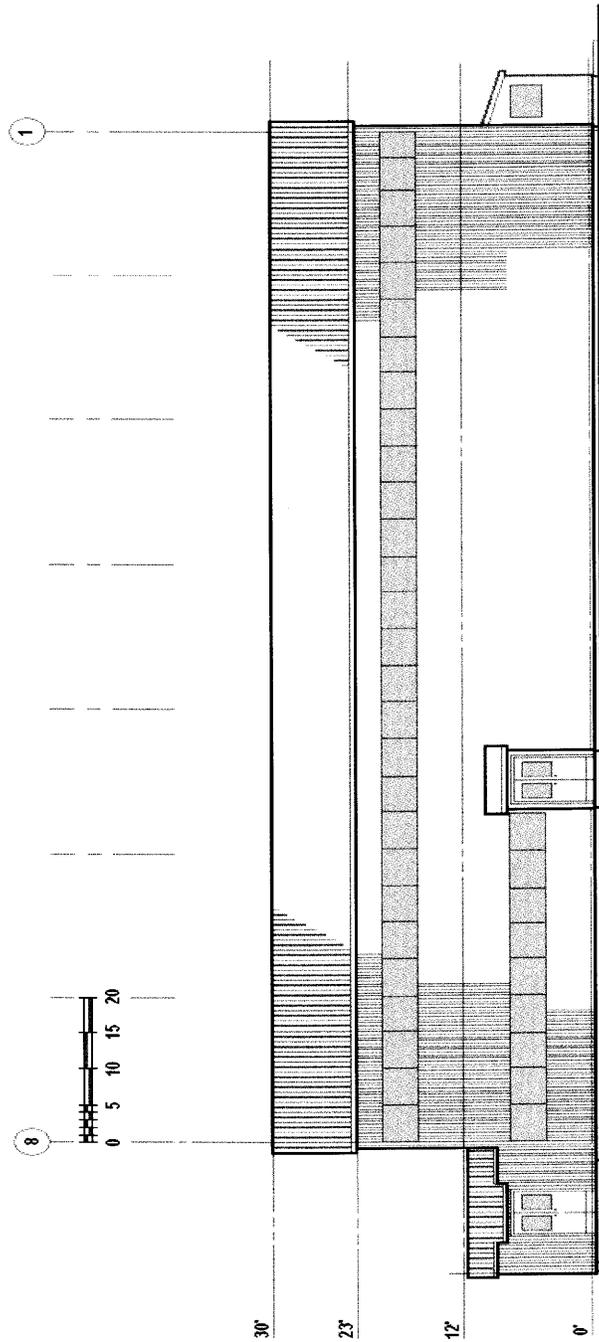
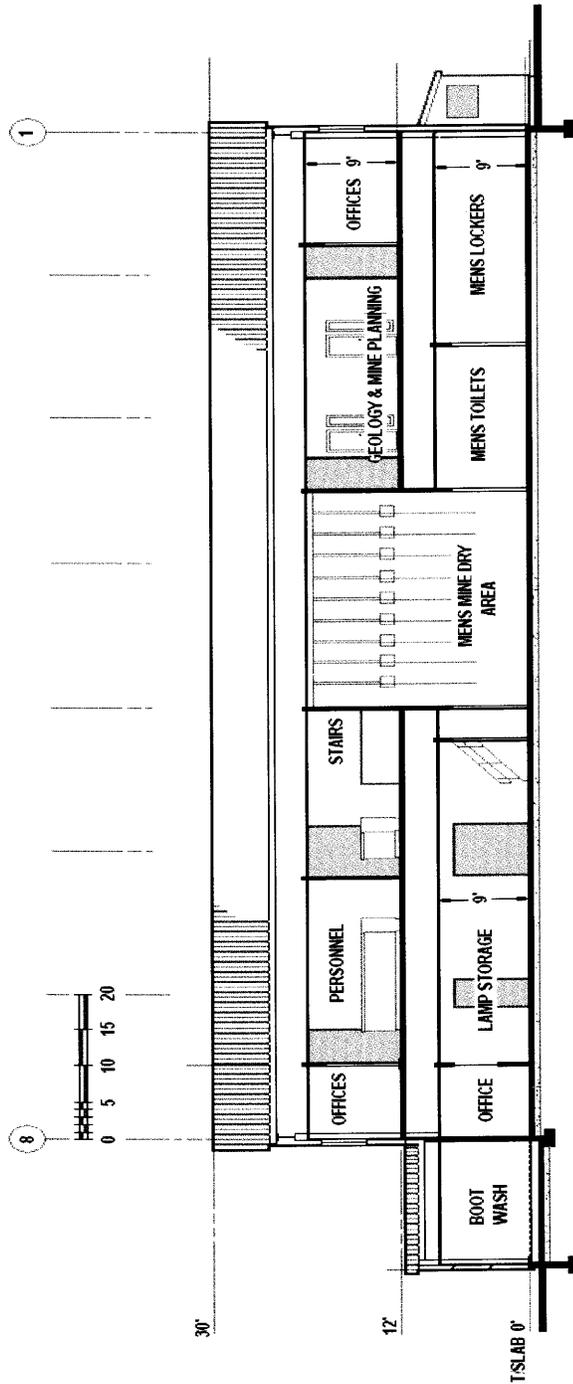


Figure 4.5-5C Office - Bathhouse Configuration



MINE DRY FACILITY - NORTHEXTERIOR ELEVATION

Figure 4.5-5D Office - Bathhouse Configuration



MINE DRY FACILITY - BUILDING SECTION

Electrical Systems – Electrical power for the mining operation will come from an existing power line running north-south immediately east of the portal area; this power line is shown on Map 4.5.1.2-1, Regional Surface Ownership Map, and on Map 3.4.1.4-1, Regional Land Use Map. Electrical voltage will be reduced from the existing power line at a substation located at the Portal Pad as shown on Map 4.5.1.2-3, Surface Facilities. The new substation to be owned, constructed, and operated by PacifiCorp. The mine substation will, in turn, feed the mine fan, the surface coal handling system, the underground mine electrical system, and the other surface facilities.

All proposed electrical components have been designed and will be constructed and operated in accordance with accepted engineering practice and in full compliance with all applicable regulatory provisions. Any new powerlines will be constructed with "raptor-proof" power poles as shown by Figure 4.3-1, Typical Raptor-Proof Power Pole Configuration, to minimize the potential for electrocution of raptors and other large birds. All substations, electrical transformers, switchgear, and electrical control components will either be located so that it is not readily accessible to either wildlife or the public or appropriate fences with locked gates or other enclosures will be utilized to limit access to authorized personnel. Where appropriate, signage identifying and warning of electrical hazards will be posted and maintained.

Telephone Lines - Buried or overhead telephone lines will be extended by US West from Highway 96 to provide telephone service for the mine facilities.

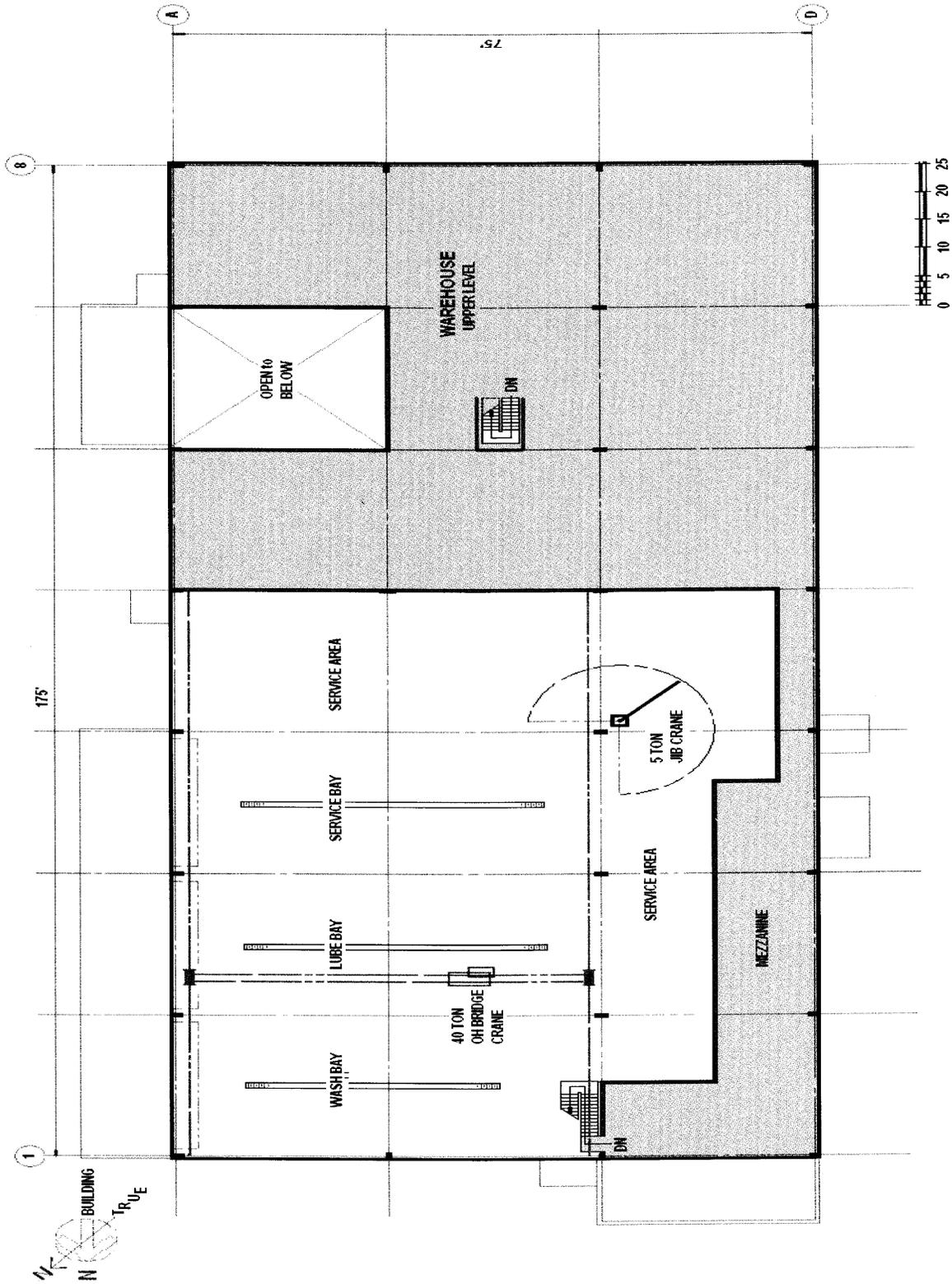
Water and Sewer Systems - Potable water, raw water, and sewer connections will be provided by Scofield Town. The connection points for water and sewer to the mine site are shown on Map 4.5.1.2-3, Surface Facilities, and are located at the south side of the permit boundary just south of the Mine Office building.

Mine water and a reserve water storage supply for emergency fire-fighting purposes will be stored in a 50,000 gallon mine water storage tank located near the north end of the Portal pad. This tank and the associated water system will be supplied by Scofield Town. Water supply, use levels, and water rights consideration are addressed in greater detail in Section 4.7, General Description of Hydrologic Protection Plans.

Signs and Markers

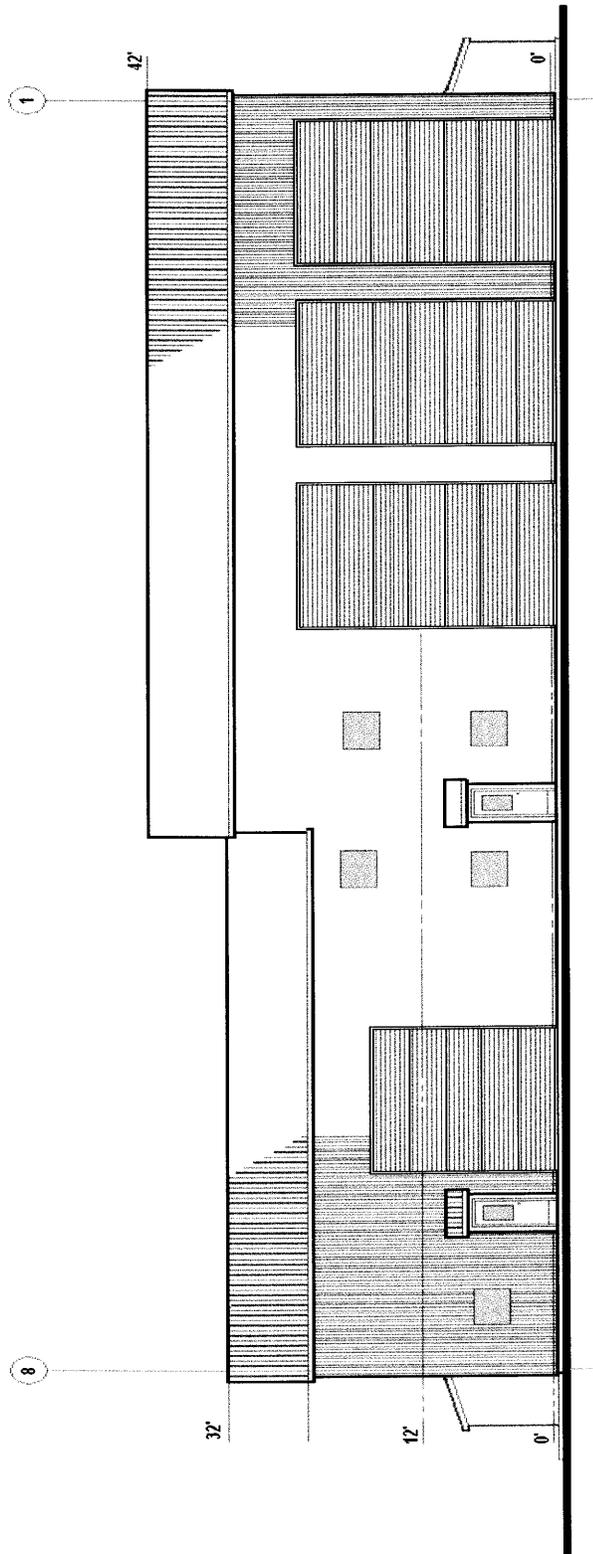
CR will post and maintain all required signs and markers in compliance with applicable regulatory provisions of Rule R645-301-521.200. Signs and markers will be constructed of durable materials and will be posted so as to be clearly visible. Mine identification signs listing the name, business address, and telephone number of the permittee and the permit number for the permanent program permit authorizing mining and reclamation operations will be posted at each point of access to the permit area from a public road. Perimeter markers will be posted outlining all areas affected by surface operations or facilities prior to initiation of mining, and soil/substitute stockpiles will be clearly marked for identification and to limit access and potential disturbance. Signs reading "Blasting Area" will be posted along the edge of any blasting area which comes within 100 feet of any public road right-of-way and at the point where any other road(s) provides access to the blasting area. All required signs and markers will be maintained or replaced during the period of active operations, site reclamation, and until final bond release is approved for all areas within the permit boundaries.

Figure 4.5-6A Warehouse & Shop Configuration



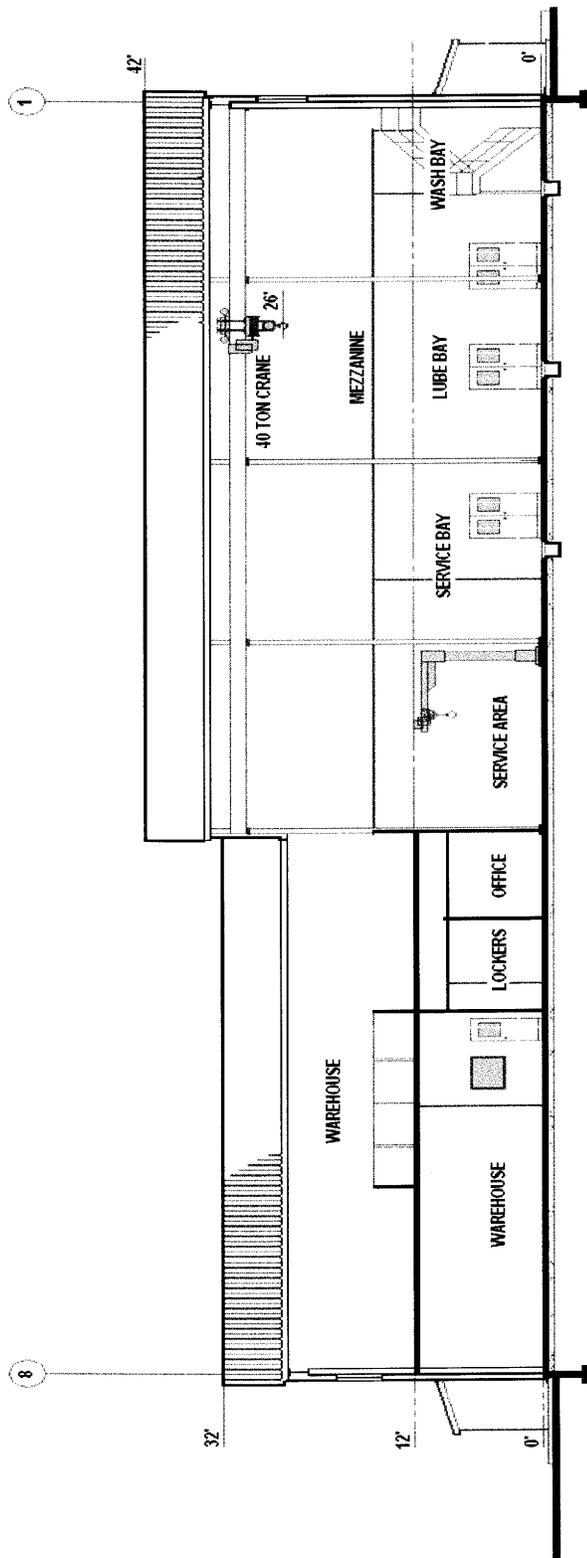
WAREHOUSE & SHOP FACILITY - UPPER LEVEL

Figure 4.5-6B Warehouse & Shop Configuration



WAREHOUSE/SHOP - EAST EXTERIOR ELEVATION

Figure 4.5-6C Warehouse & Shop Configuration



WAREHOUSE/SHOP - BUILDING SECTION

4.5.2.4 Temporary Cessation

Designs and plans for the proposed mining and related operations are based not only on geologic, environmental, and engineering information but also on existing coal contracts and conservative projections of future coal market demand. Given this consideration, CR does not anticipate any temporary cessation of the proposed mining operations prior to the end of the projected mine life. In the unlikely event that temporary cessation of operations becomes necessary, the mine surface facilities would be secured to minimize potential public health and safety hazards and to prevent or minimize potential related adverse impacts on the environment. Specifically, entrances to the mine, mine facilities, and loadout facilities would be barricaded and locked, buildings, equipment, fuel storage facilities and other support facilities would be locked and the site would be put on extended maintenance and care status until operations could be reactivated or a decision is made to permanently close the operation. In order to prevent unauthorized access to underground mine workings during any period of temporary cessation, mine openings including the mine portals and ventilation shaft will be secured by locked barricades. Dependent on the anticipated period of temporary closure, access to mine portals would be restricted by either temporary concrete block walls or fabricated locking metal gates. Maintenance and care status would involve the use of mine or contract security personnel to control site access, regularly inspect the site to identify any hazardous conditions, and conduct routine maintenance and repair to prevent significant deterioration or damage to the existing structures and facilities.

If, for any unanticipated reason, temporary cessation of mining and/or reclamation operations for a period of 30 days or more becomes necessary, CR will submit a notice of intention to UDOGM to temporarily cease or abandon operations. The notice will include a statement of the exact number of acres which have been disturbed prior to cessation, the nature and extent of any reclamation completed, and any reclamation, environmental monitoring, water treatment, or other activities which will continue during the period of temporary cessation.

The mine site provides access to private property to the north and east, therefore, the private property owners involved will have keys to the site gates to access their property during any cessation period, and during the reclamation bond period. Roads have been designed into the reclamation plan for post mining land use to allow the private property owners access.

6.1 BONDING INFORMATION

6.1.1 General Bonding Information

This section defines the requirements for filing and maintenance of performance bonds, addresses requirements for determination of bond amounts, identifies acceptable bond forms and required bond terms and conditions, describes requirements for replacement of bonds, and defines specific actions and requirements for bond release. Information in this section was developed in accordance with applicable regulatory requirements (R645-301-800) for coal mine permitting in the State of Utah.

6.1.2 Applicable Regulatory Sections Addressed

Specifically, this section addresses Rules R645-301-820 through 880.932. The following cross-references headings and corresponding information presented in this section to the applicable regulatory provisions:

<u>Permit Section</u>	<u>Applicable Regulatory Provisions</u>
6.1.1	General Introductory Information
6.1.2	General Introductory Information
6.1.3	R645-301-820.100 through 352
6.1.4	R645-301-830.100 through 500
6.1.5	R645-301-840.100 through 520
6.1.6	R645-301-850.100 through 320
6.1.7	R645-301-860.100 through 380
6.1.8	R645-301-870.100 through 200
6.1.9	R645-301-880.100 through 932
Maps	None
Exhibits	R645-301-830.100 through 300

6.1.3 Requirement to File a Bond

After approval but prior to issuance of the mining permit, CR will file a reclamation bond payable to UDOGM. The bond will be provided on a form prescribed and provided by UDOGM and will be conditioned on faithful performance of the permit plans, and applicable

requirements of the State of Utah Coal Mining Rules. As an underground coal mining operation, the bond will cover long-term surface facilities and structures and surface disturbance areas associated with the mining and related activities. Bond coverage may be for a specific term but will be maintained to provide continuous bonding coverage over the entire period of active mining and reclamation and for the extended liability period following completion of reclamation. Under the bond, CR's liability will be limited to those obligations or commitments under the approved permit specifically including reclamation of surface disturbance to return the land to a condition and productive capacity capable of supporting the approved postmining land use.

6.1.4 Determination of Bond Amount

Under Rule R645-301-830.120, the bond amount will depend on the requirements of the approved permit and reclamation plan. Consistent with this requirement, bond reclamation calculations do not accompany this initial permit application submittal. Once UDOGM has had opportunity to review and comment on the permit application and reclamation plan and any related issues have been effectively resolved, CR will proceed with preparation of a detailed bond reclamation cost estimate. This estimate, which will be submitted to UDOGM for insertion in Exhibit 5.4.3-1, Bonding and Insurance Information, will be based on the approved reclamation plan; reflect the anticipated level of effort required to reclaim all surface disturbance given site topography, geology, hydrologic conditions, revegetation potential, and other relevant factors; and will reflect any appropriate inflation factors to address potential increases in reclamation cost over the permit term.

Generally, the method used in calculating the bond reclamation cost estimate is consistent with the guidance provided by the Handbook for Calculation of Reclamation Bond Amounts (USDI-OSMRE, [latest version]) and will involve the following sequential steps:

- Determine the maximum disturbance scenario relative to reclamation requirements
- Identify, delineate, and determine disturbance area acreages
- Determine required reclamation functions and sequencing
- Calculate material handling requirements and volumes
- Delineate haulage routes and determine material haul or push distances
- Select and specify appropriate reclamation equipment
- Calculate equipment productivities
- Calculate equipment and manpower schedules and project time requirements
- Develop equipment, labor, material, demolition, and revegetation unit costs
- Calculate project profit and indirect, overhead, management and other costs
- Develop cost summary for total estimated bond reclamation cost
- Develop and present bond reclamation cost estimate documentation including description of methodology, summary calculations, and supporting volumetric, productivity, and cost data

With the exception of the text description included in the summary report, reclamation calculations will be developed and presented in computer format to facilitate review and any necessary future modifications.

Following submission of CR's detailed bond reclamation cost estimate, UDOGM will determine the appropriate bond amount which will be based on but not necessarily limited to CR's bond estimate. If the cost of reclamation and corresponding bond coverage increases or decreases due to changes in the method of operation or other factors, CR may request or UDOGM may determine that an adjustment in the bond amount is appropriate. CR and the bond surety will be notified by UDOGM of any proposed adjustment in bond amount and will have opportunity for review of the proposed adjustment and an informal conference to discuss the adjustment and related matters. If CR elects to request an adjustment in bond amount, the request will be accompanied by appropriate documentation supporting the request. Adjustments involving undisturbed lands or revised reclamation costs are not considered a bond release.

6.1.5 Bond Terms and Conditions

In compliance with applicable regulatory provisions, the reclamation bond submitted prior to permit issuance and initiation of development, construction, and operations will be in the amount determined by UDOGM and will be payable to UDOGM. Other specific required bond terms and conditions will include the following:

- The bond will be conditioned on faithful performance of all applicable requirements of the State Program and the approved permit, including completion of the reclamation plan
- Continuous bonding coverage will be provided for the latter of, the period of active mining and reclamation and the extended liability period following completion of reclamation, or until the reclamation requirements under the State Program and permit are achieved
- The bond will provide for prompt notification of UDOGM and CR by the surety in the event of any action which would render the surety incapable of providing continuing, valid bond coverage including insolvency or bankruptcy of the surety or CR, or alleged violations which could result in suspension or revocation of the surety's charter or business licenses
- If the surety is incapable of providing continuing, valid bond coverage, CR will promptly notify UDOGM and UDOGM will, in turn, provide written notification to the CR that replacement bond coverage must be obtained within a specified period not to exceed 90 days. If replacement coverage is not obtained prior to the end of the specified period, the CR will cease coal mining operations and will comply with applicable requirements for temporary cessation. Mining operations will not resume until a suitable replacement bond has been posted.

6.1.6 Bonding for Underground Coal Mining and Reclamation Activities

Specific reclamation bonding requirements and provisions which are applicable to underground coal mining and reclamation operations include limitation of bonding coverage to surface facilities and structures and surface disturbance areas associated with the underground mining operations and designation of a "long-term period of liability" in recognition of the extended period of use which is typical for such facilities and areas.

The long-term liability period will begin with permit issuance and will continue until the bond has been released, replaced, or extended in compliance with applicable regulatory provisions.

In order to maintain continuous bonding coverage, the bond will be conditioned on extension, replacement, or payment in full 30 days prior to expiration of the permit term. If the bond does not provide coverage for the entire reclamation liability period or alternatively, if a bond for the new permit term is not filed 30 days prior to expiration of the permit term, UDOGM may act to initiate bond forfeiture.

6.1.7 Form of Bond

The applicable regulations provide several alternatives for compliance with requirements for reclamation bonding coverage. Each specific alternative or bond form has a number of associated compliance requirements. Once the bond amount is determined, CR will evaluate potential bonding alternatives and will select and submit a bond in a form which meets all applicable compliance criteria.

6.1.8 Replacement of Bond

Under regulatory provisions for bond replacement, CR may elect to replace any existing bond(s) with another bond(s) providing equivalent coverage, however, existing bond(s) will not be released until UDOGM has approved as acceptable the replacement bond and bond replacement will not constitute bond release.

6.1.9 Bond Release

The applicable UDOGM regulations provide specific guidance relative to procedures for release of reclamation performance bonds. On completion of mining and related activities, CR anticipates that all associated surface disturbance will be reclaimed consistent with the approved reclamation plan in order to restore the effected lands to a condition and capability consistent with the approved postmining land use. Upon completion of reclamation and surface restoration CR will file application for bond release consistent with the following bond release process:

- CR files application for bond release
- Within 30 days of the application date, CR will file a public notice in a local newspaper of general circulation with publication at least once per week over a period of four weeks
- CR mails notices of bond release inspection to surface owners
- Within 30 days of the application filing UDOGM will conduct a bond release inspection which may also include interested surface owners or agents
- Persons with a valid legal interest which could be effected by bond release or responsible officials of jurisdictional agencies can submit written comments or objections and may request a hearing within 30 days following the date of last publication of the public notice
- If a hearing is requested it will be held within 30 days of receipt of the hearing request

- If no public hearing is held UDOGM, within 60 days of the application filing, will notify CR, the bond surety, and other interested persons of its determination on the bond release request
- At least 30 days prior to bond release UDOGM will notify, by certified mail, the municipality in which the mining activities are located of the pending bond release

6.2 — LIABILITY INSURANCE

~~Prior to approval of this permit application, CR will provide UDOGM with a certificate of insurance verifying that CR has a valid existing public liability insurance policy in form for the Kinney No. 2 Mine. The insurance policy will be issued by a firm authorized to conduct business in Utah and will provide personal injury and property damage protection of at least \$300,000 for each occurrence and \$500,000 aggregate. The policy will be maintained in force during the life of the permit including the extended liability period and will include a rider providing for notification of UDOGM of any substantive change in the policy including termination or failure to renew.~~

~~In lieu of a public liability policy, CR will also have the alternative of verifying that it can satisfy applicable state self insurance requirements.~~

6.2 LIABILITY INSURANCE

This section of the Kinney No. 2 Mine Permit Application provides information requirements for public liability insurance required under Rule R645-301-800. The information presented in this section is generally based on and responds to specific regulatory requirements. The insurance information presented in this section have been prepared in compliance with applicable provisions of the State of Utah Coal Mining Rules and are intended to verify compliance with applicable regulatory requirements.

The information categories addressed in the subsections which make up the Insurance Section are consistent with the information categories outlined in the State of Utah Coal Mining Rules. The following are the subsection titles and designations included in this section:

~~6.2 — Liability Insurance~~

~~Each subsection identifies the applicable regulatory provisions addressed and sources for the information presented and includes related supporting tables and figures. Other supporting documentation, including maps and exhibits, is referenced in the text and provided in the separate map and exhibit volumes.~~

~~In lieu of a public liability policy, CR will also have the alternative of verifying that it can satisfy applicable state self insurance requirements.~~

The insurance policy will be issued by a firm authorized to conduct business in Utah and will provide personal injury and property damage protection of at least \$300,000 for each occurrence and \$500,000 aggregate. The policy will be maintained in force during the life of the permit including the extended liability period and will include a rider providing for notification of UDOGM of any substantive change in the policy including termination or failure to renew. A copy of the Certificate of Liability Insurance can be found in Exhibit 5.4.3-1, Bonding and Insurance Information.

7.0 SPECIAL CATEGORIES AND MINING AREAS

This section of the Kinney No. 2 Mine Permit Application provides both general and specific information on design, construction, operation, maintenance, and reclamation for mining and related operations which fall under the categories of either "Special Categories of Mining", as defined by Rule R645-302-200, or "Special Areas of Mining", as defined by Rule R645-302-300. Information sources utilized in developing the descriptions presented in this section include baseline investigations, particularly with respect to evaluation of areas as potential alluvial valley floors or prime farmlands; detailed mining plans developed by the CR team; conceptual and detailed facility layouts and designs; and specific plans for control, monitoring, and mitigation of mining related impacts. The information presented in this section has been prepared in compliance with applicable provisions of the State of Utah Coal Mining Rules and are intended to address the applicability of the regulatory definitions and provisions under the two designated special categories. The discussions presented in this section reflect consideration of the environmental resource information presented in Section 3.0, Environmental Information, and the mining plans presented in Section 4.5, Engineering Design and Operation Plans, and are designed to address prevention, control, and mitigation of the potential effects of mining for areas or activities falling within the defined categories.

The various information categories addressed in the subsections which make up the Special Categories and Areas Section are consistent with the information categories outlined in the State of Utah Coal Mining Rules. The following are the subsection titles and designations included in this section:

- 7.1 Experimental Practices
- 7.2 Mountaintop Removal
- 7.3 Steep Slope Mining
- 7.4 Auger Mining
- 7.5 In-Situ Processing
- 7.6 Coal Processing Plants Not Within the Mine Permit Area
- 7.7 Variances from AOC Restoration Requirements
- 7.8 Variances for Delay In Contemporaneous Reclamation
- 7.9 Small Operator Assistance Programs
- 7.10 Operations on Prime Farmlands
- 7.11 Operations on Alluvial Valley Floors

Each subsection identifies the applicable regulatory provisions addressed and sources for the information presented and includes related supporting tables and figures. Other supporting documentation, including maps and exhibits, is referenced in the text and provided in the separate map and exhibit volumes.

This section also provides information on the applicability of the designated regulatory categories of either "Special Categories of Mining", as defined by Rule R645-302-200, or "Special Areas of Mining", as defined by Rule R645-302-300 relative to the Kinney No. 2 Mine mining and related operations. For any categories which are applicable, design, construction, operation, maintenance, and reclamation information is provided for mining

and related operations which fall under the categories. Information in this section was developed in accordance with applicable regulatory requirements (R-645-302-200 and 300) for coal mine permitting in the State of Utah.

Specifically, this section addresses Rules R645-302-210, 220, 230, 240, 250, 260, 270, 280, 290, 310 and 320. The following cross-references headings and corresponding information presented in this section to the applicable regulatory provisions;

<u>Permit Section</u>	<u>Applicable Regulatory Provisions</u>
7.1	R645-302-211 through 218
7.2	R645-302-221 through 227.900
7.3	R645-302-231 through 234.400
7.4	R645-302-241 through 245.500
7.5	R645-302-251 through 254.620
7.6	R645-302-261 through 264.900
7.7	R645-302-271 through 275
7.8	R645-302-281 through 284
7.9	R645-301-291 through 299.400
7.10	R645-302-311 through 317.628.2
7.11	R645-302-321 through 324.330

7.1 EXPERIMENTAL PRACTICES

CR has no current plans to implement or utilize experimental practices in conjunction with planned mining and related activities for the Kinney No. 2 Mine Mine. In addition, all of CR's planned operations will affect full compliance with applicable regulations without a variance from the environmental protection performance standards for experimental or research purposes or alternative postmining land uses. Since CR does not plan to conduct experimental practices in conjunction with planned mining and related operations the provisions of Rule R645-302-210 are not applicable.

7.2 MOUNTAINTOP REMOVAL

As described in Section 4.5.2.2, Mine Plans, Mining Methods, and Related Design Considerations, the Kinney No. 2 Mine operations will be exclusively underground coal mining operations. Since no surface mining activities are planned in conjunction with the Kinney No. 2 Mine operations, the provisions of Rule R645-302-220 are not applicable.

7.3 STEEP SLOPE MINING

The only areas where steep slopes exist in the planned surface disturbance area which will be affected by mining and related activities are along the eastern margin of the facilities area and disturbance in these areas will be limited. Consistent with Rule R645-301-231.100, most of the planned surface disturbance will occur on terrain conducive to topsoil salvage,

and planned reclamation efforts will result in a configuration similar to that which existed prior to the Kinney No. 2 Mine disturbance. Reclamation considerations relative to the existing land configuration and final reclamation will be addressed under the applicable provisions for re-mining of previously mined areas (R645-301-553.500). Given these considerations, the provisions of Rule R645-302-230 are not applicable.

7.4 AUGER MINING

As described in Section 4.5.2.2, Mine Plans, Mining Methods, and Related Design Considerations, the Kinney No. 2 Mine operations will be conventional underground coal mining operations utilizing continuous underground mining methods. The planned mining operations will result in significantly higher production levels and greater resource recovery and conservation than would be possible using auger mining methods. Given these considerations, CR has no present plans to conduct auger mining in conjunction with the Kinney No. 2 Mine operations and the provisions of Rule R645-302-240 are not applicable.

7.5 IN-SITU PROCESSING

CR has no current plans to implement or utilize in-situ extraction or processing methods in conjunction with planned mining and related activities for the Kinney No. 2 Mine Mine. Since CR does not plan to conduct any type of in-situ activities in conjunction with planned mining and related operations the provisions of Rule R645-302-250 are not applicable.

7.6 COAL PROCESSING PLANTS NOT WITHIN THE MINE PERMIT AREA

The Kinney No. 2 Mine mining and related operations will not utilize a coal processing plant at the mine site, all coal will be sold FOB mine site.

7.7 VARIANCES FROM AOC RESTORATION REQUIREMENTS

Planned final backfilling and grading activities will result in a reclaimed land configuration which is similar to that which existed prior to the Kinney No. 2 Mine disturbance. The area which will be affected by construction of the required mine surface facilities is a previously mined area consisting of an existing face-up area which has been partially reclaimed by the Utah AML program. An old railroad grade exists at the western edge of planned surface facilities and had very limited reclamation done by the AML project, if any. This railroad grade will not be affected by the Kinney No. 2 Mine operations. Given this previous mining related disturbance, the planned mine construction activities constitute re-mining of a previously mined area under applicable provisions of Rule R645-301-553.500. These provisions take into consideration the practical reclamation limitations associated with previously mined areas and encourage effective restoration by allowing final backfilling and grading utilizing all available spoil material and partial retention of highwall exposures if the volume of available spoil material is not sufficient to provide for total highwall elimination.

The planned postmining topography for the mine surface facilities areas effects compliance with all applicable provisions of Rule R645-301-553.500 and will result in a stable regraded configuration which provides for effective drainage, is compatible with the planned postmining land use, and minimizes the height and extent of any highwall remnant which remains. Under the applicable provisions of Rule R645-301-553.500 a variance from AOC restoration requirements is not necessary for re-mining of previously mined areas, therefore, the provisions of Rule R645-301-270 are not applicable. The remaining highwall at the pre-SMCRA mine was partially backfilled and will not be disturbed by the Kinney No. 2 Mine, however small pre-SMCRA cuts may be disturbed by Kinney No. 2 Mine operations in the general mine area. These small cuts may be reclaimed back to similar configurations as existed pre-Kinney No. 2 Mine.

7.8 VARIANCES FOR DELAY IN CONTEMPORANEOUS RECLAMATION

As described in Section 4.5.2.2, Mine Plans, Mining Methods, and Related Design Considerations, the Kinney No. 2 Mine operations will be exclusively underground coal mining operations and will not include surface mining operations or combined surface and underground mining operations. Under Rule R645-301-553, requirements for contemporaneous reclamation are only applicable to surface coal mining operations. Since no surface mining activities are planned in conjunction with the Kinney No. 2 Mine operations, the provisions of Rule R645-302-280 are not applicable.

7.9 SMALL OPERATOR ASSISTANCE PROGRAMS

The small operator assistance program (SOAP) is designed to provide financial, technical, and permitting assistance to operators who qualify under specific production threshold limits and other eligibility criteria. CR does not qualify under the SOAP eligibility guidelines and is not seeking assistance under SOAP, therefore the provisions of Rule R645-301-900 are not applicable.

7.10 OPERATIONS ON PRIME FARMLANDS

As described in Section 3.1.1.6, Prime Farmland Investigation, formal consultation with the USDA-NRCS resulted a determinations that prime farmlands do not exist in the Kinney No. 2 Mine permit area. Documentation of these determinations is provided in Exhibit 3.1.1.3-1, Soils Information. Given the determination that prime farmlands do not exist in the Kinney No. 2 Mine permit area and, therefore will not be effected or impacted by the planned mining and related operations, the provisions of Rule R634-302-310 are not applicable.

7.11 OPERATIONS ON ALLUVIAL VALLEY FLOORS

While limited areas downstream from the study area and west of the line labeled as Pastureland on Map 3.2.1.2-1, Facilities Area Vegetation Map contain resource values

consistent with the AVF criteria, future mining activities will not change the status or condition of the geology, or soils in the **this possible area** for the following reasons:

1. Mining will not interrupt or cause significant diminution of surface or ground water flows.
2. Irrigation water supplying the **possible** AVF area comes from Mud Creek diversion points well upstream of the proposed mine site.
3. The only ditch supplying water to the **possible** AVF area that is near the proposed mine site has not been used for many years and appears not to be used due to maintenance neglect.
4. Surface runoff water from the proposed mine site will be diverted through sedimentation controls including the sedimentation pond, and alternative sediment controls including but not limited to silt fences, straw bales, and sediment traps.
5. Water quality discharges from the mine site are required to meet effluent standards that would prevent adverse impacts.
6. Discharge from the sediment pond must meet NPDES requirements.
7. Runoff water from the mine site historically flows to the possible AVF area. The proposed mine operations will not stop this flow from reaching the area.
8. Drill hole data, data from geotechnical drilling, and data from soils pits dug during soils investigations did not indicate any ground water in the alluvium in the mine site area that could be contaminated by mining operations. Since the mine site is upgradient from the AVF area, it would be expected that the ground water would flow towards the AVF, and since no ground water was encountered, there is little risk of contamination from mining operations.

Water supply for use in the AVF area includes irrigation water from Mud Creek through irrigation ditches well upstream from the proposed mining operations. One irrigation ditch flows through the southwestern corner of the proposed mine permit area, and will be culverted through the operations area, thus preventing possible diminution of the irrigation water quality. It should be noted however that this irrigation ditch has not been used for many years as evidenced by the condition of the ditch and culvert crossing Highway 96 at the location of the proposed mine entrance road at Highway 96. The irrigation ditch is very overgrown with vegetation and has partially silted in from non-use over an extended period of time. The irrigation ditch culvert crossing Highway 96 is almost completely silted closed, thus evidencing non-use for an extended period of time. Surface runoff controls have been designed to collect all surface runoff from mining operations. The sedimentation pond will prevent siltation of the downstream environment. An oil/grease skimmer has been included in the pond outlet design to prevent any floating oil or grease from exiting the pond. The pond discharge will meet NPDES discharge requirements and thus adverse downstream impacts will be prevented. Relatively small areas at the topsoil stockpile and very small areas at the entrance road to the site from Highway 96 will be controlled by alternative sediment controls including, but not limited to silt fences, berms, straw bales, and/or sediment traps. These areas are very small and will not include mining operations that would create any significant discharge volumes containing harmful substances.

Risk To AVF Area

The information above demonstrates that there is negligible risk of material damage to quantity or quality of water flowing to the possible AVF area from the proposed mining operations at the Kinney No. 2 Mine. Historic mining by several mines in the area, and reclamation work completed by the Utah AML program have not adversely impacted the possible AVF area. New mining operations by CR would provide runoff controls and other controls of air quality, and control of chemical contamination that were not considered or attempted by historic mining and reclamation by AML. In addition, reclamation completed at the end of the Kinney No. 2 Mine life would be conducted in a more comprehensive manner, with more controls, and with full vegetative cover and diversity requirements. Therefore, the Kinney No. 2 Mine will have negligible impact on the possible AVF area.

Monitoring of water discharges, and monitoring of air quality during mining operations will document any adverse impacts, and regulatory requirements will dictate that any negative impacts must be corrected.