MINING PLAN DECISION DOCUMENT

CASTLE GATE MINE
AMAX COAL COMPANY
CARBON COUNTY, UTAH
ACT/007/004

Utah Department of Natural Resources
Division of Oil, Gas, and Mining

FEDERAL COAL LEASES: U-25484, U-25485, U-058184, U-019524, U-0148779, U-0146345, U-25683, SL-029093-046653, SL-046652, SL-071737, SL-048442-050115

DECEMBER 1989

Norman H. Bangerter
Governor
Dee C. Hansen
Executive Director
Dianne R. Nielson, Ph.D.
Division Director

State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203
801-538-5340

December 24, 1990

Mr. David J. Hamm
Amax Coal Industries
251 North Illinois Street
P.O. Box 6106
Indianapolis, Indiana 46206-6106

Dear Mr. Hamm:

Re: Five-Year Permit Renewal, Castle Gate Coal Company, Price River Complex, ACT/007/004, Folder #3, Carbon County, Utah

At the request of Jim Buck, Evansville, we are submitting permitting documents to your attention. Enclosed is a renewed permanent program mining permit for the Price River Complex. The expiration date for this permit is December 24, 1994, five years from the expiration date of the original permit. Also, enclosed is a copy of the State's Decision Document for the permit renewal.

Please note that two copies of the permit are included. Please read the permit to be sure you understand the requirements and conditions, then have both copies signed and return one to the Division.

Thank you for your cooperation during the permitting process.

Best regards,

Dianne

Dianne R. Nielson
Director

jbe
Attachments
cc: P. Rutledge, OSM
R. Hagen, OSM
L. Braxton, DOGM
"B" Team
BT007004.3

an equal opportunity employer

PERMIT RENEWAL AND STATE DECISION DOCUMENT

CASTLE GATE COAL COMPANY
PRICE RIVER COMPLEX
ACT/007/004
CARBON COUNTY, UTAH

December 19, 1990

CONTENTS

Administrative Overview
Permit Chronology
Location Map
Permit Renewal Findings
Letters of Concurrence and Other Attachments
- Division of State History, November 2, 1990
- 510(c) Clearance Memo
- Publication Notices

Permit with Stipulations

ADMINISTRATIVE OVERVIEW

CASTLE GATE COAL COMPANY
PRICE RIVER COMPLEX
ACT/007/004
CARBON COUNTY, UTAH

December 19, 1990

Background

The Price River Complex is located approximately 10 miles north of Price, Utah, and 110 miles southeast of Salt Lake City. The Unit is in the Wasatch Plateau of Book Cliff fields in Carbon County. in Carbon and Emery Counties, Utah, approximately three miles southwest of Scofield, Utah and twenty miles northwest of Price, Utah. The Complex consists of various separate areas including; the Hardscrabble mine facilities, the Castle Gate wash plant and loadout, the Crandall Canyon facilities, the Sowbelly site, the gravel canyon topsoil area, the Utah Fuel #1 mine, and the Schoolhouse canyon refuse area.

Castle Gate Coal Company intends to continue underground mining operations, developing the nine mineable coal seams within a 7,619 acre permit area. This area has a history of various mining operations producing coal since the turn of the century. Consolidated mining activities began in 1971, conducted by the Braztah Corporation, which in turn became the Price River Coal Company on December 1, 1979. Castle Gate Coal Company obtained rights to mine the western reserve and permit transfer on May 30, 1986. This permit expired December 24, 1989. An application for permit renewal was submitted and the Division has been working closely with Castle Gate Coal Company to renew the permit. Due to various problems, including the mine going into temporary cessation mode, the repermitting process has been slow. Due to significant progress in the permit renewal process, the Division agreed to issue a one year permit for the Price River Complex which would expire on December 24, 1990 at which time the five-year permit renewal would be issued. This action is now being taken to complete that five year renewal.

The term of this permit renewal cannot exceed a five-year permit term, therefore this permit will expire on December 24, 1994.

Issues

As part of the permit renewal process, Castle Gate Coal Company was required to resubmit the MRP for the Price River Complex, updating the plan, including as-built designs for facilities which were proposed in the original plan, as well as all other approved changes. The first submittal of the updated mine plan was received at the Division office on June 23, 1989. Deficiencies in this plan were to be addressed during the one-year permit and no later than October 1990. Supplemental volumes of the Mine Plan were received on July 18, 1990. During the renewal process, it was noticed that only two complete copies of the mine plan had been received at the Division office. Due to personnel changes within Castle Gate Coal Company and in the Division, the need for additional copies for other agencies was overlooked. A stipulation is being attached to the permit which requires the permittee to submit additional copies of the MRP and commit to resolve any issues brought to light by other agency review.

Recommendation for Approval

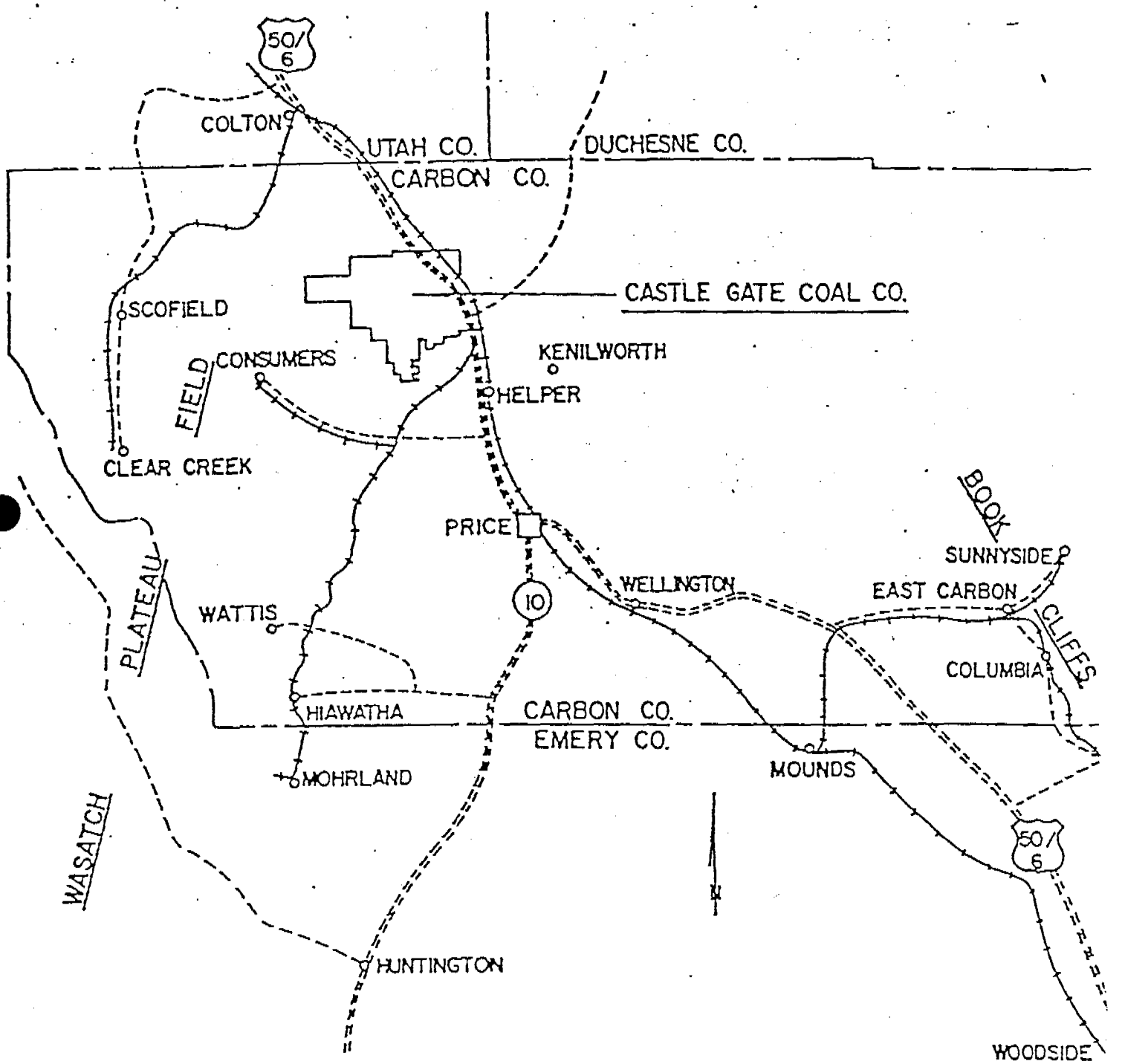
Approval for permit renewal is recommended, based on the updated MRP; a review of the current permit, including all conditions, amendments and revisions approved to date; and conformance with criteria for approval of permit renewal applications (R614-303-230 thru 235)(see attached Permit Renewal Findings document). All issues raised during the review process which are pertinent to the term of renewal have been resolved, or will be attached as conditions to permit approval. No issues were raised during the public comment period.

PERMIT CHRONOLOGY
CASTLE GATE COAL COMPANY
ACT/007/004

June 23, 1989	Castle Gate Coal Company submits updated Mining and Reclamation plan.
November 24, 1989	Division determines plan to be administratively complete.
November 14 - December 5, 1989	Castle Gate Publishes Notice for Permit renewal in Sun Advocate.
December 18, 1989	Division issues one year permit extending permit to December 24, 1990. During this year, Castle Gate is to correct technical deficiencies.
July 18, 1990	Castle Gate submits supplemental volumes to MRP.
October 5, 1990	Division makes second Determination of Completeness.
October 16 - 30, 1990	Castle Gate publishes second notice of permit renewal application.
December 19, 1990	Division issues renewed permit which will expire December 24, 1994.

BT007004.3

REGIONAL LOCATION PLAN



(Not to scale)

PERMIT RENEWAL FINDINGS

CASTLE GATE COAL COMPANY
PRICE RIVER COMPLEX
ACT/007/004
CARBON COUNTY, UTAH

December 19, 1990

1. The permit renewal term will not exceed the original permit term of five years (R614-303-234).

2. The terms and conditions of the existing permit are being satisfactorily met or are the subject of the Division Order, dated December 18, 1990 (R614-303-233.110).

3. The present underground coal mining activities are in compliance with the environmental protection standards of the Act and the Utah State Program (R614-303-233.120). (Certain issues are still being addressed under the NOV process. All issues are current and are not considered reason for not renewing the permit at this time.)

4. The requested renewal will not substantially jeopardize the operator's continuing responsibility to comply with the Act and the Utah State Program (R614-303-233.130).

5. The operator has provided evidence of having liability insurance or self-insurance (R614-303-233.140).

6. The operator has posted a reclamation surety in the required amount and has provided evidence that the surety will remain in full effect for the additional permit period. No additional surface disturbances are proposed at this time (R614-303-233.150).

Daron R. Haddock
Permit Supervisor

Dianne R. Nielson
for Associate Director, Mining

Dianne R. Nielson
Director
Division of Oil, Gas & Mining

State of Utah

Division of State History
(Utah State Historical Society)
Department of Community and Economic Development

Norman H. Bangerter
Governor
Max J. Evans
Director

300 Rio Grande
Salt Lake City, Utah 84101-1182
801-533-5755

cc: D. Ardovek

RECEIVED
NOV 06 1990

November 2, 1990

Dr. Dianne R. Nielson, Director
Attn: Mr. Lowell P. Braxton
Division of Oil, Gas and Mining
355 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203

RE: Determinations of Completeness, Castle Gate Coal Company, Castle Gate Mine, Permit Renewal, ACT/007/004, Folder #2, Carbon County, Utah

In Reply Please Refer to Case No. K867

Dear Mr. Braxton:

The Utah State Historic Preservation Office has received the above referenced project. Our office has no additional comments on this project.

The above is provided on request as outlined by 36 CFR 800 or Utah Code, Title 63-18-37. The Utah SHPO makes no regulatory requirement in this matter. If you have questions or need additional assistance, please contact me at (801) 533-7039.

Sincerely,

James L. Dykman
Regulation Assistance Coordinator

JLD:K867 OSM/NE

Board of State History: Thomas G. Alexander • Dean L. May • Douglas D. Alder • Leonard J. Arrington
Marilyn Barker • Boyd A. Blackner • J. Eldon Dorman • Hugh C. Garner • Amy Allen Price • Sunny Redd • Jerry Wylie

Norman H. Bangerter
Governor
Dee C. Hansen
Executive Director
Dianne R. Nielson, Ph.D.
Division Director

State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203
801-538-5340

December 19, 1990

TO: Daron Haddock, Permit Supervisor

FROM: Joseph C. Helfrich, Regulatory Program Coordinator

RE: Compliance Review for Section 510(c) Finding, Castle Gate Coal Company, Castle Gate Mines, ACT/007/004, Folder #5, Carbon County, Utah

As of the writing of this letter, there are no NOV's or CO's which are not corrected or in the process of being corrected. Any NOV's or CO's that are outstanding are in the process of administrative or judicial review. There are no finalized Civil Penalties which are outstanding and overdue in the name of Castle Gate Coal Company.

Finally, they do not have a demonstrated pattern of willful violations, nor have they been subject to any bond forfeitures for any operation in the state of Utah.

jbe
A:\510(C)

ıbj: OSM RECOMMENDATION

'12.18

): Joe Helfrich, AVS Representative, UT

ROM: AVS Office

UBJECT: OSM Recommendation

ATE: December 18, 1990

ending Application Number ACT007004, PRICE RIVER COAL CO., has
een researched, and the OSM recommendation is ISSUE. The AML
es listed as delinquent for Southern Ohio have been paid.

PC ID 20:DOI370025:55708]

52E for 152G22 12:10 MST 18-Dec-90 Message 807-837 [50]

ction?:
Ind for ATtention, Home to SWitch ; Capture Off ; Numeric

File ACT/007/004

NOTICE OF APPLICATION
FOR RENEWAL OF PERMIT
Castle Gate Coal Company

Pursuant to Utah Coal Mining Regulation UMC 786.11, notice is hereby given that Castle Gate Coal Company, P.O. Box 449, Helper, Utah 84526, on June 23, 1989 submitted a complete application for renewal to the State of Utah, Department of Natural Resources, Division of Oil, Gas and Mining for the renewal of a permit to operate under the provisions of the Utah Coal Mining and Reclamation Act (Utah Code Ann. 40-10-1 et seq.) and the Utah Coal Mining Regulation UMC 788.14. The presently approved permit is Permit No. ACT 007/004. The permit area is located approximately five miles northwest of Helper in Carbon County, Utah as follows:

Township 12 South, Range 9 East, SLB&M

Section 22, part of SE1/4 SW1/4, and part of SW1/4 SE1/4; Section 26, except E1/2 E1/2; Section 27; Section 28; Section 29, all except N1/2 NW1/4 and NW1/4 NE1/4; Section 30, all except N1/2 N1/2; Section 31; Section 32; Section 33; Section 34; Section 35, part of NW1/4, part of NW1/4, and part of W1/2 SW1/4; Section 36, S1/2 NW1/4, and N1/2 SW1/4.

Township 13 South, Range 9 East, SLB&M

Section 1, part of NW1/4 NW1/4; Section 2, part of NE1/4, and part of NW1/4; Section 3, NW1/4, part of NE1/4, part of SE1/4, and part of SW1/4; Section 4, N1/2, part of SE1/4, and paart of SW1/4; Section 5, NE1/4, part of NW1/4, part of SE1/4, and part of SW1/4; Section 6, N1/2, part of SW1/4, and part of SE1/4; Section 8, part of NE1/4; Section 9, part of NE1/4 and part of NW1/4; Section 10, part of NE1/4 and part of NW1/4.

The permit area for which renewal has been applied for is shown on Exhibit 1-1 in Castle Gate Coal Company's renewal application. The permit area is contained on the following U.S. Geological Survey 7.5-minute maps:

Standardvile, Kyune, Scofield, and Helper.

A copy of the permit renewal application is on file and available for public inspection at the Utah Division of Oil, Gas and Mining Area Office located on the College of Eastern Utah Campus in Price, Utah.

This notice will be published once a week for a total of four consecutive weeks. Any comments, objections or requests for informal conferences must be filed no later than 30 days after the last date of publication. Any such comments should be filed with:

State of Utah
Department of Natural Resources
Division of Oil, Gas & Mining
355 West North Temple
III Triad, Suite 350
Salt Lake City, Utah 84108

Published in the Sun Advocate on November 14, 21, 28 and December 5, 1989.

affid 1 msc psl affid for SA
08 5 h 02 05 90

AFFIDAVIT OF PUBLICATION

RECEIVED
DEC 07 1990
DIVISION OF
OIL, GAS & MINING

STATE OF UTAH)
ss.
County of Carbon,)

I, Dan Stockburger, on oath, say that I am the Publisher of the The Sun Advocate, a weekly newspaper of general circulation, published at Price, State and County aforesaid, and that a certain notice, a true copy of which is hereto attached, was published in the full issue of such newspaper for Four (4) consecutive issues, and that the first publication was on the

16th day of October, 19 90

and that the last publication of such notice was in the issue of such newspaper dated the

30th day of October, 19 90

Dan Stockburger

Subscribed and sworn to before me this

30th day of October, 19 90

Holly Jo Crofts
Notary Public.

My Commission expires October 22, 1994

Residing at Price, Utah

Publication fee, $ 117.60

Notary Public
HOLLY JO CROFTS
320 North 300 West
Price, Utah 84501
My Commission Expires
October 22, 1994

NOTICE OF APPLICATION FOR RENEWAL OF PERMIT
Castle Gate Coal Company

Pursuant to Utah Coal Mining Regulation UMC 786.11, notice is hereby given that Castle Gale Coal Company, P.O. Box 449, Helper, Utah 84526, on October 5, 1990 submitted a complete application for renewal to the State of Utah, Department of Natural Resources, Division of Oil, Gas and Mining for the renewal of a permit to operate under the provisions of the Utah Coal Mining and Reclamation Act (Utah Code Ann. 40-10-1 et seq.) and the Utah Coal Mining Regulation UMC 788.14. The presently approved permit is, Permit No. ACT 007/004. The permit area is located approximately five miles northwest of Helper in Carbon County, Utah as follows:

Township 12 South, Range 9 East, SLB&M

Section 22, part of SE¼ SW¼, and part of SW¼ SE¼; Section 26, except E½ E½; Section 27; Section 28; Section 29, all except N½ NW¼ and NW¼ NE¼; Section 30, all except N½ N½; Section 31; Section 32; Section 33; Section 34; Section 35, part of NW¼, part of NW¼, and part of W½ SW¼; Section 36, S½ NW¼, and N½ SW¼.

Township 13 South, Range 9 East, SLB&M

Section 1, part of NW¼ NW¼; Section 2, part of NE¼, and part of NW¼; Section 3, NW¼, part of NE¼, part of SE¼, and part of SW¼; Section 4, N½, part of SE¼, and part of SW¼; Section 5, NE¼, part of NW¼, part of SE¼, and part of SW¼; Section 6, N½, part of SW¼, and part of SE¼; Section 8, part of NE¼; Section 9, part of NE¼ and part of NW¼; Section 10, part of NE¼ and part of NW¼. The permit area for which renewal has been applied for is shown on Exhibit 1-1 in Castle Gate Coal Company's renewal application. The permit area is contained on the following U.S. Geological Survey 7.5-minute maps:

Standardville, Kyune, Matt's Summit, Helper and Deadman Canyon.

A copy of the permit renewal application is on file and available for public inspection at the Utah Division of Oil, Gas and Mining Area Office located on the College of Eastern Utah Campus in Price, Utah.

This notice will be published once a week for a total of four consecutive weeks. Any comments, objections or requests for informal conferences must be filed no later than 30 days after the last date of publication. Any such comments should be filed with State of Utah, Department of Natural Resources, Division of Oil, Gas and Mining, 355 West North Temple, III Triad, Suite 350, Salt Lake City, Utah 84108.

Published in the Sun Advocate October 16, 18, 23 and 30, 1990.

TECHNICAL DEFICIENCY REVIEW

Castle Gate Coal Company
ACT/007/004

December 4, 1989

UMC 771.23 Permit Applications: General Requirements For Format and Contents - JSL

The submittal does not meet the requirements of Condition One of the approved five year permit. The Division has not approved a refuse sampling plan of one sample for every five acres of potentially acid- or toxic-forming refuse waste. As outlined in the Division's February 19, 1988 Initial Completeness Review, Price River Coal Company had committed to collect four to five grab samples of the refuse waste in School House canyon, to establish the acid- or toxic-forming nature of the waste materials, prior to the Division's December 19, 1985 letter of clarification. The Division considers one sample per acre to be acceptable. Sampling more sites than one per acre is acceptable, but less than one sample per acre is not. This refuse sampling commitment must be incorporated into the approved plan.

UMC 771.23 Permit Applications - General Requirements for Format and Contents - MMD

Table 3.7-1 references Exhibit 7-1 for watershed areas used in the culvert designs presented. This Exhibit presents geology and seep and spring locations. This reference must be corrected.

Exhibits in Section 3.7 provide cross sections for both preliminary and final configurations in Crandall Canyon. The operator must clarify which set of exhibits represents the actual as-built site configuration and remove any exhibits which do not represent the current site configuration. Narratives in the text should also be clarified as to which structures have been constructed and which ones are proposed.

The Pond 007 spillway design in section 3.3 references section 3.1 for the design storm flow calculations. These calculations could not be located in this section. The operator must clarify this discrepancy by providing the required design storm calculations justifying the spillway design flow value of 17 cfs.

Page 9 of section 3.3 refers to Pond 009 as "proposed". All references to "proposed" structures which currently exist must be removed from the text.

Section 3.7-3(11) discusses the reclaimed stream channel in Crandall Canyon in both present and future tense. Page 23 states that the channel was lined with riprap but no design was found. The operator must clarify the status of the stream channel diversion and submit riprap designs if riprap exists.

UMC 782.18 Personal Injury and Property Damage Insurance Information - JRH

The Division has determined that "claims made" insurance may be considered to be adequate, however, public notice in regard to permits shall include a statement that the operator has claims made insurance. Such public notice will allow the public an opportunity for timely filing of a claim in the event of a mine related accident.

The operator still needs to provide to the Division, the Certificate of Liability Insurance Form which is incorporated into the Reclamation Agreement. Refer to comments under UMC 800 regarding requirements for completion of the Reclamation Agreement.

UMC 783.24 Maps: General Requirements - MMD

A disturbed area boundary map for the Castle Gate area was not found (see Exhibit 3.4-2). The operator must submit an appropriate map or drawing of scale 1 inch = 200 feet or greater, clearly labeling and delineating the area disturbed by surface operations in the Castle Gate area (including Addit #1 and Gravel Canyon). The disturbed area must include old Pond 012 and the adjacent catch basin and extend at least to the entrance of the truck scale.

No map showing the existing sewage system at the preparation plant or the Hardscrabble Canyon facilities was found. The operator must submit a map of scale 1 inch = 200 feet or greater which clearly delineates the sewage pipeline system (including pipe diameters) at the preparation plant and Hardscrabble Canyon.

Narratives provided in section 3.7-3(3) and page 13 of section 3.7 discuss the water supply, gas, and waste water pipelines in Crandall Canyon. The operator must provide maps of scale 1 inch = 200 feet or greater showing the locations and dimensions of these pipelines or remove the narratives from the text if these structures do not exist.

UMC 783.25 Cross-Sections, Maps and Plans - MMD

Section 3.4-3B presents design calculations for Diversion D-4. This diversion is not shown on Exhibit 3.4-2. The text describes the drainage area above the haul road reporting to this ditch and ultimately to pond 011. However, Exhibit 3.4-2 labels this area as part of the pond 012 drainage. The operator must revise Exhibit 3.4-2 or other appropriate map to include an accurate representation of Diversion D-4 and clearly identify the drainage boundaries of each impoundment.

Exhibit 3.4-5 is not adequate to determine the natural slope or volume of the Raw Water Pond. The operator must submit a certified as-built drawing of this structure showing contours at two foot intervals and extending a minimum of 50 feet beyond the embankment, or submit longitudinal and transverse cross sections adequate to accurately determine slopes and pond volume.

Exhibit 3.7-11 identifies watershed areas CC-19 and CC-20 but Exhibit 7-3 only shows one watershed identified as CC-19. Design calculations on page 18 of section 3.7 present peak flow values for areas A and B. These calculations also present a ditch design for area A but this structure could not be found on any map. These discrepancies must be corrected to present a consistent and accurate diversion system design. Furthermore, Exhibit 3.7-11 is only a photocopy of an actual map and is illegible in many areas. The operator must submit a certified map of scale 1 inch = 200 feet or greater which clearly labels and depicts the watershed areas and diversions.

Portions of Exhibit 3.7-5 are illegible. The operator must submit a clear copy of this map which plainly labels contours, structures, and cross sections.

Exhibits 3.7-5A and 3.7-5B contain cross sections of Crandall Canyon but do not include any horizontal scale factor. In addition, cross sections are included only for sections 0+00 to 18+00. The location of cross section 18+00 could not be located on Exhibit 3.7-5. No cross sections were located for stations west of section 0+00. The operator must revise Exhibit 3.7-5 to depict 5 foot contour intervals of the disturbed area or revise the submitted cross sections to include a horizontal scale and submit the remaining cross sections of the west portion of the disturbed area.

Exhibit 3.7-9 is not legible enough to determine cross section labels, map scale, or contours. This exhibit must be reproduced to clearly depict these features.

Reclaimed cross sections of Crandall Canyon submitted on Exhibit 3.7-9A, B, and C do not include a horizontal scale factor. Sections 5+00 through 11+00 depict potentially oversteepened slopes which will require stability demonstrations. In some cases, cross sections do not extend beyond the disturbed boundary. Cross sections or adequate contours must be submitted extending 100 feet beyond the disturbed boundary.

Page 10 of section 3.4-4 states that reclamation of the Castle Gate area will include grading to establish surface drainage. Exhibits 3.4-8 and 3.4-9 are incorrectly referenced as typical reclaimed cross sections. These cross sections are actually found on Exhibits 3.4-12A and B. This discrepancy must be corrected. Exhibits 3.4-12A and B present 4 cross sections for the entire Castle Gate area which could not be located on any plan view map of the area. The operator must submit a contour map of scale 1 inch = 200 feet or greater clearly showing contours at no greater than 5 foot intervals, depicting the reclaimed surface configuration of the Castle Gate area (including Gravel Canyon and Addit #1) or, submit accurate longitudinal and transverse cross sections taken at 200 foot intervals which extend 100 feet beyond the disturbed area boundary.

Page 3 of section 3.4 incorrectly states that no embankments were required for the Raw Water Pond at the Castle Gate Preparation Plant. Exhibit 3.4-5 depicts a 7 foot high embankment on the lower end of this structure. This discrepancy must be corrected to accurately describe the pond in the text.

Cross sections of Hardscrabble Canyon are not adequate to accurately determine the post mining land surface. Exhibits 3.3-8A and B contain cross sections which could only be found on one plan view (Exhibit 3.3-4A). This plan view does not depict any baseline reference corresponding to the cross sections. Measurements of the cross sections on Exhibit 3.3-4A conflict with the dimensions presented on Exhibits 3.3-8A and B. The operator must submit a contour map of scale 1 inch = 200 feet clearly showing contours at no greater than 5 foot intervals, depicting the reclaimed surface configuration of Hardscrabble Canyon or, submit accurate longitudinal and transverse cross sections (with a corresponding plan view) taken at 200 foot intervals throughout the main canyon and side canyons which extend 100 feet beyond the disturbed area boundary.

UMC 783.24-25 Maps: General Requirements, Cross Sections, Maps, and Plans - JRH

The permit area boundary map indicated in the Mining and Reclamation Plan (MRP) as Plate 1-1 is of sufficient scale to depict the permit area boundary. However this drawing is not sufficient to show the disturbed area boundaries for the individual affected areas throughout the permit area. Other drawings are included in the plan which are of more appropriate scale to show the disturbed area boundaries. Additionally, all maps and drawings should include the disturbed area boundaries where applicable as reference to the location and extent of the areas affected by surface mining activities. Without these boundaries delineated on the drawings it is difficult if not impossible to determine whether or not the operator is conducting surface mining activities within the areas approved by the Division and as shown on the drawings.

Several of the reclamation drawings have little or no surface elevation information (contours, spot elevations, etc.). In order to determine the reclaimability of the site, maps and cross sections of these areas must be accurately depicted. The drawings and the cross sections presented in the plan are currently not sufficient to determine approximate original contour requirements.

UMC 784.11 Operation Plan: General Requirements - MMD

No discussion of the mine discharge water treatment system at the Castle Gate Preparation Plant was found in the text, nor was this facility located on any map. The operator must submit a narrative detailing the use and maintenance of the water treatment system used to treat mine discharge at the Preparation Plant. This facility and related discharge structures must be included on an appropriate map.

UMC 784.12 Operation Plan: Existing Structures - JRH

Although the operator has referenced Exhibits 1-1, 3.2-1A, 3.2-1b, and 3.4-1 to help delineate previously disturbed areas, several of the requirements of this section remain deficient. A narrative description of previous mining activities is found within the text of the MRP which describes the approximate dates when mining activity has occurred. However, no compliance plan was found within the text of the MRP indicating whether or not the structures meet the performance standards of Subchapter K of the regulations. This description also needs to detail any modifications or reconstruction of these facilities for use in connection with underground mining activities.

Basically, the operator needs to: describe the facilities and structures which were previously existing; state the estimated date of construction or completion of the facility; explain any modification or reconstruction that was required to bring the facility into compliance with the performance standards; how the structure or facility will be used in conjunction with the mining permit; what monitoring and maintenance will be required throughout the operational phase of mining activity; and, what the disposition or outcome of these facilities will be during reclamation.

In the case of sediment pond embankments and slopes exceeding the limits provided in the regulations in Subchapter K, the operator shall be required to justify the existing structures or provide designs and a timetable for the modifications of these structures. Demonstration of stability may be accomplished in some cases by the performance of the structure in the past with a commitment to maintain and monitor those embankments and slopes throughout the permit term. To demonstrate stability of these embankments, the operator should indicate the frequency of the pond or impoundment inspections, whether or not any failure or signs of weakness have developed in these embankments, and, provide a commitment to monitor and maintain these structures to assure stability. The operator also needs to commit that in the event that any of these embankment are found not stable, that they will be reconstructed in accordance with the performance standards of the regulations.

Those areas affected by previous mining operations and used in conjunction with current underground coal mining facilities are to be included in the disturbed areas. The maps and plans should clearly delineate the disturbed areas and include their respective acreages on the drawings.

Careful delineation of the areas which are considered to be the areas affected by the current mining operations must be accomplished in order to approve the permit renewal and make the site "inspectable". The areas affected by the current and proposed mining operations must include, to the extent that is prudent and reasonable, those cutslopes and outslopes of pads, roads, and portal benches which were created in conjunction with and are a result of the construction of those pads, roads, and portal benches. Currently the operator has not incorporated those cut slopes and outslopes into the disturbed areas shown on the drawings.

UMC 784.13 Reclamation Plan: General Requirements - JRH

The operator need to more accurately define the plan for the removal, storage, and redistribution of topsoil, subsoil, and other material to meet the requirements of UMC 817.21-817.25. Because

most of the areas were previously disturbed, only a small amount of topsoil materials were salvaged during construction. The plan elaborates on the use of suitable substitute topsoil and alternate materials for topsoil coverage, and, the possibility of importing material for use as topsoil. The primary problem with these analyses is that the operator has not developed a mass balance for the redistribution of topsoil and substitute material.

The plan needs to locate and identify all potential resource materials to be used as topsoil and substitute material, determine the amounts of this material needed for reclamation, and, balance the amount of material vs. the amount available. The operator must quantify these materials for two reasons. First the plan for topsoil storage and distribution must be sufficient to demonstrate the reclaimability of the sites. Second, these quantities are needed to determine the reclamation bond amount.

In the event that the mass balance indicates that there is insufficient material for topsoil redistribution, sources of suitable materials must be developed within the permit area. These borrow areas, if needed, must be sampled, analysed, quantified and qualified for use in the reclamation of the operations.

If no suitable borrow areas can be found within the permit area, importing of material may be considered by the Division, but the source and the affect or impact on the area from which this material is taken will be considered by the Division and the source area for the material may have to be permitted.

UMC 784.13 Reclamation plan: General Requirements - MMD

Detailed timetables of the reclamation operational sequence relative to the start of reclamation activities must be submitted for each disturbed area. Channel reclamation should be included in addition to the activities listed on the operator's submitted reclamation timetable. The submitted timetables do not clearly distinguish the relative sequence or duration of the reclamation activities. As discussed previously in two separate meetings with CGCC representatives, the operator should submit a timetable similar to the following format:

Week 1-4 Structure removal
Week 3-6 Grading and Channel Reclamation, etc.

UMC 784.14 Reclamation Plan: Protection of Hydrologic Balance - MMD

Page 46 of Section 3.7 states that the stream channel diversion will remain as a permanent diversion. The operator states that the regulations are not clear if the performance standards of UMC 817.43

or UMC 817.44 are applicable to this channel. This diversion is classified as an ephemeral channel with a drainage area greater than one mile. Therefore the diversion must meet the design criteria set forth in UMC 817.44.

UMC 784.19 Underground Development Waste - JRH

The only information found in this section of the MRP is the consultant's report for the refuse embankment. Since the original design of the facilities, analysis for stability and design were accomlished in 1982.

It is noted in the consultant's report that four to five feet of non-toxic material will be required to cover the waste materials in the refuse pile. However, in the bonding calculations, soil cover is only indicated to be six inches of material. Is there a justification in the previously approved MRP for the reduction of cover material?

The plan does not include or cover the requirements for monitoring the embankment for stability and pieziometric surface. Although these plans have been implemented and are ongoing, the operator still needs to provide details of the methodology, location and frequency for monitoring the refuse pile for stability.

Quarterly reports are required by the Division for the inspection and condition of the refuse embankment. This reporting information is also required by MSHA for the facility. UMC regulations require that the reports be sent to the Division and a copy of the reports be maintained on file at the mine office. The Division does not have these reports in the Salt Lake office. However, the operator may propose that the copies maintained on file are sufficient to meet the requirements of the Division if a committment is made to notify the Division of any adverse or hazardous conditions found during inspection or operation of the facility. This proposal would have to be made by the operator and approved by the Division in order to attempt to waive the reporting requirements of the regulations.

UMC 784.22 Diversions - MMD

Designs for each diversion within the permit area must be submitted demonstrating compliance with UMC 817.43-817.44. The submitted diversion cross section worksheets are adequate for channel design capacity. However the operator must still submit calculations for riprap and/or energy dissipators for each diversion (including culverts) or a demonstration that these measures are not necessary.

Section 3.2 contains designs for culverts C-1 through C-10 in Sowbelly Canyon. Exhibit 3.2-2 only depicts six culverts in Sowbelly Canyon. The remaining culvert locations must be clearly labeled and drainage areas included on an appropriate map.

Exhibit 3.4-2 depicts a culvert from the refuse area haul road to Pond 013 and a culvert above Pond 012A which are not included in Table 3.4-6. Culvert designs demonstrating capacity and energy dissipators must be submitted for these structures.

Page 10 of section 3.7 presents designs for 13 culverts in Crandall Canyon. Only five culverts could be located on Exhibit 3.7-4, none of which were labeled. The operator must submit a map which clearly labels and depicts the locations (including drainage areas) of the structures listed in Table 3.7-1.

The operator must include complete information on inputs used to calculate design peak flows for all areas (disturbed and undisturbed), including:

1. Watershed maps of each area. These maps should delineate sub-watershed boundaries used in calculating peak flows and differentiate between disturbed and undisturbed boundaries. Exhibit 7-3 is not adequate to accurately determine individual sub-watershed physiographic parameters necessary for design calculations. Sub-watersheds containing less than five contours on Exhibit 7-3 must be clearly labeled and submitted on area maps of scale 1 inch = 200 feet or greater.

2. Curve number determinations for each area. Assumptions for areas other than Hardscrabble Canyon could not be found in the MRP. These values must be presented for each watershed or sub-watershed with references to supporting soil and vegetation information contained in the MRP. The operator's contention that the Division determined the information in the existing MRP to be adequate is not correct. The Division did determine the information concerning curve number methodology used for Hardscrabble Canyon as adequate but only used these as an example for other areas.

UMC 784.23 Operation Plan: Maps and Plans - JRH

The location of each facility that will remain on the proposed permit area as a permanent feature, after the completion of underground mining activities need to be presented on the plan.

Maps and plans presented in the MRP showing the operations and the facilities must include the disturbed area boundaries for reference. The boundaries should also include those areas in which proposed facilities are scheduled for construction as well as borrow areas which may be required for reclamation. Primarily, this information needs to be provided on the operational plans to ensure that the operator is conducting mining activities within the approved permit areas of the plan. These boundaries should coincide with other perimeter markers and other boundary requirements as provided in the approved MRP.

Maps used to show the final reclamation of the facilities are not clear. The disturbed areas on the drawings need to be outlined in a manner which will clearly show the disturbed area boundaries. Each map should also delineate and indicate the number of acres relevant to that specific area and specific reclamation treatment (seed mix, topsoil coverage, borrow area, etc.). Those facilities to be left as part of the post mining land use should also be clearly identified on the drawings.

UMC 800 Bond and Insurance Requirements - JRH

Bonding calculations do not include the following information:

1. A map as specified under UMC 784.23(b)(3) specifying each area of land for which bond will be posted under Subchapter J of the regulations.

2. Mass balance calculations showing backfilling and grading requirements for distribution and disposal of excess spoil and mine development waste, backfilling to meet AOC requirements, subsoil, topsoil and substitute topsoil distribution and quantities for each sub area of the permit.

3. Calculations for determination of quantities, equipment selection and productivity used in determining the bond amount.

4. Determination of Phase I and Phase II reclamation activities including a map showing those facilities to be constructed and/or removed during each phase of reclamation.

5. Costs associated with reclamation were not included in the cost estimate, these costs include but are not limited to the construction of permanent reclamation channels, sediment pond removal, soil sampling and analysis, and water monitoring costs.

In conjunction with permit renewal, the Division is requiring the completion of the attached Reclamation Agreement. This agreement serves to incorporate the bonding and liability incurance requirements for the program. Previous forms and agreements between the Division and the operator have become dated, and refer to replaced or revised regulations.

This Reclamation Agreement serves to consolidate this information and correct the bonding amount in conjunction with the permit renewal. As part of the permit renewal process this Agreement shall be completed by the operator and approved by the Division. This agreement does not have to be submitted by the operator until the Division has determined the bond amount required.

UMC 817.13 Casing and Sealing of Exposed Underground Openings: General Requirements - JRH

No commitment was found within the text of the MRP stating that all exploration, drill or other boreholes will be permanently closed in a manner as approved by the Division.

In accordance with the requirements of the Utah Division of Water Rights, all monitoring and water wells must be abandoned in accordance with the Administrative Rules for Water Well Drillers. Abandonment of these wells must be under the direct supervision of a currently licensed water well driller. A report of abandonment should also be filed to DWR within 30 days of completion of the well abandonment procedures.

The operator needs to include in the text of the MRP that the temporary and permanent abandonment of water and monitoring wells will be in accordance with the State of Utah, Administrative Rules for Water Well Drillers, Division of Water Rights.

UMC 817.14 Casing and Sealing of Exposed Underground Openings: Temporary - JRH

No discussion of the temporary abandonment of mine openings is found within the text of the MRP. In accordance with the requirements of this section, the operator must commit to effectively barricade and post each mine opening which is temporarily inactive and to periodically inspect and maintain these devices.

UMC 817.111-.117 Revegetation Plan: General Requirements - LK

The MRP contains a range condition analysis of the Barn Canyon grass-sage reference area (for 1989). In past reviews, as well as in commitments made in the MRP, Castlegate is to have the range condition of all reference areas reevaluated on a 3 to 5 year basis. Please provide a current range condition analysis for the Castlegate mixed brush, the Castlegate riparian, The Crandall Canyon conifer, the Crandall Canyon riparian, the Sowbelly grass-sage and the Sowbelly mixed brush reference areas.

Due to past damage caused by grazing animals in the 'Goose Island' area, the operator was requested to provide plans to protect reclaimed areas for a minimum 2-year period. This protection plan has not yet been provided.

The seed mix on Table 9.20 (page 63) was developed in 1979, prior to the implementation of Utah's permanent coal program. This mix does not meet the requirements of UMC 817.111-.112 and should therefore be deleted from the MRP. This mix contains only grass and shrub species, several competitive introduced species (with no demonstration that the requirements of UMC 817.112 are satisfied) and is unlikely to produce a diverse and permanent vegetation cover supportive of the postmining land use.

The applicant currently proposes to disc areas for seed bed preparation to reduce compaction (Chapter 9, page 50). Deep ripping (i.e. 18 - 24 inches) is preferred to reduce compaction in that it leaves a more roughened surface, which improves vegetation establishment.

In Section 3.9-2 (UMC 784.13(b)(5)), it states that seed and fertilizer will be mixed together and applied with a hydroseeder. This needs to be revised to show seed and fertilizer will not be mixed in the hydroseeder (it has been demonstrated that over 50% of the seed will lose its viability under these conditions). The preferred alternative is to hand broadcast fertilizer prior to seeding.

The MRP needs to clarify that seed and mulch will be applied in two separate operations (see sections 3.2-5, 3.3-4, 3.4-4, 3.7-5).

The reclamation timetable is not acceptable in that it does not identify each major step in reclamation, the relative time for each step, and the approximate time of the year. For example, seeding should not be conducted prior to October 1, and planting of transplants should be done in early spring.

While the MRP provides a supplemental planting mix for ephemeral/intermittent drainages, the various sections in the MRP do not discuss the use of this mix, nor do the reclamation maps show the locations for its use. The operator needs to provide details of the planting plan, including the timing of planting operations.

The MRP does not discuss in detail the reclamation of Gravel Canyon. At this time it is assumed that the Castlegate Area reclamation plan covers this area since it is identified on the Castlegate Area Map. This needs to be clarified in the MRP.

The MRP does not identify final revegetation of the cut and fill slopes associated with the Crandall Canyon access road (if the initial seeding was intended to be final revegetation, it needs to be made clear in the MRP.

Table 3.1-10, which deals with the reclamation costs of Hardscrabble Canyon identifies 21 acres for revegetation. Until final bond release is made, the operator needs to carry bond coverage for the revegetation cost of the 3 acre 'Goose Island' area. Therefore, the acreage on this table needs to be increased to 24 acres.

Several problems (inconsistencies) were noted on the final reclamation maps as follows:

Exhibit 3.2-3 (Sowbelly Gulch No. 5 Mine, Postmining Reclamation) - This map does not show the ephemeral drainage planting areas.

Exhibit 3.3-3 (Hardscrabble Canyon No. 3 and No. 4 Portals Postmining Reclamation) - The plant symbols on the map do not match the symbols in the legend and the map does not show the ephemeral drainage planting areas.

Exhibit 3.4-3 (Castlegate Area Post Reclamation) - The plant symbols on the map do not match the symbols in the legend and the map does not show the ephemeral drainage planting areas. Also, the legend should identify the appropriate seed mixes/planting mixes to be used.

Exhibit 3.7-9 (Crandall Canyon Reclamation Configuration) - This map does not identify or correlate the appropriate seeding/planting mixes (see Seeding/Planting Lists in Chapter 9, page 53) to be used in disturbed areas.

UMC 817.22 Topsoil: Removal - JSL

To date the Division has not received any substitute topsoil sample results or verification that the proposed substitute topsoil material can meet revegetation success standards. Samples were to have been taken by late summer of 1984. In the previous mid-permit term review the Division requested that the results of the samples be submitted immediately. The analysis has not been submitted. The permit submittal now calls for sampling and analysis to take place prior to reclamation. This is not acceptable. Reclamation feasibility must be demonstrated to the Division (UMC 786.19(b)). Analysis, trials and tests must be used to demonstrate the feasibility of the proposed topsoil substitute materials (UMC 817.22(e)). Final reclamation of Sowbelly Canyon cannot be approved until such time as the substitute topsoil has been approved by the Division.

Analysis of interim revegetation cover, and corresponding vegetation reference areas, in addition to soil analysis could potentially demonstrate reclamation feasibility (i.e. Goose Island reclamation, representing Hardscrabble and Sowbelly Canyons, and the School House Canyon waste pile representing the Castlegate area). Data collection and analysis must be conducted as soon as possible. Soil sampling and analysis should follow the Division's "Guidelines for Management of Topsoil and Overburden for Surface and Underground Coal Mines", April 1988. Vegetation sampling must follow acceptable sampling techniques as outlined in the Division's Vegetation Information Guidelines. Once the Division has reviewed this information, a determination of the need for test plots will be made.

UMC 817.42 Hydrologic Balance: Water Quality Standards and Effluent Limitations - MMD

The submitted MRP does not include a narrative of disturbed areas which do not report to a sedimentation pond. The Division files produced correspondence from CGCC dated August 10, 1988 which addressed small area exemptions. However the updated text which was submitted (Section 7.2-2(1)(A)) on this date was not included in the latest submittal. The operator must submit an updated narrative enumerating areas which do not report to a sedimentation pond pursuant to subsection (a)(3) of this regulation. The text should list the description, the acreage, and the alternative sediment control method utilized for each area. Each Alternate Sediment Control Area (ASCA) or Small Area Exemption (SAE) should be discussed according to Attachment A definitions and must be delineated and labeled on an appropriate map.

Attachment

UMC 817.43 Hydrologic Balance: Diversions - MMD

The submitted diversion designs are based on average channel slope values. Where channels are not relatively uniform in slope, the operator must submit channel capacity design calculations based on minimum slope and channel stability calculations based on maximum slope values.

No design for the disturbed area diversion below the Gravel Canyon topsoil area was found in the MRP. The operator must submit a design as per the aforementioned criteria for this diversion and clearly label and locate this diversion on an appropriate map.

Exhibit 3.5-1 does not differentiate between diversions and natural drainages in the Gravel Canyon area. It is not clear from this drawing where disturbed and natural drainages report to. The individual channels appear to converge over a short reach above the disturbed area. The operator must submit a map which clearly delineates and labels each diversion in this area.

Page 29 of section 3.7 references Exhibit 3.7-5 as the diversion system map of Crandall Canyon. No clearly defined disturbed drainage system can be identified from this map. The operator must submit a map of scale 1 inch = 200 feet or greater which clearly labels and locates the disturbed diversions in Crandall Canyon.

UMC 817.44 Hydrologic Balance: Stream Channel Diversions - MMD

Cross section F-F' on Exhibit 3.3-8A presents the reclaimed surface in Hardscrabble Canyon. This cross section shows a super-elevated reclaimed channel configuration. No super-elevated channels will be approved for final reclamation. The reclaimed channel should be located as near to the center of the drainage as possible while maintaining the natural channel sinuosity.

UMC 817.46 Hydrologic Balance: Sedimentation Ponds - MMD

No discharge relationships were found in the MRP for any of the pond spillway structures. The operator must submit design calculations for all impoundments demonstrating that the primary and emergency spillways will safely convey the design discharge at the required freeboard.

Pond exhibits frequently do not contain sufficient cross sectional elevations to determine the surrounding land surface configuration. The Division agreed during the January 1988 meeting

with CGCC that cross sections extending 50 feet beyond the spillway outlet would be adequate to meet regulatory requirements. The operator has not provided this information in the submitted drawings.

The operator commits to cleaning sediment from the pond structures prior to reaching the maximum design sediment capacity but does not identify the maximum capacity elevations. The elevations of the maximum sediment level and maximum water level must be shown on individual pond drawings or included in the text. The operator must install elevation reference markers in each sedimentation pond (except ponds 12A and B) which correspond to the maximum sediment level.

Pond volumes presented in the text frequently conflict with volumes presented on the Exhibits. The operator must clarify all conflicting information to reflect accurate and consistent pond parameters.

Cross section D-D' on Exhibit 11.1 and the spillway cross section on Exhibit 11.3 do not correspond to the horizontal distances shown on the pond plan views. Cross sections of all ponds must be accurately scaled to correspond to plan views. No cross section of the primary spillway in Pond 003 was found. The operator must submit a cross section through the length of the spillway which clearly shows inlet elevation, riser diameter and height (when applicable), barrel length, and barrel slope.

Exhibit 11.3 does not show an elevation of the 36 inch road culvert outlet. The outlet elevation of the Pond 004 spillway is labeled as 87.6 feet but it is not clear if this is the invert or top elevation. The operator must clearly label the inlet elevations on all pond drawings. Both inlet elevations appear to be lower than the spillway crest elevation. In addition, both inlets are located in close proximity to the outlet structure. These factors combine to produce short circuiting and significantly decrease the pond trap efficiency. The operator must relocate the spillway to the opposite end of the pond to mitigate this problem and optimize the pond efficiency.

The spillway barrel lengths depicted on Exhibit 11.4 conflict. The cross section barrel length is 203 feet while the plan view barrel length is 210 feet. The operator must correct this discrepancy to present a consistent and accurate representation of the spillway structure.

The longitudinal cross section of Pond 009 shown on Exhibit 11.6 is not depicted on the plan view. The water level shown on this cross section appears to be at the crest of the embankment. No

dimensions for the conveyance structure between the two pond cells is presented. The spillway structural dimensions are not labeled and can not be accurately determined from this exhibit. Cross sections do not extend beyond the top of the interior pond embankment. The operator must submit an accurate drawing of Pond 009 which clearly identifies the following features:

1. The elevations of the spillway inlet crest and outlet invert.

2. The riser height, riser diameter, barrel length, barrel diameter, and barrel slope.

3. The cross sectional dimensions and slope of the spillway structure between pond cells.

4. Pond cross sections extending at least to the bottom of the pond outslope embankment.

Exhibit 11.8 is not adequate to determine the capacity of Pond 011. The operator must submit an accurate contour map showing contours at no less than two foot intervals or submit adequate longitudinal and transverse cross sections which accurately depict the structural pond dimensions.

Submitted cross sections of Pond 12A do not depict any baseline reference. The operator must submit cross sections with a corresponding baseline reference or coordinates to provide some degree of accuracy. The spillway barrel length and slope can not be determined from Exhibit 11.9A. Design details of the decant structure are not presented on this drawing. The operator must submit a cross section through the length of the spillway structure which accurately depicts the dimensions, slope, and location of the structure (including the decant). This exhibit shows riprap at the outlet of the culvert above the pond. The operator must submit corresponding riprap design calculations and label the culvert structure above pond 12A.

Cross section 5 on Exhibit 11.9C depicts the top of the Pond 12B embankment at the same elevation as the spillway crest shown on Exhibit 11.9B. Exhibit 11.9B appears to label the spillway crest as 3 or 5 (illegible) feet below the top of the embankment, which conflicts with the submitted cross sections. The operator must clarify this discrepancy to present accurate, detailed drawings of Pond 12B.

Contours on Exhibit 11-10 extend from the bottom of Pond 013 to the maximum water elevation. Only one cross section of the pond structure is presented. The operator must submit additional cross sections or contours extending at a minimum to the bottom of the embankment outslope. An unidentified 24 inch culvert inlet is shown above the pond. This structure must be clearly labeled and identified.

Exhibit 11.11 does not present slope information beyond the top of the Pond 014 embankment. The operator must submit an accurate contour map or additional cross sections extending at a minimum to the spillway outlet which are sufficient to determine the surface configuration.

Exhibit 11.12 is not adequate to accurately determine the diameter or outlet elevation of the primary spillway for Pond 015. Contours must be extended to include the spillway outlet or additional cross sections must be submitted sufficient to accurately determine the surface configuration at the spillway outlet. Cross section C-C' depicts the end locations of a corrugated metal pipe but does not show any structural dimensions or identify the structure. The operator must clearly label and identify this structure and designate its purpose.

UMC 817.46 Hydrologic Balance: Sedimentation Ponds - JRH

The combined inslope and outslope of several of the sediment ponds are less than the 5:1 criteria as indicated in part (m) of this section. On incised ponds, the inslopes of the ponds should not exceed 2h:1v. In order for the Division to determine these structures stable, the operator must sufficiently justify the existing ponds. Justification in this case should primarily rely on the performance of these ponds in the past. The operator needs to state that these ponds have been routinely inspected on a quarterly basis and that no signs of weakness or instability have been found for these structures. In the event that stability has been a problem in the past, or, if an embankment is found to be unstable, the operator must commit to reconstruct the pond or embankment in accordance with the design and the performance standards of Subchapter K including UMC 817.46 and .49 as they apply.

UMC 817.47 Hydrologic Balance: Discharge Structures - MMD

The operator must submit design calculations for energy dissipators at all pond spillway outlets and hanging culverts or demonstrations that these structures are unnecessary. The location of all energy dissipators must be shown on appropriate maps.

UMC 817.49 Hydrologic Balance: Permanent and Temporary Impoundments - MMD

No provisions for inlet erosion protection were found for any impoundments. The operator must submit a riprap or other appropriate design for all pond inlets or demonstrate that these measures are not necessary.

UMC 817.52 Hydrologic Balance - DWD

The applicant will be required to monitor the amount of water discharged from each mine. Discharge on each monitoring occasion will be monitored at the mine mouth through the use of totalizing flow meters. Totals shall be recorded and submitted to the Division on a quarterly basis.

UMC 817.61-68 Use of Explosives - JRH

The operator should indicate that surface blasting for the operations is not routine for the mine. In the event of any surface blasting, the operator must commit to conduct blasting operations in accordance with 30 CFR 850 by a certified blaster and in accordance with UMC 817.61-.68.

Explosives magazines used in conjunction with the underground mining operations must also be located on the operational facilities drawings and the MRP must state that these magazines have been constructed and maintained in accordance with Federal and State regulations.

UMC 817.101 Backfilling and Grading: General Requirements - JRH

No calculations could be found referencing the cross sections for earthwork calculations. These calculations are required for backfilling and grading design for reclamation and determination of the bond amount.

Although it was previously agreed in past meetings with the operator that areas which required only miscellaneous site grading and cleanup would not require mass balance calculations, the operator will need to provide mass balance calculations with supporting contour or cross section information in areas such as highwall reduction or road reclamation where considerable earthwork is to be accomplished.

For areas where considerable earthwork will need to be accomplished to meet approximate original contour (AOC) requirements cross sections and calculations for earthwork will be necessary to prove the reclaimability of the site, the feasibility of the methods of reclamation and the cost for the reclamation bond.

Sufficient information must be presented on the drawings and within the text of the plan to indicate that the reclamation to be accomplished meets AOC requirements. For those higwalls and slopes which were previously existing prior to the ACT, a variance from total mitigation of these highwalls can be achieved with sufficient justification by the operator for partial retention of these highwalls and embankments. Methods used to justify retention of these highwalls would include, inability to mitigate highwall due to slope stability, stable conditions of existing highwall and the establishment of vegetation on the slopes, shortage of fill materials so as to economically or reasonably mitigate the highwalls without creating additional disturbed areas, and providing sufficient earthwork to allow the existing highwalls to blend in with the surrounding contours.

Those highwalls and embankments that were constructed as part of the proposed Mining and Reclamation Plan require complete mitigation. The operator has stated that all reclaimed slopes will be less than 2h:1v but the reclamation plans and cross sections provided do not provide sufficient information to determine whether or not this statement is correct.

UMC 817.103 Backfilling and Grading: Covering Coal and Acid- and Toxic-Forming Materials - JRH

Information regarding this section of the regulations was not referenced nor could be found within the text of the Mining and Reclamation Plan. The operator needs to address the specific requirements of this section.

UMC 817.106 Regrading of Stabilizing Rills and Gullies - JRH

This section was not referenced in the plan and a commitment that that all rills and gullies greater than 9 inches in depth will be filled, regraded and reseeded was not found within the text of the plan.

Additionally, the plan currently calls for only 6 inches of cover in areas such as the waste disposal facilities. It is clear that maintenance and repairs of gullies greater than 9 inches in depth is not adequate for these facilities. In those areas where the amount of topsoil or cover material is less than eighteen inches, the operator should commit to maintain and repair rills and gullies when they exceed half of the cover depth.

UMC 817.121-126 Subsidence Control Plan - DWD

The applicant will be required to conduct a current subsidence survey over the areas that have been mined since 1978. The survey should consist of measuring existing monument locations to establish changes from subsidence. Areas should be identified on a map that have been mined since 1983, but have not been monitored for subsidence. The following information should also be presented for such areas; the overburden height, the type of mining method used and the coal seam mined.

The applicant shall submit a mitigation plan to ensure that the pre-subsidence usefulness and value of land will be maintained. Castle Gate Coal Company shall commit to restore areas impacted by subsidence caused surface cracks which are of a size and nature to cause injury or death to grazing livestock or wildlife. Restoration will encompass backfilling cracks and recontouring the affected land surface and replacing surface water resources that are intercepted as a result of mining. Restoration shall be undertaken after the review of annual subsidence shows the surface has stabilized. All areas of needed restoration will be completed prior to bond release. Livestock owners will be compensated at fair market value for any livestock which are injured or killed as a direct result of surface hazards caused by subsidence.

The applicant will be required to resubmit clear and legible copies of Figures 3.1-1, 6-11 and 6-12.

UMC 817.150-.156 Class I Roads - JRH

All roads utilized within the permit area for the transportation of coal should be classified as Class I roads. The operator makes some references to Class I roads in the text of the plan, but does not attempt to address the requirements of these sections.

Each Class I road within the permit area should be clearly marked on the drawings and compliance with the requirements of those sections pertinent to Class I roads should be discussed within the text of the Mining and Reclamation Plan. The plan should address the design, construction, drainage control, sediment control, operation, maintenance and reclamation of these roads.

Additionally, Class I roads require certification under UMC 817.150(d)(1). Certification statements for the design and the construction of these roads is not found in the plan.

UMC 817.160-.166 Class II Roads - JRH

UMC 817.170-.176 Class III Roads - JRH

Similar to Class I roads, the operator has not identified specifically which roads are classified as Class II or Class III roads within the permit area.

The specific requirements of these sections of the regulations also need to be addressed in the plan.

Several roads have been noted within the plan which are not included within the disturbed area boundaries of the plan. These roads include the access road to Crandall Canyon, the access road above Crandall Canyon leading to the water tank and the leach field, and the road to the topsoil stockpiles. All roads constructed, utilized and maintained in conjunction with the mining operations must be included on the drawings, shown as disturbed areas, be classified as Class I, II, or III roads and address the specific requirements for their applicable sections.

It is also apparent that several of these roads are to be left as part of the post mining land use, however the operator has stated that no facilities or structures will be left upon reclamation. The operator needs to correct the plan to indicate which structures, roads or other facilities will be left as part of the post mining land use and include a discussion of these plans in the text of the MRP.

UMC 817.153 Roads: Class I: Drainage - MMD

UMC 817.163 Roads: Class II: Drainage - MMD

UMC 817.173 Roads: Class III: Drainage - MMD

The operator must submit designs for all road drainage systems pursuant to the requirements of the above applicable regulations. The location of drainage structures such as ditches, swales, etc. shall be included on appropriate maps and clearly labeled.

ATTACHMENT A

POLICY

ASCA's Permitting action for ASCA's will include depiction of alternative sediment control structures on the disturbed area drainage map. The drainage area treated by the alternative control will also be depicted on a map to assess adequacy of the structure. Alternative control structures may be depicted on disturbed area maps with a generic symbol such that the particular type of structure is left up to the judgement of the Division's Field Specialist, with concurrence from the Division Hydrologist assigned to that mine, in consultation with the operator.

The operator must supply a plan stating how all ASCA's will be installed, maintained, and eventually removed following reclamation. This will include a discussion of how ASCA's will meet effluent limits and state and federal water quality standards, based on each BCTA.

ASCA's may be small areas, the sum total area of which does not exceed 15 percent of the total disturbed area, except in unique cases determined by the Division.

Failure to properly maintain these structures according to approved designs will result in enforcement action.

SAE's Any area that an operator desires to exempt from the sediment control requirements of UMC/SMC 817.45 and 46 must be specifically approved by the Division in a formal permitting action (Usually an amendment). The operator must demonstrated that the drainage from this area will meet the effluent standards of UMC/SMC 817.42 and State and Federal water quality standards for the receiving waters without siltation structures or alternative sediment control measures.

BT6010/13

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING
355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203
(801) 538-5340

This permit, ACT/007/004, is issued for the state of Utah by the Utah Division of Oil, Gas and Mining (DOGM) to:

Castle Gate Coal Company
251 North Illinois Street
P.O. Box 6106
Indianapolis, Indiana 46206-6106
(317) 266-1500

for the Castle Gate Mine. Castle Gate Coal Company is the lessee of federal coal leases U-25484, U-25485, U-058184, U-019524, SL-029093-046653, and SL-071737; State leases ML-11940, ML-18148, and ML-13681; and of fee-owned parcels. A performance bond is filed with the DOGM in the amount of $2,683,603.00, payable to the state of Utah, Division of Oil, Gas and Mining and the Office of Surface Mining Reclamation and Enforcement (OSMRE). DOGM must receive a copy of this permit signed and dated by the permittee.

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

Sec. 2 PERMIT AREA - The permittee is authorized to conduct underground coal mining activities on the following described lands (as shown on the map appended as Attachment B) within the permit area at the Castle Gate Mine situated in the state of Utah, Carbon County, and located:

<u>Township 12 South, Range 9 East, SLBM</u>

Section 22: Portions of SE1/4 SW1/4 and SW1/4 SE1/4
Section 26: All but E1/2 E1/2
Sections 27, 28: All
Section 29: All but N1/2 NW1/4 and NW1/4 NE1/4
Section 30: All but N1/2 N1/2
Sections 31, 32, 33, 34: All
Section 35: Portions of N1/2, W1/2 SW1/4, and SE1/4 SE1/4
Section 36: S1/2 NW1/4 and portions of SW 1/4 and NE1/4

Township 13 South, Range 9 East, SLBM

Section 1: Portion of NW1/4 NW1/4
Section 2: Portions of NE1/4 and NW1/4
Section 3: NW1/4 and portions of NE1/4, SE1/4 and SW1/4
Section 4: N1/2 and portions of SE1/4 and SW1/4
Section 5: NE1/4 and portions of NW1/4, SE1/4 and SW1/4
Section 6: N1/2 and portions of SW1/4 and SE1/4
Section 8: Portion of NE1/4
Section 9: Portions of NE1/4, NW1/4 and SW1/4
Section 10: Portions of NE1/4 and NW1/4

This legal description is for the permit area (as shown on Attachment B) of the Castle Gate Mine. The permittee is authorized to conduct underground coal mining activities connected with mining on the foregoing described property subject to the conditions of the leases, the approved mining plan, including all conditions and all other applicable conditions, laws and regulations.

Sec. 3 PERMIT TERM - This permit becomes effective on December 25, 1989, and expires on December 24, 1994.

Sec. 4 ASSIGNMENT OF PERMIT RIGHTS - The permit rights may not be transferred, assigned or sold without the approval of the Director, DOGM. Transfer, assignment or sale of permit rights must be done in accordance with applicable regulations, including but not limited to 30 CFR 740.13(e) and R614-303.

Sec. 5 RIGHT OF ENTRY - The permittee shall allow the authorized representative of the DOGM, including but not limited to inspectors, and representatives of OSMRE, without advance notice or a search warrant, upon presentation of appropriate credentials, and without delay to:

A. have the rights of entry provided for in 30 CFR 840.12, R614-400-110, 30 CFR 842.13 and R614-400-220; and,

B. be accompanied by private persons for the purpose of conducting an inspection in accordance with R614-400-210 and 30 CFR 842, when the inspection is in response to an alleged violation reported by the private person.

Sec. 6 SCOPE OF OPERATIONS - The permittee shall conduct underground coal mining activities only on those lands specifically designated as within the permit area on the maps submitted in the mining and reclamation plan and permit application and approved for the term of the permit and which are subject to the performance bond.

Sec. 7 ENVIRONMENTAL IMPACTS - The permittee shall minimize any adverse impact to the environment or public health and safety through but not limited to:

A. accelerated monitoring to determine the nature and extent of noncompliance and the results of the noncompliance;

B. immediate implementation of measures necessary to comply; and

C. warning, as soon as possible after learning of such noncompliance, any person whose health and safety is in imminent danger due to the noncompliance.

Sec. 8 DISPOSAL OF POLLUTANTS - The permittee shall dispose of solids, sludge, filter backwash or pollutants in the course of treatment or control of waters or emissions to the air in the manner required by the approved Utah State Program and the Federal Lands Program which prevents violation of any applicable state or federal law.

Sec. 9 CONDUCT OF OPERATIONS - The permittee shall conduct its operations:

A. in accordance with the terms of the permit to prevent significant, imminent environmental harm to the health and safety of the public; and

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

Sec. 10 AUTHORIZED AGENT - The permittee shall provide the names, addresses and telephone numbers of persons responsible for operations under the permit to whom notices and orders are to be delivered.

Sec. 11 COMPLIANCE WITH OTHER LAWS - The permittee shall comply with the provisions of the Water Pollution Control Act (33 USC 1151 et seq,) and the Clean Air Act (42 USC 7401 et seq), UCA 26-11-1 et seq, and UCA 26-13-1 et seq.

Sec. 12 PERMIT RENEWAL - Upon expiration, this permit may be renewed for areas within the boundaries of the existing permit in accordance with the Act, the approved Utah State Program and the Federal Lands Program.

Sec. 13 CULTURAL RESOURCES - If during the course of mining operations, previously unidentified cultural resources are discovered, the permittee shall ensure that the site(s) is not disturbed and shall notify DOGM. DOGM, after coordination with OSMRE, shall inform the permittee of necessary actions required. The permittee shall implement the mitigation measures required by DOGM within the time frame specified by DOGM.

Sec. 14 APPEALS - The permittee shall have the right to appeal as provided for under R614-300.

Sec. 15 SPECIAL CONDITION - In addition to the general obligations and/or requirements set out in the leases, the federal mining plan approval, and this permit, the permittee shall comply with the Division Order issued December 18, 1990 as well as the condition appended hereto as Attachment A.

The above conditions (Secs. 1-15) are also imposed upon the permittee's agents and employees. The failure or refusal of any of these persons to comply with these conditions shall be deemed a failure of the permittee to comply with the terms of this permit and the lease. The permittee shall require his agents, contractors and subcontractors involved in activities concerning this permit to comply with these conditions. These conditions may be revised or amended, in writing, by the mutual consent of DOGM and the permittee at any time to adjust to changed conditions or to correct an oversight. DOGM may amend these conditions at any time without the consent of the permittee in order to make them consistent with any new federal or state statutes and any new regulations.

THE STATE OF UTAH

By: Dennis R. Nelson

Date: 12/19/90

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

_____

Authorized Representative of the Permittee

Date: _____

APPROVED AS TO FORM:

By: _____
Assistant Attorney General

Date: 12-24-90

BT6014/1-5

Attachment A

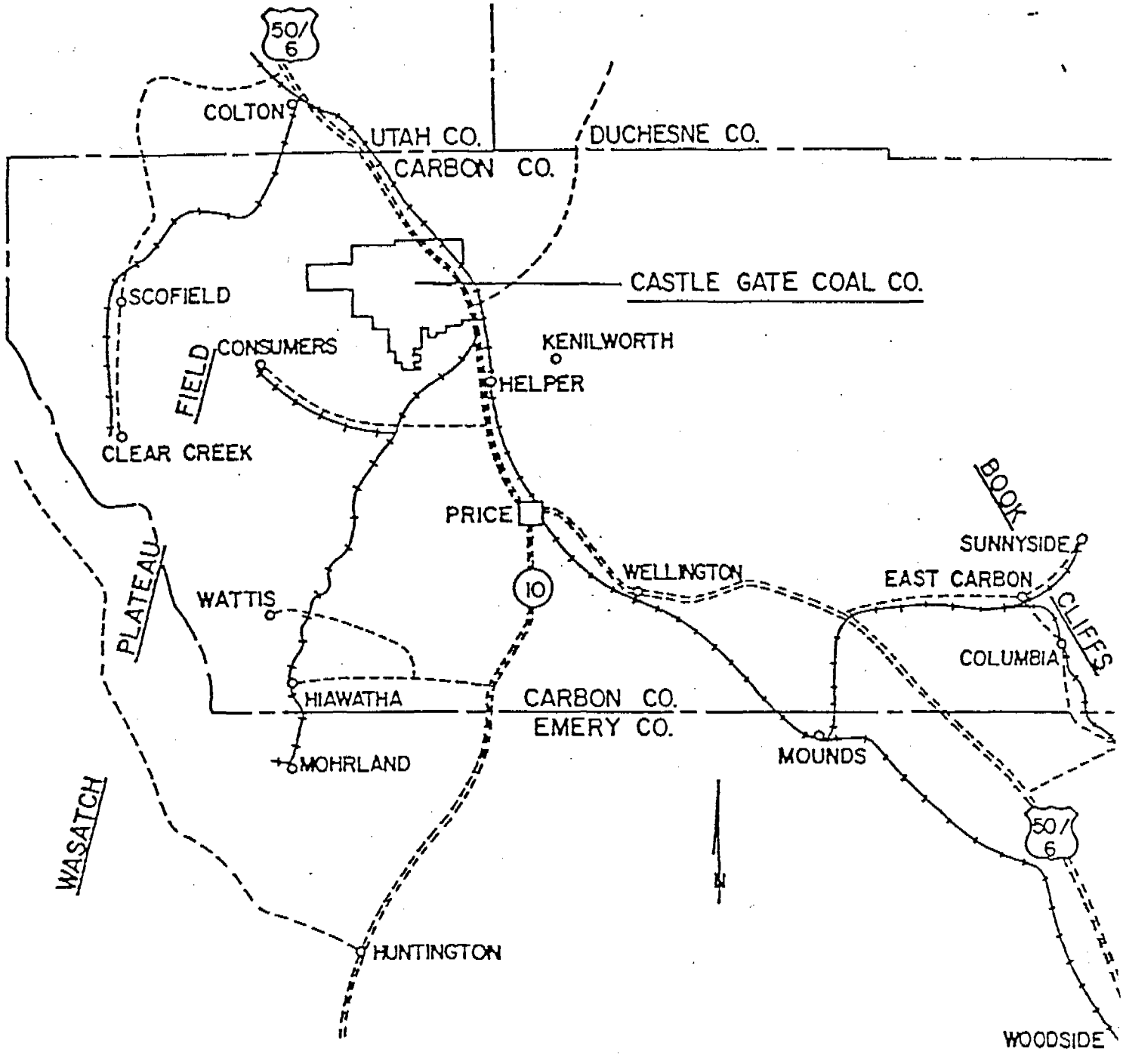
STIPULATION
Castle Gate Coal Company
ACT/007/004

R614-303-122-(DRH)

By January 24, 1991, the permittee will provide ten (10) additional copies of the complete Mining and Reclamation Plan (MRP) to the Division for distribution to other agencies, with the committment to resolve any issues or deficiencies brought to light by other agencies reviews.

REGIONAL LOCATION PLAN

ATTACHMENT B



(Not to scale)

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

PERMITTEE	
Mr. James W. Buck, P.E. Castle Gate Coal Company 251 N. Illinois Street P.O. Box 967 Indianapolis, Indiana 46206-0967 Permit Number ACT/007/004	DIVISION ORDER AND FINDINGS of PERMIT DEFICIENCY

PURSUANT to R614-303-212, the DIVISION hereby ORDERS the PERMITTEE, Castle Gate Coal Company, to make the permit changes enumerated in the FINDINGS OF PERMIT DEFICIENCY in order to be in compliance with the State Coal Program. These Findings of Permit Deficiency are to be remedied in accordance with the requirements of R614-303-220.

FINDINGS OF PERMIT DEFICIENCY

1) **R614-301-121. Permit Application Format and Contents.** The PERMITTEE shall replace the current table of contents and map reference to incorporate updated information submitted by the PERMITTEE. Other references found

within the Mining and Reclamation Plan should also be updated to reflect the current information provided in the plan. This information shall be provided on or before March 1, 1991.

2) **R614-301-122. Permit Application Format and Contents.** The information contained within the permit must be organized to ensure that each Figure, Plate, Diagram, Analysis etc. that is referenced is included within the Permit Application. The language used in the permit application must accurately differentiate existing and proposed facilities, activities, treatments, etc. This information shall be provided on or before June 1, 1991.

3) **R614-301-140. Maps and Plans.** The PERMITTEE shall submit to the DIVISION, a schedule for providing complete and accurate maps and drawings to depict the current existing conditions for all facilities, and, proposed reclamation treatments. This schedule shall be provided on or before March 1, 1991.

4) **R614-301-142. Maps and Plans.** The PERMITTEE has not provided maps and plans with the permit application which distinguish among each of the phases during which coal mining and reclamation operations were or will be conducted at any place within the life of operations. At a minimum, distinctions will be clearly shown among those portions of the life of operations in which coal mining and

reclamation operations occurred: prior to August 3, 1977; after August 3, 1977, and prior to either May 3, 1978; after May 3, 1978 and prior to the approval of the State Program; and, after the estimated date of issuance of a permit by the Division under the State Program. The PERMITTEE must provide identification as to the date and the use of those areas and facilities within the permit area which have been incorporated into the underground mining activities. Those areas affected by previous mining operations (including cutslopes and outslopes of pads and roads) and used in conjunction with current underground coal mining facilities are to be included in the disturbed areas. This information shall be provided on or before March 1, 1991.

5) **R614-303-200. Permit Review, Change and Renewal** Specific requirements or deficiencies found within the PERMITTEE's current Mining and Reclamation Plan shall be addressed using the R614 - Coal Mining Rules. This shall apply to all changes in the permit submitted subsequent to this ORDER.

6) **R614-301-222. Soil Survey. and R614-301-223. Soil Characterization.** The PERMITTEE must provide reconnaissance soil survey information for each disturbed area. The survey shall determine the best available soil within the permit area for use as substitute topsoil. The survey must provide an indication of the areal extent of each soil type and identify the location of each soil sampling

location and each soil pit. The maps must be drawn on a scale of 1"= 200' or greater, labeled according to scale and provided with a legend. The soil survey information shall be provided on or before June 1, 1991.

7) **R614-301-224. Substitute Topsoil.** The PERMITTEE must include results of analyses, trials, and tests to support the use of selected overburden as a substitute for topsoil. Samples of the eight borrow sites shown in Ex 8-10 must be taken down to the planned excavation depth and segregated by 0-6", 6-12", 12-24", 24-36" 36-48" samples. Include results of analyses, trials, and tests as described under R614-301-233 and in the Division "Guidelines for Management of Topsoil," Table 6. This substitute topsoil information must be provided on or before March 1, 1991.

8) **R614-301-231. General Requirements.** The PERMITTEE must include plans for testing of the redistributed soil to evaluate the nutrient and other soil amendment requirements. The Division requests that the Permittee take 1 sample for every 2.5 acres of respread soil and that the following standard fertility tests are performed: texture, nitrate nitrogen (ppm), phosphorus (ppm), potassium (ppm), pH, and EC (mmhos). These tests must be performed on all soil, regardless of origin, at all disturbed areas after grading. This information shall be submitted on or before March 1, 1991.

9) **R614-301-232. Topsoil and Subsoil Removal.** The PERMITTEE is required to remove and protect all topsoil material unless the DIVISION authorizes and consents to another plan. Reference on p 19, sec 8.3 to the Permittee's "preaffectment investigations" must be deleted. This must be accomplished on or before March 1, 1991.

10) **R614-301-233. Topsoil Substitutes and Supplements.** The PERMITTEE must provide a complete report from all sampling locations of "in situ" soils, proposed topsoil borrow areas (2 in Sowbelly, 3 in Hardscrabble and 3 in Crandall Canyon), refuse piles, and topsoil in order to ascertain the ability of the Applicant to adequately reclaim the disturbed areas. The Analyses required for a complete report are listed in Table 6 of the "Guidelines for Management of Topsoil," a Division pamphlet. The Permittee mentions an incomplete list of analyses in the MRP Revision of July 1990 on p21, sec 3.2; p24, sec 3.3; p21, sec 3.4. Reference to the Table 6 list of analyses and the location of the results must be made in the text in Chap VIII, p 20, paragraph 2. Once these analyses have been submitted, the Division may require further testing to clarify areas of acidity and/or toxicity. These analyses must be provided on or before March 1, 1991.

11) **R614-301-240. Reclamation Plan.** The PERMITTEE must include plans for the removal of all parking areas or plans to cover the hard surface with 4 feet of non-

toxic/non-acidic material. The PERMITTEE must appraise the DIVISION of all potentially toxic and/or acidic areas that will require additional cover. Exhibits 3.3-3 and 3.2-3 must be amended to show those areas that potentially require additional soil material as per p 31, sec 3.1, Chap III of the 1990 Amendment to the Plan. This information must be submitted on or before March 1, 1991.

12) **R614-301-321. Vegetation Information.** The PERMITTEE must provide the current range condition analysis for the Castlegate mixed brush, the Castlegate riparian, the Crandall Canyon conifer, the Crandall Canyon riparian, the Sowbelly grass-sage and the Sowbelly mixed brush reference areas. This information must be submitted on or before March 1, 1991.

13) **R614-301-340. Reclamation Plan.** The PERMITTEE must provide plans to protect reclaimed areas for a minimum 2-year period. The PERMITTEE will revise the MRP to show 1) seedbed preparation plans(i.e. deep ripping to 18-24 inches), 2) that seed and fertilizer will not be mixed in the hydroseeder, 3) plans for the use of the supplemental planting mix for ephemeral/intermittent drainages, including locations(shown on the reclamation maps) and timing of the planting operations, 4) the final revegetation plans (as identified in the July 1990 correspondence) for the cut and fill slopes associated with the Crandall Canyon

access road, 5) Clear plans for the reclamation of Gravel Canyon. This information must be provided on or before March 1, 1991.

14) **R614-301-411. Environmental Description.** The PERMITTEE must provide current information regarding the Carbon County zoning for the permit area. Specifically, what are the current zoning classification(s) for the Crandall Canyon area and the allowable activities for each classification (CE-1 and CE-2). This information must be provided on or before March 1, 1991.

15) **R614-301-521. Operation Plan. General.** The PERMITTEE shall provide exhibits or drawings which include: the location of all buildings in and within 1,000 feet of the permit area, with identification of the current use of each building; the location of surface and subsurface manmade features within, passing through, or passing over the proposed permit area; and, water supply intakes for current water users. This information shall be provided on or before June 1, 1991.

16) **R614-301-525.100. Subsidence Control Plan.** The PERMITTEE shall submit a subsidence control plan which identifies the influence on renewable resource lands. The subsidence control plan shall include a terrestrial survey over areas that have been mined since 1985. A description of the survey shall be provided

on a map and in narrative form to describe any areas disrupted by subsidence (i.e., fracturing, surface cracks, slumps, depressions, etc.). The subsidence control plan shall also establish subsidence monitoring sites over areas mined since December 31, 1987, and, all areas intended for future mining. The PERMITTEE shall provide a mitigation plan in conjunction with the subsidence control plan to ensure that the pre-subsidence usefulness and value of the land will be maintained. The subsidence mitigation plan must include a commitment by the PERMITTEE to: restore areas impacted by subsidence caused surface cracks which are of a size or nature to cause injury or death to grazing livestock or wildlife; replacing surface water resources; backfilling and recontouring the affected land surface area; compensation for livestock killed or injured; and restoration of any other facilities destroyed or damaged as a direct result of surface hazards caused by subsidence. This Subsidence Control Plan shall be submitted on or before June 1, 1991.

17) **R614-301-550. Reclamation Design Criteria and Plans.** The permit application must include site specific plans that incorporate the design criteria for reclamation activities. These design criteria and plans shall include but not be limited to: phased reclamation treatments and designs throughout the permit liability period, designs for temporary and permanent surface features, including diversions, impoundments, sediment control structures, and other facilities which will require

construction throughout the reclamation process; specific plans and details for all permanent facilities to remain as part of or in conjunction with post mining land use, including roads, utilities, and structures; and, maps and drawings which clearly show the areal and vertical extent of the existing facility areas and those areas throughout all phases of reclamation. This information shall be provided on or before June 1, 1991.

18) **R614-301.553. Backfilling and Grading.** Backfilling and grading design criteria must be described in the permit application. Disturbed areas must be backfilled and graded to: achieve the approximate original contour, except as provided in R614-301-553.600 through R614-301-553.642; eliminate all highwalls, spoil piles, and depressions, except as provided in R614-301-552.100 (small depressions); R614-301-553.620 (previously mined highwalls); and in R614-301-553.650 (retention of highwalls); achieve a postmining slope that does not exceed either the angle of repose or such lesser slope as is necessary to achieve a minimum long-term static safety factor of 1.3 and to prevent slides; minimize erosion and water pollution both on and off the site; and, support the approved postmining land use. Information within the plan does not specifically address the above requirements. This information shall be provided on or before June 1, 1991.

19) **R614-301-553.500. Previously Mined Areas.** The PERMITTEE shall demonstrate in writing, that the volume of all reasonably available spoil material is insufficient to completely backfill the reaffected or enlarged highwalls to be retained throughout the mine facilities. The PERMITTEE must also demonstrate that the remaining highwalls shall be eliminated to the maximum extent technically practical in accordance with the following criteria: (1) All spoil generated by the remining operation and any other reasonably available spoil shall be used to backfill the area. Reasonably available spoil in the immediate vicinity of the remining operation shall be included within the permit area. (2) The backfill will be graded to a slope which is compatible with the approved postmining land use and which provides adequate drainage and long term stability. (3) Any highwall remnant shall be stable and not pose a hazard to the public health and safety or to the environment. The PERMITTEE shall demonstrate, to the satisfaction of the regulatory authority (DIVISION), that the highwall remnant is stable. (4) Spoil placed on the outslope during previous mining operations shall not be disturbed if such disturbances will cause instability of the remaining spoil or otherwise increase the hazard to the public health and safety or to the environment. This information shall be provided on or before June 1, 1991.

20) **R614-301-723 Sampling and Analysis.** The present monitoring plan states that the Dissolved Oxygen (D.O.) parameter is analyzed in the laboratory. Because

D.O. is instable, the PERMITTEE should measure D.O. in the field and commit in the plan to provide sampling and analysis according to the current edition of "Standard Methods for the Examination of Water and Wastewater". This must be provided on or before March 1, 1991.

21) **R614-301-731. Operation Plan. General Requirements.** The operational plan must be specific to the local hydrologic conditions and will contain steps to be taken during coal mining and reclamation operation through bond release. The PERMITTEE needs to correct the MRP to include monitoring plans specific to ground water and surface water during reclamation through bond release. These monitoring plans should reflect the requirements of R614-301-731.200, and must reflect the language of R614-301-731.212, R614-301-731.233, R614-301-731.214, and R614-301-731-224. The PERMITTEE shall submit a reclamation plan for all phases of reclamation indicating how the relevant requirements for R614-301-730. through R614-301-760. will be met. This shall be required on or before June 1, 1991.

22) **R614-301-731.300. Acid- and Toxic-Forming Materials.** The PERMITTEE must provide a complete analysis of the Schoolhouse refuse site samples. At present, the PERMITTEE has not sufficiently demonstrated the non-toxic/non-acidic nature of the refuse, and that the proposed 6 inches of cover material for the

refuse material is adequate. Based on the results submitted, further sampling may be required by the DIVISION to define areas of toxicity/acidity. The complete analysis of the Schoolhouse site refuse samples shall be provided on or before March 1, 1991.

23) **R614-301-742.222 Sediment Control Measures.** The PERMITTEE must insure that Pond #013, located in School House Canyon, meets the requirements of 30 CFR 77.216 and must specifically address those requirements in the MRP. This information must be provided on or before March 1, 1991.

24) **R614-301-746. Coal Mine Waste.** The PERMITTEE must insure that the School House Refuse pile meets all requirements of R614-301-746 and that they are addressed in the MRP. Runoff from above a refuse pile and on the surface of a refuse pile must be diverted into stabilized diversion channels and, uncontrolled drainage may not be diverted over the outslope of the refuse pile. Drainage control must meet the requirements of R614-301-742.300 and be designed to safely pass the runoff from a 100 year 6-hour event. The PERMITTEE must meet these requirements on or before June 1, 1991.

25) **R614-301-800. Bonding and Insurance.** The PERMITTEE shall provide to the DIVISION, the Certificate of Liability Insurance Form which is incorporated into

the Reclamation Agreement. Bonding calculations do not include the following information: a map specifying each area of land for which bond will be posted; mass balance calculations presented in sufficient detail to show backfilling and grading requirements for distribution and disposal of excess spoil and mine development waste, backfilling to meet AOC requirements, subsoil, topsoil and substitute topsoil distribution and quantities for each sub area of the permit; calculations for determination of quantities, equipment selection and productivity used in determining the bond amount which reflect the quantities determined in the mass balance calculations; determination of Phase I and Phase II reclamation activities including a map showing those facilities to be constructed and/or removed during each phase of reclamation. This information shall be required on or before June 1, 1991.

26) **R614-302-313. Application Contents--Reconnaissance Inspection.** The PERMITTEE must, whether or not prime farmland is present, include the results of a reconnaissance inspection of the proposed permit area to indicate whether prime farmland exists. The DIVISION in consultation with the SCS will determine the nature and extent of the required reconnaissance inspection. The PERMITTEE must submit the results of a reconnaissance inspection of the proposed permit area with the statement of non-prime farmland determination

from the Soil Conservation Service. A copy of this information must be provided on or before June 1, 1991.

ORDER

Castle Gate Coal Company is ORDERED to make the requisite permit changes in accordance with R614-303-220, as set forth above, and to submit a complete application for permit change addressing each FINDING OF PERMIT DEFICIENCY within the time periods indicated in each of the FINDINGS. The application for permit change shall specify for each FINDING, whether or not the change constitutes a significant permit revision or a permit amendment when submitted.

So ORDERED, this 18th day of December, 1990.

Dianne R. Nielson

Dianne R. Nielson, Director

Division of Oil, Gas and Mining

\users\coal\wp\CASTLE.ORD