

**APPLICATION FOR AN UNDERGROUND
COAL MINE PERMIT**

**KAISER STEEL CORPORATION
SUNNYSIDE MINES
CARBON COUNTY, UTAH**

BOOK 1

STATE OF UTAH)
) ss.
COUNTY OF CARBON)

William P. Balaz, Jr., being first duly sworn, deposes and says:

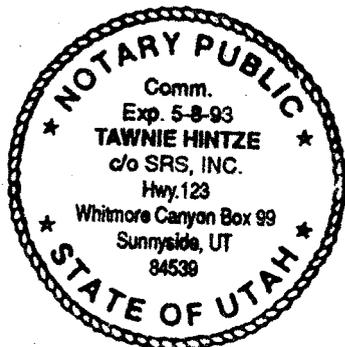
1. That he is Mine Manager of Sunnyside Coal Company;
2. That on behalf of said Company, under transmittal letter dated July 31, 1990, he submitted a permit change of name for ACT/007/007 to the State of Utah, Board and Division of Oil, Gas and Mining, for Sunnyside Mines, Carbon County, Utah; and
3. That the information contained therein is true and correct to the best of his information and belief.

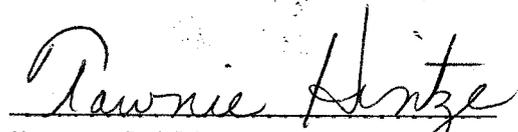

William P. Balaz, Jr.

STATE OF UTAH)
) ss.
COUNTY OF CARBON)

On this 31st day of July, 1990, before me, the undersigned, a Notary Public in and for the State of Utah, whose principal place of business is located in Carbon County, Utah, personally appeared WILLIAM P. BALAZ, JR., personally known to me (or proved to me on the basis of satisfactory evidence) to be the MINE MANAGER OF SUNNYSIDE COAL COMPANY, the Company that executed the instrument and the officer who executed the within instrument on behalf of the Company therein named and acknowledged to me that such Company executed the within instrument pursuant to its bylaws or a resolution of its Board of Directors.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.




Notary Public, State Of Utah

My Commission Expires 05-08-93

1.20 Legend, Financial, Compliance, And Related Information

The applicant is Sunnyside Coal Company and includes information on principal shareholder, directors and officers and surface and coal rights ownership for the Sunnyside Mines and adjacent areas as well as permit term and boundary information.

Permits and licenses issued to the applicant in connection with the operation of coal mines in the United States are provided as well as a listing of Notices of Violation of Federal and State environmental protection laws in connection with such mining activities during the preceding three years.

1.21 Identification of Interest

The rules and regulations stated under UMC 782.13--Identification of Interests--are presented sequentially in this section. Each subpart is addressed as follows:

(a) Each application shall contain the names and addresses of:

(1) The name, address, and telephone number of the permit applicant:

Sunnyside Coal Company
P. O. Box 99
Sunnyside, Utah 84539
(801) 888-4421

(2) Legal or equitable owner of record of areas to be affected by surface operations and facilities and of the coal to be mined is:

Sunnyside Coal Company
P. O. Box 99
Sunnyside, Utah 84539
(801) 888-4421

United States of America
Department of the Interior
Bureau of Land Management

Utah State Offices
University Club Building
136 East South Temple
Salt Lake City, UT 84111
(801) 524-5433

(3) Holder of record of leasehold interest in areas to be affected by surface operations and facilities and of the coal to be mined is:

Sunnyside Coal Company
P. O. Box 99
Sunnyside, Utah 84539
(801) 888-4421

(4) Purchaser of record under a real estate contract of areas to be affected by surface operations and facilities and of the coal to be mined:

None

(5) The operator and the applicant who will accept service of process is:

William P. Balaz, Jr.
Mine Manager
Sunnyside Coal Company
Sunnyside Mines
P. O. Box 99
Sunnyside, Utah 84539

(b) The applicant, Sunnyside Coal Company, is a public corporation incorporated under the laws of the State of Colorado.

(1) The names and addresses of the officers and directors of Sunnyside Coal Company are as follows:

Officers of Applicant

James T. Cooper	President	The Registry 1113 Spruce Street Boulder, CO 80302
David B. Corman	Vice President	The Registry 1113 Spruce Street Boulder, CO 80302
Jeffrey L. Vigil	Treasurer	The Registry 1113 Spruce Street Boulder, CO 80302
Kenneth R. Oldham	Secretary	1200 Hudson's Bay Centre 1600 Stout Street Denver, CO 80202

Directors of Applicant

James T. Cooper	Sunnyside Mines, Inc. The Registry 1113 Spruce Street Boulder, Co 80302
David B. Corman	Sunnyside Mines, Inc. The Registry 1113 Spruce Street Boulder, CO 80302
Jeffrey L. Vigil	Sunnyside Mines, Inc. The Registry 1113 Spruce Street Boulder, Co 80302
Kenneth R. Oldham	Knutson, Brightwell & Reeves 1200 Hudson's Bay Centre 1600 Stout Street Denver, Colorado 80202

(b) (2) All common stock of Sunnyside Coal Company is owned and/or controlled by Sunnyside Mines, Inc.

Sunnyside Mines, Inc.
The Registry
1113 Spruce Street
Boulder, CO 80302

(b) (3) Names under which the applicant and principal shareholder previously operated mining activities:

Applicant has previously conducted mining activities under the name of Sunnyside Reclamation & Salvage, Inc.

Applicant's principal Shareholder, Sunnyside Mines, Inc. conducts mining activities in Pennsylvania through International Anthracite Corporation and in Kentucky through Sunnyside of Kentucky.

(c) See (a) and (b) above

(d) Current or previous coal mining permits or pending permit applications:

(1) B Canyon, Carbon County, Utah

Division of Oil, Gas and Mining
Department of Natural Resources
State of Utah
May 28, 1985

(2) International Anthracite Corporation, Schuylkill County, Pennsylvania, Permit Nos. 548 413 04, 548 607 01-01

State of Pennsylvania
Department of Environmental Resources
Harrisburg, PA 17120

(3) Sunnyside of Kentucky, Pike County, Kentucky
Permit Nos. 898-5521, 898-5522, 898-5058, 898-5057,
898-0320, 898-5523, 898-5524, 898-5525, 898-5526,
898-5527, 898-5528, 898-5531, 898-5530, 898-5529,
898-5059

State of Kentucky
Department for Surface Mining, Reclamation,
and Enforcement
Frankfort, Kentucky 40601

(e) The names and addresses of owners of record of all surface and subsurface areas contiguous to any part of the proposed area are listed below (Also see Plates II--1 and II-2):

(i) Surface Owners:

United States of America
Department of the Interior
Bureau of Land Management
324 South State
Salt Lake City, UT 84111-2303

State of Utah
Division of State Lands
355 West North Temple
3 Triad Center
Suite 400
Salt Lake City, UT 84180-1204

Chevron Resources
A Division of Chevron Industries, Inc.
595 Market Street
San Francisco, CA 94120

Dennis, Donald I.
P.O. Box 97
Bullard, TX 75757

East Carbon City
Dale Andrews, Mayor
Columbia Branch
East Carbon City, UT 84520

Hill, Howard L.
23543 Highland Glen Drive
Newhall, CA 91321

Jensen, Glen E.
Elmo, UT 84521

Sunnyside Coal Company
P. O. Box 99
Sunnyside, Utah 84539

Larcher, Ernest
New House Hotel
Price, UT 84501

Oliveto, Dominic
P.O. Box 598
Price, UT 84501

Union Steel
P.O. Box 58
Oakland, CA 94604

United States Steel Corporation
1230 Kennecott Building
10 East South Temple
Salt Lake City, UT 84113

(ii) Subsurface Owners:

United States of America
Department of the Interior
Bureau of Land Management
324 South State
Salt Lake City, UT 84111-2303

State of Utah
Division of State Lands
355 West North Temple
3 Triad Center
Suite 400
Salt Lake City, UT 84180-1204

County of Carbon
County Commissioners
County Building
Price, UT 84501

Pagano, Jay
P.O. Box 67
Price, UT 84501

(f) The name of the mine is Sunnyside Mines whose Mine Safety and Health Administration (MSHA) identification numbers for the individual mines are:

Mine No 1 MSHA ID NO. 42-00093

Mine No. 2 MSHA ID No. 42-00094

Mine No. 3* MSHA ID No. 42-00092

Surface MSHA ID No. 42-01813

(g) The following is a statement of all lands, interests in land options or pending bids on interests held or made by the applicant for lands which are contiguous to the area to be covered by the permit:

- (i) Sunnyside Coal Company holds surface rights on various parcels of lands contiguous to the permit area (see Surface Ownership Map, Plate II-1).
- (ii) Sunnyside Coal Company holds coal rights in areas contiguous to the permit area (see Subsurface Ownership Map, Plate II-2).
- (iii) Currently, there are not any options and pending bids on interests held or made by the applicant for lands contiguous to the permit area.

* Sunnyside Coal Company has scheduled a consolidation meeting with MSHA ID No. 42-00092 for Mine No. 3 and MSHA ID No. 42-00093 for Mine No. 1. I.D. No. 42-00093 will be used for No. 1 and No. 3 Mines.

1.22 Compliance Information

The rules and regulations stated under UMC R614-301-113.100-350--Compliance Information--are presented sequentially in this section. Each subpart is addressed as follows:

- (113.100) The applicant, Sunnyside Coal Company, or any subsidiary, affiliate, or persons controlled by or under common control with the applicant:
- (113.110) Has not had a Federal or State mining permit suspended or revoked in the last five (5) years;
- (113.120) Has not forfeited a mining bond or similar security deposited in lieu of bond.
- (113.200) Such a suspension, revocation or forfeiture has not occurred. See (113.100, 113.110, and 113.120) above.
- (113.300) A listing of violation notices received by Sunnyside Coal Company in connection with any underground or surface coal mining activities during the 3-year period before the application date, for violation of air or water environmental protection laws, rules or regulations of the United States and of the State of Utah are provided as follows:

NOTICES OF VIOLATIONS

Sunnyside Mines
Carbon County, Utah

Regulatory Authority:
State of Utah
Department of Natural Resources
Division of Oil, Gas and Mining
Salt Lake City, Utah

NOTICE OF VIOLATION 89-26-1-1 (03/29/89)

Part 1 of 1 UMC 817.97, UMC 817.50

Failure to maintain water quality effluent in accordance with UPDES permit on the Discharge Pond 002, also known as the Whitmore Mine Water Discharge Pond.

Protect fish, wildlife, and related environmental values and maintain water quality effluent by cessation of oil spillage and water sampling.

\$5,000 Penalty Assessed

Terminated 04/12/89

CESSATION ORDER 89-25-1-1 (04/19/89)

Part 1 of 1 UMC 817.97, UMC 843.11 (b)

Failure to protect fish, wildlife, and related environmental values.

Failure to cease deposition of oil and/or flocculated oil into Grassy Trail Creek.

Cessation of deposition of oil and flocculated oil into Grassy Trail Creek.

Vacated 06/20/89

Notice Of Violation 89-26-1-1 was terminated April 12, 1989. Since N89-26-1-1 was terminated as a result of the Division's finding that the requirements for abatement had been met, there was no conduct on the part of SRS to support the Division's issuance of a Failure-To-Abate CO. Cessation order issued within abatement time given for Notice Of Violation N89-26-1-1.

CESSATION ORDER 89-25-2-1 (04/19/89)

Part 1 of 1 S 40-10-9 U.C.A., UMC 817.97, And
UMC 817.42 (a)(1)

Conducting mining activities without a permit (deposit of sediment-laden mine water into Grassy Trail Creek);

Failure to protect fish, wildlife, and related environmental values;

Failure to pass sediment-laden mine water (Sunnyside storage tanks) through a sediment-control structure, pond, or treatment facility prior to leaving the permit area.

Vacated 06/20/89

Operator had or has a permit to conduct mining activities. Division presented no evidence to support harm to fish, wildlife, or related environmental values. Division presented no evidence to support sediment-laden water. All evidence presented showed values within UPDES permit levels.

NOTICE OF VIOLATION 89-30-11-1 (11/08/89)

Part 1 of 1 UMC 817.52 (b)(ii)

Failure to notify appropriate agencies (EPA, State Health, DOGM) of NPDES permit non-compliance within five days of receiving analysis results.

Follow required reporting procedures as outlined in the discharge permit.

\$200 Penalty Assessed

Terminated 11/08/89

NOTICE OF VIOLATION 89-26-24-1 (12/20/89)

Part 1 of 1

UMC 817.181 AND 817.42

Failure to maintain support facilities required or used incidentally for the operation of the underground mine. The specific support facility associated with the "NOV" is the oil emulsion pipeline underground, particularly down the manshaft.

\$1280 Penalty Assessed

Terminated 6/18/90

NOTICES OF VIOLATIONS

International Anthracite
Corporation
Schuylkill County,
Pennsylvania

Regulatory Authority:
State of Pennsylvania
Department of Environmental
Resources
Harrisburg, PA 17120

COMPLIANCE ORDER PERMIT #54841304 (10/13/88)

Paragraph 1 of 1 Special Permit Condition #9 and #25
PA Code 88.49366

Failure to keep backfilling and grading concurrent. Evidenced by an affected area which exceeds the 1,500-foot limit for maximum affected area.

\$1500 Penalty Assessed

Terminated 03/31/89

NOTICES OF VIOLATIONS

Sunnyside Of Kentucky
Pike County, Kentucky

Regulatory Authority:
State of Kentucky
Department for Surface Mining,
Reclamation, and Enforcement
Frankfort, Kentucky 40601

No Violations To Date Since Operator Took Over on April 1990.

PAP UPDATE REGISTER

MINE NAME

FILE NUMBER

Sunnyside

ac-1007/007

DATE REC.	PAGE NO.	PLATE NO.	APPROVAL DATE	INSERT BY	CONTENTS/REMARKS AMENDMENT NO.
<i>November 21, 1991</i>	<i>Chapter III TABLE OF CONTRACT + insert map / Amendment / Sect. 2.10 + p. 1 thru 16</i>		<i>11/23/90</i>	<i>H. Lauer</i>	
<i>April 30, 1991</i>	<i>III-5+41</i>	<i>Plate III-13</i>		<i>H. Lauer</i>	
<i>25 March 1991</i>	<i>PLATE 5-5</i>	<i>PLATE 5-5</i>		<i>WHL</i>	<i>Drawings AS-0106 to D111</i>
<i>"</i>		<i>III-1</i>		<i>"</i>	<i>AS-0213, AS-0263 to 0265</i>
<i>"</i>		<i>2/3</i>		<i>"</i>	<i>no approval or PE stamp</i>
		<i>III-1/3</i>		<i>"</i>	<i>"</i>
<i>8/19/91</i>	<i>MAP D4-0174</i>	<i>III-40</i>	<i>8/2/91</i>	<i>QEP</i>	<i>Refuse Area Drainage Plans</i>
<i>8/21/91</i>	<i>Table III-50</i>		<i>8/21/91</i>	<i>QEP</i>	<i>Alternate Sediment Control Area with maps,</i>
<i>8/21/91</i>	<i>Book 2 Appendix</i>	<i>III-1</i>	<i>8/21/91</i>	<i>QEP</i>	<i>Course Refuse Diversion Ditch calculations 100% 6hr</i>
<i>11/1/91</i>	<i>Chapter 3</i>			<i>QEP</i>	<i>operations & Reclamation Plan</i>
<i>11/92</i>	<i>pg 1 Chapter 1</i>			<i>QEP</i>	<i>Prefix Update to R645</i>
<i>10/19/92</i>		<i>Appendix III-1</i>	<i>10/20/92</i>	<i>QEP</i>	<i>Division Order 91B</i>
<i>10/15/92</i>		<i>Plate III-13</i>	<i>10/15/92</i>	<i>QEP</i>	<i>DO91B</i>
<i>12/92</i>	<i>pg. 142 of chapter 2</i>		<i>12/10/92</i>	<i>QEP</i>	<i>Legal & Financial 92L</i>
<i>7/9/93</i>	<i>#</i>	<i>III-10</i>	<i>7/14/93</i>	<i>QEP</i>	<i>Recertification only</i>
<i>11/5/93</i>		<i>III-II</i>	<i>8/11/93</i>	<i>TH</i>	<i>Man shaft Sed. Pond</i>
<i>11/18/93</i>	<i>25</i>		<i>11/17/93</i>	<i>SM</i>	<i>Removal of H₂O monitoring sites</i>

P A P UPDATE REGISTER

MINE NAME			FILE NUMBER		
Sunnyside Mine			ACT/007/007		
Date Entered	Page #(s)	Plate #(s)	Date Approved	By	Content/Remarks
12/27/93	Chap III 3.2.9	III-17E III 17C K-N	9/30/93	SM	Field Measured X-Sections
"		III 17C G-J III 17B-A-F	"	"	"
12/27/93	Chap VII 7.1.3 Chap III 3.2.9A -3.5.1.2	Plate Plate III-101 3-20	10/31/93	SM	Adding Manshaft Pipeline to 001 Pond
↓	pg 47-48 Tables III-10 III-24 III-25 III-29		↓		↓
12/27/93	Pgs 9-10 Table VII-1-4	plate VII-4	11/17/93	SM	Removal of Groundwater Sample Sites
12/27/93	Chap III Pg 24, 24A	Table 3-50 Plate III-33	11/16/93	SM	Topsail Piles (BTEA)
↓	Appendix III-16	Plate III-33(15) Fig 1, Fig 2(16)	↓		Railroad Pond Fig 2 Topsail Stockpile access Rd. Topsail Stockpile
12/27/93	3.2.10 Pg 10 Pg 62-62A	Table III-1A	10/31/93	SM	Chapter III
↓	7.7-A, 48	Plate III-33 III-14, 3-20 3-21	↓		↓
12/27/93	Pg 24, 24A Appendix III-16	Table III-50 Fig III-16-1	11/18/93	SM	Chapter III - Abatement Plan
↓	↓	Plate III-33 12 of 12 11 of 12	↓		↓

P A P UPDATE REGISTER

MINE NAME			FILE NUMBER		
<i>Sunnyside</i>			ACT/007/007		
DATE REC.	PAGE #s	PLATE #s	APPROVAL DATE	INSERT BY	CONTENT/REMARKS
5/15/89		III-1, 12, 3 III-12, 32, 3	5/15/89	<i>pgl</i>	For Minor Road
		III-22, Sheet 3 III-23, Sheet 4		"	Realignment
	Table III-3 Table III-2 Table III-22			"	
5/5/89		III-42 (2 of 2) (as-built)	5/16/89	DW	BORROW POND
6/1/89	5-A Section 3.29		5/25/89	RUS	Clean out plan for 002. amendment ACT/007/007-89C
4/18/89	All of Chapter 3	III-1, 12, 3 28, 3 III-42, III-32 E4-039	6/26/89 (6/20/89)	<i>pgl</i>	Editorial Change for Chapter III Highwall Reduction ACT/007/007-89E-45
8/28/89	Table III-11, 25 and 29 Plate III-1, Appendix Book 6	19, 21, 24, 20, 3 7-1	8/28/89	<i>pgl</i>	Amendment ACT/007/007-89I
9/20/89	Soil Analysis for Whitlock Pond		8/28/89	<i>pgl</i>	For Amendment ACT/007/007-89I
11/8/89	Updated Cost Estimate	Table III-1, 11, 19, 25, and 29	11/8/89	<i>pgl</i>	For Amendment ACT/007/007-89G

pg. 56 (Chapter III)

Chapter II, pages 1-6 3/12/90
 Lease Agreement,
 Plates II-1, II-2, III-1, 29, 3,
 and III-3a.

9075R/1
 Revised 3/31/88

pgl Incidental Boundary
 Change, ACT/007/007-90A.

Plate II-1, II-2 and III-1, 29, 3
 Page IV-4 6/15/90

pgl 16.71 acres in state lease
 ACT/007/007-90B

pgl Stream Enhancement Plan
 ACT/007/007-90C

MRP Update Register

Mine Name

File Number

Kaiser - Sunnyside Mine

ACT/007/007

Date Rec.	Page #s	Plate #s	Approval Date	Insert By	Content/Remarks
12/8/86	6	2	1-8-87	JRF	CRT - Design + Calcs.
3/20/87	27		3-5-87	JRF	Interim Land Mgmt & Revegetation
6/3/87		1		JRF	Sequence Map III-3 for 1986 Annual Report
5/23/87	2 pgs. 9a 10 ch. 7	1	6-22-87	"	Plate III-3 replaced 6/24/87
6/30/87	Coarse Recharge Toe Pond	(2) D4-0117 D4-0142	3-27-87	"	See Enclosed Replacement Guide in this packet
6/30/87		D4-0152 A4-0195	3-27-87	"	" " " "
8/24/87	1 - Culvert Mod ch III	III-28	8/24/87	"	Culvert Modification for Erosion Protection
10/19/87	1 p. Ch III p 43 Vol I	III-1A Temp Waste Disposal	10/6/87	"	Temp waste disposal Amend.
1/15/88	OK → OK →	III-5 (Repl III-5) II-10.1-3		JRF	CRT as-built SSSF as-built
2/4/88	7 pages CRT Pond Ch III Append III-1		2/4/88	"	CRT - as-built verbage
2/4/88	20 pages SSSF Pond Ch III Append III-1		2/4/88	"	SSSF as-built verbage
8/15/88		II-1		"	Surface Ownership Updated
9/13/88	II-8, 10 & 78a	II-1, III-1, 2, 6 3 & 8 of 3 III-3 (2)(5)(6)(8)(9)	9/13/88	"	Mid-term Review
5/15/89	#10 + File for Figure II-3	# II-2 Plate II-1	5/15/89		Amendment (IBC) ACT/007/007 - 29B

ACT/1001/007-86#15

**KAISER
COAL**

KAISER COAL CORPORATION
Sunnyside Coal Mines
P.O. Box 10
Sunnyside, Utah 84539
Telephone (801) 888-4421

December 8, 1987

FILE COPY

RECEIVED

DEC 9 1987

DIVISION OF
OIL, GAS & MINING

Mr. John J. Whitehead
Permit Supervisor
Utah Division of Oil, Gas & Mining
355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203

Dear Mr. Whitehead:

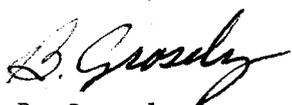
Re: Revised Copies of October 30, 1986, Submittal for the
SSSF Pond and February 25, 1987, Submittal for the CRT Pond

Enclosed are fourteen copies of the requested revisions for the SSSF
Pond and CRT Pond. The written material may be inserted in the permit
Book 2, Section 9, and Book 2, Section 1, in place of the material
there. The maps may be inserted in Book 4.

Along with the above enclosures are fourteen copies of Drawing D4-0159
(Revision for SSSF Pond Draining System) and Table 3-38 (Revision to
Sediment Pond Reclamation).

Thank you for your consideration on this matter. If you have any
questions, please call.

Sincerely,



B. Grosely
Mine Engineer

AMENDMENT TO
APPROVED Mining & Reclamation Plan
Approved, Division of Oil, Gas & Mining

BG:th

Enclosures

Note: File Reference 86-B and 87-G.

by J. Whitehead date 2/4/88

ACT/007/007-
#15 87F

**KAISER
COAL**

KAISER COAL CORPORATION
Sunnyside Coal Mines
P.O. Box 10
Sunnyside, Utah 84539
Telephone (801) 888-4421

September 23, 1987

FILE COPY

RECEIVED

SEP 24 1987

**DIVISION OF OIL
GAS & MINING**

Mr. John Whitehead
State of Utah
Natural Resources
Division of Oil, Gas & Mining
355 W. North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203

Dear Mr. Whitehead:

Enclosed are 14 copies of Plate III 1A (Temporary Waste Disposal Area) and the revised text for the Sunnyside Mines permit application package as requested.

Thank you for your cooperation in this matter. Please call if there are any further questions.

Sincerely,

B. Grosely / th
B. Grosely
Mine Engineer

BG:th

Enclosures

AMENDMENT
APPROVED Mining & Reclamation Plan
Approved, Division of Oil, Gas & Mining
by *A.W. Hedberg* date *8 Oct 87*

RECEIVED
MAR 03 1987

**KAISER
COAL**

KAISER COAL CORPORATION
Sunnyside Coal Mines
P.O. Box 10
Sunnyside, Utah 84539
Telephone (801) 888-4421

**DIVISION OF
OIL, GAS & MINING**

February 26, 1987

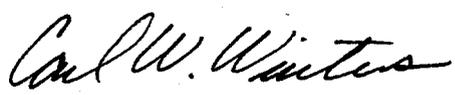
Mr. Lowell P. Braxton, Administrator
Mineral Resource Development & Reclamation Program
Utah Division of Oil, Gas & Mining
355 W. North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203

Re: NPDES Discharge Point 015
Sunnyside Mines
ACT/007/007

Dear Mr. Braxton:

As requested in Mr. John Whitehead's letter of January 7, 1987, please find fourteen copies of Drawings D4-0152 (NPDES Discharge Locations) and A4-0195 (Hydrologic Flow Diagram) enclosed. Drawing D4-0152 is the requested map depicting all NPDES discharge point locations; extra copies are provided to replace the map submitted December 15, 1986. Drawing A4-0195 is an updated edition of Figure VII-3 from Book 6 of the Sunnyside Mines Permit.

Sincerely,



Carl W. Winters
Senior Mining Engineer

encl

cc: B. J. Bourquin

February 25, 1987

COARSE REFUSE TOE POND
PARTS REPLACEMENT GUIDE

REMOVE:

✓ All pages pertaining to Coarse Refuse Toe Pond in Appendix III-1, Book 2

✓ Frontpiece for Railcut Pond in Appendix III-1, Book 2

Drawings in Book 4, found as Plate III-5

C4-0060 (Control Plan Map)

D4-0078 (Sediment Pond Plan Map)

D4-0114 (Elevations)

D4-0115 (Cross-sections)

} could not locate

RETAIN:

Drawing in Book 4, found as Plate III-5
C4-0006 (Refuse Area)

could not locate

INSERT:

✓ Attached calculation pages, including frontpiece, for Coarse Refuse Toe Pond in Appendix III-1, Book 2

✓ Frontpiece for Railcut Pond in Appendix III-1, Book 2

Drawings in Book 4, identified as Plate III-5

✓ D4-0117 (Borrow Area)

✓ D4-0142 (Coarse Refuse Toe Pond - Revised)

RECEIVED
MAR 03 1987

DIVISION OF
OIL, GAS & MINING

MATERIAL UPDATE INSTRUCTIONS

9/25/85

Chapter 1

Replace pages 4 and 5.

Chapter 2

Replace page 2.

Chapter 3

Replace Table of Contents, all text and List of Exhibits (pages 1 - 91).

Replace Tables 24, 28, ²⁹31, 32, 33, 34, 35, 36, 41, 43, 44 and 45.

Insert Tables 47 and 48.

Replace Plates 1 (1 of 3, 2 of 3 and 3 of 3), 20, 21, 22 and 23.

Insert Plate 39.

Chapter 8

Replace pages 2, 3 and 4.

Replace Plate 1.

Chapter 9

Replace pages 7 and 11.

Chapter 10

Replace page 12.

**KAISER
COAL**

KAISER COAL CORPORATION
Sunnyside Coal Mines
P.O. Box D
Sunnyside, Utah 84539
Telephone (801) 888-4421

RECEIVED

August 8, 1985

AUG 09 1985

Mr. Lowell P. Braxton
Division of Oil, Gas & Mining
355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203

**DIVISION OF OIL
GAS & MINING**

RE: Response to the Draft Technical
Analysis, Sunnyside Mines, ACT/007/007

Dear Mr. Braxton:

As requested in your letters of June 27 and July 18, 1985, we are submitting a response to the deficiency items that were outlined. Changes were made in the MRP and fourteen (14) copies are attached for your inspection.

Please contact me if you should have any questions. I am planning to be in Salt Lake City starting August 19, 1985 to answer questions and make changes in MRP if needed. This will hopefully avoid time lags between your review and our response.

Sincerely yours,



Douglas C Pearce
Mine Engineer

enclosures

ESPONSE
OFFICE OF SURFACE MINING CONCERNS
DRAFT TECHNICAL ANALYSIS

Item: June 27, 1985 Letter

1. Public notice was given in the Sun-Advocate July 3, 10, 17 and 24 that Kaiser Coal Corporation has submitted a complete permit application to the Division for review. Figure II-2 has been updated with new material.
2. Two copies of the information requested on reclaimed channels was submitted on August 2, 1985. Twelve additional copies are attached.
3. A copy of the NPDES change application was submitted to the Division on August 2, 1985. Figure III-8 is an approval letter from the EPA for the modification.
4. The results of the geotechnical study being conducted by Rollins, Brown and Gunnell will be submitted to the Division during the week of August 19, 1985.

Item: July 18, 1985 Letter

1. Plate III-12, D4-0094 has been revised to show a 48" culvert (SSSF C-3).
2. Plates III-12, D4-0081 and III-12, D4-0097 have been revised to show inter- and outer side slope configuration. The combined upstream and downstream side slopes are 1v:5.5h.
3. References to Figure III-4 and III-5 on page 4 of Chapter III have been changed to III-9 and III-10. The new Figures III-9 and III-10 have been provided.
4. The water monitoring plans in Chapters III and VII were reworded to reflect that Kaiser will submit, within 30 days of permit approval, a map showing the 12 in-mine monitoring locations. Reported springs N2CL-1, N2C-25 and an unnamed spring in the right fork of No. 2 Canyon were removed from the MRP spring sampling program after field sampling trips in May and June. No sign of the springs could be found at the locations marked on Plate VII-3. The reported spring in the right fork of No. 2 Canyon was plotted as described by a local stockman.

This water source could not be verified in the field. Researching the baseline data collection notes showed that sites N2CL-1 and N2C-25 were marked wrong on the plate. Table VII-5 describes site N2CL-1 as a stream sample and site N2C-25 as an underground water sample from DDH-25. Plate VII-3 has been revised to show the correct site sample labels.

5. Table III-23 has been revised to correct the water parameter list.

6. A commitment to report annually, total water discharged is found in Section 7.1.5 of the MRP.

7. Section 3.3.5.4 of the MRP has been changed to fully address the comments in the Draft TA on explosives.

8. Section 3.4.9.1 of the MRP has been changed to state that inspection of slurry impoundments will be by a qualified registered professional engineer.

9. The East Slurry Cell is designed as a total containment evaporation pond without a discharge device. The structure has the capacity to contain the runoff from 10-100 year, 24 hour storm events. Calculations of capacity and runoff are found in Appendix III-1. Water from a 100 year, 24 hour storm event would evaporate in 40 days based on evaporation rates in Table XI-5 for the month of August. If the water is required to be removed from the pond in within 10 days, the total suspended solids of the discharge would probably not meet NPDES standards because of the amount of minus 300 mesh material that would remain in suspension.

10. Class I haul road plans were submitted August 2, 1985. Twelve additional copies are attached.

**KAISER
COAL**

KAISER COAL CORPORATION
Sunnyside Coal Mines
P.O. Box D
Sunnyside, Utah 84539
Telephone (801) 888-4421

June 11, 1985

RECEIVED

JUN 12 1985

**DIVISION OF OIL
GAS & MINING**

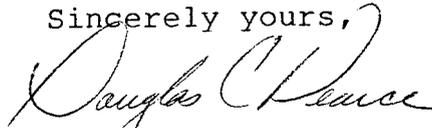
Mr. Lowell P. Braxton
Division of Oil, Gas & Mining
355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203

RE: Draft Technical Analysis Response
ACT/007/007, Sunnyside Mines
Carbon County, Utah

Dear Mr. Braxton:

Enclosed Please find fourteen (14) copies of the response to the May 21, 1985 draft technical analysis. As stated on the phone June 6, 1985, the response is late because of errors that were found in the permit boundary in two separate areas. Those errors have been changed on all maps and in the text.

Sincerely yours,



Douglas C Pearce
Mine Engineer

read 6/12/85

Response to Stipulations Document
Kaiser Coal Corporation
Sunnyside Mines
ACT/007/007, Carbon County Utah

✓ Stipulation 782.13-(1)-JW

Response (1)

Chapter II has been updated and corrected to reflect the recent reorganization of Kaiser Steel Corporation.

Stipulation 817.11-(1)-SC

Response (1)

Section 3.3.5.1 has been revised to include descriptions of blasting signs and topsoil stockpile signs.

Stipulation 817.13-.15-(1)-RVS

Response (1)

Plate III-18 has been revised to show a lock box on the sample pipes for water and gas to deny public access.

✓ Stipulation 817.41-(1)-JW

Response (1)

Section 3.5.4.2 has been revised to commit to providing the Division with Hydrologic information and designs to be used in the final reclamation phase.

Stipulation 817.41-(1,2,3)-RVS

Response (1)

The applicant has committed in Section 7.1.6 to provide the Division with specifics of the baseline underground water monitoring plan and a location map showing the 12 monitoring stations. The material will be found in Appendix VII-6 Hydrologic Monitoring Plan.

Response (2)

The applicant has committed in Section 7.1.6 to provide baseline water quantity and quality as requested.

Response (3)

The applicant has committed in Section 7.1.6 to provide ground-water and lithologic data from the drilling program by September 30, 1985. Baseline water quality information will be collected for 2 years for boreholes that encountered water.

Stipulation 817.42-(1,2)-JW

Response (1)

Kaiser Coal Corporation will make application to EPA to add the nine sediment ponds to its NPDES Sampling program. The applicant has committed to sampling the pond discharges, in Section 3.4.3.3, with the surface water operational schedule which includes total settleable solids.

✓ Response (2)

The coarse refuse seep was included as an operational monitoring point (CRB) in Chapter III.

Stipulation 817.43-(1,2,3,4,5,6,7)-JW

✓ Response (1)

Plates III-12 and III-11 have been revised to show the correct drainage area acreages for the upper hillside area and area I.

problem
* Response (2)

The SSSF C-3 culvert was changed to incorporate a 48-inch culvert.

✓ Response (3)

The change in Section 3.4.3.2 from "full depth" to "full length".

✓ Response (4)

Specific measures which define erosion in ditches and culvert outlets have been included in Section 3.4.3.3.

✓ Response (5)

Plate III-36 show erosion measures for culvert inlet protection.

✓ Response (6)

Plates III-1 and III-12 have been revised to show the Class I haul road and associated drainage controls. Revised calculations for the M-CV culvert have been submitted in the permit culvert summary.

✓ Response (7)

Kaiser Coal has committed to provide the Division with specific designs, drawings and measures for railcut ditches D-6, D-7, D-8, D-9, D-10 and D-11 in Section 3.4.3.2. ~~*~~

Stipulation 817.44-(1)-JW 2

✓ Response (1)

Kaiser Coal has committed to provide the Division within 90 days of permit approval, revised design calculation for peak flow for all permanent culverts with drainage areas greater than one square mile. All culverts which cannot pass a 100-year, 24 hour precipitation event will be replaced at the end of mine life. The commitment is found in Section 3.4.3.2.

Stipulation 817.45-(1)-JW

✓ Response (1) Plate III-33, Drawing A5-0105 has been revised to show a berm along the outside edge of the pad and a silt fence at the north end.

Stipulation 817.46 (1,2,3)-JW

✓ Response (1)

Kaiser Coal Corporation has committed to submit within 90 days of permit approval accurate, as-built configurations for the Coarse Refuse Toe Pond, Hoist House Pond, Pasture Pond, Old CR Road Pond, Railcut Pond, Lower #2 Canyon Pond. Stability analysis will be performed on all ponds not meeting the required 1v:5h combined upstream and downstream side slopes of embankments. The investigation will include test results showing strength parameters, pore pressures and long-term seepage considerations. The commitment is found in Section 3.4.3.2.

* Response (2)

Revised plans for the SSSF Pond have been provided. A commitment to construct within 90 days of permit approval is found in Section 3.4.3.2.

Stipulation 817.47-(1,2,3,4,5)-JW

✓ Response (1)

Plate III-35 was revised to show increase roughness (energy dissipating devices) on the apron devices.

✓ Response (2)

Culvert SSSF C-1 and the Coarse Refuse Toe sediment pond outlet velocity calculations have been corrected.

✓ Response (3)
See UMC 817.43(4) response.

✓ Response (4)
All undisturbed culverts having exit velocities in excess of 5 feet per second will be protected with approved measures. The "Culvert Size and Outlet Protection" summary lists all affected culverts.

✓ Response (5)
All culvert outlet protection measures will be installed within 180 days of permit approval.

✓ Stipulation 817.49-(1)-JW

Response (1)
Kaiser Coal Corporation will, within 120 days of permit approval, rebuild the embankments of the Twinshaft mine water pond with at least 2:1 side slopes on both inside and outside slopes.

Stipulation 817.50-(1)-RVS

Response (1)
Section 3.4.3.1 has been revised to address unplanned discharges from mine portals.

Stipulation 817.52-(1,2,3)-RVS and JW

* Response (1)
Operational ground water monitoring plans are discussed in Section 7.1.6. There, Kaiser Coal Corporation commits to giving the division a plan for operational ground water monitoring within 30 days of permit approval.

✓ Response (2)
Totalizing flow meters are presently installed on all mine water discharge lines. This is mentioned in Section 7.1.3.1 and other places in the permit application.

✓ Response (3)
A commitment is made in Section 3.4.3.3 to monitor surface water flows which meets the Divisions requirements.

Stipulation 817.56-(1)-JW

Response (1)

A commitment to renovate the Whitmore Dam is found in Section 3.5.3.3.

Stipulation 817.61-.68-(1,2,)-RVS

Response (1)

Documentation that verifies compliance with MSHA explosive regulation does not exist. If Kaiser Coal Corporation was not in compliance, MSHA would cite Kaiser and prohibit further use of explosives until compliance was achieved.

Response (2)

Blasting will occur as needed in the surface operations. Section 3.3.5.4 has been revised to address the specific requirements of UMC 817.62, 817.65, 817.67 and 817.68.

Stipulation 817.71-.74-(1,1)-PGL

Response (1)

The percent of mine voids to be filled with underground development waste and excess spoil is discussed in Section 3.4.9.1 (d).

Stipulation 817.81-.85-(1,2,3)-PGL

Response (1)

Plate III-5 Refuse Area with stamp and signature of a registered professional engineer has been included for Division Review.

Response (2)

Section 3.4.9.1 has been changed to commit to inspections of the coarse refuse disposal by a qualified registered engineer.

Response (3)

Section 3.4.9.1 has been changed to show a commitment to providing information on 90% of maximum dry density for the coarse refuse material. In place information is found on the Rollins, Brown and Gunnell drill logs in Appendix III-5.

Stipulation 817.91-.93-(1,2,3)-PGL

Response (1)

Drawing III-37 East and West Slurry Cells has been submitted for Division review.

Response (2)

Section 3.4.9.1 has been changed to show a commitment not to use the West Slurry Cell as an impoundment until the coarse refuse pile level reaches the level of the west side dike.

Response (3)

Evaporation as shown by Table XI-5 is 3.4 times the maximum annual precipitation shown in Table XI-1. All water received over a ten year period would evaporate during that time. Section 3.4.9.1 has been changed to show this fact.

Stipulation 817.101-(1,2,3)-EH

Response (1)

Table III-3 has been revised to provide a specific explanation why each road or portion of road will remain after reclamation.

Response (2)

Kaiser Coal Corporation has committed to provide within 120 days of permit approval a geotechnical analysis of slope stability for the Twin shafts reclaimed area. The commitment is found in Section 3.5.4.2.

Response (3)

Plates III-20 through III-23 have been redrawn to more clearly depict highwalls. All highwalls shown will be regraded.

Stipulation 817.103-(1)-EH

Response (1)

Plate III-23 and soil availability figures for Borrow area I have been corrected.

Stipulation 817.121-.126-(1,2)-RVS

Response (1)

A commitment to provide a subsidence monitoring plan within 30 days of permit approval, for inclusion in the permit is found in Section 3.4.8. The plan will include the number of and installation schedule for subsidence monuments in Whitmore Canyon.

Response (2)

Plates III-38 Castle Gate Sandstone Cross-Section show the thickness of the Castle Gate Sandstone beneath and adjacent to Grassytrail Creek. Reference to this Plate is made in Section 3.4.8.

Stipulation 817.150-.156-(1)-PGL

Response (1)

The class one haul road plans are not as yet approved. Plans will be placed in Appendix III-11 within 30 days of permit approval. Section 3.2.10 shows this commitment.

Stipulation 817.160-.166-(1,2,3,4,5,6)-PGL

Response (1)

Table III-3 has been changed to indicate the length of roads which will be reclaimed.

Response (2)

Table III-3 has been changed to indicate the justification for retention of each road.

Response (3)

Plate III-1 has been changed to indicate if the roads are reclaimed, being reclaimed, or to be reclaimed.

Response (4)

Section 3.2.10 has been changed to show maintenance to performance standards.

Response (5)

Table III-2 and III-3 describe the Coarse Refuse Toe road. Plate III-1 shows the road location.

Response (6)

A right of way from the BLM for the Water Canyon Road was not found in company records. Application for right of way will be submitted within 60 days of permit approval. The road is also not within the permit area. All maps, legal descriptions and text will be changed to show the road within the permit

area. The Fan Canyon road also needs permit boundary changes and right-of-way applications. State, Federal and private lands are involved. Applications for right-of-ways will be submitted within 60 days of permit approval.

Stipulation 817.180-(1)-PGL

Response (1)

Section 3.2.10 has been changed to show a commitment to maintain and restore the transportation facilities area.

Stipulation 817.181-(1)-PGL

Response (1)

Section 3.2 has been changed to show a commitment to maintain and restore the support facilities.

TECHNICAL RESPONSE
KAISER COAL CORPORATION
MATERIAL UPDATE

RECEIVED

JUN 12 1985

DIVISION OF OIL
GAS & MINING

Book 1,2,3 and 4

Chapter I

Replace page 1 and 5

Chapter II

Replace all text (Index, pages 1 through 46 and the index)

Replace Plate II-1 and II-2

Chapter III

Replace all text (Index, pages 1 through 83 and the index)

Replace Plates III-1 (1 of 3), III-5 (6 of 6), III-6, III-11, III-12 (1 of 2 and 2 of 2), III-16, III-18 (1 of 2, 2 of 2), III-20, III-21, III-22, III-23, III-26, III-28, III-32 (1 of 2), III-33 (1 of 6), and III-35

Insert new plates III-36, III-37 and III-38

Replace Tables III-2, III-4, III-23 and III-43

Replace Culvert Size and Outlet Protection Summary in Appendix III-1

Book 5

Chapter IV

Replace pages 1,2,3,4 and 5

Replace Plate IV-1

Chapter V

?

Plate IV-1, IV-2, IV-3

RECEIVED

JUN 12 1985

DIVISION OF OIL
GAS & MINING

Book 6

Chapter VI

Replace pages 14 and 15 ~~missing~~

Replace Plate VI-1

Chapter VII

Replace all text (Index, pages 1 through 23 and the list of exhibits)

Replace Figure VII-2 *missing*

VII-3 provided

Book 7

Chapter VIII

Replace pages 1, *2*, 4 and 5 *missing*

Replace Plate VIII-1

Chapter IX

- page 2 provided -

Replace pages 1, 4 and 6

Replace Plate IX-1

Book 8

Chapter X

Replace pages 1, 3, 4, 7 and 8

Replace Plate X-1

Chapter XI

Replace pages 1, 2 and 5

Chapter XII

Replace page 2

Chapter XIV

Replace the Table of Contents

Chapter XV

Replace page 1

RESPONSE TO ADDITIONAL TECHNICAL
DEFICIENCIES LETTER OF 1/16/85

RECEIVED
MAR 01 1985

DIVISION OF
OIL, GAS & MINING

UMC 783.15 Ground Water Information

The applicant must provide historical flow data for mine water discharge and commit to providing quality analyses for water encountered by the drilling program.

Response

Table III-39 shows all available records for mine water discharge.

Section 7.1.6 has been revised to show a commitment to provide the Division with quality analysis for water encountered during the drilling program.

UMC 783.16 Surface Water Information

The applicant must provide past monthly flow data for Grassy Trail Creek.

Response

Table III-40 shows all available data from USGS Station 09314340. Data has been collected from 1979 through 1984. The data is shown as yearly totals rather than monthly totals after consultation with Rick Smith in a meeting at the mine site in January.

A search was conducted to find historical flow records. In court records, the State Supreme Court of Utah review of Joseph R. Sharp Vs. George C. Whitmore (Decree No. 3028) found that "the stream becomes entirely dry in the majority of years;." The court also found that the occupants of the Whitmore Ranch were compelled to haul water for their culinary and domestic uses during periods of low flow or no water flow. Five measurements were recorded and are as follows:

August, 1905	No Flow
May 13, 1913	14.30 CFS
May 22, 1913	7.00 CFS
June 27, 1914	9.05 CFS
July 1, 1914	7.75 CFS

These measurements were taken at the first ditch diversion which is about one-half mile below the present USGS measuring station.

A search of the State Engineer's records found water use data starting in 1922. This information consists of the amount of water used and not complete stream flow. Other water rights and uses downstream are lumped together making the resultant data useless in determining historical flow.

UMC 783.25 Cross-Sections, Maps and Plans

The applicant must provide information about the extent and seasonal variation of subsurface water in the form of contour maps as required by Subsection (f).

A tunnel from the "B" Canyon extends to the Kaiser permit area. The present connection to the permit area as natural ventilation was verified per a telephone conversation with the Bureau of Land Management (BLM) in Price. Allen Vance stated that Kaiser checks the breakout and workings once per week. This breakout was and is dewatered as well. Therefore, this tunnel and breakout must be included in the permit area. Reclamation of the breakout and the water quality must also be included in accordance with UMC 784.13 (a).

Response

Plate VI-1 shows subsurface water contours. Data was obtained from records of sinking shafts and drilling test holes.

The "B" Canyon breakout and entries have been included in the permit area. Reclamation plans and water data have been incorporated in the permit. Water from "B" Canyon is discharged at NPDES Station 003 and has been presented previously.

UMC 784.13 Reclamation Plan: General Requirements

(b) (1) The reclamation timetable needs to be included. Table III-10 merely shows the revegetation timing.

Response

Table III-42 presents the reclamation timetable.

UMC 784.16 Reclamation Plan: Ponds, Impoundments, Banks, Dams, and Embankments

(a) (1) (i) The coal processing waste dams and embankments require preparation and certification by a registered professional engineer.

(a) (1) (iv) A survey describing the potential effect from subsidence of the strata must be addressed for the structures.

(a) (3) (iii) The operator and maintenance requirements for each structure must be included in the plan.

(e) (4) The consideration to the possibility of mudflows, rock debris falls, or other landslides must be given.

Response

Figure III-6 is a letter of certification by a registered professional engineer for the slurry ponds and the coarse refuse pile.

Potential effects of subsidence are addressed in Section 3.4.9.1, paragraph eleven.

Operator and maintenance requirements are addressed in Section 3.4.9.1, paragraph ten.

Potential of mudflows, rock debris falls, or other landslides are addressed in Section 3.4.9.1, paragraph eleven.

UMW 784.20 Subsidence Control Plan

The applicant must:

1. Describe the survey method(s) and calculation(s) utilized to derive ground movement or subsidence.
2. Indicate on a map (plan view) areas that will undergo double seam mining.
3. Indicate on a map (plan view) additional subsidence monitoring locations along upper Whitmore Canyon and adjacent to Grassy Trail Reservoir.

Response

Survey methods used to determine subsidence and a statement on future monitoring points are found in Section 3.4.8, paragraph four.

Double seam mining will not be practiced, and Section 3.3.1.1 has been changed to reflect this.

UMC 784.23 Operation Plan: Maps and Plans

The first five-year mining sequence depicted on Plate III-3 is not consistent with the five-year sequence shown on Plate II-3. Please clarify.

Response

The mining sequence maps II-3 and III-3 have been revised to reflect current mining plans.

UMC 785.19 Underground Coal Mining Activities on Areas or Adjacent to Areas Including Alluvial Valley Floors in the Arid or Semi-Arid Areas of Utah

The Division's assesment of whether the cessation of mining "includes . . . significant physical disturbance of the surface or ground water regime" will depend, in part, upon submittal of all available mine discharge and stream flow data to compare with projected future flow values for Grassy Trail Creek. These data and associated comparisons should enhance characterization of natural flow and better quantify flow changes caused by mining.

Response

Water discharge and stream flow data have been submitted in Table III-39 and III-40. A search for historical stream flow data was conducted (see UMC 783.16 response).

UMC 805.11 Bond Determination

There is a discrepancy in bonding of Area 7. Eighty-one acres at four foot depth of borrow material must be included.

Where were the soil sampling costs in Table III-36 derived?

The costs of fertilizer must be clearly distinguished; i.e., the cost of phosphorous versus P₂O₅ or nitrogen versus ammonium nitrate. The narrative and bond estimate need to be the same.

The cost of casing and sealing DDH must be included.

Covering of the coal seams must be included in the bond estimate.

Reclamation related to highwall reduction (as described in UMC 817.101) must be included in the bond estimate.

All of the sedimentation pond reclamation must be in the bond estimate.

The 1985 unit costs for dismantling are \$.14/cf (Means). The costs for disposal must be included.

Response

The coarse refuse will cover a total of 24 acres and will be covered with four feet of borrow material. The fine coal slurry material will encompass approximately 59 acres and will be covered with one foot of borrow material. The total acreage within these two categories is 83 acres. The bonding information for Area 7 has been changed to reflect the borrow requirements of these two categories. Tables III-43 and III-44 have been added to clarify the amount of borrow material that will be required and the amount of borrow material that is available (see UMC 817.22 (e) Topsoil: Removal).

The soil sampling costs in Table III-45 were derived from the following. Approximately three samples (at different depths) will be taken per acre on the 260 acres of disturbance. The approximate analysis cost per sample at Colorado State University is \$15.36 per sample. Therefore, the sample cost per acre is $\$15.36 \times 3 = \$46.10/\text{acre}$. This information is also clarified in the bonding section in the Soil Testing discussion.

Phosphorous will be added to topsoiled areas in the form of P₂O₅ at a rate of 30 lbs/acre. Nitrogen will be added in the form of ammonium nitrate at a rate of 40 lbs/acre. The narrative and the bonding estimate, as well as information in the Soils Chapter (Chapter VIII), have been clarified.

The costs for sealing DDH and covering the coal seams have been included in Table III-36, III-44, and III-450. The 1985 Means Cost Data labor rates have been incorporated in the bond calculations. Cost related to disposal of buildings is found in Table III-28.

Reclamation related to highwall reduction is included in the bond estimate. The side hillcuts will be graded to the most moderate slope possible to reduce or eliminate the highwall. The required minimum static factor of safety was achieved for all highwall reductions.

Sediment pond reclamation is included in Table III-38 and III-45.

UMC 817.14 Casing and Sealing of Underground Openings: Temporary

The applicant must discuss whether underground openings will be temporarily abandoned and, if necessary, the methods used for temporary sealing.

Response

Section 3.3.5.2 covers temporary sealing of mine openings and drill holes.

UMC 817.15 Casing and Sealing of Underground Openings: Permanent

The applicant must provide and commit to a time framework for initiating permanent abandonment of underground openings.

Response

See UMC 784.13 response.

UMC 817.22 (e) Topsoil: Removal

1. The applicant must provide the volume of borrow material necessary to cover the 81 acres of refuse with a four foot thick layer of borrow material.
2. The MRP must include the area of each borrow site and total area of material to be removed from each of the five proposed borrow sites and the depth of material that will be removed from each borrow site. The total volume from all borrow sites must equal the volume necessary for reclamation (approximately 524,000 yd³).
3. A set of samples for physical and chemical analyses must be obtained from all borrow sites. Sites #4 and #5 have not been presented. All five borrow sites must have soil samples taken at 12 inch intervals to the depth required to obtain the necessary volume for reclamation.
4. The applicant must update Plate III-1 to indicate the location of borrow site five.

Response

The coarse refuse will cover a total of 24 acres and will be covered with four feet of borrow material. The slurry material will encompass approximately 59 acres and will be covered with one foot of borrow material. The total acreage within these two categories is 83 acres.

Table III-44 has been added to clarify the amount of borrow material that will be required by reclamation area and by type of disturbance. A total of 256,750 cu. yds. will be required; 95,200 cu. yds. will be required for the slurry material, 154,880 cu. yds. will be required for the coarse refuse, and the remainder of borrow material will be used to cover portals (6,670 cu. yds.). Table III-43 has been added to clarify the amount of borrow material that is available. Borrow Areas 1 through 5 will yield approximately 257,488 cu. yds. of material. These borrow areas will provide sufficient material to cover disturbed areas as required. In addition, Grassy Trail Dam Borrow Area could yield an additional 8,500 cu. yds. of material if necessary.

Secondly, Borrow Area 5 could be expanded towards the south to provide additional material if deemed necessary at the conclusion of mining operations.

Soil samples have been taken for Borrow Areas 1 through 5 and Grassy Trail Dam Borrow Area, and these data are presented in Table VIII-4. All of the borrow areas were sampled at 12-inch intervals to the depth that they will be salvaged; i.e., Borrow Areas 1, 2, and 3 were sampled to a depth of 8 to 10 feet, Borrow Area 4 to about 10 feet, and Borrow Area 5 to a depth of 15 feet.

Plate III-1 has been updated to include Borrow Area 5 and the Grassy Trail Creek Dam Borrow Area. This latter Borrow Area has been approved by DOGM (see Figure III-4).

UMC 817.25 Topsoil: Nutrients and Soil Amendments

The applicant must clarify the several different proposed rates of fertilizer application and present it in terms of pounds per acre nitrogen and phosphorous, not pounds per acre fertilizer.

Response

Phosphorous will be added in the form of P₂O₅ at a rate of 30 lbs./acre. Nitrogen will be added in the form of ammonium nitrate at a rate of 40 lbs/acre. The information in Chapter VIII - Soils has been clarified and reflects the narrative and bonding estimate shown in Chapter III.

UMC 817.41 Hydrologic Balance: General Requirements

The applicant must address the water quality of the mine portal drainage (unplanned discharges) and, if necessary, discuss portal discharge mitigation.

Response

Paragraph two of Section 3.4.3.1 addressed the problem of unplanned portal discharges.

UMC 817.43 Hydrologic Balance: Diversions

1. Manshaft Area

Response

The manshaft area was redrawn and new calculations made in response to the Division's comments. One copy of Plate III-11, Drawing D4-0091, is included.

2. Riprap and Filter Blanket Calculations

Response

A new drawing (III-35) showing ditch and culvert discharge protection methodology has been submitted. The methods shown eliminate the need for riprap and filter blanket calculations. New summary tables for ditches and culverts have been provided that contain information on Railcut D-3, WSC-1, Hoisthouse 4-D, and all other structures. Plate III-9 has been revised to show more accurately the location of the Ditch Hoisthouse 4-D. The change in location now shows the correct ditch slope.

A ditch and culvert inspection program has been outlined in Appendix III-1 and in Chapter III.

3. SSSF Diversions

Response

Plate III-12 has been revised to distinguish between flow patterns and ditches. Some flow pattern arrows have been removed.

The time to peak for flows into Culverts SF-4 and SF-5 were calculated by John Whitehead. Times to peak for the culverts did not coincide; therefore, the methodology used to calculate the flow is valid.

Minimum headwall height for all culverts is listed under H_w (height of water).

The acreage for SSSF Upper Hillside was revised and the drainage recalculated. New calculations have been submitted for inspection.

4. Railcut Area

Response

This area was redesigned. Calculations and maps have been submitted for inspection.

5. Culvert Outlet Velocities

Response

A corrected summary of culvert design parameters has been submitted for inspection. Where information on drawing was incorrect, the drawings have been revised.

6. Riprap Placement at Sediment Pond Outlets

Response

Plate III-35 shows configuration of erosion protection at sediment pond outlets. The summary table for culverts and sediment pond outlets shows which outlet requires protection.

7. Miscellaneous

Response

The design for the coarse refuse drainage pond and Plate III-15 should be removed and discarded.

All new ditch and culvert calculations are shown on the summary sheets. Complete calculation sheets were not submitted in most cases.

UMC 817.45 Hydrologic Balance: Sediment Control

- A. The material in the introduction explaining the latest Kaiser submittal refers the reader to Plate III-35 in regards to the small areas with alternative sediment controls. No Plate III-35 was apparently submitted; please clarify.
- B. The silt fence proposed for the #1 Mine outcrop fan may not withstand peak flows from the drainage area above. The applicant is requested to consider a rock gabion type structure with a silt fence filter on the downstream side or provide an alternative design.
- C. The upper section marked as "vegetated" shown on Drawing A5-0109 needs a silt fence or other sediment treatment facility as agreed upon with Division hydrologists in the fall of 1984. Please change Drawing A5-0109 accordingly.

Response

The reference in the introduction to Plate III-35 should have been Plate III-33.

A rock gabion structure has been drawn on Plate III-33(7) to protect the silt fence filter from high peak flow.

A silt fence has been put on Plate III-33(5) below the vegetated area.

UMC 817.46 Hydrologic Balance: Sediment Ponds

The response to the November 5, 1984, deficiency comment was that Plate III-12(1-3) shows the dimensions of the SSSF sediment pond. No dimensions could be located on any of the Plate III-12's. Accurate pond dimension must be shown on Plate III-12 to assess compliance with the regulations.

Further, using the dimensions referred to in the narrative response of 60 feet X 180 feet for the top of water level and 40 feet X 160 feet for the bottom of the pond and a depth of 5 feet, a volume of 42,500 cubic feet can be calculated. On page 5 of the SSSF sediment pond and diversion calculations, the volume needed to contain the 10-year, 24-hour storm runoff and three year sediment volume is 113,948 cubic feet. Based on UMC 817.46(g), the pond at present is less than half the size needed to meet the requirements of the regulations. Adequate sizing of the pond must be provided for.

During the course of the review, the location of the Refuse Road I Pond could not be ascertained from any of the plates. Please provide an updated plate with the pond location on it.

Response

The SSSF Sediment Pond design was reviewed and revised. An error in the pond depth was found and corrected.

The location of Refuse Road I (Old Coarse Refuse Road) Pond is found on Plate III-1 (3 of 3).

UMC 817.50 Hydrologic Balance: Underground Mine Entry and Access Discharges

The applicant indicates the potential for mine drainage discharge from portal seals (two inch water check pipe with valve depicted on Plate III-18). Accordingly, the applicant must address the requirements of UMC 817.50.

Response

See UMC 817.41 response.

UMC 817.81-.85 Coarse Refuse - Coal Processing Waste Banks: Construction Requirements

The applicant must provide certification of the coal refuse disposal site design by a registered professional engineer.

The applicant must provide a commitment that all inspections of the disposal site will be conducted on a quarterly basis by a registered professional engineer and that the results of the inspection will be maintained at the mine site.

Response

Figure III-6 is a letter of certification for the coarse refuse pile and the slurry ponds. A commitment to conduct quarterly inspections is found in Section 3.4.9.1(b), paragraph seven.

UMC 817.89 Disposal of Noncoal Wastes

The applicant needs a letter from East Carbon City that the use of their landfill for the disposal of non-industrial wastes has been authorized.

Response

Figure III-7 is a letter of approval from East Carbon City to use the city landfill for disposal of non-coal wastes.

UMC 817.91-.93 Coal Processing Waste: Dams and Embankments

The design of the coal refuse embankment structures must be certified by a registered professional engineer.

A commitment must be made that there will be a weekly inspection of the embankment structures by a person trained to recognize specific signs of structural instability.

The safety factor requirements of the west side dike are not currently met. The applicant must provide mitigation measures.

The applicant must evaluate the effects of water saturation on the stability of the embankments of the East Slurry Cell as this cell acts as an overflow pond for Slurry Ponds #1 and #2. The feasibility of the reclamation of the potentially saturated slurry material in the East Slurry Cell must also be addressed.

Response

Figure III-6 is a letter of certification of the coarse refuse pile and the slurry ponds. A commitment to conduct weekly inspections by a qualified engineer is found in Section 3.4.9.1 (a), paragraph nine.

Mitigation measures for the west side dike are found in Section 3.4.9.1 (a), paragraph six.

The study showing the effects of water saturation on the stability of the East Slurry Cell is found in Appendix III-5.

A statement addressing the feasibility of reclamation of the potentially saturated slurry material in the east cell is found in Section 3.4.9.1 (a), paragraph eleven.

UMC 817.97 Protection of Fish, Wildlife, and Related Environmental Values

The statement that cottonwood and box elder trees will be planted in moist canyon bottoms (Section 10.5, page 14) has not been removed as indicated in Kaiser's December 2, 1984, Technical Deficiency Response. This must be done.

Response

The statement on planting trees has been removed and a replacement page provided.

UMC 817.99 Slides and Other Damage

The applicant must make a commitment that they will notify the Division by the fastest available means when a slide occurs which may have a potential adverse effect on public, property, health, safety, or the environment and comply with any remedial measures required by the Division.

Response

The statement about slides in Section 3.4.1.1 has been changed to comply with UMC 817.99.

UMC 817.101 Backfilling and Grading: General Requirements

The applicant must provide design information utilized to achieve a minimum static safety factor of 1.3 for highwall backfilling and grading as per UMC 817.101 (5) (ii). The applicant must identify and provide reclamation information for all highwall, depression, and spoil pile areas (UMC 817.101) that have been disturbed or utilized since enactment of SMCRA in 1977. This includes highwalls existing near buildings presently utilized and built pre-Act.

If highwalls are retained, the applicant must address the criteria in UMC 817.101 (b) (1) and (8) and demonstrate how the requirements are met. The retained highwalls must also be clearly outlined on the map.

The detailed plan for covering of coal seams must be addressed. It is stated in the plan that any coal seam exposed because of a portal opening will be covered with four feet of nontoxic material. How much material will be needed and where will this come from?

A regrading plan for the borrow area must be provided showing how drainage out of the depression created during excavation will be obtained.

Response

All highwalls are shown on Plate III-20, 21, 22, and 23. Cross sections of typical highwall reductions are found on Plate III-32 (1-2). Calculations for the reduction of highwalls and covering the coal seams with four feet of non-toxic material are found in the bond determination. The borrow areas are

on a side slope and will be excavated parallel to the existing contour. The excavation will not result in a depression.

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

The applicant must provide information requested under UMC 817.22 (e) of this document to achieve compliance with this regulation.

Response

See UMC 805.11 Response.

UMC 817.124 Subsidence Control: Surface Owner Protection

The applicant must incorporate mitigation measures described in the Technical Deficiencies Response dated August 31, 1984, for raptor nests, stream and spring flow, Grassy Trail fishery, and roads.

Response

Mitigation measures were incorporated in the last text update in Section 3.4.8.

UMC 817.126 Subsidence Control: Buffer Zones

The application describes mining operations that will extend beneath and adjacent to Grassy Trail Creek, a perennial stream. Detailed subsurface information accompanied by a comprehensive pillar design plan for areas beneath and adjacent to the perennial stream have not been presented.

As identified in the Technical Deficiency letter dated August 15, 1984, the information listed below must be included in the application.

1. Formula and listing of the weight-density parameters used in the multiple-layer roof calculation.
2. Angle of draw calculation(s) acquired from the Bureau of Land Management (BLM) or derived by company personnel.
3. Pillar strength and safety factor values.
4. The anticipated rate of pillar collapse.
5. Maps (plan view) that delineate foot and barrier pillar locations and dimensions, haulageways and cross-cuts, and attendant surface projection(s) of buffer zone boundaries.

Inasmuch as potential extraction beneath Grassy Trail Reservoir is not excluded in the MRP (Section 3.4.8, page 30), the applicant must provide buffer zone information as given above for potential mining areas beneath and adjacent to the reservoir.

The applicant must also provide a plan for implementing subsidence monitoring along the upper portion of Whitmore Canyon and adjacent to Grassy Trail Reservoir.

Response

Detailed information is presented in Section 3.4.8 on the effects of mining under Grassy Trail Creek. Detailed subsurface information accompanied by a comprehensive pillar design will not be presented since full extraction is anticipated, and no pillars will remain in place.

During a DOGM field investigation during January, 1985, several areas in the mine were inspected to observe the effects of mining under the creek and in flow of water. From this inspection, mine water discharge records and information presented in Section 3.4.8, it can be concluded that full extraction subsidence in the past and the future has not and will not cause material damage which could result in environmental degradation or safety hazards to streams, water bodies, and associated structures.

Changes have been made in text to preclude mining under Grassy Trail Reservoir.

New subsidence monitoring points are addressed in Section 3.4.8.

UMC 817.165 Roads: Class II: Maintenance

The maintenance of the roads must be addressed in the plan.

Is the road to the substation included in the list? Is it fully addressed?

Response

Maintenance of roads is addressed in Section 3.2.10.

UMC 817.166 Roads: Class II: Restoration

The applicant must demonstrate compliance with performance standards for roads that are to be left. This includes roads that will partially remain (partially removed). (This is in accordance with UMC 817.133 (c) (5) and (6).

Response

Roads to be left will be maintained to design standards during the 10-year responsibility period. This is addressed in Section 3.2.10.

ADDITIONAL TECHNICAL DEFICIENCIES RESPONSE

Kaiser Steel Corporation
Sunnyside Mines
ACT/007/007, Carbon County, Utah

December 2, 1984

RECEIVED

DEC 03 1984

DIVISION OF OIL
GAS & MINING

UMC 783.15

The last two paragraphs of Section 7.1.6 have been replaced. The replacement material describes a drilling program commitment.

UMC 784.13 (b) (4)

The bonding and soil handling plan have been rewritten.

UMC 805.11

The bond estimate has been rewritten and includes grading costs.

UMC 817.22 (e)

The response to the question is contained in Chapter III, 3.5.2 Soil Removal and Storage.

Soil sample have been taken of all the borrow areas. This information is contained in Chapter VIII.

Statements concerning toxic or hotspots have been eliminated or clarified as necessary. This information is contained in Chapters III and VIII.

UMC 817.25

Page 42 was amended to indicate that four feet of material (rather than 12") will be distributed over the refuse pile.

The information concerning stock piled topsoil use -- "It cannot be used to cover additional areas with a thin topsoil layer" -- is discussed in Section 3.5.2 Soil Removal and Storage. This was for the purpose of bond calculation and not actual distribution of the soil.

A statement was also deleted that stated the topsoil would be spread in a 3" layer like existing topsoil conditions.

UMC 817.43

1. The manshaft area calculations were recalculated and the maps redrawn showing the correct acreage.
2. The methodology for sizing filter blankets uses a set relationship between D_{15} , D_{85} and D_{50} particle sizes because the actual material to be used is unknown. The smallest durable particle size range in the filter blanket to be used is 0.0156 feet (3/16 inch). The methodology has been rewritten to clarify this point. A set relationship between D_{15} , D_{85} and D_{50} for soils was not meant to be implied as actual size distribution varies widely with each soil sample.

The ditches were redesigned and are presented in a separate section in Appendix III-1.

The formula was changed to show an exponent of $13/6$.

The SSSF diversions, ditches, culverts and sediment pond were reviewed and changed.

4. The railcut area was redesigned to show all the future terraces and ditches. Some of the items (ditch, etc.) commented on by the reviewer were eliminated.
5. Culverts were reviewed for inlet, outlet or pipe full conditions. Velocities at the outlet were calculated for riprap analysis.
6. Riprap installation at pond outlets is covered in the new Riprap P methodology.

UMC 817.45

Silk fences are shown on Plate III-35(1-7) and methodology on Plate III-34. Plates III-33(1-7) show small area exemption requests and control measures.

UMC 817.46

Maps submitted (Plate III-12(1-3)) show top of pond dimensions of 80'x 200', top of water level dimensions of 60'x 180' and bottom of pond dimensions of 40'x 160'. Side slopes are shown as 2:1.

UMC 817.49

The second paragraph of Section 3.2.8 has been changed to meet UMC 817.49(h) (1)-(5).

UMC 817.97 Fish and Wildlife Information

The Utah Division of Wildlife Resources (UDWR) last stocked Grassy Trail Reservoir and Grassy Trail Creek with brown trout and rainbow trout respectively in 1979. The Sunnyside Permit Application, Section 10.3.2.1, states that there is no spawning habitat for either species in the permit area and that the Class 3 fishery in Grassy Trail Creek below the reservoir was sustained on a put and take basis during seasons of adequate water flow.

According to Larry Dalton, UDWR game biologist, (personal communication) rainbow trout are reproducing in the stream below Whitmore Reservoir. A section of stream was sampled in 1983 and again in 1984 and the density average was 120 and 200 fish per mile of stream. Statements in the Permit Application regarding the absence of spawning habitat and the nature of the fishery in Grassy Trail Creek have been deleted and the new information has been included.

A recent unconfirmed sighting of a clack-footed ferret is documented in Carbon County, Eastern $\frac{1}{2}$ Section 10, T15s, R13E, according to observer, Phil Garcia, consecration office, Utah Division of Wildlife Resources on February 10, 1980.

Plate X-1 has been updated to include mule deer summer and winter range.

The statements that cottonwood and box elder trees will be planted in moist canyon bottoms (Section 10.5, page 13-14) have been removed

because all riparian areas that were disturbed have been revegetated pre-law.

Reseeded areas will be protected from livestock grazing by fencing. Fence specifications are height of top wire not more than 40 inches and spacing of other wires at 16, 22 and 30 inches (J. Yoakum and W.P. Dasmann, 1969. Habitat management practices In Wildlife Management Techniques, ed. Robert H. Giles, Jr. The Wildlife Society, Washington, D.C. 623 pp). The 40-inch height is easily jumped by deer and the spacing between wires prohibits twisting of legs.

The grazing plan is currently being revised by the Soil Conservation Service. The requested information will be provided when the revised plan is available.

UMC 817.103

The soils chapter and soil area in Chapter III have been re-written to clear up the discrepancy.

UMC 817.126

This question was covered in the answer to UMC 817.124 of the Division's August 15, 1984 letter. Plate III-3 shows the subsidence buffer zone which protects Grassytrail Reservoir and perennial portions of Grassytrail Creek.

**KAISER
STEEL**

KAISER STEEL CORPORATION
SUNNYSIDE COAL MINES
SUNNYSIDE, UTAH 84539
TELEPHONE 801-888-4421

May 16, 1984

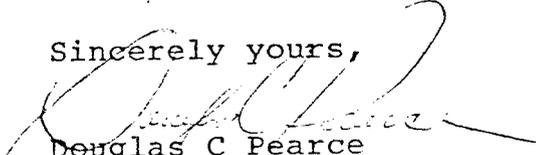
Mr. Ronald W. Daniels
Deputy Director
Division of Oil, Gas & Mining
4241 State Office Building
Salt Lake City, Utah 84114

RE: Sunnyside Permit
Consolidation
ACT/007/007

Dear Ron:

Please find enclosed nine (9) copies of the Sunnyside Permit Application. Reference of the most up todate plate for each chapter are found in the permit. The plates referenced are to be transfered from the original permit, ACR, DOC, TA, or other sources indicated in the reference by the recipient of the Permit Application. Some of the pictures are copies of poor quality. The original pictures are found in the first permit application if better quality are needed.

Sincerely yours,


Douglas C Pearce
Mine Engineer

ORGANIZATION OF PERMIT APPLICATION

Book 1 Chapters 1, 2, and 3 through exhibits
Book 2 Chapter 3 (continued)
Appendix III-1 through III-3
Book 3 Chapter 3 (continued)
Appendix III-4
Plate III-1 through Plate III-4
Book 4 Chapter 3 (continued)
Plate III-5 through Plate III-19
Book 4A Chapter 3 (continued)
Plate III-20 through Plate III-41
Book 5 Chapters 4 and 5
Book 6 Chapters 6 and 7
Book 7 Chapters 8 and 9
Book 8 Chapters 10, 11, 12, 13, 14, and 15
Book 9 Chapter 16

revised 9/13/88

CHAPTER I

INTRODUCTION AND SUMMARY OF PERMIT APPLICATION

TABLE OF CONTENTS

	Page
1.1 Scope of Operation	1
1.2 Summary of Environmental Impacts	2
1.3 Introduction to Document Organization	4
1.4 Acknowledgement	5
List of Exhibits	7

CHAPTER II

LEGAL, FINANCIAL, COMPLIANCE AND
RELATED INFORMATION

TABLE OF CONTENTS

	Page
2.1 Scope	1
2.2 Identification of Interests	1
2.3 Compliance Information	8
2.4 Right of Entry and Operations Information	17
2.5 Relationship to Areas Designated Unsuitable to Mining	20
2.6 Permit Term	21
2.7 Personal Injury and Property Damage Insurance	22
2.8 Proposed Performance Bond	22
2.9 Other Licenses and Permits	22
2.10 Location of Public Office for Filing Application	24
2.11 Newspaper Advertisement	25
List of Exhibits	26

CHAPTER III

OPERATION AND RECLAMATION PLAN

TABLE OF CONTENTS

	Page
3.1 Scope	1
3.2 Surface facilities/Construction Plans	1
3.2.1 Site selection and preparation	2
3.2.2 Portals	2
3.2.3 Surface buildings and structures	2
3.2.4 Coal handling processing, preparation and storage	2
3.2.5 Power system, transmission lines substations, mine feeders	3
3.2.6 Water supply system	3
3.2.7 Sewage system	3
3.2.8 Water diversion structures	4
3.2.9 Sediment control structures and water treatment facilities	5
3.2.10 Transportation, roads, parking area, railroad spurs	6
3.2.10.1 Belt conveyors and railtracks	7
3.2.11 Total area for surface disturbance during permit term	8
3.2.12 Additional areas for surface disturbance for life of mine	8
3.2.13 Detailed construction schedule	8
3.3 Operating plan	8
3.3.1 Mining plans	8

revised 1-12-87

AMENDMENT TO
APPROVED Mining & Reclamation Plan
Approved, Division of Oil, Gas & Mining
by D.W. Wedberg date 3/5/87

3.3.1.1	Orientation and multiple seam considerations	9
3.3.1.2	Portals, shafts and slopes	9
3.3.1.3	Mining methods	10
3.3.1.4	Mine development	11
3.3.1.5	Retreat mining	12
3.3.1.6	Roof control, ventilation, water systems, dust suppression, dewatering and electrical	12
3.3.2	Barrier pillars	14
3.3.2.2	Protection of surface structures and streams	14
3.3.2.3	Property boundaries	14
3.3.2.4	Outcrop protection	14
3.3.3	Conservation of coal resource	15
3.3.3.1	Projected maximum recovery	15
3.3.3.2	Justification for non-recovery	15
3.3.3.3	Access to future reserves	15
3.3.4	Equipment selections	16
3.3.4.1	Surface equipment	16
3.3.4.2	Underground equipment	16
3.3.5	Mine safety, fire protection, security	17
3.3.5.1	Signs	17
3.3.5.2	Fences and gates	18
3.3.5.3	Fire protection	18
3.3.5.4	Explosives	19
3.3.6	Operations schedule	21
3.3.6.1	Annual production per year for permit term	21

revised 1-12-87

3.3.6.2	Operating schedule	21
3.3.6.3	Operating schedule	21
3.3.7	Acreage and delineation of mine permit area total permit area	21
3.3.8	Mine plan area	22
3.4.1	Preservation of land-use	22
3.4.1.1	Projected impacts of mining on current and future land use	22
3.4.1.2	Control measures to mitigate impact	23
3.4.2	Protection of human values	23
3.4.2.1	Projected impacts of mining on human values - historical and cultural	23
3.4.2.2	Control measures to mitigate impacts	24
3.4.3	Protection of hydrological balance	24
3.4.3.1	Projected impacts of mining on hydrologic balance	24
3.4.3.2	Control measures to mitigate impacts	25
3.4.3.3	Monitoring procedures to measure impacts and control	27
3.4.4	Preservation of soil resources	28
3.4.4.1	Projected impacts of mining on soil resources	28
3.4.4.2	Control measures to mitigate impacts	29
3.4.5	Protection of vegetative resources	29
3.4.5.1	Projected impacts of mining on vegetative resources	29
3.4.5.2	Mitigating measures to be employed to reduce impacts on the vegetative resources	29

3.4.5.3	Monitor procedures - reference areas and revegetation	30
3.4.6	Protection of fish and wildlife	30
3.4.6.1	Protected impacts of mining on fish and wildlife	30
3.4.6.2	Mitigating measures to be employed to protect fish and wildlife	31
3.4.7	Protection of air quality	31
3.4.7.1	Projected impacts of mining operation on air quality	31
3.4.7.2	Mitigating measures to be employed to control air pollutants	31
3.4.7.3	Air quality monitoring plan	31
3.4.8	Subsidence Control Plan	32
3.4.9	Waste disposal plans	37
3.4.9.1	Projected impacts of disposal areas on the environment	37
3.4.9.2	Control measures to mitigate impacts	43
3.5.1	Reclamation plan	44
3.5.1.1	Contemporaneous reclamation	44
3.5.1.2	Soil removal and storage	45
3.5.2	Final abandonment	49
3.5.3.1	Sealing of mine openings	49
3.5.3.2	Removal of surface structures	51
3.5.3.3	Disposition of dams, ponds and diversions	52
3.5.4	Backfilling and grading plans	53
3.4.5.1	Recontouring	53
3.4.5.2	Removal or reduction of highwalls	54
3.5.4.3	Terracing and erosion control	54

3.5.4.4	Soil distribution and stabilization	55
3.5.5	Revegetation plan	57
3.5.5.1	Soil preparation	57
3.5.5.2	Seeding and transplanting	58
3.5.5.3	Mulching	59
3.5.5.4	Management	60
3.5.5.5	Monitoring	61
3.5.6	Schedule of reclamation	61
3.5.6.1	Detailed timetable	61
3.5.7	Cost estimate for reclamation	62
3.5.7.1	Cost estimate of each step of reclamation	63
3.5.7.2	Statistical methodology	81
3.5.7.3	Forecast of performance bond liability during permit term and forecast of liability for the life of the mine	83
3.6	Bibliography	84
	List of Exhibits	87

CHAPTER IV

LAND STATUS, LAND-USE AND POST-MINING LAND-USE

TABLE OF CONTENTS

	Page
4.1 Scope	1
4.2 Methodology	1
4.3 Land Status	2
4.3.1 Surface Land Status/Mine Plan Area	2
4.3.1.1 Ownership	2
4.3.1.2 Surface Managing Authorities	2
4.3.1.3 Utility Corridors and Other Rights-of-Way	2
4.3.1.4 Special Use Permits and Leases	3
4.3.2 Mineral Ownership/Mine Plan Area	3
4.3.2.1 Coal Ownership and Mines	3
4.3.2.2 Coal Leases	3
4.3.2.3 Mineral Ownership, Mines and Wells	3
4.4 Land-Use	3
4.4.1 Regional Land-Use	3
4.4.2 Land-use in Mine Plan Area	4
4.4.3 Land-use During Operations	4
4.5 Post-mining Land-use	5
4.6 Socioeconomic Considerations	5
4.7 Bibliography	6
List of Exhibits	7

CHAPTER VI

GEOLOGY

TABLE OF CONTENTS

	Page
6.1 Scope	1
6.2 Methodology	1
6.3 Regional geologic framework	2
6.4 Geology of project vicinity	3
6.4.1 Stratigraphy	3
6.4.2 Structure	4
6.4.3 Coal geology	5
6.5 Geology of coal bed and adjustment	10
6.5.1 Exploration	10
6.5.2 Geology	10
6.5.3 Adjacent units	11
6.5.3.1 Rock characteristics, acid-toxic, pyrite, clay and alkalinity	12
6.5.4 Coal quality	13
6.6 Geologic effect of mining	13
6.6.1 Mining hazards	13
6.6.2 Surface hazards	14
6.6.3 Impacts of mining	14
6.6.3.1 Subsurface water	14
6.6.3.2 Toxic wastes	14
6.6.3.3 Subsidence	14
6.7 Bibliography	16

CHAPTER VII

GROUND HYDROLOGY

TABLE OF CONTENTS

	Page
7.1 Ground hydrology	1
7.1.1 Methodology	1
7.2.1 Existing groundwater resources	1
7.1.2.2 Permit area groundwater hydrology	2
7.1.3 Groundwater development and mine dewatering	6
7.1.3.1 Water supply	6
7.1.4 Effects of mining operation on groundwater	8
7.5.1 Mitigation and control plan	9
7.1.6 Groundwater monitoring plan	10
7.2 Surface water hydrology	10
7.2.0 Scope	10
7.2.1 Methodology	11
7.2.2 Existing surface water resources	12
7.2.2.1 Regional surface water hydrology	12
7.2.2.2 Mine plan area surface water hydrology	13
7.2.3 Surface water development, control and diversions	17
7.2.3.1 Water supply	17
7.2.3.2 Sedimentation control structures and diversions	18
7.2.4 Effect of mining on surface water	19
7.2.5 Mitigation and control plans	20

7.2.6	Monitoring plan	21
7.3	Alluvial valley floor determination	21
7.4	Bibliography	24

CHAPTER VIII

SOIL RESOURCES

TABLE OF CONTENTS

	Page
8.1 Scope	1
8.2 Methodology	1
8.3 Soil resource information of mine plan area	1
8.3.1 Soils identification	1
8.3.2 Soils description	2
8.3.3 Present and potential productivity of existing soils	2
8.4 Prime farmland investigation and determination	2
8.5 Physical and chemical properties of soils and results of analyses, tests and trials	2
8.6 Use of selected overburden materials or substitutes	3
8.7 Plans for removal, storage and protection of soils	5
8.8 Plans for redistribution of soils	6
8.9 Nutrients and soil amendments	6
8.10 Effects of mining operations on soils, nutrients and soil amendments to be used	7
8.11 Mitigation and control plans	7
8.12 Bibliography	8
List of Exhibits	10

CHAPTER IX
VEGETATION RESOURCES

TABLE OF CONTENTS

	Page
9.1 Scope	1
9.2 Methodology	1
9.3 Existing resources	4
9.3.1 General site description	4
9.3.2 Vegetation types	4
9.3.2.1 Cover data	5
9.3.2.2 Production data	5
9.3.2.3 Tree data	5
9.3.2.4 General description	5
9.3.2.5 Species list	5
9.3.2.6 Total acres in mine plan area	5
9.3.2.7 Total acres of vegetation types to be disturbed	6
9.3.2.8 Reference area supporting data	6
9.4 Threatened and endangered species	7
9.5 Effects of mining operation on vegetation	7
9.6 Mitigation and management	7
9.6.1 Mitigation	7
9.7 Revegetation methods and justification	8
9.8 Revegetation monitoring	11
9.9 Bibliography	12
List of Exhibits	15

CHAPTER X
FISH AND WILDLIFE RESOURCES

TABLE OF CONTENTS

	Page
10.1 Scope	1
10.2 Methodology	1
10.3 Existing fish and wildlife resources	2
10.3.1 Wildlife habitats in mine plan area	2
10.3.2 Wildlife	3
10.3.2.1 Aquatics	5
10.3.2.2 Mammals	6
10.3.2.3 Birds	9
10.3.2.4 Reptiles	10
10.3.3 Species of special interest	11
10.3.3.1 Threatened and endangered species	11
10.3.3.2 Raptors	11
10.4 Effects of mining operation on fish and wilflife	12
10.5 Mitigation and management plan	13
10.6 Fish and wildlife monitoring	14
10.7 Bibliography	16
List of Exhibits	18

CHAPTER XI
CLIMATOLOGY AND AIR QUALITY

TABLE OF CONTENTS

	Page
11.1 Scope	1
11.2 Methodology	1
11.3 Existing environment	1
11.3.1 Precipitation	1
11.3.2 Temperature	2
11.3.3 Evaporation	3
11.3.4 Relative humidity	3
11.3.5 Wind	3
11.4 Effects of mining operations on air quality	4
11.5 Climatological and air quality monitoring	5
11.6 Bibliography	6
List of Exhibits	7

CHAPTER XII

GEOTECHNICAL INFORMATION

TABLE OF CONTENTS

	Page
12.1 Scope	1
12.2 Methodology	1
12.3 Underground mine design	1
12.3.1 Geotechnical tests and analysis	2
12.3.2 Coal pillar design	2
12.3.3 Roof span design	2
12.4 Surface subsidence effects of mining	2
12.5 Stability analysis of earthen structures	3

CHAPTER XIII

DESIGNS

TABLE OF CONTENTS

	Page
13.1 Data for this chapter have been included in other chapters	1

CHAPTER XIV

CONSULTTION AND COORDINATION

TABLE OF CONTENTS

	Page
14.1 Scope	1
14.2 Federal Consultation and Coordination	1
14.3 State Consultation and Coordination	2
14.4 Local Consultation and Coordination	3
14.5 Other Consultation	4

CHAPTER XV

RESOURCE RECOVERY AND PROTECTION PLAN

TABLE OF CONTENTS

	Page
15.1 (abridged) Resource recovery and protection plan	1

CHAPTER XVI
B-CANYON REVISION
 TABLE OF CONTENTS

	<u>PAGE NO.</u>
LIST OF TABLES, MAPS, AND EXHIBITS.....	iii
INTRODUCTION.....	1
Document Description.....	1
Urgency.....	1
Document Organization.....	2
Document Scope.....	3
Description of Revision Area and Operations.....	4
Summary of Environmental Impacts.....	6
UMC 771.25 PERMIT FEES.....	8
UMC 771.27 VERIFICATION OF APPLICATION.....	9
UMC 782.16 RELATIONSHIP TO AREAS DESIGNATED UNSUITABLE FOR MINING.....	10
UMC 782.21 NEWSPAPER ADVERTISEMENT AND PROOF OF PUBLICATION.....	11
UMC 783.14 GEOLOGY DESCRIPTION.....	12
UMC 783.15 GROUND WATER INFORMATION.....	13
UMC 783.16 SURFACE WATER INFORMATION.....	21
UMC 783.19 VEGETATION INFORMATION.....	22
UMC 783.20 FISH AND WILDLIFE RESOURCES INFORMATION.....	23
UMC 783.22 LAND-USE INFORMATION.....	24
UMC 783.27 PRIME FARMLAND INVESTIGATION.....	25
UMC 784.14 RECLAMATION PLAN: PROTECTION OF HYDROLOGIC BALANCE.....	26
UMC 784.20 SUBSIDENCE CONTROL PLAN.....	27
UMC 784.21 FISH AND WILDLIFE PLAN.....	28
UMC 784.24 TRANSPORTATION FACILITIES.....	29
Belt Loading Station.....	29
Conveyor Belts.....	29
Conveyor Drives.....	30
Transfer Points.....	30

revised
9/13/88

CHAPTER XVI
TABLE OF CONTENTS

		<u>PAGE NO.</u>
UMC 784.25	RETURN OF COAL PROCESSING WASTE TO ABANDONED UNDERGROUND WORKINGS.....	32
UMC 817.41	HYDROLOGIC BALANCE: GENERAL REQUIREMENTS...	33
UMC 817.48	HYDROLOGIC BALANCE: ACID-FORMING AND TOXIC-FORMING MATERIALS.....	34
UMC 817.50	HYDROLOGIC BALANCE: UNDERGROUND MINE ENTRY AND ACCESS DISCHARGES.....	35
UMC 817.52	HYDROLOGIC BALANCE: SURFACE AND GROUND WATER MONITORING.....	36
UMC 817.59	COAL RECOVERY.....	37
UMC 817.71	DISPOSAL OF EXCESS SPOIL AND UNDERGROUND DEVELOPMENT WASTE: GENERAL REQUIREMENTS.....	38
UMC 817.88	COAL PROCESSING WASTE: RETURN TO UNDERGROUND WORKINGS.....	39
UMC 817.97	PROTECTION OF FISH, WILDLIFE, AND RELATED ENVIRONMENTAL VALUES.....	40
UMC 817.121	SUBSIDENCE CONTROL: GENERAL REQUIREMENT....	41
UMC 817.122	SUBSIDENCE CONTROL: PUBLIC NOTICE.....	42
UMC 817.124	SUBSIDENCE CONTROL: SURFACE OWNER PROTECTION.....	43
UMC 817.126	SUBSIDENCE CONTROL: BUFFER ZONES.....	44

CHAPTER I

INTRODUCTION AND SUMMARY OF PERMIT APPLICATION

TABLE OF CONTENTS

	Page
1.1 Scope of Operation	1
1.2 Summary of Environmental Impacts	2
1.3 Introduction to Document Organization	4
1.4 Acknowledgement	5
List of Exhibits	7

Sunnyside Coal Company

Operations • Highway 123 • P.O. Box 99 • Sunnyside, Utah 84539

ACT/007/007 #2
Copy PAM
92A

RECEIVED

JAN 27 1992

DIVISION OF
OIL GAS & MINING

Mr. Lowell P. Braxton
Associate Director, Mining
Division of Oil, Gas and Mining
3 Triad, Suite 350
Salt Lake City, Utah 84180-1203

Dear Mr. Braxton:

Re: Request for Permit Change Sunnyside Mine.
ACT 007/007, Carbon County, Utah

As a result of a recent change in the Utah Administrative Code, the prefix R614 (the Utah Coal Regulatory Program) will be replaced by the new prefix R645. This is a prefix change only. The section/subsection citations balance of the rules governing the Coal Regulatory Program remains unchanged.

In order to accurately reflect this change in the above-cited Mining and Reclamation Plan, please consider this letter an application for a Permit Change as provided for at R645(614)-303-220. The prefix R645 replaces prefix R614 in all portions of the approved permit.

Approval of this Permit Change by the Division of Oil, Gas and Mining will obviate the need to change this prefix in each portion of the permit until other circumstances require submission of a rewritten permit.



Signed

Sunnyside Coal Company
Company

January 24, 1992
Date

Corporate Offices
The Registry
1113 Spruce Street
Boulder, CO 80302
303-938-1506
FAX: 303-938-5050

Sales Office
1350 17th Street
Suite 350
Denver, CO 80202
303-534-3348
FAX: 303-825-8626

West Coast Division
1345 Astoria Drive
Fairfield, CA 94533
707-425-4506

Operations
Highway 123
P.O. Box 99
Sunnyside, UT 84539
801-888-4421
FAX: 801-888-2581

RECEIVED

JUN 12 1985

DIVISION OF OIL
GAS & MINING

CHAPTER I

1.1 Scope of Operation

This permit application is submitted by Kaiser Coal Corporation Sunnyside Mines in Carbon County, Utah (Figure I-3 and I-4). The operator is presently operating under an interim permit (Figure I-2) until the permanent permit is issued by the Division.

The Sunnyside Mines is located in the Book Cliffs coal field about 120 air miles southeast of Salt Lake City (see location map, Figure I-1). The permit area amounts to 14,475 acres, the bulk of which is owned in fee by Kaiser Coal with Federal and Carbon County coal leases making up the balance. It has been in continuous operation since the 1890's (under Kaiser Coal since 1950) and is a major contributor to the socioeconomic well-being of Carbon County.

The Upper and Lower Sunnyside seams of the Blackhawk Formation are mined. Approximately 55 million tons of coal have been produced during the 86 years of operation. Mine workings cover an area approximately 6 1/2 miles by 2 1/2 miles. Projected production ranges from .8 to 1.0 million tons of clean coal per year.

Mine development consists of main slopes driven down the pitch from which development entries are driven on the strike extending to bleeder entries to develop the longwall panels. Longwall mining was introduced in 1961 and now accounts for 65 to 80 percent of the coal produced. The balance is derived from development work and limited room and pillar mining. The bulk of the production exits the mine via a belt conveyor system. The remaining production exits by rail haulage.

Run-of-mine coal is washed in a preparation plant. The clean coal product is conveyed to the unit train loadout stockpile. Coarse refuse is trucked to the disposal area and fine refuse is slurried to slurry ponds for disposal and water recovery.

Photographs of surface facilities including buildings, portals, shafts, ventilation fans, substations, coarse and fine refuse disposal, sedimentation ponds, and reservoir are shown in Chapter III. They may be located on the Surface facilities, hydrology, disturbed vegetation map (Plate III-1).

Underground mine water, in excess of mine usage, is pumped to the surface for use in coal cleaning and irrigation of city parks, golf course and several alfalfa fields. Any surplus is discharged into Grassy Trail Creek, the only perennial stream within the permit area, under NPDES Discharge Permit UT-0022942.

CHAPTER I

Grassy Trail Reservoir, formed by the Whitmore Canyon Dam, provides culinary water to the towns of Sunnyside and East Carbon as well as the mine facilities of the joint owners, Kaiser Steel Corporation and Royal Land Company.

The Sunnyside Mines is served by the Denver and Rio Grande Western Railroad. It purchases its power from Utah Power and Light via a 44,000-volt transmission line.

1.2 Summary of Environmental Impacts

The Sunnyside Mines has been in continuous operation for over eighty years. Nearly all of the disturbance occurred prior to the Federal Act (P.L. 95-87). The total disturbed area is 260.00 acres, or 1.8 percent of the permit area. Because the Sunnyside Mines is an existing operation, all environmental impacts are being monitored by regulatory agencies including the Division of Oil, Gas and Mining, Office of Surface Mining, and the Environmental Protection Agency. Contemporaneous reclamation is being performed as needed.

The following summarizes the various environmental impacts:

(a) Land-Use:

Current land-use, other than mining, consists of fish and wildlife habitat, limited grazing, minimal cropland (four acres of alfalfa) oil and gas exploration activities and recreation. There is no prime farmland within the permit area.

Mining impacts on land-use will be minimal. Mitigation measures are designed to protect the hydrologic balance, soil, vegetative and fish and wildlife resources.

(b) Human Values:

There are no recorded sites in the listing of the National Register of Historic places. A recent survey (see Chapter V) indicates some may be eligible for nomination. However, these have coexisted with the mining operation for over 80 years and none are in danger.

(c) Hydrologic Balance:

There is no gravity discharge of water from mine openings. Underground mine water, in excess of consumption by the mine

CHAPTER I

and irrigation of some fields, is discharged into Grassy Trail Creek. This discharge actually helps maintain a more uniform water flow. Contamination by oil and grease and total suspended solids is controlled with skimmers, sedimentation ponds, soil stabilization, revegetation and maintenance of roads and berms. Mine water and Grassy Trail Creek water are sampled monthly. The analyses are reported to the regulatory authorities.

(d) Soil Resources:

Most of the areas that have been disturbed by mining activities at the Sunnyside Mines occurred prior to the Surface Mining Control and Reclamation Act of 1977. Consequently, the topsoil materials were not removed and stockpiled prior to construction and other operations activities. Most of these areas are currently active, and as such many will not be reclaimed until mining activities cease. At that time, the facilities will be abandoned according to the procedures outlined in Chapter III. The surface materials will be ripped and analyzed for soil nutrients, and will then be amended or topsoiled as needed. Revegetation will be completed according to the Utah rules and regulations of the Coal Mining and Reclamation Permanent Program.

All areas that have been disturbed since the 1977 Act have been or will be properly prepared prior to mining activities. All suitable topsoil material is appropriately removed and stockpiled for use in future reclamation.

(e) Vegetative Resources:

Approximately 1.8 percent of the permit area vegetation will be lost during the life of the mine. Future disturbance will be minimized wherever possible. Revegetated and reference areas will be monitored and evaluated to determine the degree of success in revegetation.

(f) Fish and Wildlife:

Mining activities during the past eighty years have had some impact on wildlife resources. However, most affected populations have adjusted to the altered environment. This altered environment will continue until mining is completed and the land reclaimed. Future surface disturbances will be very small and total impacts on fish and wildlife will be minimal.

(g) Air Quality:

Since this is an underground mining operation and thermal drying of coal is not involved, impacts on air quality are

CHAPTER I

limited to fugitive dust on some unpaved roads and to two small coal-fired boilers.

Calcium chloride, magnesium chloride or water is used to control road dust as required. The coal-fired equipment is periodically inspected by the Utah Department of Health, Bureau of Air Quality.

(h) Subsidence:

Subsidence is expected over much of the permit area as a result of controlled caving during the mining operations. Renewable land resources and structures exist in the permit area and could be affected by mining. Effects of mining and mitigation are found in Chapter III.

(i) Waste Disposal:

Fine refuse from coal cleaning is sent to slurry ponds from which water is reclaimed for irrigation or discharge into the Icelander drainage system. Coarse refuse is compacted, terraced and covered with earthfill in the disposal area. The total disturbed area is 287.36 acres. Included are 4.81 acres that are being contemporaneously reclaimed.

At the conclusion of mining, projected to be twenty-five years from now, final abandonment and reclamation will begin. All mine openings will be capped or sealed according to regulations. All surface structures will be dismantled and removed and the disturbed area graded to blend with the surrounding contours, covered with topsoil, and revegetated. Some surface structures may remain for alternate use after mining if approved by the division at that time. Waste disposal facilities will be scarified, filled if necessary, graded, covered with topsoil and revegetated.

Some roads will be left for grazing and recreational use. The Grassy Trail Reservoir supplies culinary water to the towns of Sunnyside and East Carbon and is expected to continue serving these communities.

Topsoil will be handled, stored and redistributed according to performance standards. Revegetation with specific seeds and seedlings will occur in the first appropriate season, after proper grading and topsoil replacement. Mulching, nutrients and soil amendments will be applied if needed. Vegetation in reference areas will be used to determine success of revegetation.

RECEIVED

SEP 25 1985

DIVISION OF OIL
GAS & MINING

CHAPTER I

The estimated reclamation cost, which is also the performance bond liability, amounts to \$2,873,165.00 for the life of the mine.

1.3 Introduction to Document Organization

This application has been prepared in accordance to Chapter I, Regulations Pertaining to Surface Effects of Underground Coal Mining Activities, promulgated under UCA 40-10-1 et seq. (Final Rules of the Utah Board and Division of Oil, Gas and Mining.)

It is presented following the General Guideline for Organizational Format and Content, issued by the Division of Oil, Gas and Mining and revised November 3, 1980.

1.4 Acknowledgements

Kaiser Steel Corporation gratefully acknowledges the assistance and co-operation of the personnel of the Division of Oil, Gas and Mining through the course of preparing this permit application.

Assistance of Federal, County and other State agencies as well as private consultants is also appreciated. These are listed in Chapter XIV.

Maps, plans and cross-sections required under UMC 784.23 have been prepared by or under the direction and certified by:

John S. Huefner
Registered Professional Engineer (Civil)
Utah No 3250

&

G.A. Farnsworth
Utah No. 760

The following lists personnel of Kaiser Coal Corporation who have participated in the preparation of this permit application:

Lloyd a Heath, Mine Manager (former)
J. Brett Harvey, Mine Manager
Lynn P. Huntsman, Manager, Engineering & Quality Control

RECEIVED

SEP 25 1985

DIVISION OF OIL
GAS & MINING

CHAPTER I

G.A. Farnsworth, Registered Professional Engineer
Douglas C. Pearce, Mining Engineer
Joan Felice, Secretary
Bart Hyita, Mining Engineer
Byron Allred, Surveyor and Draftsman
Ed Sievers, Environmental Technician
Sara Jennings, Environmental Technician
Susan Picard, Environmental Technician

York Canyon Mine, Raton, New Mexico:

Marcia J. Wolfe, Reclamation Engineer
John P. Abbott, Reclamation Engineer
Kevin Lackey, Reclamation Engineer
Les Boothe, Reclamation Engineer
Ronald Jepson, Reclamation Engineer

Oakland, California Headquarters:

Joe T. Taylor, Director, Coal Operations & Engineering
Robert L. Wilson, Manager, Exploration
Hon C. Lee, Manager, Mineral Processing
Robert T. Turner, Geologist

CHAPTER I

LIST OF EXHIBITS

Figure	I-1	Location map of Sunnyside Mines
Figure	I-2	Sunnyside underground mines interim permit
Figure	I-3	Copy of receipt verifying permit application fee submittal
Figure	I-4	Verification of Sunnyside Mines permit application

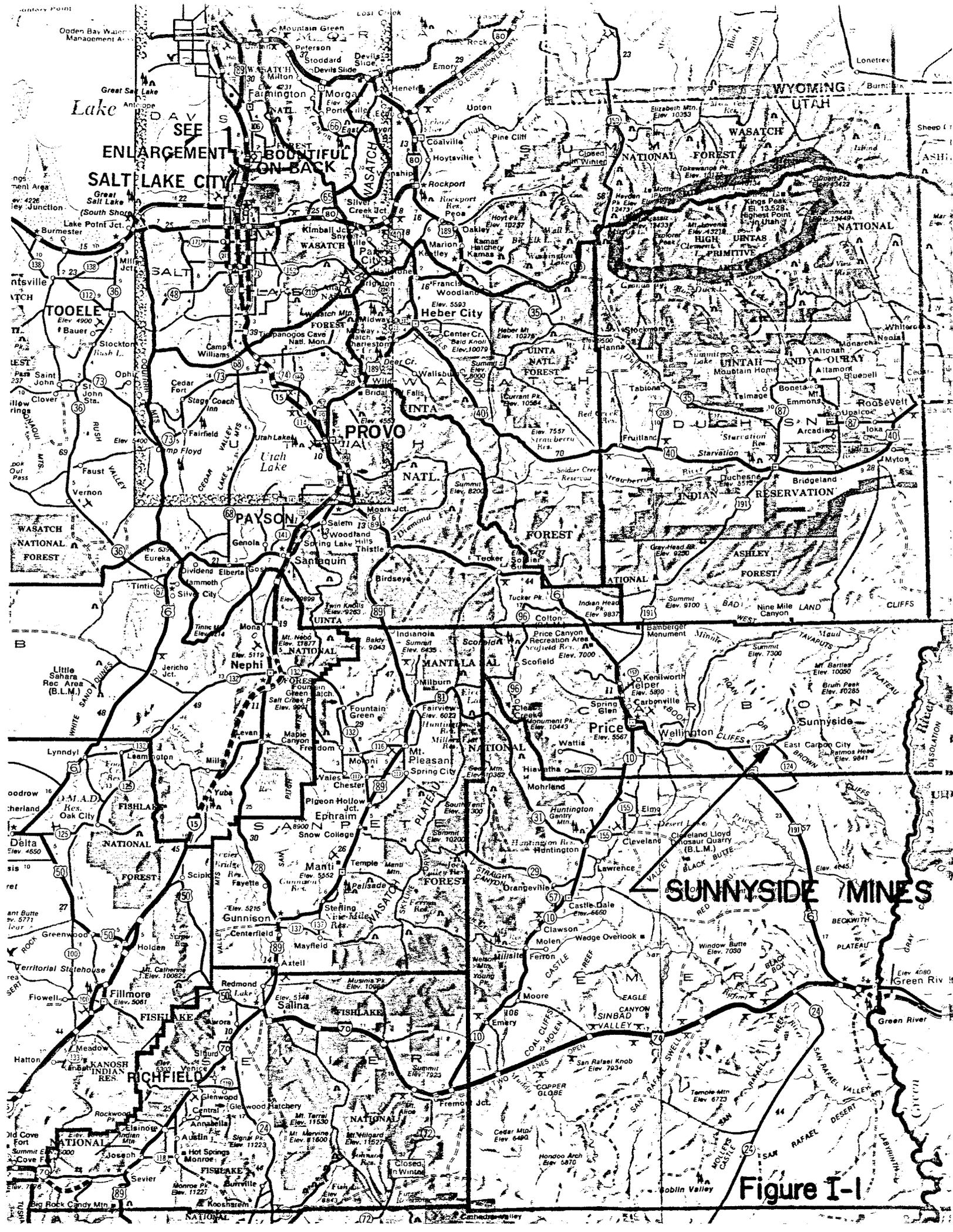


Figure I-1



OIL, GAS, AND MINING BOARD

I. DANIEL STEWART
Chairman

CHARLES R. HENDERSON
JOHN L. BELL
THADIS W. BOX
C. RAY JUVELIN

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING
1588 West North Temple
Salt Lake City, Utah 84116
(801) 533-5771

May 11, 1978

Mr. Lloyd A. Heath
Kaiser Steel Corporation
P.O. Box D
Sunnyside, UT. 84539

Re: Sunnyside Mines
Carbon County, Utah

Dear Mr. Heath:

As you know, under Section 502 of the Surface Mining Control and Reclamation Act (P.L. 95-87), you are required to have a State permit for your mining operations issued under State Law.

This is to inform you that for the purposes of Section 502 of the Act and Section 700.5 of the Federal Regulations, you have adequately complied with Section 40-8-23 of the Utah Mined Land Reclamation Act in that you have submitted a Notice of Intent and a Reclamation Plan or filed a Notice of Intent and have complied with the 30-CFR-211 regulations and therefore are operating with the expressed permission of the Division of Oil, Gas, and Mining. According to Sections 40-8-17 (1) and 40-8-23 (5) you are bound to comply with all applicable laws and regulations prior to your final approval under 40-8-13 and 40-8-14 (U.C.A.). Publication of said tentative approval will be made as required by Section 40-8-13 (4), U.C.A.

The tentatively approved permit number for this mine is ACT/007/007, and is revocable at any time by the Division until a final permit is issued under P.L. 95-87.

According to 715.11 (b) and 717.11 (b) of the Federal Regulations, a copy of this letter is to be available at the mine site.

Sincerely,

RONALD W. DANIELS
COORDINATOR OF MINED
LAND DEVELOPMENT

NO. _____
March 20 1981

RECEIVED FROM Hon C. Lee

Five Dollars _____ DOLLARS

Mining Permit for Kaiser Steel
Corp.

Account Total \$ 5.00

Amount Paid \$ 5.00

Balance Due \$ _____ Paula J. Hank

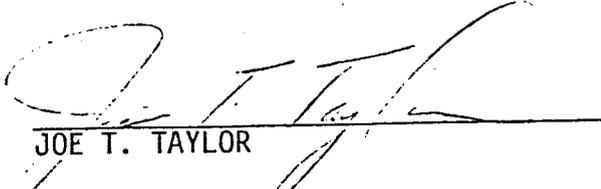
THE EFFICIENCY LINE AN AMPAD PRODUCT

Figure I-3. Copy of receipt verifying permit application fee submittal.

STATE OF CALIFORNIA)
) ss.
COUNTY OF ALAMEDA)

JOE T. TAYLOR, being first duly sworn, deposes and says:

1. That he is Vice President, Coal Group, of Kaiser Steel Corporation;
2. That on behalf of said Corporation, under transmittal letter dated March 20, 1981, he submitted to the State of Utah, Board and Division of Oil, Gas and Mining, an Application for Underground Mining Activities Permit for Sunnyside Mines, Carbon County, Utah; and
3. That the information contained in said Application is true and correct to the best of his information and belief.

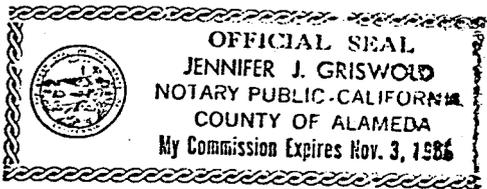


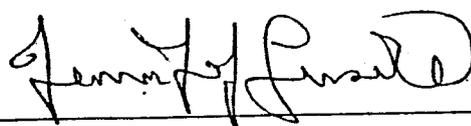
JOE T. TAYLOR

STATE OF CALIFORNIA)
) ss.
COUNTY OF ALAMEDA)

On this 25 day of August, 1983, before me, the undersigned, a Notary Public in and for the State of California, whose principal place of business is located in Alameda County, California, personally appeared JOE T. TAYLOR, personally known to me (or proved to me on the basis of satisfactory evidence) to be the VICE PRESIDENT, COAL GROUP of KAISER STEEL CORPORATION, the Corporation that executed the instrument and the officer who executed the within instrument on behalf of the Corporation therein named and acknowledged to me that such Corporation executed the within instrument pursuant to its bylaws or a resolution of its Board of Directors.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.





Notary Public, State of California
My commission expires 11/3/86

Figure I-4. Verification of Sunnyside Mines permit application

Chapter II

Legal, Financial, Compliance and Related Information

Table of Contents

	<u>Page</u>
2.1 Legal, Financial, Compliance, And Related Information	1
2.2 Identification Of Interest	1
2.3 Compliance Information	6
2.4 Right of Entry Information	9
2.5 Unsuitability	13
2.6 Permit Term	13
2.7 Insurance and Proof of Publication	14
2.8 Other Licenses and Permits	14
2.9 Location of Public Office for Filing Application	16
2.10 Newspaper Advertisement	17

Chapter II

2.1 Legal, Financial, Compliance, And Related Information

Sunnyside Coal Company's Sunnyside Mine in Carbon County submits this permit application. This document will be revised as required during the life of the permit.

The applicant is Sunnyside Coal Company and includes information on principal shareholder, directors and officers and surface and coal rights ownership for the Sunnyside Mines and adjacent areas as well as permit term and boundary information.

Permits and licenses issued to the applicant in connection with the operation of coal mines in the United States are provided as well as a listing of Notices of Violation of Federal and State environmental protection laws in connection with such mining activities during the preceding three years.

2.2 Identification of Interest

(1.) The applicant, Sunnyside Coal Company, is a public corporation incorporated under the laws of the State of Colorado.

(2a.) The name, address, telephone number and employer identification number of the permit applicant:

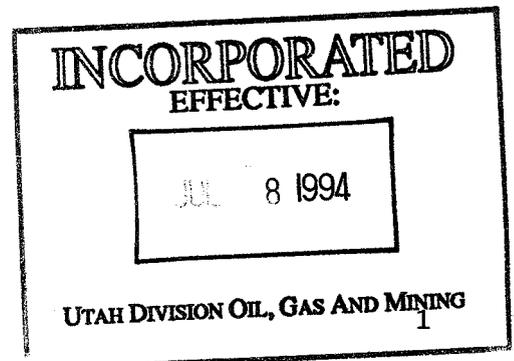
Sunnyside Coal Company EIN 84-1102281
P. O. Box 99
Sunnyside, Utah 84539
(801) 888-4421
FAX (801) 888-2581

(2b.) The operator and the applicant who will accept service of process is:

Robert M. Burnham
Sunnyside Coal Company
P. O. Box 99
Sunnyside, Utah 84539

(2c.) The person responsible for abandoned mine land reclamation payments for Sunnyside Coal Company is:

Robert M. Burnham
Sunnyside Coal Company
P.O. Box 99
Sunnyside, Utah 84539



Chapter II

(3a.) The names and addresses of the officers and directors of Sunnyside Coal Company are as follows:

Officers of Applicant

Robert M. Burnham	President	The Registry 1113 Spruce Street Boulder, CO 80302
	Secretary	The Registry 1113 Spruce Street Boulder, CO 80302

Directors of Applicant

Robert M. Burnham	The Registry 1113 Spruce Street Boulder, CO 80302
	The Registry 1113 Spruce Street Boulder, CO 80302

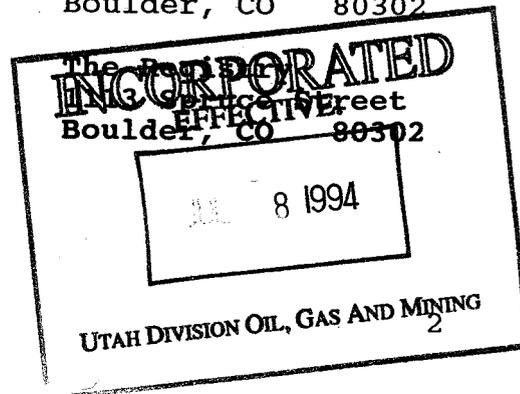
All common stock of Sunnyside Coal Company is owned and/or controlled by Sunnyside Mines, Inc.

Sunnyside Mines, Inc. EIN 84-112047
The Registry
1113 Spruce Street
Boulder, CO 80302

Telephone (303) 938-1506
Fax (303) 449-0281

Officers of SMI

Robert M. Burnham	President	The Registry 1113 Spruce Street Boulder, CO 80302
	Secretary	



Revised 3/15/94.

Chapter II

Directors of SMI

Robert M. Burnham

The Registry
1113 Spruce Street
Boulder, CO 80302

The Registry
1113 Spruce Street
Boulder, CO 80302

(4a.) Applicant has previously conducted mining activities under the name of Sunnyside Reclamation & Salvage, Inc. The name change was effective April 2, 1990.

Applicant's principal Shareholder, Sunnyside Mines, Inc. no longer conducts mining activities in Pennsylvania through International Anthracite Corporation and in Kentucky through Sunnyside of Kentucky (Potter Mining) due to the sale of these properties. IAC was sold on April 26, 1991 and SKI was sold out of bankruptcy on December 23, 1991.

(4b.) Current or previous coal mining permits or pending permit applications:

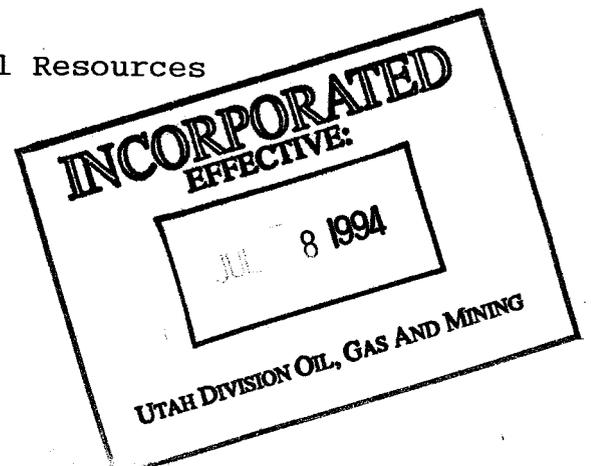
- (1) Sunnyside Mine, Carbon County, Utah ACT/007/007
Reformatted, Renewal Permit Application Package

Division of Oil, Gas and Mining
Department of Natural Resources
State of Utah
Salt Lake City, Utah

- (2) International Anthracite Corporation, Schuylkill County,
Pennsylvania (sold 4/26/91)

Permit Nos. 548 413 04, 548 607 01-01

State of Pennsylvania
Department of Environmental Resources
Harrisburg, PA 17120



(6.) The names and addresses of owners of record of all surface and subsurface areas contiguous to any part of the proposed area are listed below (Also see Plates 1-1 and 1-2):

(i) Surface Owners:

United States of America
Department of the Interior
Bureau of Land Management
324 South State
Salt Lake City, UT 84111-2303

State of Utah
Division of State Lands
355 West North Temple
3 Triad Center
Suite 400
Salt Lake City, UT 84180-1204

Chevron Resources
A Division of Chevron Industries, Inc.
595 Market Street
San Francisco, CA 94120

Dennis, Donald I.
P.O. Box 97
Bullard, TX 75757

East Carbon City
Dale Andrews, Mayor
Columbia Branch
East Carbon City, UT 84520

Hill, Howard L.
23543 Highland Glen Drive
Newhall, CA 91321

Jensen, Glen E.
Elmo, UT 84521

Sunnyside Coal Company
P. O. Box 99
Sunnyside, Utah 84539

Larcher, Ernest
Price, UT 84501

Oliveto, Dominic
P.O. Box 598
Price, UT 84501

Union Steel
P.O. Box 58
Oakland, CA 94604

United States Steel Corporation
1230 Kennecott Building
10 East South Temple
Salt Lake City, UT 84113

(ii) Subsurface Owners:

United States of America
Department of the Interior
Bureau of Land Management
324 South State
Salt Lake City, UT 84111-2303

State of Utah
Division of State Lands
355 West North Temple
3 Triad Center
Suite 400
Salt Lake City, UT 84180-1204

County of Carbon
County Commissioners
County Building
Price, UT 84501

Pagano, Jay
P.O. Box 67
Price, UT 84501

The name of the mine is Sunnyside Mines whose Mine Safety and Health Administration (MSHA) identification numbers are:

<u>Mine No 1</u>	MSHA ID NO. 42-00093
<u>Mine No 2</u>	MSHA ID No. 42-00094
<u>Surface</u>	MSHA ID No. 42-01813

The following is a statement of all lands, interests in land options or pending bids on interests held or made by the applicant for lands which are contiguous to the area to be covered by the permit:

- (i) Sunnyside Coal Company holds surface rights on various parcels of lands contiguous to the permit area (see Surface Ownership Map, Plate 1-1).

- (ii) Sunnyside Coal Company holds coal rights in areas contiguous to the permit area (see Subsurface Ownership Map, Plate 1-2).
- (iii) Currently, there are not any options and pending bids on interests held or made by the applicant for lands contiguous to the permit area.

2.3 Compliance Information

The rules and regulations stated under UMC R614-301-113.100-350--Compliance Information--are presented sequentially in this section. Each subpart is addressed as follows:

- (113.100) The applicant, Sunnyside Coal Company, or any subsidiary, affiliate, or persons controlled by or under common control with the applicant:
- (113.110) Has not had a Federal or State mining permit suspended or revoked in the last five (5) years;
- (113.120) Has not forfeited a mining bond or similar security deposited in lieu of bond.
- (113.200) Such a suspension, revocation or forfeiture has not occurred. See (113.100, 113.110, and 113.120) above.
- (113.300) A listing of violation notices received by Sunnyside Coal Company in connection with any underground or surface coal mining activities during the 3-year period before the application date, for violation of air or water environmental protection laws, rules or regulations of the United States and of the State of Utah are provided as follows:

NOTICES OF VIOLATIONS

Sunnyside Mines
Carbon County, Utah

Regulatory Authority:
State of Utah
Department of Natural Resources
Division of Oil, Gas and Mining
Salt Lake City, Utah

NOTICE OF VIOLATION 89-26-1-1 (03/29/89)

Part 1 of 1

UMC 817.97, UMC 817.50

Failure to maintain water quality effluent in accordance with UPDES permit on the Discharge Pond 002, also known as the Whitmore Mine

Water Discharge Pond.

Protect fish, wildlife, and related environmental values and maintain water quality effluent by cessation of oil spillage and water sampling.

\$5,000 Penalty Assessed

Terminated 04/12/89

CESSATION ORDER 89-25-1-1 (04/19/89)

Part 1 of 1 UMC 817.97, UMC 843.11 (b)

Failure to protect fish, wildlife, and related environmental values.

Failure to cease deposition of oil and/or flocculated oil into Grassy Trail Creek.

Cessation of deposition of oil and flocculated oil into Grassy Trail Creek.

Vacated 06/20/89

CESSATION ORDER 89-25-2-1 (04/19/89)

Part 1 of 1 S 40-10-9 U.C.A., UMC 817.97, And
UMC 817.42 (a) (1)

Conducting mining activities without a permit (deposit of sediment-laden mine water into Grassy Trail Creek);

Failure to protect fish, wildlife, and related environmental values;

Failure to pass sediment-laden mine water (Sunnyside storage tanks) through a sediment-control structure, pond, or treatment facility prior to leaving the permit area.

Vacated 06/20/89

NOTICE OF VIOLATION 89-30-11-1 (11/08/89)

Part 1 of 1 UMC 817.52 (b) (ii)

Failure to notify appropriate agencies (EPA, State Health, DOGM) of NPDES permit non-compliance within five days of receiving analysis results.

Follow required reporting procedures as outlined in the discharge

permit.

\$200 Penalty Assessed

Terminated 11/08/89

NOTICE OF VIOLATION 89-26-24-1 (12/20/89)

Part 1 of 1

UMC 817.181 AND 817.42

Failure to maintain support facilities required or used incidentally for the operation of the underground mine. The specific support facility associated with the "NOV" is the oil emulsion pipeline underground, particularly down the manshaft.

\$1280 Penalty Assessed

Terminated 6/18/90

NOTICE OF VIOLATION 90-20-3-1 (9/21/90)

Failure to submit a permit renewal application at least 120 days prior to expiration of existing permit.

\$380 Penalty Assessed

Termination still open

NOTICES OF VIOLATIONS

International Anthracite
Corporation
Schuylkill County,
Pennsylvania

Regulatory Authority:
State of Pennsylvania
Department of Environmental
Resources
Harrisburg, PA 17120

COMPLIANCE ORDER PERMIT #54841304 (10/13/88)

Paragraph 1 of 1 Special Permit Condition #9 and #25
PA Code 88.49366

Failure to keep backfilling and grading concurrent. Evidenced by an affected area which exceeds the 1,500-foot limit for maximum affected area.

\$1500 Penalty Assessed

Terminated 03/31/89

NOTICES OF VIOLATIONS

Sunnyside Of Kentucky
Pike County, Kentucky

Regulatory Authority:
State of Kentucky
Department for Surface Mining,
Reclamation, and Enforcement
Frankfort, Kentucky 40601

No Violations To Date Since Operator Took Over on April 1990.

2.4 Right of Entry Information

(a) A description of the documents upon which the applicant, Sunnyside Coal Company and its legal predecessor Sunnyside Reclamation and Salvage, Inc., bases its legal right to enter and begin underground coal mining activities in the permit area as follows:

(1) Deed dated 3/9/89 through which Kaiser Coal Corporation, a Nevada corporation, conveyed and warranted to Sunnyside Reclamation and Salvage, Inc., a Colorado corporation, title to tracts of land in Carbon County, Utah. It was recorded by the County Recorder of Carbon County, Utah in Book 287, pages 52-95 inclusive. Fee land included in the deed and within the permit area is described as follows:

T14S, R14E, SLB&M, Utah

Sect. 6: N1/2, S1/2 SW1/4, S1/2 SE1/4, NW1/4 SE1/4

Sect. 7: NW1/4, SW1/4 NE1/4, E1/2 SW1/4, S1/2 SE1/4,
NW1/4 SE1/4

Sect. 17: NE1/4, SE1/4 NW1/4, SW1/4, S1/2S E1/4

Sect. 18: E1/2, S1/2 SW1/4, NE1/4 SW1/4, NW1/4 SW1/4
SW1/4 NW1/4 less the following described area:

Beginning at the NW corner of SW1/4NW1/4 of Section 18,
T14S, R14E:

thence S 45° 05' E, 1,577.42 ft;

thence S 39° 25' W, 1,759.22 ft;

thence N 2,472.87 ft to point of beginning.

Sect. 19 and 20: All

Sect. 21: W1/2

Sect. 28 and 29: All

Sect. 30: NE1/4, NE1/4 NW1/4, NW1/4 SE1/4

Sect. 31: S1/2 NE1/4, NE1/4 NE1/4

Sect. 32 and 33: All

Sect. 34: W1/2

T15S, R14E, SLB&M, Utah

Sect. 3: W1/2
 Sect. 4: All
 Sect. 5: NE1/4, N1/2 SE1/4, SE1/4 SE1/4
 Sect. 8: NE1/4 NE1/4
 Sect. 9: All
 Sect. 10: W1/2, SE1/4
 Sect. 15: W1/2, N1/2 NE1/4
 Sect. 16: E1/2, NW1/4, E1/2 SW1/4
 Sect. 17: E1/2 NE1/4

(2) Federal Coal Leases numbers Salt Lake 062966-063383-Utah 010140, Utah 32083 and SL-068754. Areas within both the leases and the permit area are described as follows:

T14S, R13E, SLB&M, Utah

Sect. 1: SE1/4
 Sect. 12: NE1/4, N1/2, NW1/4, SE1/4, NW1/4,
 SE1/4 SE1/4, N1/2 SE1/4, SW1/4 NW1/4
 NE1/4 SW1/4, SW1/4 SE1/4 less the
 following described area:

Beginning at a point which bears South 1320 ft from the NW corner of Section 12:

thence South, 1320 ft;
 thence S 89°55'30" E, 1327.01 ft;
 thence South, 1320 ft;
 thence S89°53'15"E, 1327.22 ft;
 thence South, 1320 ft;
 thence S89°51'E, 1327.43 ft;
 thence N45°05'07"W, 5623.40 ft to the place of beginning.
 Sect. 13: Portions of: NE1/4 NE1/4, E1/2 SE1/4,
 SW1/4 SE1/4, SE1/4 SW1/4, NE1/4 SW1/4,
 NW1/4 SW1/4, SW1/4, NW1/4 which are described
 as follows:

Beginning at a point which bears 2850 ft S89°51'E from the WS corner of Section 13:

thence N42°30'W, 4215 ft;
 thence North 610 ft;
 thence S42°30'E, 3730 ft;
 thence N47°30'E, 100 ft;
 thence S42°30'E, 1450 ft;
 thence N89°50'W, 710 ft to the point of beginning.

Beginning at the SE corner of Section 13:

thence North, 1487.13 ft;
 thence S39°25'W, 1920.39 ft;
 thence S89°50'E, 1219.36 ft to the point of beginning.

Less the following described area:

Beginning at a point which bears South 1320 ft from the NE corner of Section 13:

thence N89°51'W, 1327.76 ft;
thence North 1320 ft;
thence S 45°05'33"E, 1874 ft to the point of beginning.

Sect. 24: S1/2 SE1/4, Portions of: N1/2 NE1/4, SE1/4 NE1/4, N1/2 SE1/4 and NE1/4 SW1/4 which are described as follows:

Beginning at the NE corner of Section 24:

thence S0°07'W, 1814.87 ft;
thence S57°11'W, 430 ft;
thence N38°23'W, 1165 ft;
thence N42°26'W, 860.51 ft;
thence N39°5'E, 709.31 ft;
thence S89°50'E, 1219.36 ft;
thence South, 45.54 ft to the place of beginning.

Beginning at a point which bears N 0°02'E, 1,294.59 ft from the SE corner of said Section 24:

thence N0°02'E, 1294.59 ft;
thence N0°07'E, 830.41 ft;
thence S57°11'W, 3905.58 ft;
thence S89°E, 3280.00 ft to the place of beginning and containing 80 acres more or less.

Beginning at a point which bears N89°50'W 1720 ft from the EN corner of Section 24:

thence N89°50'W, 750 ft;
thence S42°30'E, 2900 ft;
thence N57°11'E, 100 ft;
thence N38°23'W, 1165 ft;
thence N42°26'W, 860.51 ft;
thence N39°25'E, 350 ft;
thence N42°30'W, 400 ft to the point of beginning.

Sect. 14: Portions of: NW1/4 which is described as follows:

Beginning at a point which bears 1915 ft N89°41'W from the NE corner of Section 14:

thence S42°30'E, 2090 ft;
thence South, 600 ft;
thence N42°30'W, 1400 ft;

thence S48°00'W, 1525 ft;
thence South, 175 ft;
thence N89°41'W, 315 ft;
thence North, 300 ft;
thence N48°00'E, 1775 ft;
thence N42°30'W, 1125 ft;
thence S89°41'E, 500 ft to the point of beginning.

Sect. 11: Portions SW1/4 SE1/4 which is described as follows:

Beginning at a point which bears 1915 ft N89°41'W from the SE corner of Section 11:

thence N40°30'W, 1150 ft;
thence S48°00'W, 380 ft;
thence S42°30'E, 780 ft;
thence S89°41'E, 520 ft to the point of beginning.

Sect. 25: NE1/2 NE1/4

T14S, R14E, SLB&M, Utah:

Sect. 6: NW1/2 SW1/4

Sect. 7: W1/2 SW1/4

Sect. 8: SW1/4, SW1/4 SE1/4

Sect. 17: W1/2 NW1/4, NE1/4 NW1/4, N1/2 SE1/4

Sect. 18: E1/2 NW1/4, NW1/4 NW1/4

Sect. 30: NW1/4 NW1/4, SE1/4 NW1/4, NE1/4 SW1/4
S1/2 SE1/4, NE1/4 SE1/4

Sect. 31: NW1/4 NE1/4

(3) Coal lease, dated November 8, 1989, granted by Carbon County of the State of Utah, the lessor, to Sunnyside Reclamation and Salvage, Inc., the lessee. The lease embraces the following described lands in Carbon County, Utah all of which are within the permit area:

Salt Lake Meridian, Utah

T14S, R14E

Sect. 21: SE 1/4, NE 1/4

Sect. 27: SW 1/4, SW 1/4 of NW 1/4

Sect. 34: E 1/2.

T15S, R14E

Sect. 3: E 1/2

Sect. 10: NE 1/4.

(4) Coal lease agreement, dated February 21, 1990, entered into with Geneva Steel granting a partial sublease of Utah Coal Lease M1-43715. The lease covers the following described lands:

Part of Section 16, T14S, R14E, SLBM described as:

Beginning at a point that is S88°56'36"W 1,251.66 Ft. from the Southwest section corner of said Section 16; running thence N45°00'02"W 1,771.31 Ft; thence N0°03'W 1,704.04 Ft; thence S45°00'02"E 4,218.68 Ft; thence N88°56'35"W 1,724.02 Ft. to the point of beginning, containing 82.81 acres more or less.

(5) The specific land and surface rights for the Sunnyside permit area are included in the deed described in paragraph (1) of this section. Those lands are identified and described as follows:

T14S, R14E, SLB&M, Utah
Sect. 31: SE1/4
T15,S, R14E, SLB&M, Utah
Sect. 5: W1/2, SW1/4 SE1/4
Sect. 6: S1/2S E1/4,SE1/4 SW1/4,
portions of N1/2 SE1/4 and NE1/4 NW1/4 South of
the D&RGW railroad right-of-way.
Sect. 7: N1/2 NE1/4, N3/4 NW1/4
Sect. 8: N1/2 NW1/4, NW1/4 NE1/4

The foregoing documents have been duly assigned and transferred to applicant, and appropriate approvals are being processed and awaited.

The surface operations associated with underground coal mining activities at the Sunnyside Mines does not involve the surface mining of coal.

2.5 Relationship to Areas Designated Unsuitable for Mining

(a) The proposed permit area is not within an area designated unsuitable for surface effects of underground coal mining activities.

(b) Substantial legal and financial commitments were made at Sunnyside Mines before January 4, 1977 and the mines have engaged in underground coal mining in the proposed permit area for more than ninety years.

(c) There are no occupied dwellings within 300 feet of surface operations or facilities.

2.6 Permit Term

Underground coal mining in the permit area began in the late 1890's and has continued to some degree yearly since that time. The termination date is unknown at this time but is estimated to be more than five (5) years. It is conceivable that production

will continue beyond that time if the property can remain economically competitive. This estimate is based on a yearly production of approximately one million tons. Plate 1-3 delineates the proposed mining activity for five years. Like all mining plans, this proposal will undoubtedly change numerous times as the property is influenced by physical and economic conditions.

The total permit area encompasses 14,520 acres. Of these, 920 acres are anticipated to be surface lands over the underground workings expected to be mined during the five year period. The proposed mine workings will be under 1,000 feet up to 3,000 feet of overburden. Additional coal leases required for the proposed mine layout are noted on Plate 1-3. These leases will be obtained from Federal, County and private lease holders. Coal in these, as yet unacquired leases, will be lost if not recovered through existing and future access in the Sunnyside Mines. Surface topography in these areas makes it unlikely for another operator to gain access to and mine these areas except through existing workings. Additional coal leases, other than those shown on the map, could be acquired in the future. In such an event, the mine plan would, in all probability, change to take advantage of better conditions, more economical mining costs, easier access and ventilation requirements, or any of a number of benefits that might result from such acquisitions.

The information presented is for the 5 year permit term, although reclamation of most surface areas will not begin at that time.

2.7 Insurance and Proof of Publication

A copy of the certificate of liability insurance is shown in Figure 1-1.

A copy of the newspaper advertisement and publishers affidavit of publication is shown in Figures 1-2 and 1-3.

2.8 Other licenses and Permits

A list of other licenses and permits under applicable State and Federal land-use, air and water quality, water rights and health and safety laws and regulations needed by Sunnyside Coal Company to conduct the underground coal mining activities are as follows:

(1) NPDES Discharge Permit for Sunnyside Coal Company, Sunnyside Mines, UT-0022942.

Issued on September 2, 1977 by:

Enforcement Division
U.S. Environmental Protection Agency
Region VIII
1860 Lincoln Street
Denver, CO 80203

(2) MSHA Identification Number 1211-Ut-09-01813-01 for Sunnyside Preparation Plant Tailings Ponds, Sunnyside Mines, Sunnyside Coal Company.

Issued on March 15, 1976

U.S. Department of the Interior
Mine Safety and Health Administration
P.O. Box 25367, DFC
Denver, CO 80225

(3) MSHA Identification Number 1211-UT-0031 for Grassy Trail Reservoir, Sunnyside Mines, Sunnyside Coal Company.

Issued on August 29, 1978 by:

U.S. Department of Labor
Mine Safety and Health Administration
P.O. Box 25367, DFC
Denver, CO 80225

(4) MSHA Identification Number 1211-UT-09-01813-02 for Sunnyside Coarse Refuse.

(5) Application to Appropriate Water for Miscellaneous Purposes, State of Utah. Application Number 28812 (91-231) by Sunnyside Mines, Sunnyside Coal Company.

Approved on June 14, 1961 by:

State Engineer
Water Rights Division
State of Utah
231 East 400 South
Salt Lake City, UT 84102

(6) Notice of Intent to Mine Coal. Industrial Commission of Utah: Coal was being mined at Sunnyside prior to the establishment of the Industrial Commission; therefore, a Notice of Intent Application was not filed.

(7) Right of Way - USA Salt Lake 064436
expires January 1994.

Right of Way - USA Utah 029686
expires January 1994.

Right of Way - USA Salt Lake 065523
expires January 1998.

Right of Way - USA Utah 016755
expires January 2007.

Right of Way - USA Salt Lake 071198
expires January 2014.

Right of Way - USA Utah 20994
expires January 2014.

Right of Way - USA Salt Lake 069099
expires January 2014.

Right of Way - USA Utah 45898
expires annually in July.

(8) Explosives Permit #9CA00133C1 90026.

ID Number 94-0594733

Issued by Bureau of Alcohol, Tobacco and Firearms, Department of
the Treasury. Expires March 31 of each year.

2.9 Location of Public Office for Filing Application

A copy of the application will be simultaneously and concurrently
filed for public inspection with the:

Recorder
Carbon County Court House
Price, Utah 84501

2.10 Newspaper Advertisement

LEGAL NOTICE

Pursuant to Utah Mining Code R614-301-117.200 notice is hereby given that Sunnyside Coal Company, P.O. Box 99, Sunnyside, Utah 84539, has submitted a Coal Mine Renewal Permit Application for the Sunnyside Mines to the Utah Division of Oil, Gas, and Mining.

The Sunnyside Mines Permit Area is located near the town of Sunnyside, approximately twenty-five miles east of Price, Utah via U.S. Highway 6 and State Highway 123. The following are the legal descriptions of the Permit Area:

1. Fee Land

T14S, R14E, SLB&M, Utah

Sect. 6: N1/2, S1/2 SW1/4, S1/2 SE1/4, NW1/4 SE1/4

Sect. 7: NW1/4, SW1/4 NE1/4, E1/2 SW1/4, S1/2 SE1/4, NW1/4 SE1/4

Sect. 17: NE1/4, SE1/4 NW1/4, SW1/4, S1/2S E1/4

Sect. 18: E1/2, S1/2 SW1/4, NE1/4 SW1/4, NW1/4 SW1/4

SW1/4 NW1/4 less the following described area:

Beginning at the NW corner of SW1/4NW1/4 of Section 18, T14S, R14E:

thence S 45° 05' E, 1,577.42 ft;

thence S 39° 25' W, 1,759.22 ft;

thence N 2,472.87 ft to point of beginning.

Sect. 19 and 20: All

Sect. 21: W1/2

Sect. 28 and 29: All

Sect. 30: NE1/4, NE1/4 NW1/4, NW1/4 SE1/4

Sect. 31: S1/2 NE1/4, NE1/4 NE1/4

Sect. 32 and 33: All

Sect. 34: W1/2

T15S, R14E, SLB&M, Utah

Sect. 3: W1/2

Sect. 4: All

Sect. 5: NE1/4, N1/2 SE1/4, SE1/4 SE1/4

Sect. 8: NE1/4 NE1/4

Sect. 9: All

Sect. 10: W1/2, SE1/4

Sect. 15: W1/2, N1/2 NE1/4

Sect. 16: E1/2, NW1/4, E1/2 SW1/4

Sect. 17: E1/2 NE1/4

2. Federal Leases

Federal Coal Leases numbers Salt Lake 062966-063383-Utah 010140, Utah 32083 and SL-068754. Areas within both the leases and the permit area are described as follows:

T14S, R13E, SLB&M, Utah

Sect. 1: SE1/4

Sect. 12: NE1/4, N1/2, NW1/4, SE1/4, NW1/4,
SE1/4 SE1/4, N1/2 SE1/4, SW1/4 NW1/4
NE1/4 SW1/4, SW1/4 SE1/4 less the
following described area:

Beginning at a point which bears South 1320 ft from the NW corner of Section 12:

thence South, 1320 ft;
thence S 89°55'30" E, 1327.01 ft;
thence South, 1320 ft;
thence S89°53'15"E, 1327.22 ft;
thence South, 1320 ft;
thence S89°51'E, 1327.43 ft;
thence N45°05'07"W, 5623.40 ft to the place of beginning.

Sect. 13: Portions of: NE1/4 NE1/4, E1/2 SE1/4,
SW1/4 SE1/4, SE1/4 SW1/4, NE1/4 SW1/4,
NW1/4 SW1/4, SW1/4, NW1/4 which are described as
follows:

Beginning at a point which bears 2850 ft S89°51'E from the WS corner of Section 13:

thence N42°30'W, 4215 ft;
thence North 610 ft;
thence S42°30'E, 3730 ft;
thence N47°30'E, 100 ft;
thence S42°30'E, 1450 ft;
thence N89°50'W, 710 ft to the point of beginning.

Beginning at the SE corner of Section 13:

thence North, 1487.13 ft;
thence S39°25'W, 1920.39 ft;
thence S89°50'E, 1219.36 ft to the point of beginning.

Less the following described area:

Beginning at a point which bears South 1320 ft from the NE corner of Section 13:

thence N89°51'W, 1327.76 ft;
thence North 1320 ft;
thence S 45°05'33"E, 1874 ft to the point of beginning.

Sect. 24: S1/2 SE1/4, Portions of: N1/2 NE1/4, SE1/4 NE1/4, N1/2 SE1/4 and NE1/4 SW1/4 which are described as follows:

Beginning at the NE corner of Section 24:

thence S0°07'W, 1814.87 ft;
thence S57°11'W, 430 ft;
thence N38°23'W, 1165 ft;
thence N42°26'W, 860.51 ft;
thence N39°5'E, 709.31 ft;
thence S89°50'E, 1219.36 ft;
thence South, 45.54 ft to the place of beginning.

Beginning at a point which bears N 0°02'E, 1,294.59 ft from the SE corner of said Section 24:

thence N0°02'E, 1294.59 ft;
thence N0°07'E, 830.41 ft;
thence S57°11'W, 3905.58 ft;
thence S89°E, 3280.00 ft to the place of beginning and containing 80 acres more or less.

Beginning at a point which bears N89°50'W 1720 ft from the NE corner of Section 24:

thence N89°50'W, 750 ft;
thence S42°30'E, 2900 ft;
thence N57°11'E, 100 ft;
thence N38°23'W, 1165 ft;
thence N42°26'W, 860.51 ft;
thence N39°25'E, 350 ft;
thence N42°30'W, 400 ft to the point of beginning.

Sect. 14: Portions of: NW1/4 which is described as follows:

Beginning at a point which bears 1915 ft N89°41'W from the NE corner of Section 14:

thence S42°30'E, 2090 ft;
thence South, 600 ft;
thence N42°30'W, 1400 ft;
thence S48°00'W, 1525 ft;
thence South, 175 ft;
thence N89°41'W, 315 ft;

thence North, 300 ft;
thence N48°00'E, 1775 ft;
thence N42°30'W, 1125 ft;
thence S89°41'E, 500 ft to the point of beginning.

Sect. 11: Portions SW1/4 SE1/4 which is described as follows:

Beginning at a point which bears 1915 ft N89°41'W from the SE corner of Section 11:

thence N40°30'W, 1150 ft;
thence S48°00'W, 380 ft;
thence S42°30'E, 780 ft;
thence S89°41'E, 520 ft to the point of beginning.

Sect. 25: NE1/2 NE1/4

T14S, R14E, SLB&M, Utah:

Sect. 6: NW1/2 SW1/4
Sect. 7: W1/2 SW1/4
Sect. 8: SW1/4, SW1/4 SE1/4
Sect. 17: W1/2 NW1/4, NE1/4 NW1/4, N1/2 SE1/4
Sect. 18: E1/2 NW1/4, NW1/4 NW1/4
Sect. 30: NW1/4 NW1/4, SE1/4 NW1/4, NE1/4 SW1/4
S1/2 SE1/4, NE1/4 SE1/4
Sect. 31: NW1/4 NE1/4

3. Carbon County Leases

Coal lease, dated November 8, 1989, granted by Carbon County of the State of Utah, the lessor, to Sunnyside Reclamation and Salvage, Inc., the lessee. The lease embraces the following described lands in Carbon County, Utah all of which are within the permit area:

Salt Lake Meridian, Utah
T14S, R14E
Sect. 21: SE 1/4, NE 1/4
Sect. 27: SW 1/4, SW 1/4 of NW 1/4
Sect. 34: E 1/2.
T15S, R14E
Sect. 3: E 1/2
Sect. 10: NE 1/4.

4. State Lease

Coal lease agreement, dated February 21, 1990, entered into with Geneva Steel granting a partial sublease of Utah Coal Lease ML-43715. The lease covers the following described lands:

Part of Section 16, T14S, R14E, SLBM described as:

Beginning at a point that is S88°56'36"W 1,251.66 Ft. from the Southwest section corner of said Section 16; running thence N45°00'02"W 1,771.31 Ft; thence N0°03'W 1,704.04 Ft; thence S45°00'02"E 4,218.68 Ft; thence N88°56'35"W 1,724.02 Ft. to the point of beginning, containing 82.81 acres more or less.

Part of Section 16, T14S, R14E, SLBM described as:

Beginning at the Southwest corner of said section,

5. Surface Rights

The specific land and surface rights for the Sunnyside permit area are included in the deed described in paragraph (1) of this section. Those lands are identified and described as follows:

T14S, R14E, SLB&M, Utah

Sect. 31: SE1/4

T15,S, R14E, SLB&M, Utah

Sect. 5: W1/2, SW1/4 SE1/4

Sect. 6: S1/2S E1/4,SE1/4 SW1/4,
portions of N1/2 SE1/4 and NE1/4 NW1/4

South of the D&RGW railroad right-of-way.

Sect. 7: N1/2 NE1/4, N3/4 NW1/4

Sect. 8: N1/2 NW1/4, NW1/4 NE1/4

The described areas are contained on the following U.S. Geological Survey 7.5 minute quadrangle maps:

Sunnyside, Patmos Head, Bruin Point, and Mt. Bartles, all in Utah.

A copy of the permit application is available at the office of the County Recorder of Carbon County, Carbon County Courthouse, Price, Utah 84501. Written comments, objections, or requests for informal conferences may be made to the Utah Division of Oil, Gas and Mining, 355 West North Temple, 3 Triad Center Suite 350, Salt Lake City, Utah, 84180-1203.

(To be published in the Sun Advocate, Price, Utah)

RECEIVED

JUN 12 1985

DIVISION OF OIL
GAS & MINING

CHAPTER II

NOTICE OF VIOLATIONS N85-4-10-1 (3/22/85)

Part 1 of 1 UMC 771.19

Failure to mine in accordance with an approved interim permit.

Stop using the dirt road from the coarse refuse haul road to state highway 123. Install sediment controls to ensure that there are no additional contributions of suspended solids to Grassy Trail Creek from the newly disturbed area associated with the stream crossing southwest of the coal stockpile. Submit plans for the Class I road. Submit plans for the permitting of, or reclamation of the dirt road from the coarse refuse haulroad to state highway 123 in accordance with UMC 817.150 -. 156.

Violation pending.

CESSATION ORDER No. C 85-4-2-1 (3/22/85)

Part 1 of 1 UCA 40-10-22 (1) (c)

Failure to abate a notice of violation within the time set for abatement.

Comply with the remedial actions required in the violation, immediately.

Violation terminated 3/22/85.

NOTICE OF VIOLATIONS N 85-4-11-1 (4/4/85)

Part 1 of 1 UMC 817.42 (c)

Failure to maintain water treatment facilities as approved.

Maintain facilities in accordance with approved plan.

Violation pending.

NOTICE OF VIOLATIONS N 85-4-17-3 (5/13/85)

Part 1 of 3 UCA 40-10-22 (1) (c), UMC 771.19,
UMC 43 (a)

Failure to construct and maintain diversion to divert runoff from a sediment pond, to ensure that they will pass safely the peak runoff from a 10 year, 24 hour precipitation event. Failure to mine in accordance with an approved interim mine plan.

JUN 12 1985

CHAPTER II

DIVISION OF OIL
GAS & MINING

Construct and maintain the diversions in accordance with the approved plan.

Violation pending.

Part 2 of 3 UCA 40-10-22 (1) (c), UMC 771.19,
UMC 817.46 (e), (l), (m), UMC 817.47

Failure to conduct mining activities in accordance with an approved interim permit.

Failure to provide an adequate discharge structure.

Reconstruct and maintain the pond to meet approved design specifications. Submit complete and adequate plans to the Division for adequate erosion protection of the emergency spillway outlet.

Violation pending.

Part 3 of 3 UMC 817.49 (b), UMC 817.46 (e)

Failure to construct and maintain a pond to prevent short circuiting to the extent possible.

Cease pumping water into the pond. Submit complete and adequate plans to the Division which show how piping along the spillway will be stopped.

Violation pending.

RECEIVED

JUN 12 1985

DIVISION OF OIL
GAS & MINING

CHAPTER II

NOTICES OF VIOLATIONS

York Canyon Mines
Colfax County, New Mexico

Regulatory Authority:
State of New Mexico
Energy and Minerals Depart.
Mining & Minerals Division
Santa Fe, New Mexico

NOTICE OF VIOLATION 021 (1/19/82)

Part 1 of 1 Rule 79-1 Section 23

Failure of the operator to maintain sediment control berm.

Berm repaired.
Informal conference held February 26, 1982.
No penalty assesses.
Terminated on January 22, 1982.

NOTICE OF VIOLATION 022 (3/10/82)

Part 1 of 1 Rule 79-1 Section 23

Failure of operator to repair breached protective dike along York Canyon drainage.

Protective dike repaired.
Informal hearing held May 27, 1982
\$250 penalty assessed
Terminated on April 4, 1982.

NOTICE OF VIOLATION 024 (4/19/82)

Part 1 of 3 Rule 79-1 Section 35

Failure of the operator to conduct operations so as to minimize or prevent water pollution.
Potential sources of water pollution were removed. Plan submitted to NMBSM to eliminate future potential sources of water pollution.

Informal hearing held June 24, 1982.
No penalty assessed.
Terminated April 28, 1982.

RECEIVED

JUN 12 1985

DIVISION OF OIL
GAS & MINING

CHAPTER II

Part 2 of 3

Rule 79-2 Section 25

Warning sign not posted near explosive storage magazine.

Sign that had fallen down was put back up.

Informal conference held June 24, 1982.

No penalty assessed.

Terminated May 7, 1982.

Part 3 of 3

Rule 79-1 Section 35

Mine discharge catchment basin was not isolated from surface runoff.

Pond was isolated from surface runoff.

Informal hearing held June 24, 1983.

No penalty was assessed.

Terminated on June 24, 1982.

Informal hearing held June 24, 1983, no penalty was assessed.

NOTICE OF VIOLATION 025 (5/4/82)

Part 1 of 1

Rule 80-1 Chapter K, 19-11(j)

Unnecessary disturbance to York Canyon drainage channel.

Disturbed area was cleaned up.

Informal hearing held June 24, 1982.

No penalty assessed.

Terminated May 14, 1982.

NOTICE OF VIOLATION 026 (5/4/82)

Part 1 of 1

Rule 80-1, Chapter K, 19-11(b) and 19-15(c)

Failure of operator to respond to a letter of deficiency dated February 19, 1982, regarding construction of haul road in accordance with approved design.

Deficiency repaired.

Informal conference held on June 24, 1982.

\$1,200 penalty assessed.

JUN 12 1985

DIVISION OF OIL
GAS & MINING

CHAPTER II

NOTICE OF VIOLATION 011 (08/31/83)Part 1 of 1 Rule 80-1, Chapter K Section 22

Underground leakage of diesel fuel from buried diesel line polluting undetermined portion of York Canyon alluvial aquifer.

Diesel leak was abated within 90 days.

No penalty assessed.
Terminated November 28, 1983

NOTICE OF VIOLATION 144 (4/18/84)Part 1 of 1 Rule 79-1, Section 21, Topsoil Handling

Failure of the operator to stockpile topsoil in a stable area.

Constructed ditch/berm adjacent to stockpile.

Informal conference held June 15, 1984.
No penalty assessed.
Terminated May 21, 1984.

NOTICE OF VIOLATION 145 (4/18/84)Part 1 of 1 Rule 79-1, Section 21, Topsoil Handling

Failure to segregate topsoil material from mined out overburden materials.

Constructed ditch/berm around topsoil stockpile.

Informal conference held June 15, 1984
No penalty assessed.
Terminated May 21, 1984.

NOTICE OF VIOLATION 146 (4/17/84)Part 1 of 1 Rule 79-1, Section 19, Backfilling and Grading.

Failure to stabilize rills and gullies over nine inches deep.

Filled rills and gullies with topsoil or rock material.

Informal conference held June 15, 1984.
No penalty assessed.
Terminated May 21, 1984

RECEIVED

JUN 12 1985

DIVISION OF OIL
GAS & MINING

CHAPTER II

NOTICE OF VIOLATION 147 (4/18/84)

Part 1 of 1 Rule 79-1, Sections 23 (E) (8) and 15 (b)
and NMSA Section 69-25A-19 (B) (10) (C)

Failure to be certified by a qualified professional engineer registered in New Mexico for all structures which act as the final impoundment of runoff from the permit area.

Informal conference held June 15, 1984.

Violation vacated July 2, 1984.

NOTICE OF VIOLATION 150 (5/28/84).

Part 1 of 1 Rule 79-1, Section 19, Backfilling and
Grading (715.14) (i)

Failure to stabilize rills and gullies over nine inches deep.

Informal conference held July 20, 1984

No penalty assessed.

Terminated on July 3, 1984.

NOTICE OF VIOLATION 155 (6/12/84)

Part 1 of 1 Rule 79-1, Section 21, Topsoil Handling

Failure of operator to remove contamination from the topsoil stockpile and to prevent water erosion of topsoil stockpile.

Constructed berm around topsoil stockpile.

Informal hearing held July 20, 1984.

\$1,000 penalty assessed.

Terminated on July 3, 1984.

NOTICE OF VIOLATION 156 (7/6/84)

Part 1 of 2 Rule 79-1, Section 23(e) (vi) (5)

Failure of the operator to have a properly installed (constructed) spillway system for a sediment pond.

Informal conference held August 2, 1984.

Vacated September 7, 1984.

Part 2 of 2 Rule 79-1, Section 23(1) (2) (iii)

Failure of the operator to construct culverts to avoid erosion at inlets and outlets.

RECEIVED

JUN 12 1985

DIVISION OF OIL
GAS & MINING

CHAPTER II

Informal conference held August 2, 1984.
Vacated September 7, 1984.

NOTICE OF VIOLATION 157 (7/6/84)

Part 1 of 1 Rule 79-1, Section 23 (vi) (f)

Failure of the operator to control discharges from sedimentation ponds and diversions to reduce erosion and prevent deepening or enlargement of stream channels and to minimize disturbances to the hydrologic balance.

Rip rap material placed in discharges of diversion and spillway.

Informal conference held August 2, 1984.
No penalty assessed.
Terminated August 24, 1984.

NOTICE OF VIOLATION 158 (7/6/84)

Part 1 of 1 Rule 79-1, Section 19 (i)

Failure of the operator to regrade or stabilize rills and gullies deeper than nine inches that have formed in areas that have been regraded and the topsoil replaced but vegetation has not yet been established.

Rip rap material placed in rills.

Informal conference held August 2, 1984.
No penalty assessed.
Terminated August 24, 1984.

NOTICE OF VIOLATION 159 (7/6/84)

Part 1 of 1 Rule 79-1, Section 23 (e) (vi) (5)

Failure of the operator to have a properly installed (constructed) spillway system for sedimentation pond.

Informal conference held August 2, 1984.
Vacated September 7, 1984.

NOTICE OF VIOLATION 160 (7/6/84)

Part 1 of 1 Rule 79-1, Section 69-25A-19 (B) (10) (C)
NM-CSMS Section 23 (E) (8)

Failure of the operator to have all sedimentation structures

JUN 12 1985

DIVISION OF OIL
GAS & MINING

CHAPTER II

(ponds) which present suspended solids to stream flow or runoff outside of the permit area, to be certified after construction by a qualified professional engineer registered in New Mexico.

Informal conference held August 2, 1984.
No penalty assessed.
Terminated October 9, 1984.

NOTICE OF VIOLATION 161 (7/10/84)

Part 1 of 1 Rule 79-1, NMSA Section 69-25A-19 (B)
(10) (C) NM CSMC Section 23 (E) (8)

Failure of the operator to have all sedimentation structures (ponds) which prevent suspended solids to stream flow or runoff outside of the permit area, to be certified after construction by a qualified professional engineer registered in New Mexico.

Informal conference held August 2, 1984.
No penalty assessed.
Terminated October 9, 1984

NOTICE OF VIOLATION 165 (8/14/84)

Part 1 of 1 Rule 79-1, NMSA Section 21 (B) (iii) NM
CSMS Section 19 (i)

Failure of operator to protect topsoil from wind and water erosion.

Failure of operator to regrade or stabilize rills or gullies deeper than 9 inches.

Informal conference held October 15, 1984.
No penalty assessed.
Terminated September 14, 1984.

NOTICE OF VIOLATION 191 (10/18/84)

Part 1 of 2 Findings of fact 6 (d) Permit No. 1-A-2
Surface) Conclusions of law 3 Permit
No. 1-A-2 (Surface)

Failure of the operator to fulfill the conditions of their permit. (Findings of fact, conclusions of law.) The operator graded, topdressed and seeded an area (slope) in excess of 15 degrees and in excess of that which occurred before mining. The slope was measured in two areas with a clinometer. Measured slopes were 37% (20° 18') and 42% (22° 47').

RECEIVED

JUN 12 1985

DIVISION OF OIL
GAS & MINING

CHAPTER II

Informal hearing held January 14, 1985.
No penalty assessed.
Terminated January 16, 1985.

Part 2 of 2 Rule 79-1, Section 19 (i)

Failure of the operator to regrade or stabilize rills and gullies deeper than nine inches that have formed in areas that have been regraded and topsoil replaced but vegetation has not yet been established.

Informal hearing held January 14, 1985.
Vacated January 14, 1985; NOV was improperly written.

NOTICE OF VIOLATION 192 (12/28/84)

Part 1 of 1 Rule 79-1, Section 69-25A-19 (B) (14)
CSMC Section 23 (e) (2) (i)

Failure of the operator to ensure that all debris are treated or buried and compacted or otherwise disposed of in a manner designed to prevent contamination of ground or surface waters.

Failure of the operator to provide 24-hour theoretical detention time for the inflow or runoff entering a pond from a 10 year 24 hour precipitation event. The operator discharged water from a pond containing some contaminants* into the York Canyon stream in the absence of a 10 year 24 hour precipitation event* surface oil.

Informal hearing held February 18, 1985.
Vacated March 8, 1985.
No penalty assessed.

NOTICE OF VIOLATION 193 (12/28/84)

Part 1 of 1 Rule 79-1, Section 69-25A-19 (B) (17)
CSMC Section 23 (L) (2) (i)

Failure of the operator to maintain roads in a manner that decreases erosion. Runoff from an active access road had been discharged onto an undisturbed area in a manner that created rills and gullies deeper than nine inches.

Abated January 8, 1985.
Informal hearing held February 18, 1985.
No penalty assessed.

RECEIVED

JUN 12 1985

CHAPTER II

NOTICE OF VIOLATION 200 (2/21/85)

DIVISION OF OIL
GAS & MINING

Part 1 of 3 Rule 80-1, Section 19-15 (j)

Failure of the operator to restrict their surface facilities and areas to be disturbed to those areas described under Items #1, 3, and 4 of the exploration plan section of permit application.

Failure of the operator to provide sediment control measures.

Failure of operator to notify MMD by letter of any deviations from the exploration plan.

Failure of the operator to protect off-site areas from damage by locating any part of the operations outside the permit area.

Informal hearing held April 4, 1984.
\$1,200 penalty assessed.
Terminated April 29, 1985.

Part 2 of 3 NMSA Section 69-25A-19 (B) (17)

Failure of the operator to maintain a primary road so as to control or prevent erosion and siltation. A discharge (s) from the primary access road caused erosion in excess of nine inches. The road berm had apparently been intentionally breached to allow discharge of water which had collected on the road surface.

Informal hearing held April 4, 1985.
\$1,100 penalty assessed.
Terminated April 29, 1985.

Part 3 of 3 Permit E-18 Coal Exploration
Stipulation # 7

Failure of the operator to notify the Mining and Minerals Division by letter of any deviations from the exploration plan section of the exploration mine permit application for the upper left fork seam in the Upper York Canyon Exploration Permit 3E-16. The operator drilled a well within the permit area that was not included in the exploration plan.

Informal hearing held April 4, 1985.
No penalty assessed.
Terminated April 29, 1985.

RECEIVED

JUN 12 1985

DIVISION OF OIL
GAS & MINING

CHAPTER II

NOTICES OF VIOLATION

Chimney Rock Coal Mine
Archuleta County, Colorado

Regulatory Authority
State of Colorado
Department of Natural Resources
Mined Land Reclamation Division
Denver, Colorado

NOTICE OF VIOLATION 8/81 NOV #81-13

Construction of an unapproved haul road. A minor revision was approved after issuance of the violation.

Assessment conference held.
\$100.00 penalty assessed.
NOV terminated.

NOTICE OF VIOLATION 12/81 NOV # 81-49

Construction and relocation of powder magazine prior to Division approval. A minor revision to relocate a powder storage area has been submitted to the Division prior to the issuance of this violation. Construction activities began a few days before Division approval. The revision was approved shortly after the violation was issued.

Assessment conference held February 1982.
\$950 penalty assessed.
NOV terminated.

NOTICE OF VIOLATION 3/82 NOV # 82-9

Discharge via the emergency spillway of sediment pond 002. Water being pumped from the pit to the pond exceeded the holding capacity and resulted in a discharge from the emergency spillway. Chimney Rock Coal held a temporary approval to discharge water from the sediment pond from the Colorado Department of Health. It was felt by the Division that more pond capacity was needed. To abate the violation, water was discharged when weather permitted.

Assessment conference held May 1982.
\$200 penalty assessed.
NOV terminated.

NOTICE OF VIOLATION 11/82 NOV # 82-50, 52, 53, 54, 55,
56, 57, 58.

An assessment conference was held in January 1983 and Chimney Rock Coal presented a case before the Mined Land Reclamation Board on March 24, 1983. Civil penalties were fixed at that

JUN 12 1985

DIVISION OF OIL
GAS & MINING

CHAPTER II

time. The following is a summary of those violations.

NOTICE OF VIOLATION 11/82 NOV # 82-50

Conducted mining activity outside of the approved mining limits.

Backfilling of an existing pit was the abatement.

\$2,350 penalty assessed.

Abated 4/83

NOTICE OF VIOLATION NOV #82-52

Failure to salvage, store, and protect topsoil as required by Rule 4.06. (Combined 82-52, 82-53, 82-54, 82-58).

Topsoil piles were dressed and seeded as required.

\$2,000 penalty assessed

Abated 2/7/83

NOTICE OF VIOLATION NOV # 82-53

Failure to salvage topsoil.

\$3,350 penalty assessed.

NOV terminated.

NOTICE OF VIOLATION 11/82 NOV # 82-54

Failure to adequately mark topsoil stockpiles.

\$750 penalty assessed.

NOV terminated.

NOTICE OF VIOLATION NOV #82-55

Failure to comply with the terms of the approved drainage control plan. As a result, runoff from the disturbed area was not flowing through a sedimentation pond. The approved plan was implemented.

\$1,700 penalty assessed.

Abated 3/21/83

NOTICE OF VIOLATION NOV # 82-56

Failure to contemporaneously reclaim. Maps 17A and 17B were included in the permit as timetables for abatement.

\$1,600 penalty assessed.

Abated 1/6/83

JUN 12 1985

DIVISION OF OIL
GAS & MINING

CHAPTER II

NOTICE OF VIOLATION 11/82 NOV # 82-57

Failure to keep storage truck containing explosives locked and closed when responsible personnel are not present.

\$850 penalty assessed.
Abated 11/23/82.

NOTICE OF VIOLATION 11/82 NOV # 82-58

Failure to reseed or stabilize.

\$2,600 penalty assessed.
NOV terminated.

NOTICE OF VIOLATION 2/83 NOV # 83-5

Failure to submit the information required by Stipulations 13,20, and 22 by the required time frames. The information was due February 6, and was submitted February 9.

Assessment conference held April 14, 1983.
\$1,050 penalty assessed.
NOV terminated.

NOTICE OF VIOLATION 2/83 NOV # 83-6

Failure to adequately mark the permit boundary. As a result, surface coal mining operations were being conducted outside of the approved permit area. The area was flagged off and equipment kept out. Disturbance was on a rocky area, so as to keep it to a minimum.

Assessment conference held April 14, 1983.
\$1,100 penalty assessed.
NOV terminated.

NOTICE OF VIOLATION 3/83 NOV # 83-10

Operator failed to comply with the terms of the approved permit. Specifically, sedimentation pond 004 was constructed closer to the ephemeral drainage channel than approved. The toe of the outslope of the embankment is less than 4 feet from the centerline of drainage. The pond has been reconstructed so that the outside toe of the west embankment is 40 feet from the centerline of ephemeral drainage channel.

\$900 penalty assessed.
NOV terminated.

RECEIVED

JUN 12 1985

CHAPTER II

DIVISION OF OIL
GAS & MINING

NOTICE OF VIOLATION 8/83 NOV # 83-40

Operator augered coal beyond permit boundary. One hole was approximately 10 ft. to 20 ft. beyond line.

\$800 penalty assessed.
NOV terminated.

NOTICE OF VIOLATION 10/83 NOV # 83-29

Issued for failure to provide documentation that adequate bonding will be available for the mine site past the expiration date of the existing bond.

No penalty assessed.
Abated 11/9/83.

NOTICE OF VIOLATION 2/16/84 NOV # C-84-14

Act Section (s) 34-33-120 (2) (e)
Regulation Section(s) 4.06.1 and 4.06.4(2)(b)

Failure to protect topsoil and failure to follow approved mine plan. Specifically a portion of the southern half of the east pit which has been topsoiled and seeded during the fall of 1983, subsequently had spoil material placed over it which compacted and contaminated the topsoil.

Terminated May 30, 1984.
Assessment conference held April 3, 1984.
\$1,100 penalty assessed.
Abatement plan submitted to the Division on 3/2/84,

NOTICE OF VIOLATION 2/16/84 NOV #C-84-21

Act Section(s) 120 (2)(e)
Regulation Section(s) 4.06.3(2)(b)

Moving a soil stockpile without Division approval. Specifically the stabilized and revegetated stockpile west of Sediment Pond No. 002 was moved to a location on top of the graded fill in the east pit area.

NOV terminated.
Informal hearing held 4/3/84
\$2,175 penalty assessed.

Abatement plan submitted to Division on 3/16/84.

RECEIVED

JUN 12 1985

DIVISION OF OIL
GAS & MINING

CHAPTER II

NOTICE OF VIOLATION 2/16/84 NOV #C-84-022

Permit Section(s) Sec. 2.05 of Permit Revision No. 1 Failure to follow approved mine plan. Specifically fill material was placed to a depth of about 9 feet in an area of approximately 340 by 150 feet by 350 feet by 180 feet. The filled area was located adjacent to and west of Sediment Pond No. 002 in an alluvial valley floor.

NOV terminated June 7, 1984.
Informal hearing held 4/3/84.
\$2,912.50 penalty assessed.
Abatement plan submitted to the Division on 3/16/84.

NOTICE OF VIOLATION 3/8/84 NOV # CV-84-024

Act Section(s) 120(2)(j)
Regulation Section(s) 4.05.4

Relocation of the stream channel of Stollsteimer Creek without approval by the Division.

An abatement letter was sent to the Division on 3/16/84.
An informal hearing was held on the site on 4/3/84.
\$2,800 penalty assesses.
NOV terminated 6/6/84.

NOTICE OF VIOLATION 3/8/84 NOV #CV-84-025

Act Section(s) 120(2)(e)
Regulation Section(s) 4.06

Failure to salvage stockpile, and protect topsoil as required.

An abatement letter was submitted to the Division on 3/16/84.
\$2,225 penalty assessed.
NOV terminated 6/6/84.

NOTICE OF VIOLATION 3/8/84 NOV # CV-84-026

Act Section(s) 129(2)(j)(II)
Regulation Section(s) 4.05.5

Failure to provide an adequate and functional sediment control system.

An abatement plan was submitted to the Division on 3/16/84.
\$650 penalty assessed.
NOV terminated 6/6/84.

RECEIVED

JUN 12 1985

CHAPTER II

NOTICE OF VIOLATION 8/23/84 NOV #C-84-156

DIVISION OF OIL
GAS & MINING

Regulation Section(s) 4.08.4 (2)

Blasting outside times announced in published blasting schedule-
specifically at 8:20 AM on August 2, 1984. Schedule called for
blasting 1/2 hour from 10 AM to 7 PM.

An assessment conference was held on October 2, 1984 and a civil
penalty of \$1,100.00 was assessed. NOV terminated 10/15/84.

NOTICE OF VIOLATION C-84-171 (11/27/84)

Act Section(s) 34-33-123(2)

Regulation Section(s) 5.03.2(2)(a) Failure to follow the approved
permit in that subsoil from in place subsoil salvage area F was
removed and placed in an unapproved location (the east pit).
This material was approved to be placed on the facilities area
and on Barren Ridge, but not on the East Pit.

An abatement plan was submitted on December 20, 1984.
A final civil penalty of \$1,350.00 was assessed. NOV terminated
12/31/84.

RECEIVED

JUN 12 1985

DIVISION OF OIL
GAS & MINING

CHAPTER II

NOTICES OF VIOLATION

COLORADO COAL MINE NO. 1
Huerfano County, Colorado

Regulatory Authority:
State of Colorado
Department of Natural Resources
Mined Land Reclamation Division
Denver, Colorado

NOTICE OF VIOLATION C-82-30 (8/31/82)

Act (Section(s) 34-33-109 (1)
Regulation Section(s) 2.06.10, 4.28.2

Conducting operations of a coal loadout without a permit.

The NOV was vacated October 31, 1982

NOTICE OF VIOLATION C83-20 (10/7/83)

Act Section(s) 34-33-123-(2)
Regulation Section(s) 5.02.2(2)(a), 3.02.4(2)(6)

Failure to meet the conditions of permit approval. Specifically, failure to post sufficient bond by August 25, 1983 as required by Proposed Decision and Findings of Compliance issued on June 16, 1983.

Perma did not meet the deadlines for bonding and was assessed a \$27,000 penalty.

The violation was terminated following a hearing with the Mined Land Reclamation Board in March 1984.

NOTICE OF VIOLATION C-84-011 (2/13/84)

Act Section(s) 120(2)(j)(II)
Regulation Section(s) 4.05.5 (1)

Failure to maintain sediment control measures by failure to clean culvert of sediment in the collector ditch.

Culvert was cleaned of sediment.

Assessment conference was held on July 6, 1984 and an \$800.00 penalty was assessed. NOV terminated 7/13/84.

RECEIVED

JUN 12 1985

DIVISION OF OIL
GAS & MINING

CHAPTER II

NOTICE OF VIOLATION C-84-012 (2/13/84)

Act Section(s) 120(2)(e)
Regulation Section(s) 4.07.3(2)(a)(i)

Failure to stabilize and protect stockpile soil materials with an effective vegetative cover.

Operator indicated that the areas had been drilled and seeded in the falls of 1982 and 1983. A fence was installed to protect the revegetation.

An assessment conference was held on July 6, 1984 and a civil penalty was assessed in the amount of \$1,350.00.
NOV terminated 7/6/84.

NOTICE OF VIOLATION C-84-034 (3/8/84)

Act Section(s) 34-33-120(2)(j)
Regulation Section(s) Rule 4.05.3(3)

Failure to stabilize and maintain diversion ditches.

The diversion ditches were repaired and or reconstructed.

An assessment conference was held on July 6, 1984 and a civil penalty of \$464.00 was assessed.

NOV terminated 6/12/84

NOTICE OF VIOLATION C-84-035 (3/8/84)

Act Section(s) 34-33-123(2)
Regulation Section(s) 4.05.6(8)(g)

Failure to follow the approved mine plan. Specifically, constructing a diversion ditch which was not approved by the Division.

A technical revision was submitted in order to bring the ditch into compliance. An assessment conference was held on July 6, 1984 and a civil penalty of \$400 was assessed.

NOV terminated 6/12/84.

NOTICE OF VIOLATION C-84-036 (3/8/84)

Act Section(s) 34-33-120-(2)(j)(II)(A)
Regulation Section(s) 4.05.6(8)(g)

Failure to stabilize the pond embankment with respect to erosion

RECEIVED

JUN 12 1985

CHAPTER II

DIVISION OF OIL
GAS & MINING

by establishing a vegetative cover.

The problem was mitigated by previous seeding and new fencing. With further information the Division agreed that the material in question was not a pond embankment, but rather an overburden stockpile, and as a result it was not subject to the same requirements for stabilization and vegetative cover.

NOV was vacated on July 9, 1984.

NOTICE OF VIOLATION C-84-037 (3/8/84)

Act Section(s) 34-33-120(2)(j)(II)(B)
Regulation Section(s) 4.05.6(t)

Failure to have sedimentation pond certified by a qualified registered professional engineer following construction and submit such certification to the Division.

Certification was submitted to the division.

NOV was vacated on July 12, 1984.

NOTICE OF VIOLATION C-84-038 (3/8/84)

Act Section(s) 34-33-122(2)
Regulation Section(s) 4.05.13(1)

Failure to monitor groundwater.

A monitoring plan was submitted to the Division by Mr. Rob Traylor of Piteau and Associates. Monitoring has been ongoing since.

An assessment conference was held on July 6, 1984 and a civil penalty of \$500 was assessed.
NOV terminated 6/12/84

NOTICE OF VIOLATION C-84-069 (4/23/84)

Act Section(s) 34-33-120(2)(j)
Regulation Sections(s) 4.04(3), 4.05(1)

Failure to maintain drainage control structures. Specifically, failure to clean the diversion ditch of sediment by the specified compliance deadline.

Ditch was cleaned and reconstructed. Surveys were completed in order to assure proper grades.

JUN 12 1985

CHAPTER II

DIVISION OF OIL
GAS & MINING

An assessment conference was held on July 6, 1984 and an amount of \$900 was assessed. See Cessation Order C-84-129.

CESSATION ORDER C-84-125 (6/25/84)

Act Section(s) 34-33-123(3)
Regulation Section(s) 5.03.2(3)

Failure to properly abate Notice of Violation No. C-84-012.

A letter of explanation was issued to the Division on July 10, 1984.

Order terminated 7/5/84.

CESSATION ORDER C-84-126 (6/25/84)

Act Section(s) 34-33-123(3)
Regulation Section(s) 5.03.2(3)

Failure to abate Notice of Violation No. C-84-034.

A letter of explanation was issued to the Division on July 10, 1984.

Order terminated 7/5/84.

CESSATION ORDER C-84-127 (6/25/84)

Act Section(s) 34-33-123(3)
Regulation Section(s) 5.03.2(3)

Failure to properly abate Notice of Violation C-84-035.

A letter of explanation was sent to the Division on July 10, 1984.

Order was terminated 7/5/84.

CESSATION ORDER C-84-128 (6/25/84)

Act Section(s) 34-33-123(3)
Regulation Section(s) 5.03.2(3)

Failure to properly abate Notice of Violation C-84-036.

A letter of explanation was sent to the Division concerning NOV C-84-036.

The order was vacated along with NOV C-84-036 on 7/9/84.

RECEIVED

JUN 12 1985

DIVISION OF OIL
GAS & MINING

CHAPTER II

CESSATION ORDER C-84-129 (6/25/84)

Act Section(s) 34-33-123(3)
Regulation Section(s) 5.03.2(3)

Failure to properly abate NOV C-84-069

Ditch problem was mitigated with reference to NOV C084-069

An assessment conference was held on September 10, 1984 and an amount of \$850 was assessed.

Order was terminated on 7/5/84.

NOTICE OF VIOLATION C-84-155 (8/15/84)

Act Section(s) 34-33-111(1)(e), 120(2)(e), 120(2)(j)(II) (A)

Regulation Section(s) 2.05.3(6), 4.06, 4.05.2(1)

An assessment conference was held on Monday, September 10, 1984 and a final civil penalty of \$850.00 was assessed. NOV terminated 12/18/84..

NOTICE OF VIOLATION C-84-161 (9/26/84)

Act Section(s) 34-33-120(2)(j)
Regulation Section(s) Rule 4.05.3(3)

Failure to maintain diversion culvert.

Culvert was removed and cleaned.

An assessment conference was held on December 11, 1984 and no civil penalty was assessed, since the county road ditch contributed most of the sediment which clogged the culvert.

A new culvert is to be installed by the county to prevent the same situation in the future.

NOV terminated 11/26/84.

NOTICE OF VIOLATION C-85-017 (3/6/85)

Act Section(s) 34-33-122(2).
Regulation Section(s) Rule 4.05.12(2)(c).

Failure to maintain surface water monitoring station.

Vandalized station was replaced immediately.

RECEIVED

JUN 12 1985

DIVISION OF OIL
GAS & MINING

CHAPTER II

Informal conference held May 20, 1985.
No penalty assessed.
Terminated March 15, 1985.

2.4 Right of Entry and Operation Information

(a) A description of the documents upon which the applicant, Kaiser Coal Corporation, basis its legal right to enter and begin underground coal mining activities in the permit are as follows:

(1) Deed dated February 28, 1951 through which Book Cliffs Corporation, a Nevada corporation, conveyed and warranted to Kaiser Steel Corporation, a Nevada corporation, title to tracts of land in Carbon County, Utah. It was recorded by the County Recorder of Carbon County, Utah in Book 15D, pages 80 to 93 inclusive. Fee land included in the deed and within the permit area is described as follows:

T14S, R14E, SLB&M, Utah
Sect. 6: N1/2, S1/2SW1/4, S1/2SE1/4, NW1/4SE1/4
Sect. 7: NW1/4, SW1/4NE1/4, E1/2SW1/4, S1/2SE1/4,
NW1/4SE1/4
Sect. 17: NE1/4, SE1/4NW1/4, SW1/4, S1/2SE1/4
Sect. 18: E1/2, S1/2SW1/4, NE1/4SW1/4, NW1/4SW1/4
SW1/4NW1/4 less the following described area:

Beginning at the NW corner of SW1/4NW1/4 of Section 18,
T14S, R14E:

thence S 45° 05' E, 1,577.42 ft;
thence S 39° 25' W, 1,759.22 ft;
thence N 2,472.87 ft to point of beginning.

Sect. 19 and 20: All
Sect. 21: W1/2
Sect 28 and 29: All
Sect. 30: NE1/4, NE1/4NW1/4, NW1/4SE1/4
Sect. 31: S1/2NE1/4, NE1/4NE1/4
Sect. 32 and 33: All
Sect. 34: W1/2
T15S, R14E, SLB&M, Utah
Sect. 3: W1/2
Sect. 4: All
Sect. 5: NE1/4, N1/2SE1/4, SE1/4SE1/4
Sect. 8: NE1/4NE1/4
Sect. 9: All
Sect. 10: W1/2, SE1/4

RECEIVED

JUN 12 1985

DIVISION OF OIL
GAS & MINING

CHAPTER II

Sect. 15: W1/2, N1/2NE1/4
Sect. 16: E1/2, NW1/4, E1/2SW1/4
Sect. 17: E1/2NE1/4

- (2) Federal Coal Leases numbers Salt Lake 062966-063383-Utah 010140, Utah 32083 and SL-068754. Areas within both the leases and the permit area are described as follows:

T14S, R13E, SLB&M, Utah

Sect. 1: SE1/4

Sect. 12: NE1/4, N1/2, NW1/4, SE1/4, NW1/4,
SE1/4SE1/4, N1/2SE1/4, SW1/4NW1/4,
NE1/4SW1/4, SW1/4SE1/4 less the
following described area:

Beginning at a point which bears South 1320 ft from the NW corner of Section 12:

thence South, 1320 ft;
thence S 89°55'30" E, 1327.01 ft;
thence South, 1320 ft;
thence S89°53'15"E, 1327.22 ft;
thence South, 1320 ft;
thence S89°51'E, 1327.43 ft;
thence N45°05'07"W, 5623.40 ft to the place of beginning.
Sect. 13: Portions of: NE1/4NE1/4, E1/2SE1/4,
SW1/4SE1/4, SE1/4SW1/4, NE1/4SW1/4,
NW1/4SW1/4, SW1/4, NW1/4 which are described
as follows:

Beginning at a point which bears 2850 ft S89°51'E from the SW corner of Section 13:

thence N42°30'W, 4215 ft;
thence North 610 ft;
thence S42°30'E, 3730 ft;
thence N47°30'E, 100 ft;
thence S42°30'E, 1450 ft;
thence N89°50'W, 710 ft to the point of beginning.

Beginning at the SE corner of Section 13:

thence North, 1487.13 ft;
thence S39°25'W, 1920.39 ft;
thence S89°50'E, 1219.36 ft to the point of beginning.

Blue corrections

RECEIVED

JUN 12 1985

DIVISION OF OIL
GAS & MINING

CHAPTER II

Less the following described area:

Beginning at a point which bears South 1320 ft from the NE corner of Section 13:

thence N89°51'W, 1327.76 ft;
thence North 1320 ft;
thence S 45°05'33"E, 1874 ft to the point of beginning.

Sect. 24: S1/2SE1/4, Portions of: N1/2NE1/4, SE1/4NE1/4, N1/2SE1/4 and NE1/4SW1/4 which are described as follows:

Beginning at the NE corner of Section 24:

thence S0°07'W, 1814.87 ft;
thence S57°11'W, 430 ft;
thence N38°23'W, 1165 ft;
thence N42°26'W, 860.51 ft;
thence N39°05'E, 709.31 ft;
thence S89°50'E, 1219.36 ft;
thence South, 45.54 ft to the place of beginning.

Typo

Beginning at a point which bears N 0°02'E, 1,294.59 ft from the SE corner of said Section 24:

thence N0°02'E, 1294.59 ft;
thence N0°07'E, 830.41 ft;
thence S57°11'W, 3905.258 ft;
thence S89°E, 3280.00 ft to the place of beginning and containing 80 acres more or less.

Beginning at a point which bears N89°50'W 1720 ft from the NE corner of Section 24:

thence N89°50'W, 750 ft;
thence S42°30'E, 2900 ft;
thence N57°11'E, 100 ft;
thence N38°23'W, 1165 ft;
thence N42°26'W, 860.51 ft;
thence N39°25'E, 350 ft;
thence N42°30'W, 400 ft to the point of beginning.

Sect. 14: Portions of: NW1/4 which is described as follows:

Beginning at a point which bears 1915 ft N89°41'W from the NE corner of Section 14:

thence S42°30'E, 2090ft;

CHAPTER II

Sect. 11: Portions SW1/4SE1/4 which is described as follows:

Beginning at a point which bears 1915 ft N89°41'W from the SE corner of Section 11:
thence N40°30'W, 1150 ft;
thence S48°00'W, 380 ft;
thence S42°30'E, 780 ft;
thence S89°41'E, 520 ft to the point of beginning.

Sect. 25: NE1/2NE1/4

T14S, R14E, SLB&M, Utah:

Sect. 6: NW1/2SW1/4
Sect. 7: W1/2SW1/4
Sect. 8: SW1/4, SW1/4SE1/4
Sect. 17: W1/2NW1/4, NE1/4NW1/4, N1/2SE1/4
Sect. 18: E1/2NW1/4, NW1/4NW1/4
Sect. 30: NW1/4NW1/4, SE1/4NW1/4, NE1/4SW1/4
S1/2SE1/4, NE1/4SE1/4
Sect. 31: NW1/4NE1/4

(3) Coal lease, dated August 18, 1975, granted by Carbon County of the State of Utah, the lessor, to Kaiser Steel Corporation, the lessee. The lease embraces the following described lands in Carbon County, Utah all of which are within the permit area:

Salt Lake Meridian, Utah

T14S, R14E

Sect. 21: E1/2
Sect. 27: SW1/4, SW1/4NW1/4
Sect. 34: E1/2.

T15S, R14E

Sect. 3: E1/2
Sect. 10: NE1/4.

(4) The specific land and surface rights for the Sunnyside permit area are included in the deed described in paragraph (1) of this section. Those lands are identified and described as follows:

T14S, R14E, SLB&M, Utah

Sect. 31: SE1/4

T15, S, R14E, SLB&M, Utah

Sect. 5: W1/2, SW1/4SE1/4

Sect. 6: S1/2SE1/4, SE1/4SW1/4, portions of NE1/4 and NE1/4NW1/4 South of the D&RGW railroad right-of-way.

Revised 5/1/89

Supplement
P. 41

10 **AMENDMENT TO**
APPROVED Mining & Reclamation Plan
Approved, Division of Oil, Gas & Mining

by RUS date 5/13/89

RECEIVED

JUN 12 1985

DIVISION OF OIL
GAS & MINING

CHAPTER II

thence South, 600 ft;
thence N42°30'W, 1400 ft;
thence S48°00'W, 1525 ft;
thence South, 175 ft;
thence N89°41'W, 315 ft;
thence North, 300 ft;
thence N48°00'E, 1775 ft;
thence N42°30'W, 1125 ft;
thence S89°41'E, 500 ft to the point of beginning.

Sect. 11: Portions SW1/4SE1/4 which is described as follows:

Beginning at a point which bears 1915 ft N89°41'W from the SE corner of Section 11:

thence N40°30'W, 1150 ft;
thence S48°00'W, 380 ft;
thence S42°30'E, 780 ft;
thence S89°41'E, 520 ft to the point of beginning.

Sect. 25: NE1/2NE1/4

T14S, R14E, SLB&M, Utah:

Sect. 6: NW1/2SW1/4
Sect. 7: W1/2SW1/4
Sect. 8: SW1/4, SW1/4SE1/4
Sect. 17: W1/2NW1/4, NE1/4NW1/4, N1/2SE1/4
Sect. 18: E1/2NW1/4, NW1/4NW1/4
Sect. 30: NW1/4NW1/4, SE1/4NW1/4, NE1/4SW1/4, S1/2SE1/4, NE1/4SE1/4
Sect. 31: NW1/4NE1/4

(3) Coal lease, dated August 18, 1975, granted by Carbon County of the State of Utah, the lessor, to Kaiser Steel Corporation, the lessee. The lease embraces the following described lands in Carbon County, Utah all of which are within the permit area:

Salt Lake Meridian, Utah
T14S, R14E
Sect. 21: SE1/4
Sect. 27: SW1/4, SW1/4NW1/4
Sect. 34: E1/2.

T15S, R14E
Sect. 3: E1/2
Sect. 10: NE1/4.

CHAPTER II

(4) The specific land and surface rights for the Sunnyside permit area are included in the deed described in paragraph (1) of this section. Those lands are identified and described as follows:

T14S, R14E, SLB&M, Utah
Sect. 31: SE1/4 *not in permit area*
T15,S, R14E, SLB&M, Utah
Sect. 5: W1/2, SW1/4SE1/4
Sect. 6: S1/2SE1/4, SE1/4SW1/4,
portions of N1/2SE1/4 and NE1/4NW1/4 South of the D&RGW
railroad right-of-way.
Sect. 7: N1/2NE1/4, N3/4NW1/4
Sect. 8: N1/2NW1/4, NW1/4NE1/4

The foregoing documents have been duly assigned and transferred to applicant, Kaiser Coal Corporation, and appropriate approvals are being processed and awaited.

(b) No information pursuant to UMC 782.15(b) needs to be provided since the surface operations associated with underground coal mining activities at the Sunnyside Mines does not involve the surface mining of coal.

2.5 Relationship to Areas Designated Unsuuitable for Mining

(a) The proposed permit area is not within an area designated unsuitable for surface effects of underground coal mining activities.

(b) Kaiser Coal Corporation made substantial legal and financial commitments before January 4, 1977 and has engaged in underground coal mining in the proposed permit area for more than thirty years.

(c) There are no occupied dwellings within 300 feet of surface operations or facilities.

2.6 Permit Term

Underground coal mining in the permit area began in the late 1890's and has continued to some degree yearly since that time. The termination date is unknown at this time but is estimated to be twenty-five (25) more years. It is conceivable that production will continue beyond that time if the property can remain economically competitive. This estimate is based on a yearly production

JUN 12 1985

CHAPTER II

DIVISION OF OIL
GAS & MINING

of approximately one million tons. Plate II-3 delineates the proposed mining activity for five years. Like all mining plans, this proposal will undoubtedly change numerous times as the property is influenced by physical and economic conditions.

The total permit area encompasses 14,475 acres. Of these, 3020 acres are anticipated to be surface lands over the underground workings expected to be mined during the twenty-five year period. The proposed mine workings will be under 1000 feet to 2000 feet of overburden. Additional coal leases required for the proposed mine layout are noted on Map II-3. These leases will be obtained from Federal, County and private lease holders. Coal in these, as yet unacquired leases, will be lost if not recovered through existing and future access in the Sunnyside Mines. Surface topography in these areas makes it impossible for another operator to gain access to and mine these areas except through existing workings. Additional coal leases, other than those shown on the map, could be acquired in the future. In such an event, the mine plan would, in all probability, change to take advantage of better conditions, more economical mining costs, easier access and ventilation requirements or any of a number of benefits that might result from such acquisitions.

The information presented is for the life of the mine despite the permit term.

2.7 Personal Injury and Property Damage Insurance

A copy of the certificate of liability insurance is shown in Figure II-1.

2.8 Proposed Performance Bond

The proposed performance bond, as forecasted in Section 3.5.7, is \$1,821,512.00 for the life of the mine.

2.9 Other licenses and Permits

A list of other licenses and permits under applicable State and Federal land-use, air and water quality, water rights and health and safety laws and regulations needed by Kaiser Coal Corporation to conduct the underground coal mining activities are as follows:

RECEIVED

JUN 12 1985

DIVISION OF OIL
GAS & MINING

CHAPTER II

(1) NPDES Discharge Permit for Kaiser Coal Corporation, Sunnyside Mines, UT-0022942.

Issued on September 2, 1977 by:

Enforcement Division
U.S. Environmental Protection Agency
Region VIII
1860 Lincoln Street
Denver, CO 80203

(2) MESA Identification Number 1211-UT-9-0017 for Sunnyside Preparation Plant Tailings Ponds, Sunnyside Mines, Kaiser Coal Corporation.

Issued on March 15, 1976 by:

U.S. Department of the Interior
Mining Enforcement and Safety Administration
Coal Mine Health and Safety
P.O. Box 15037
Denver, CO 80215

(3) MSHA Identification Number 1211-UT-0031 for Grassy Trail Reservoir, Sunnyside Mines, Kaiser Coal Corporation.

Issued on August 29, 1978 by:

U.S. Department of Labor
Mine Safety and Health Administration
P.O. Box 25367, DFC
Denver, CO 80225

(4) Application to Appropriate Water for Miscellaneous Purposes, State of Utah. Application Number 28812 (91-231) by Sunnyside Mines, Kaiser Coal Corporation.

Approved on June 14, 1961 by:

State Engineer
Water Rights Division
State of Utah
231 East 400 South
Salt Lake City, UT 84102

(5) Notice of Intent to Mine Coal. Industrial Commission of Utah: Coal was being mined at Sunnyside prior to the establishment of the Industrial Commission. Therefore, a Notice of Intent Application was not filed.

RECEIVED

JUN 12 1985

CHAPTER II

DIVISION OF OIL
GAS & MINING

(6) Surface Mining Control and Reclamation Permit - Utah Division of Oil, Gas and Mining: Permit number ACT/ 007/007 assigned to Sunnyside, May 11, 1978, in a letter signed by Ronald W. Daniels, Coordinator of Mined Land Development.

(7) Right of Way - USA Salt Lake 064436
expires January 1994.

Right of Way - USA Utah 029686
expires January 1994.

Right of Way - USA Salt Lake 065523
expires January 1998.

Right of Way - USA Utah 016755
expires January 2007.

Right of Way - USA Salt Lake 071198
expires January 2014.

Right of Way - USA Utah 20994
expires January 2014.

Right of Way - USA Salt Lake 069099
expires January 2014.

Right of Way - USA Utah 45898
expires annually in July.

(8) Mine Safety and Health Administration

Mine Permit ID Numbers:

No. 1 Mine	42-00093
No. 2 Mine	42-00094
No. 3 Mine	42-00092

Issued verbally by Mine Enforcement and Safety Administration, Department of Interior in 1970 (now Mine Safety and Health Administration, Department of Labor).

Sunnyside Surface Operations:
ID Number 42-01813

Issued verbally by Mine Safety and Health Administration, Department of Labor, in 1983.

RECEIVED

JUN 12 1985

DIVISION OF OIL
GAS & MINING

CHAPTER II

(9) Explosives Permit #9CA00133C1 90026.

ID Number 94-0594733

Issued by Bureau of Alcohol, Tobacco and Firearms, Department of the Treasury. Expires March 31 of each year.

2.10 Location of Public Office for Filing Application

A copy of the application will be simultaneously and concurrently filed for public inspection with the:

Recorder
Carbon County Court House
Price, Utah 84501

2.11 Newspaper advertisement

Figure II-2 is a copy of the newspaper advertisement.

(COAL)

INSURANCE BROKER:
Reed Stenhouse Inc. of California
Three Embarcadero Center, Suite 2400
San Francisco, CA 94111
(415) 986-1122

CERTIFICATE OF LIABILITY INSURANCE

Issued to: State of Utah
Department of Natural Resources
Division of Oil, Gas, and Mining

THIS IS TO CERTIFY, That the The National Union Fire Insurance Company
(Name of Insurance Company)
of 70 Pine Street, New York, New York 10270
(Home Office Address of Company)
has issued to Kaiser Steel Corporation, et al of
(Name of Permit Applicant)
P.O. Box 5050, Fontana, CA 92335 Policy No. GLA 9456838 RA
(Address of Permit Applicant)

effective from April 1 19, 83 and continuing until cancelled,
nonrenewed, or changed as provided herein, which policy provides personal
injury and property damage insurance covering the obligations imposed upon
such permit applicant with regard to Permit No. ACT/007/007 according
to provisions of the coal mining and reclamation program of Utah, (Utah Code
Annotated 40-10-1 et seq.), specifically Section UMC/SMC 806.14.

Underwriting Agent: Dolores Gillard-Williams, Special Accts. Underwriting

Company Name: National Union Fire Insurance Company Phone: (415) 445-2700

Address: Three Embarcadero Center, San Francisco, CA 94111

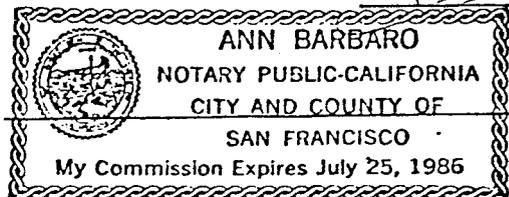
The above-named insurance company agrees to notify the Division in writing
of any substantive change in the above coverage, including cancellation,
failure to renew, or other material change. No change shall be effective
until at least thirty (30) days after such notice is received by the Division.

The undersigned affirms that the above information is true and complete to
the best of his or her knowledge and belief, and that he or she is an
authorized representative of the above-named insurance company.

Dolores Gillard-Williams, Special Accounts Manager August 15, 1983
(Date, Signature, and Title of Authorized Representative of Insurance Company)

Signed and sworn to before me by Dolores Gillard-Williams this the 15th
day of August, 1983.

Ann Barbato
(Notary)



My Commission Expires:
Figure II-1
Verification of
Insurance

AFFIDAVIT OF PUBLICATION

STATE OF UTAH }
County of Carbon, } ss.

I, Dan Stockburger, on oath, say that I am
the General Manager of 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
3rd day of July, 19 85, and that the
last publication of such notice was in the issue of such newspaper
dated the 24th day of July, 19 85

Dan Stockburger
Subscribed and sworn to before me this

24th day of July, 19 85

Holly J. Baker
Notary Public.

My Commission expires October 22, 1986, 19 86

Publication fee, \$ 420.00

Pursuant to Utah Mining Code Part UMC 786, notice is hereby given that Kaiser Coal Corporation, 102 South Tejon, Suite 800, Colorado Springs, Colorado 80903, has submitted a complete permit application to the Utah Division of Oil, Gas and Mining and to the Office of Surface Mining, Reclamation and Enforcement, U.S. Department of the Interior.

The Sunnyside Mines Permit Area is located near the town of Sunnyside, approximately twenty-five miles east of Price, Utah via U.S. Highway 6 and State Highway 123. The following are the legal descriptions of the Permit Area:

1. Fee Land
T14S, R14E, SLB&M, Utah
Sect. 6: N $\frac{1}{2}$, S $\frac{1}{2}$ SW $\frac{1}{4}$, S $\frac{1}{2}$ SE $\frac{1}{4}$, NW $\frac{1}{4}$ SE $\frac{1}{4}$
Sect. 7: NW $\frac{1}{4}$, SW $\frac{1}{4}$ NE $\frac{1}{4}$, E $\frac{1}{2}$ SW $\frac{1}{4}$, S $\frac{1}{2}$ SE $\frac{1}{4}$, NW $\frac{1}{4}$ SE $\frac{1}{4}$
Sect. 17: NE $\frac{1}{4}$, SE $\frac{1}{4}$ NW $\frac{1}{4}$, SW $\frac{1}{4}$, S $\frac{1}{2}$ SE $\frac{1}{4}$
Sect. 18: E $\frac{1}{2}$, S $\frac{1}{2}$ SW $\frac{1}{4}$, NE $\frac{1}{4}$ SW $\frac{1}{4}$, NW $\frac{1}{4}$ SW $\frac{1}{4}$, SW $\frac{1}{4}$ NW $\frac{1}{4}$ less the following described area: Beginning at the NW corner of SW $\frac{1}{4}$ NW $\frac{1}{4}$ of Section 18, T14S, R14E: thence S45°05'E, 1,577.42 ft.; thence S39°25'W, 1,759.22 ft.; thence N 2,472.87 ft. to point of beginning.
Sect. 19 and 20: All
Sect. 21: W $\frac{1}{2}$
Sect. 28 and 29: All
Sect. 30: NE $\frac{1}{4}$, NE $\frac{1}{4}$ NW $\frac{1}{4}$, NW $\frac{1}{4}$ SE $\frac{1}{4}$
Sect. 31: S $\frac{1}{2}$ NE $\frac{1}{4}$, NE $\frac{1}{4}$ NE $\frac{1}{4}$
Sect. 32 and 33: All
Sect. 34: W $\frac{1}{2}$
T15S, R14E, SLB&M, Utah
Sect. 3: W $\frac{1}{2}$
Sect. 4: All
Sect. 5: NE $\frac{1}{4}$, N $\frac{1}{2}$ SE $\frac{1}{4}$, SE $\frac{1}{4}$ SE $\frac{1}{4}$
Sect. 8: NE $\frac{1}{4}$ NE $\frac{1}{4}$
Sect. 9: All
Sect. 10: W $\frac{1}{2}$, SE $\frac{1}{4}$
Sect. 15: W $\frac{1}{2}$, N $\frac{1}{2}$ NE $\frac{1}{4}$
Sect. 16: E $\frac{1}{2}$, NW $\frac{1}{4}$, E $\frac{1}{2}$ SW $\frac{1}{4}$
Sect. 17: E $\frac{1}{2}$ NE $\frac{1}{4}$

2. Federal Leases
Federal Coal Leases numbers Salt Lake 062966-063383-Utah 010140, Utah 32083 and SL-068754. Areas within both the leases and the permit area are described as follows:

T14S, R13E, SLB&M, Utah
Sect. 1: SE $\frac{1}{4}$
Sect. 12: NE $\frac{1}{4}$, N $\frac{1}{2}$ NW $\frac{1}{4}$, SE $\frac{1}{4}$, NW $\frac{1}{4}$, SE $\frac{1}{4}$ SE $\frac{1}{4}$, N $\frac{1}{2}$ SE $\frac{1}{4}$, SW $\frac{1}{4}$ NW $\frac{1}{4}$, NE $\frac{1}{4}$ SW $\frac{1}{4}$, SW $\frac{1}{4}$ SE $\frac{1}{4}$ less the following described area: Beginning at a point which bears South 1,320 ft. from the NW corner of Section 12: thence South, 1,320 ft.; thence S89°55'30" E, 1,327.01 ft.; thence South, 1,320 ft.; thence S89°53'15" E, 1,327.22 ft.; thence South, 1,320 ft.; thence S89°51'E, 1,327.43 ft.; thence N45°05'07" W, 5,623.40 ft. to the place of beginning.
Sect. 13: Portions of: NE $\frac{1}{4}$ NE $\frac{1}{4}$, E $\frac{1}{2}$ SE $\frac{1}{4}$, SW $\frac{1}{4}$ SE $\frac{1}{4}$, SE $\frac{1}{4}$ SW $\frac{1}{4}$, NE $\frac{1}{4}$ SW $\frac{1}{4}$, NW $\frac{1}{4}$ SW $\frac{1}{4}$, SW $\frac{1}{4}$, NW $\frac{1}{4}$ which are described as follows: Beginning at a point which bears 2,850 ft. S89°51'E from the SW corner of Section 13: thence N42°30'W, 4,215 ft.; thence North 610 ft.; thence S42°30'E, 3,730 ft.; thence N47°30' E, 100 ft.; thence S42°30'E, 1,450 ft.; thence N89°50'W, 710 ft. to the point of beginning. Beginning at the SE corner of Section 13: thence North, 1,487.13 ft.; thence S39°25'W, 1,920.39 ft.; thence S89°50'E, 1,219.36 ft. to the point of beginning. Less the following described area: Beginning at a point which bears South 1,320 ft. from the NE corner of Section 13: thence N89°51'W, 1,327.76 ft.; thence North 1,320 ft.; thence S45°05'33"E, 1,874 ft. to the point of beginning.
Sect. 24: S $\frac{1}{2}$ SE $\frac{1}{4}$, Portions of: N $\frac{1}{2}$ NE $\frac{1}{4}$, SE $\frac{1}{4}$ NE $\frac{1}{4}$, N $\frac{1}{2}$ SE $\frac{1}{4}$ and NE $\frac{1}{4}$ SW $\frac{1}{4}$ which are described as follows: Beginning at the NE corner of Section 24: thence S0°07'W, 1,814.87 ft.; thence S57°11'W, 430 ft.; thence N38°23'W, 1,165 ft.; thence 42°26'W, 860.51 ft.; thence

Beginning at a point which bears N 0°0'E, 1,294.59 ft. from the SE corner of said Section 24: thence N0°02'E, 1,294.59 ft.; thence N0°07'E, 830.41 ft.; thence S57°11'W, 3,905.58 ft.; thence S89°E, 3,280 ft. to the place of beginning and containing 80 acres more or less.

Beginning at a point which bears N89°50'W, 1,720 ft. from the NE corner of Section 24: thence N89°50'W, 750 ft.; thence S42°30'E, 2,900 ft.; thence N57°11'E, 100 ft.; thence N38°23'W, 1,165 ft.; thence N42°26'W, 860.51 ft.; thence N39°25'E, 350 ft.; thence N42°30'W, 400 ft. to the point of beginning.

Sect. 14: Portions of: NW $\frac{1}{4}$ which is described as follows: Beginning at a point which bears 1,915 ft. N89°41'W from the NE corner of Section 14: thence S42°30'E, 2,090 ft.; thence South, 600 ft.; thence N42°30'W, 1,400 ft.; thence S48°00'W, 1,525 ft.; thence South, 175 ft.; thence N89°41'W, 315 ft.; thence North, 300 ft.; thence N48°00'E, 1,775 ft.; thence N42°30'W, 1,125 ft.; thence S89°41'E, 500 ft. to the point of beginning.

Sect. 11: Portions: SW $\frac{1}{4}$ SE $\frac{1}{4}$ which is described as follows: Beginning at a point which bears 1,915 ft. N89°41'W from the SE corner of Section 11: thence N40°30'W, 1,150 ft.; thence S48°00'W, 380 ft.; thence S42°30'E, 780 ft.; thence S89°41'E, 520 ft. to the point of beginning.

Sect. 25: NE $\frac{1}{2}$ NE $\frac{1}{4}$
T14S, R14E, SLB&M, Utah:

Sect. 6: NW $\frac{1}{2}$ SW $\frac{1}{4}$
Sect. 7: W $\frac{1}{2}$ SW $\frac{1}{4}$
Sect. 8: SW $\frac{1}{4}$, SW $\frac{1}{4}$ SE $\frac{1}{4}$
Sect. 17: W $\frac{1}{2}$ NW $\frac{1}{4}$, NE $\frac{1}{4}$ NW $\frac{1}{4}$, N $\frac{1}{2}$ SE $\frac{1}{4}$
Sect. 18: E $\frac{1}{2}$ NW $\frac{1}{4}$, NW $\frac{1}{4}$ NW $\frac{1}{4}$
Sect. 30: NW $\frac{1}{4}$ NW $\frac{1}{4}$, SE $\frac{1}{4}$ NW $\frac{1}{4}$, NE $\frac{1}{4}$ SW $\frac{1}{4}$, S $\frac{1}{2}$ SE $\frac{1}{4}$, NE $\frac{1}{4}$ SE $\frac{1}{4}$
Sect. 31: NW $\frac{1}{4}$ NE $\frac{1}{4}$

3. Carbon County Leases

Coal lease, dated August 18, 1975, granted by Carbon County of the State of Utah, the lessor, to Kaiser Coal Corporation, the lessee. The lease embraces the following described lands in Carbon County, Utah all of which are within the permit area:

T14S, R14E, SLB&M, Utah
Sect. 21: SE $\frac{1}{4}$
Sect. 27: SW $\frac{1}{4}$, SW $\frac{1}{4}$ NW $\frac{1}{4}$
Sect. 34: E $\frac{1}{2}$
T15S, R14E SLB&M, Utah
Sect. 3: E $\frac{1}{2}$
Sect. 10: NE $\frac{1}{4}$

4. Surface Rights

The specific land and surface rights for the Sunnyside permit area are included in the deed described in paragraph (1). Those lands are identified and described as follows:

T14S, R14E, SLB&M, Utah
Sect. 31: SE $\frac{1}{4}$
T15S, R14E, SLB&M, Utah
Sect. 5: W $\frac{1}{2}$, SW $\frac{1}{4}$ SE $\frac{1}{4}$
Sect. 6: S $\frac{1}{2}$ SE $\frac{1}{4}$, SE $\frac{1}{4}$ SW $\frac{1}{4}$, portions of N $\frac{1}{2}$ SE $\frac{1}{4}$ and NE $\frac{1}{4}$ NW $\frac{1}{4}$ South of the D&RGW railroad right-of-way.
Sect. 7: N $\frac{1}{2}$ NE $\frac{1}{4}$, N $\frac{1}{4}$ NW $\frac{1}{4}$
Sect. 8: N $\frac{1}{2}$ NW $\frac{1}{4}$, NW $\frac{1}{4}$ NE $\frac{1}{4}$

The described areas are contained on the following U.S. Geological Survey maps: Sunnyside, Patmos Head, Bruin Point and Mt. Bartles, all in Utah.

A copy of the plan is available for public inspection at the Office of the County Clerk of Carbon County, Carbon County Court House, Price, Utah 84501. Written comments, objections or requests for informal conferences may be made to the Utah Division of Oil, Gas and Mining, 355 W. North Temple, 3 Triad Center, Suite 350, Salt Lake City, Utah 84180-1203 and to the Office of Surface Mining, Reclamation and Enforcement, Brooks Towers, 1020 15th Street, Denver, Colorado 80202.

Published in the Sun Advocate July 3, 10, 17

Figure II-3

LEASE

This Lease and Agreement becoming effective as of the 22nd day of March, 1989, by and between Carbon County, a body politic of the State of Utah, acting by and through its Board of Commissioners, made and adopted on June 10, 1981, hereinafter called Lessor, and Sunnyside Reclamation and Salvage, Inc., a Colorado Corporation, hereinafter called Lessee;

WITNESSETH:

1. Lessor, for and in consideration of the royalties, covenants, and agreements hereinafter to be paid, kept, and performed by Lessee, has demised, leased, and let, and by these presents does demise, lease, and let unto Lessee all coal in the following described real property ("Premises"):

Township 14 South, Range 14 East, SLBM

• Section 21: NE1/4

2. The terms of this Lease shall be five (5) years from the effective date hereof ("Primary Term") and as may be terminated or extended as provided herein.

3. Lessee shall pay to Lessor a production royalty equal to four percent (4%) of the value on every ton of 2,000 pounds of coal mined, removed, and sold from the Premises during the term of this Lease. Lessee shall make payment for the same on the 18th day of each month for the preceding month's production. In no case shall the production royalty payable be less than One and No/100 Dollars (\$1.00) per ton. It is understood and agreed that if said royalties do not amount to Ten Dollars (\$10.00) per month, in any calendar month, Lessee shall nevertheless pay said amount of Ten Dollars (\$10.00) per month as a minimum royalty on the 18th day of each month during the term of this Lease; said payments shall be made at the office of the Treasurer of Carbon County at Price, Utah. As evidence of the amount of coal mined and sold, Lessee shall furnish to the County Clerk of Carbon County at his office at Price, Utah, upon his request and on a confidential basis, copies of the applicable production and sale records relating to this Lease, the Premises, and the coal mined therefrom.

AMENDMENT TO

APPROVED Mining & Reclamation Plan
Approved, Division of Oil, Gas & Mining

by RUS date 5/15/89

4. The Lessee shall engage in the diligent development of the coal resources subject to the Lease.

5. Lessee shall operate and mine the Premises in a workmanlike manner in accordance with good and economical mining with due regard to the safety, development, and preservation of said premises, and shall comply with the laws of the State of Utah, the Industrial Commission of the State of Utah, the United States Government, and with all other applicable rules, regulations, and laws which may hereafter be enacted or promulgated in the interest of safety and workmanlike operations of the Premises.

6. Lessor may, at reasonable times and at its sole risk and expense, enter upon the Premises for the purpose of inspection; and Lessee shall, at all reasonable times, leave the Premises and mine open to such inspection. Lessee further agrees, upon demand of Lessor, to furnish within a reasonable time a detailed plat, or working plan, of its operations on the Premises.

7. Lessee shall pay, when due, all taxes lawfully assessed by the State of Utah upon improvements or output of coal on or from the Premises.

8. Lessee shall keep books of account showing the amount of coal mined and sold from the Premises; and said books of account shall, on a confidential basis, be open to the inspection of Lessor at all reasonable times. Upon demand of Lessor, the Lessee shall make a report of tonnage mined by the 15th day of each month covering all production from the Premises for the previous month.

9. Lessee shall furnish a copy of the Utah State Mine Inspection Report to Lessor upon request within a reasonable time after such inspection is made.

10. Lessee shall indemnify Lessor from any and all liability, including attorney's fees and court costs, which may occur as a result of Lessee's activities upon the Premises.

11. It is mutually agreed that in the event of labor strikes, fires, floods, and other causes beyond the control of the Lessee, production may be suspended so long as necessary by the exigence

AMENDMENT TO
APPROVED Mining & Reclamation Plan
Approved, Division of Oil, Gas & Mining

by RUS date 5/15/89

of said conditions, provided that this is not to be construed as changing the provisions for minimum royalty payments as outlined in Section 3 of this Agreement.

12. Upon the expiration of this Lease, or upon the failure to pay the royalties when due, or upon failure to comply within a reasonable time with the written request of Lessor with any of the terms and conditions of this Lease, the same shall terminate thirty (30) days after Lessor gives written notice to Lessee of the grounds for termination; and Lessor may enter upon and take possession of the Premises without process of law or court action; and Lessee agrees to pay all expenses, including a reasonable attorney's fee for the enforcement of the provisions of this Lease. Lessee shall have a period of ninety (90) days from the termination or expiration of this Lease to remove any personal property from the Premises.

13. Lessor hereby grants unto Lessee the right and option to renew this Lease for one (1) successive five (5) year term after the termination hereof under the same terms and conditions herein stated; provided, however, that the amount of royalty shall be renegotiated at the end of the Primary Term, said renegotiation to be based upon the rate charged by the Federal Government on coal lands leased in the area; and, provided further, that any increase in royalty renegotiated shall not exceed the rate charged by the Federal Government in such instances. The minimum granted royalty of Ten Dollars (\$10.00) per month shall not be renegotiated. Said option to renew shall be exercised by Lessee giving its written notice to Lessor of its intent to renew at least sixty (60) days prior to the end of the Primary Term.

14. Lessee shall not assign this Lease, or any portion of the Premises, without first receiving the written consent of the Lessor to do so. Such consent shall not be unreasonably withheld.

15. This Lease is issued only under such title as the Lessor may hold; and if Lessor is hereafter divested of such title, Lessor shall not be liable for any damages sustained by Lessee, nor shall Lessee be entitled to or claim any refund of rentals or other monies theretofore paid to Lessor. It is now agreed that if any acreage here-

AMENDMENT TO
APPROVED Mining & Reclamation Plan
Approved, Division of Oil, Gas & Mining

by RUS date 5/15/89

under is deleted because of failure of title in Lessor, such deletion shall be deducted from the total acreage of 40 acres and the minimum monthly royalty shall be reduced accordingly on a pro-rata basis.

16. Notices provided herein shall be given to the parties as follows:
If to the Lessor:

Carbon County Courthouse
Price Utah 84501
Attention: _____

If to the Lessee:

Sunnyside Reclamation & Salvage, Inc.
P. O. Box 99
Sunnyside, Utah 84539
Attention: _____ Mine Manager

17. This Agreement shall be binding upon the heirs, successors, and assigns of Lessee.

IN WITNESS WHEREOF, Lessor has caused this instrument to be subscribed by the Board of Commissioners of Carbon County, State of Utah, and the Lessee has hereunto set its hand and seal:

This Agreement is memorialized on the 12th day of April, 1989.

CARBON COUNTY, a body politic of the State of Utah

By William D. Krumpal

By Emma R. Kuykendall

By Lynnda C. Varner

Rick
See file if need be -
if this will work, please

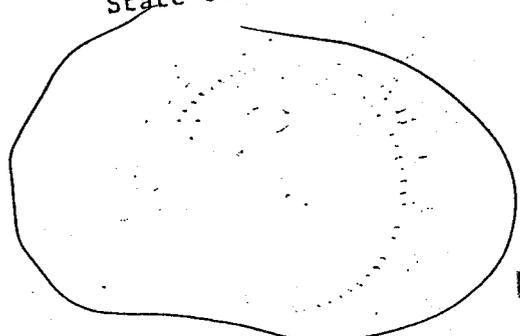
ATTEST:

Jean A. Winters
Clerk of Carbon County,
State of Utah

Someone failed to copy this for you!
SUNNYSIDE RECLAMATION & SALVAGE INC.
a Colorado Corporation

AMENDMENT TO
APPROVED Copper Mining & Reclamation Plan
Approved, Division of Oil, Gas & Mining

by RUS date 5/15/89



RECEIVED

JUN 12 1985

DIVISION OF OIL
GAS & MINING

CHAPTER II

LIST OF EXHIBITS

Figure	II-1	Verification of insurance form
Figure	II-2	Copy of actual newspaper advertisement and proof of publication
<i>Figure</i>	<i>II-3</i>	<i>Carbon City. Lease</i>
Plate	II-1	Surface ownership plat
Plate	II-3	Mine development and phase map

BTD
2/21/90
AOW
2/24/90

AGREEMENT FOR
PARTIAL SUBLEASE OF STATE OF **AMENDMENT TO**
UTAH COAL LEASE ML-43715

APPROVED Mining & Reclamation Plan
Approved, Division of Oil, Gas & Mining

This Agreement for Partial Sublease of State of Utah Coal Lease, ML-43715, (this "Agreement") is entered into this 21st day of February, 1990, between Geneva Steel, a Utah corporation ("Sublessor"), and Sunnyside Reclamation and Salvage, Inc., a Colorado corporation ("Sublessee"). *date 3/12/90*

RECITALS

A. Sublessor is lessee under that certain State of Utah Coal Lease, ML-43715 ("Lease ML-43715"), which Lease covers all of Section 16, T.14S., R.14E., 5LBM, located in the County of Carbon, State of Utah.

B. Sublessee owns and operates the Sunnyside Coal Mine (the "Sunnyside Mine") which is adjacent to and planned for development into Lease ML-43715.

C. The orderly development of 22 left panel and 23 left panel of the Sunnyside Mine requires that Sublessee be given the rights to mine coal from a portion of Lease ML-43715.

AGREEMENT

THEREFORE, in consideration of the premises and the covenants contained herein, Sublessor and Sublessee agree as follows:

1. Partial Sublease. On the terms and conditions set forth herein, Sublessor agrees to sublease to Sublessee and Sublessee agrees to sublease from Sublessor that portion of Lease ML-43715 which comes within 22 left panel and 23 left panel of the Sunnyside Mine ("Leased Premises") as shown on Exhibit "A" hereto and being more particularly described as follows:

A parcel of mineral land lying within the SW1/4 SW1/4 of Section 16, T14S, R14E, Salt Lake Base Meridian described as;

Beginning at the Southwest Section Corner of said Section 16; running thence N0°03'W 1,270 Ft; thence S43°08'14"E 1,770.98 Ft; thence N88°56'35"W 1,210 Ft. to the point of beginning, containing 17.64 acres more or less.

2. Term of Agreement. This Agreement is effective as of the date hereof and shall expire when Sublessee has completed its coal mining activities within the Leased Premises or upon ten (10) years from the date first above written, whichever occurs first.

3. Royalties. Sublessor shall charge no royalty for the removal of coal by Sublessee from the Leased Premises; provided, however, that Sublessee shall be responsible for payment to the State of Utah for any royalties that it may assess for the removal of coal from the Leased Premises.

4. Use and Possession. Sublessee shall have possession of the Leased Premises during the term hereof only for the purposes of mining coal. Sublessor shall have the right to enter upon the Leased Premises at reasonable times for the purpose of inspecting the same. The exercise of said right of inspection shall be conducted in such a way as not to unreasonably interfere or conflict with Sublessee's use of the Leased Premises.

5. Compliance with Laws and Regulations. Sublessee shall comply with all applicable State and Federal laws and regulations which pertain to its activities on the Leased Premises and Sublessee agrees to indemnify and hold Sublessor harmless from and against any loss or damage resulting from said Lessee's failure to so comply. The obligations of Sublessee hereunder with respect to its mining activities on the Leased Premises shall continue beyond the term of this Agreement.

6. Liability. Sublessee hereby agrees to indemnify, defend and hold harmless Sublessor from and against all obligations, claims, demands, losses, damages, liabilities, actions, lawsuits and other proceedings, judgments, awards, costs and expenses, directly or indirectly related to, connected with or arising from the occupancy or use of the Leased Premises by Sublessee.

7. Assignment. Sublessee shall not assign, mortgage or pledge this Agreement nor sublet the whole or any part of the Leased Premises without the prior written consent of the Sublessor, which consent shall not be unreasonably withheld.

8. Severability. If any provision hereof shall to any extent be held invalid, the remainder of this Agreement shall not be affected thereby. Each provision hereof shall be valid and enforceable to the fullest extent permitted by law.

9. Miscellaneous. The captions to the Paragraphs of this Agreement are for convenience of reference only and shall not be deemed relevant in resolving questions of construction or interpretation hereunder. Sublessee shall not record this Agreement or a memorandum hereof without the prior written consent of Sublessor. This Agreement and any Exhibits hereto shall constitute the entire agreement between the parties. No amendment to this Agreement shall be binding upon the Sublessor unless reduced to writing and signed by both parties. This Agreement shall be governed by and construed in accordance with the laws of the State of Utah.

IN WITNESS WHEREOF, Sublessor and Sublessee have executed this Agreement as of the day and year first above written.

GENEVA STEEL, a Utah corporation

By: Robert A. [Signature]

Its: VP

Sublessor

SUNNYSIDE RECLAMATION AND SALVAGE, INC.

By: James T. Cooper

Its: President

Sublessee

P. 4

EXHIBIT "A"

SUNNYSIDE UT.

JAN 29 '90 15:10 SRS, INC.

SRS, Inc.

1 Mine

21st Left

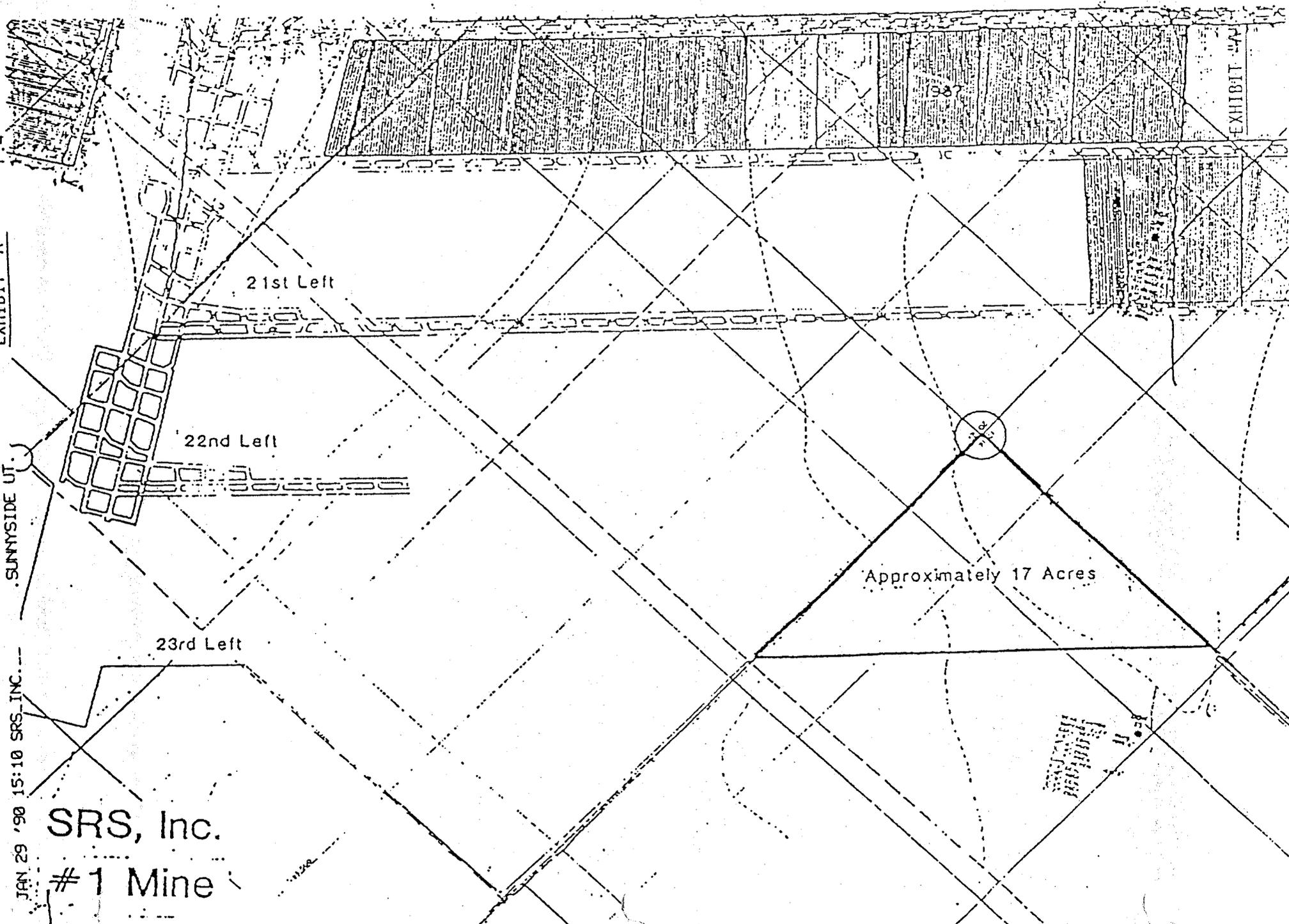
22nd Left

23rd Left

Approximately 17 Acres

EXHIBIT "A"

1987



CHAPTER III REVISIONS - JUNE 29, 1989

REMOVAL OF ALL SURFACE STRUCTURES

- Page 7 - Acreage revised for reclamation to include all surface structures, with the exception of those permanent structures marked on Plate III-1 and noted on Table III-1.
- Page 41 - Acreage and tonnage of topsoil revised in 3rd paragraph.
- Page 59 - Took out Construction Management under Contingency and put in Reclamation Management cost.
- Table III-11 - Revised Disturbed acres and resulting revegetation cost.
- Table III-29 - Added On-Site Manager and changed contingency by taking out construction management percentage. Included costs from other tables that were changed.

AMENDMENT TO

APPROVED Mining & Reclamation Plan
Approved, Division of Oil, Gas & Mining

by



date

7/17/89

REVISIONS AND COMMENTS ON CHAPTER 3

- 3.1 SCOPE References to acreage were moved to Chapter 2 and 3.2.10 Permit Term Disturbance Area. There are some questions on total acreage in permit area, total disturbed acreage, and acreage sold to Sunnyside Fuels Corporation (SFC). Total acreage will be checked in the future after all questions on land ownership and liability are clear. All clarifications of acreage will be submitted to DOGM as revisions when they are completed. The original Kaiser permit acreage numbers have been reinserted in the text.
- 3.2.2 Portals and Shafts Information regarding portals and shafts were placed in this section and Section 3.3.1.2 Portals, Shafts and Slopes of the original text was removed. SRS added 12 portals and shafts that exist on the property. The status and cost of sealing portals and shafts are displayed in Tables III-5 and III-6. Some of the portals have not been accessed and will have to be verified in the field in the future.
- 3.2.3 Surface Buildings and Structures The section was removed and included in 3.2 Surface Facilities/Construction Plans.
- 3.2.3 Coal Handling, Processing, Preparation and Storage Some of the text rewritten for clarification and text from 3.2.10.1 Belt Conveyors and Rail Tracks was moved to this section.
- 3.2.4 Power System, Transmission Lines, Substations, Mine Feeders An additional substation was added. This substation was constructed at the time the original text was written but was not covered in costs. Part of Section 3.3.1.6 on underground electrical was moved to this section.
- 3.2.8 Sedimentation Control Structures and Water Treatment Facilities Paragraph on Coarse Refuse Source was rewritten to clarify. References to Slurry Cell 1, Slurry Cell 2, Clear Water Pond, East Slurry Cell, and West Slurry Cell that are located on SFC land have been reinserted in the text.
- 3.2.9 Culverts and Roads Section renamed to exclude transportation, parking areas, and railroad spurs because text includes only references to culverts & roads.
- 3.2.10 Permit Term Disturbance Area Disturbance area and permit area acreages have been reinserted in the text as originally submitted in the Kaiser permit. After all changes and clarification of land position and responsi-

bility are complete, revised acreages will be submitted as permit revisions.

3.3.1.2 in the original text was moved to 3.2.2

Mining Schedule (unnumbered) was added to text.

3.3.1.5 Roof Control, Ventilation, Water Systems Dust Suppression, and Dewatering Ventilation revised to reflect current ventilation. Water Systems revised to clarify current discharge and piping. Electrical moved to Section 3.2.4.

3.3.2.4 Outcrop Protection Comments on outcrop mining because of metallurgical properties removed because it does not apply to steam customers.

3.3.3.1 Projected Maximum Recovery General comments that were not reflective of the subject were removed.

3.3.5.3 Fire Protection Modified to reflect current status of fire truck.

3.3.6.1 Annual Production Per Year for Permit Term Production forecasts modified to give range of production and estimated total production through 1994.

3.3.6.2 Operating Schedule Schedule modified for current conditions.

3.3.6.3 Employment Duplication of Section name changed and employment figure revised.

3.3.7 (Original permit section Acreage and Delineation of Mine Permit Area) Covered in previous sections of Chapter 3.

3.3.8 (Original permit section Mine Plan Area) Section removed. Verbage covered in other sections. A 25 year mine plan cannot be projected at present.

3.4.3.1 Projected Impacts of Mining on Hydrologic Balance Tables and text updated.

3.4.3.2 Control Measures to Mitigate Impact References to as-builts and ponds to be installed that were completed and data submitted were removed from the text.

3.4.3.3 Monitoring Procedures to Measure and Control Impacts Portions of the text were rewritten to reflect current monitoring practices.

3.4.5.1 Projected Impacts of Mining on Vegetative Resources
Disturbance percentage changed to reflect original vegetative disturbance that includes SFC land.

3.4.3.7 Air Quality Monitoring Plan Revised to reflect change of location of weather station.

3.4.8 Subsidence Control Plan Text and Tables revised to reflect recent monitoring and addition of subsidence points.

3.4.9 Waste Disposal Plans Slurry and coarse refuse taken out of this section has been reinserted.

3.4.9.1 Projected Impacts of Disposal Areas on the Environment
Text rewritten to clarify certain areas. Text on inspection, maintenance, and subsidence, and reclamation that were originally removed as the responsibility of SFC have been reinserted.

Text on results of testing to be presented to DOGM that has been presented was removed. Text on maintenance, reclamation, water discharge, inspection, and subsidence originally removed as the responsibility of SFC have been reinserted.

Text on underground development waste and toxic or acid forming materials was rewritten into one section to try to clarify.

3.5.1 Contemporaneous Reclamation Coarse refuse disposal area originally removed because contemporaneous reclamation was to be SFC responsibility has been reinserted.

3.5.1.2 Soil Removal and Storage Previously disturbed acreage revised. Acreage on SFC ground originally taken out has been reinserted. Some of the text rewritten to clarify certain points. Two tables were moved and revised to reflect changes in topsoil stockpiled quantities. Changes of soil removal volumes originally taken out of the permit in the slurry refuse area have been reinserted and modified to reflect revised unit costs. Some of the quantities of borrow material required were also modified to reflect changes in reclamation practices and current quantities remaining.

3.5.3.1 Sealing of Mine Openings Sealing and filling with 25-ft. of material was changed to sealing or filling and appropriate tables modified to reflect change. Portals that cannot be accessed by road were proposed to be blasted shut for at least 25-ft. if possible.

Where highwall reduction was done over portal headwalls, the

headwalls will not be removed unless it might be visible after regrading.

- 3.5.3.2 Removal of Surface Structures Permanent structures, including transformers necessary for power to permanent structures that were to remain were clarified on tables. Previous maps and text mentioned permanent structures but was not completely clear. Maps were updated to show some of the structures that were on site at the time of the original document but were not on the maps or in the text and the cost of removal was added.

Shafts and portals were moved to Section 3.5.3.1.

The refuse area originally pulled out as part of SFC responsibility has been reinserted.

- 3.5.3.3 Disposition of Dams, Ponds and Diversions Reference to renovation of of Grassy Trail Dam to design specifications was removed. Have not located dam renovation design specifications.

Reference to slurry ponds originally removed as SFC responsibility has been reinserted.

- 3.5.4.1 Recontouring Reference to the coarse refuse pile was originally removed as SFC responsibility has been reinserted.

Text on postmining drainage patterns, designs for channel peak flows and sizing, and timetable and method for removal of undisturbed diversions was not included.

- 3.5.4.4 Soil Distribution and Stabilization Some rewrite to try to clarify and simplify text.

- 3.5.5.1 Soil Preparation Paragraph on soil preparation for refuse area originally taken out has been reinserted.

- 3.5.5.2 Seeding and Transplanting References to seeding on the coarse refuse originally taken out has been reinserted.

There is currently no work being pursued on additional species. This paragraph was removed.

- 3.5.6.1 through 3.5.6.5 under Schedule of Reclamation Renumbered and rewritten to try to clarify. Areas on pp. 81-83 of the old permit were brought forward to consolidate and clarify.

Portions pertinent of other areas were included in previous sections.

3.5.6.3 Responsibility Period Monitoring The number of sediment ponds to be monitored during the responsibility period were revised to cover the SFC area.

3.5.7.2 Bond Estimate New revised section to describe methods of calculation shown on Tables. The tables attempt to simplify the pages eliminated in Section 3.5.7.

Culvert Removal Some culverts were not shown on original maps. Subsequent revisions have been sent in to reflect location and cost of removal. Some of the costs include culverts on SFC land.

Highwall Regrading The train loadout and preparation plant volumes were recomputed on a contour cut/fill balance rather than a single cross section for each area.

Regrading Outside Highwall The Water Canyon refuse was covered with 1' of borrow material rather than 4'. The acreage for the SFC area was reinserted.

Pond Reclamation Costs The slurry ponds, water treatment ponds, and sediment control ponds on SFC land originally taken out have been reinserted. The push distance was revised on larger ponds.

Revegetation Failure A 40% revegetation failure was included as a contingency to cover high vegetation failure in the desert environment. This was not covered previously. Revegetation on SFC land originally taken out was reinserted.

Construction Management and Contingency Included as a management cost based on a % of total reclamation cost rather than a fixed cost for a manager for a fixed period of time.

COST TABLES

- III-1 Several structures were added along with descriptions & demolition costs on a single table.
- III-5 Spreadsheet showing portals, seal status, and cost to seal.
- III-6 Shaft sealing cost developed based on Table III-8
- III-9 Portal Closure & Fill - details cost of hauling material to portals that are not included in highwall reduction or have to be blasted shut. Does not include both sealing and backfilling portals.

- III-10 Drill Hole Cementing - gives cost of cementing only known open holes.
- III-11 through III-18 All costs revised to reflect current seed and reclamation cost.
- III-20 Table shows individual grading, ripping, haulage, and backhoe costs for all material moved based on previous cross sections. Costs developed in Tables III-31 through III-37.
- III-21 Revised push distances and associated unit costs. Included ponds and reservoirs in the SFC area.
- III-24 Disturbed acreage was revised to include the SFC area.
- III-29 Summary of all costs. Includes a 40% revegetation failure rate which is 2.2% of total costs.

CHAPTER III
OPERATION AND RECLAMATION PLAN

RECEIVED

NOV 0 1 1991

DIVISION OF
OIL GAS & MINING

TABLE OF CONTENTS

	Page
3.1 Scope	1
3.2 Surface facilities Construction Plans	1
3.2.1 Site selection and preparation	2
3.2.2 Portals and Shafts	2
3.2.3 Coal handling processing, preparation and storage	2
3.2.4 Power system, transmission lines substations, mine feeders	3
3.2.5 Water supply system	4
3.2.6 Sewage system	4
3.2.7 Water diversion structures	4
3.2.8 Sediment control structures and water treatment facilities	5
3.2.9 Culverts and roads	6
3.2.10 Permit term disturbance	7
3.2.11 Additional areas for surface disturbance for life of mine	8
3.2.12 Detailed construction schedule	8
3.3 Operating plan	8
3.3.1 Mining plans	8
3.3.1.1 Orientation and multiple seam considerations	9
3.3.1.2 Mining methods	9
3.3.1.3 Mine development	10

3.3.1.4	Retreat mining	11
3.3.1.5	Roof control, ventilation, water systems, dust suppression, and dewatering	11
3.3.2	Barrier pillars	13
3.3.2.2	Protection of surface structures and streams	13
3.3.2.3	Property boundaries	13
3.3.2.4	Outcrop protection	13
3.3.3	Conservation of coal resource	14
3.3.3.1	Projected maximum recovery	14
3.3.3.2	Justification for non-recovery	14
3.3.3.3	Access to future reserves	14
3.3.4	Equipment selections	15
3.3.4.1	Surface equipment	15
3.3.4.2	Underground equipment	15
3.3.5	Mine safety, fire protection, security	16
3.3.5.1	Signs	16
3.3.5.2	Fences and gates	17
3.3.5.3	Fire protection	17
3.3.5.4	Explosives	18
3.3.6	Operations schedule	19
3.3.6.1	Annual production per year for permit term	19
3.3.6.2	Operating schedule	20
3.3.6.3	Employment	20
3.4.1	Preservation of land-use	20
3.4.1.1	Projected impacts of mining on current and future land use	20
3.4.1.2	Control measures to mitigate impact	20

RECEIVED

NOV 01 1991

DIVISION OF
 OIL GAS & MINING

RECEIVED

NOV 0 1 1991

3.4.2	Protection of human values	21
	DIVISION OF OIL GAS & MINING	
3.4.2.1	Projected impacts of mining on human values - historical and cultural	21
3.4.2.2	Control measures to mitigate impacts	21
3.4.3	Protection of hydrological balance	21
3.4.3.1	Projected impacts of mining on hydrologic balance	21
3.4.3.2	Control measures to mitigate impacts	23
3.4.3.3	Monitoring procedures to measure impacts and control	24
3.4.4	Preservation of soil resources	25
3.4.4.1	Projected impacts of mining on soil resources	25
3.4.4.2	Control measures to mitigate impacts	25
3.4.5	Protection of vegetative resources	26
3.4.5.1	Projected impacts of mining on vegetative resources	26
3.4.5.2	Mitigating measures to be employed to reduce impacts on the vegetative resources	26
3.4.5.3	Monitor procedures - reference areas and revegetation	26
3.4.6	Protection of fish and wildlife	26
3.4.6.1	Protected impacts of mining on fish and wildlife	27
3.4.6.2	Mitigating measures to be employed to protect fish and wildlife	27
3.4.7	Protection of air quality	27
3.4.7.1	Projected impacts of mining operation on air quality	27
3.4.7.2	Mitigating measures to be employed to control air pollutants	28

RECEIVED

NOV 01 1991

3.4.7.3	Air quality monitoring plan	28
3.4.8	Subsidence Control Plan	28
3.4.9	Waste disposal plans	32
3.4.9.1	Projected impacts of disposal areas on the environment	33
3.4.9.2	Control measures to mitigate impacts	37
3.5.1	Reclamation plan	37
3.5.1.1	Contemporaneous reclamation	38
3.5.1.2	Soil removal and storage	39
3.5.3	Final abandonment	43
3.5.3.1	Sealing of mine openings	43
3.5.3.2	Removal of surface structures	43
3.5.3.3	Disposition of dams, ponds and diversions	44
3.5.4	Backfilling and grading plans	45
3.4.5.1	Recontouring	45
3.4.5.2	Removal or reduction of highwalls	46
3.5.4.3	Terracing and erosion control	46
3.5.4.4	Soil distribution and stabilization	47
3.5.5	Revegetation plan	48
3.5.5.1	Soil preparation	48
3.5.5.2	Seeding and transplanting	49
3.5.5.3	Mulching	50
3.5.5.4	Management	51
3.5.5.5	Monitoring	52
3.5.6	Schedule of reclamation	52
3.5.6.1	Detailed timetable	52
3.5.6.2	Reclamation monitoring	52

3.5.6.3	Responsibility period monitoring	53
3.5.6.4	Statistical methodology	53
3.5.6.5	Sampling methodology	54
3.5.7	Cost estimate for reclamation	54
3.5.7.1	Forecast of performance bond liability during permit term	54
3.5.7.2	Bond estimate	55
3.6	Bibliography	59
	List of Exhibits	62

RECEIVED

NOV 0 1 1991

DIVISION OF
OIL GAS & MINING

3.1 Scope

This chapter covers requirements for reclamation and operation plans under UMC 784.

Surface facilities and operation plans are described and are illustrated with appropriate maps. Impacts of mining on human and natural resources as well as mitigating measures and monitoring procedures are presented with reference to more detailed information from the subsequent chapters. Data on subsidence is given and environmental effects are described.

Reclamation plans, including estimated schedule and cost, are presented.

Since the Sunnyside Mines is an established operation, most of the measures needed for the protection and preservation of human and natural resources are already in practice and are being monitored by regulatory authorities including the DOGM, OSM and MSHA.

3.2 Surface Facilities/Construction Plans

Table III-1, and Plate III-1 list the surface facilities and show the location of the facility or structures and the year of construction, if available. The location of each structure is shown on Plate III-1 by its identification number. These identification numbers are also referred to in the narrative as appropriate. Some of the structures are shown in the photographs in Section 3.7.1.

At this time, no new surface facilities or structures are planned during the permit period. No plans are presently contemplated to modify or reconstruct any existing facility.

The support facilities area will be maintained and restored at end of mine life to prevent damage to fish, wildlife, and related environmental values and to prevent additional contributions of suspended solids to stream flow or runoff outside the permit area.

RECEIVED

NOV 01 1991

DIVISION OF
OIL GAS & MINING

CHAPTER III

3.2.1 Site Selection and Preparation

The Sunnyside Mines have been in continuous operation since the 1890's. Site selection and preparation were carried out many years ago. Details of site preparation are not available.

3.2.2 Portals and Shafts

There are 33 portals and 8 shafts in the three mines making up the Sunnyside Mines that have not been reclaimed. The portals are listed in Table III-5. Shafts are listed in Table III-6. Both are identified on Plate III-1 and are shown in the photographs in Section 3.7.1.

The bulk of the mine-run coal exits the mine via the No. 3 Mine Belt portal (P 14.1). Men and materials are transported through the No. 3 and No. 1 Mine Slope portals (P 14).

All other portals and shafts, with the exception of the Man-shaft (S 6), are primarily used for ventilation.

Each of the three mines has a main slope for access (see Plate III-4). There is also a No. 4 Slope which borders the BP Coal America's B Canyon property to the north which extends down dip from the motor road to the headgate in 19 Left Inside panel.

3.2.3 Coal Handling, Processing, Preparation and Storage

Run-of-mine coal is transported to the surface by conveyor belt or mine cars. The cars are dumped by a rotary car dump. The conveyor from the mine dumps coal on the belt from the rotary car dump to the rotary breaker. Coal is sent to raw coal bins after going through the rotary breaker. The raw coal is washed in the preparation plant to produce the final clean coal product as well as the coarse and fine (slurry) refuse. The clean coal is sent by belt conveyor to an open stockpile. Beneath the stockpile is an arch-supported tunnel through which railroad cars pass for loading. Car loading is via two 5-foot diameter openings controlled by air-actuated gates. The cars are loaded while in motion. A unit train of eighty-four cars may be loaded in about one hour.

RECEIVED

NOV 0 1 1991

DIVISION OF
OIL GAS & MINING

CHAPTER III

The surface facilities for coal handling, preparation, storage and loadout are listed in Table III-1 and identified on Plate III-1. Plate III-2 shows the surface location of the following conveyor belts and tracks:

<u>I.D. Number</u>	<u>Description</u>
1	48" slope belt. Conveys coal from mine to the surface
2	60" belt from rotary dump to rotary breaker
3	42" belt from rotary breaker to raw coal bins
4	42" tripper belt over the raw coal bins
5	42" raw coal reclaim belt
6	42" raw coal feed belt (to Baum jigs)
7	36" clean coal stacking belt
8	24" coarse refuse belt
9	Old loadout belt (not in use)
10	Old loadout belt (not in use)
11	Denver & Rio Grande Western Railroad tracks
12	40" gage mine tracks (the mine haulage system provides a transportation link between the surface and underground workings for coal as well as for men and materials)

3.2.4 Power System, Transmission Lines, Substations, Mine Feeders

Power for the Sunnyside Mines operation is supplied by Utah Power and light through a 44,000 V transmission line. It is distributed to the six substations (E 1 to E 6) identified in Table III-1, and shown in photographs in Section 3.7.1.

From the substations, power is distributed at 4,160 V to surface facilities and through portals and shafts to the underground mine sections where it is further transformed to the required voltages.

All longwall equipment and the newer continuous miners and shuttle cars operate on 950 volts. Older development section equipment operates on 480 volts. Some large motors operate at 4160 volts. DC power for electric locomotives, at 550 volts, is rectified from AC.

Underground power systems are installed and maintained according to regulations set forth in the 1969 Health and Safety Act and are inspected by MSHA personnel.

RECEIVED

NOV 0 1 1991

DIVISION OF
OIL GAS & MINING

CHAPTER III

3.2.5 Water Supply System

The culinary water supplying Sunnyside Mines, East Carbon City and the City of Sunnyside comes through an underground line from Grassy Trail Reservoir, parallel to the existing road, to a culinary water treatment plant in Whitmore Canyon near the manshaft bathhouse. The treated water goes through a buried water line to a 50,000 gallon surface water storage tank at the mouth of Pasture Canyon. At the tank, the water is teed into two water lines run down the canyon. One line goes to the Sunnyside Mines and the City of Sunnyside and the second line goes to the water tank for the City of East Carbon.

The area needed for the water plant has been sold to the cities and withdrawn from the permit area (Plate II-1.)

3.2.6 Sewage System

The sewers of the Sunnyside Mines are tied to the sewage system of the City of Sunnyside.

3.2.7 Water Diversion Structures

Grassy Trail Reservoir (W3a and W3B) which is formed by the Whitmore Canyon Dam is used to store culinary water for the Cities of Sunnyside and East Carbon as well as facilities of Sunnyside Mines. This was constructed in 1952 and was designed by Templeton, Linke and Associates and Company.

The Whitmore Canyon dam is routinely maintained. Vegetative growth is cut where necessary to facilitate inspection and repairs. Inspections are conducted weekly or more frequently as needed by qualified personnel. A yearly inspection of the dam is conducted by a professional engineer from the State Engineer's Office. Construction plans for the dam were approved by the State Engineer on September 21, 1951 and final construction was approved by Joseph M. Tracy, State Engineer on November 24, 1952 (see Figure III-5). A copy of a yearly inspection report by a professional engineer is submitted to the Division within thirty (30) days of receipt of the report. A copy of the report is on file at the mine office for inspection. The Whitmore Canyon Dam and Grassy Trail Reservoir are identified on Plate III-1.

RECEIVED

NOV 0 1 1991

DIVISION OF
OIL GAS & MINING

CHAPTER III

The yearly inspection will contain statements on:

(1) Existing and required monitoring procedures and instrumentation.

(2) The design depth and elevation of any impounded waters at the time of the initial certification report or the average and maximum depths and elevations of any impounded waters over the past year for the annual certification reports.

(3) Existing storage capacity of the dam or embankment.

(4) Any fires occurring in the construction material up to the date of the initial certification or over the past year for the annual certification reports.

(5) Any other aspects of the dam or embankment affecting stability.

Other diversions such as clear water ditches are used to divert runoff from crossing a disturbed area. The designs for the diversions and sediment ponds are located in Appendix III-1.

During the permit term, there are no plans to alter a natural drainage way, or make alterations involving a steep cut slope.

3.2.8 Sedimentation Control Structures and Water Treatment Facilities

Sedimentation control structures are used to store water runoff from disturbed areas up to and including a 10-year 24-hour event. Designs of the sediment control structures are located in Appendix III-1.

There are thirteen sediment control structures and water treatment ponds on the permit which are marked on Plate III-1. Division and State Board of Health approvals for existing ponds are in Appendix III-2.

Sediment control structures are periodically cleaned of sediments when the sediment height reaches a predetermined design level. The State Board of Health requires that 1.5 feet be maintained between the sediment and the water outlet. The maximum sediment level is marked on the vertical standpipe spillway or on a ground stake. Rainfall in excess of a 10-year 24-hour event is passed through the structure with a vertical

RECEIVED

NOV 0 1 1991

DIVISION OF
OIL GAS & MINING

CHAPTER III

3.2.9 Culverts and Roads

All culverts under roads are listed in Table III-22 along with specifications and are plotted on Plate III-28 as RC-1 through RC-10-4.

Table III-2 lists roads and Table III-3 lists the specifications for the roads in the permit area. All of the roads existed prior to enactment of PL-95-87. No new roads are planned during the permit period.

Cross-sections for roads are shown on Plates III-17B through III-17F. The physical locations of the cross-sections presented on the above plates are shown on Plate III-17A.

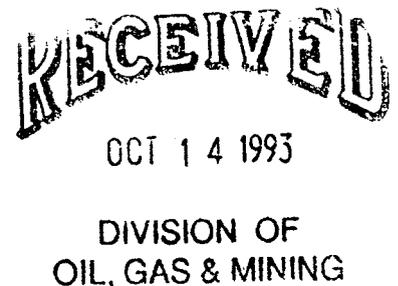
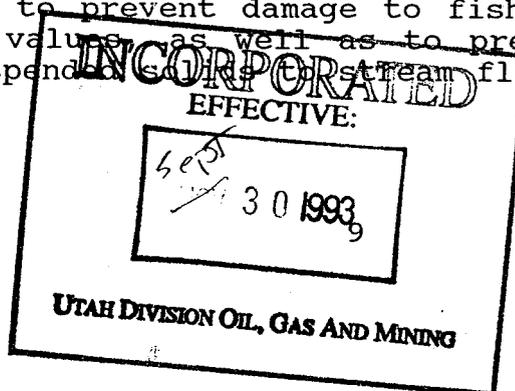
Figure III-15 shows existing access roads designated as Primary Coal Haul Roads in Amendment 92K.

A county owned road (extension of State Highway 123) traverses a portion of the permit area (see Plate III-1). Past mining, including full extraction of the coal seam, has not affected the road or its use by the public. Future mining planned under portions of the road is expected to have no effect on the road or its continued use by the public. There are no plans to relocate this or any other public road.

The roads in Fan Canyon, Lower Water Canyon, and short access roads to the Twinshaft Fan and Manshaft and ponds will be removed after the mine life. The remainder of roads are necessary for land access appropriate to the uses of fish and wildlife habitat, livestock grazing, and recreation. These roads are typically pre-law, occur on land owned by the Sunnyside Mines operator and provide access to the rodeo grounds, Grassy Trail Reservoir, water treatment facility, tar sands deposits, and private owners outside the permit area.

Roads will be maintained according to UMC 817 road performance standards throughout the life of the facility and during the 10-year responsibility period. Maintenance will consist of basic custodial care to control erosion, repair of structures and drainage systems, removal of debris from culverts and ditches, and replacement of road surface material as needed.

The transportation facilities will be restored at the end of the mine life to prevent damage to fish, wildlife, and related environmental values, as well as to prevent additional contributions of suspended solids to stream flow or runoff outside the permit area.



CHAPTER III

standpipe emergency spillway. Water in the pond is discharged after a twenty-four hour sediment settling period.

All sediment ponds will be inspected at a minimum of four times per year for structural weakness, erosion, proper function, sediment levels and other hazardous conditions. A written record of findings will be maintained at the mine office for inspection. Reports of dam conditions including erosion, structural weakness or other hazardous conditions will be submitted to the Division within thirty (30) days of the inspection. Hazardous conditions will be reported directly to the Division immediately after the finding.

Sediments removed from the ponds will be disposed in the industrial waste dump (Plate III-1) or used as a borrow material. If the material is to be used as borrow, the operator will contact the Division to receive approval of the location and the amount of material to be used. The Division may require a chemical analysis of the sediments prior to disposal as borrow depending upon the area of disposal.

Coal slurry, a mixture of coal fines and water from the preparation plant is transported in an open ditch to three slurry settling ponds. Two of the settling ponds (SP1 and SP2) use a dike of coke breeze coarse refuse to filter the effluent before discharging into the third pond (Clear Water Pond). Final settling is completed before discharge through UPDES discharge point 004 into Icelander drainage or onto adjacent alfalfa fields. If both of the settling ponds are full, the old East Cell Slurry Pond (ESC) is used as an alternate evaporation location. Use of ESC is limited.

A control structure approved by the Division (see Appendix 111-3) is located at the bottom of the wash below the coarse refuse embankment. The rock gabion structure is used to drop out sediments. The Division has also approved addition of flocculent at this point to reduce the suspended iron content. Sampling points for discharge from the coarse refuse are the Coarse Refuse Source (CRS), that is located immediately below the gabion structure and Coarse Refuse Boundary (CRB) that is roughly 600 feet below CRS. Total iron values at the permit boundary (CRB) are in compliance with standards.

3.2.9 Culverts and Roads

All culverts under roads are listed in Table III-22 along with specifications and are plotted on Plate III-28 as RC-1 through RC-10-4.

RECEIVED

NOV 01 1991

DIVISION OF
OIL GAS & MINING

CHAPTER III

3.2.9A Methane Drainage Borehole

A Methane Drainage Borehole is scheduled for construction during December of 1993. The location of the borehole, temporary drilling pad, pipeline and topsoil storage pile is shown on Plate III-1Di.

Methane will be collected from underground horizontal drill holes, which have been or will be drilled into the coal seam, and directed to the surface via a pipeline to the bottom of the proposed borehole. Methane will be flared to the atmosphere at the drillhole pad, and some will be directed to the manshaft intake fan via an underground pipeline. At the manshaft intake fan, the methane will be used to heat the manshaft.

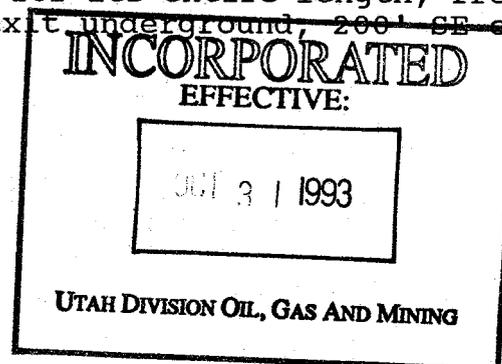
The borehole will be located on the surface in an area that has been previously disturbed (See Plate III-20). Drainage from the drill pad will report to the 006 Sediment Pond via the pre-existing ditch.

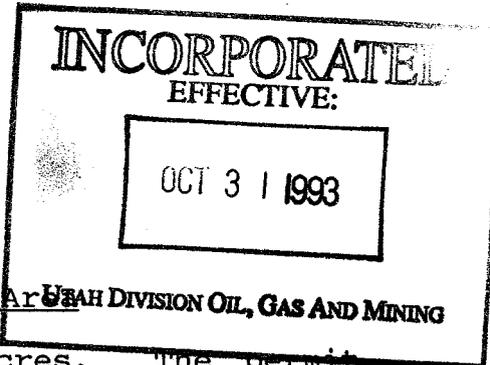
The soils in the area of the borehole belong to the Shupert-Winetti Complex (SCS Map Unit Description 107). Field observations have determined a surface layer of 3" of pale brown loam, underlain by a sandy loam reaching a depth of at least 24". Soil samples have been taken to a depth of 24".

In preparation for the construction of the temporary pad, at least 6" of topsoil will be removed and a topsoil storage pile will be established as shown on Plate III-1Di and Figure III-16. The capacity of the topsoil storage area is 3820 cu. ft. Removal of 6" of topsoil will result in storage of 1887.5 cu. ft. Most of the topsoil will be stored for no more than 6 months, after which time it will be redistributed in conjunction with the reclamation of the drill pad. The remaining portion will be used when the wellhead is reclaimed. The topsoil pile will be established and maintained in accordance with established Division guidelines, and as outlined in Chapter III, page 46, in section 3.5.1.2. As an additional control measure, a berm which will be capable of containing runoff from a 100 yr. 6 hr. event will be established around the topsoil pile.

A geo-fabric will be placed prior to placement of the gravel which will form the pad.

The borehole itself will be cased for its entire length, from its entry at the surface through its exit underground, 200' SE of the manshaft.





3.2.10 Permit Term Disturbance Areas

The Sunnyside permit contains 14,475 acres. The permit boundary is delineated on Plate II-1. A total of 313 acres have been disturbed. An additional 5.88 acres have been contemporaneously reclaimed in Slaughter Canyon. 23 acres of the disturbed area are excluded for permanent roads and right-of-ways. The remaining 290 acres are to be reclaimed (Table III-24).

3.2.11 Additional Areas for Surface Disturbance for Life of Mine

There are no new planned areas of disturbance during the permit term.

3.2.12 Detailed Construction Schedule

There is no new planned construction during the permit term.

3.3 Operating Plan

3.3.1 Mining Plans

The Sunnyside coal property has been mined continuously since the late 1890's. Over sixty million tons of coal have been extracted during this period. Kaiser Steel Corporation leased the No. 2 Mine from Utah Fuel Company in 1942 to provide coking coal to the newly constructed steel mill at Fontana, California. In 1950, Kaiser Steel purchased the entire property. Since 1950, the major production areas have been shifted from the No. 2 Mine near the southeast boundary to the No. 1 Mine area to the northwest (see Plate III-3).

At the present time, the Sunnyside workings extend along the strike from the Columbia Mine northwestward to the boundary of the B Canyon Federal Lease a distance of approximately 6-1/2 miles. Workings down-dip from the outcrop have reached a maximum of 2-1/2 miles. Future workings will be further extensions down-dip (see Plate III-4).

The Sunnyside complex encompasses three mines, each with its separate ventilation, access and haulage systems. At present, the

CHAPTER III

The only room and pillar work contemplated in the future will be in isolated or small areas not conducive to longwall mining.

Future mining will extend the main slopes down-dip far enough to turn off the next set of longwall development entries, driving a two-entry system to connect with the bleeder slopes, leaving a barrier pillar, and driving starting rooms up-dip to connect with the previous panel. The continuous miners develop to keep at least one and preferably two panels ahead.

3.3.1.4 Retreat Mining

Longwall retreat mining will continue to be used at the Sunnyside Mines.

3.3.1.5 Roof Control, Ventilation, Water Systems Dust Suppression, and Dewatering

(a) Roof Control:

All entries, including slopes, raises, bleeders, rooms, etc., are roof bolted with 6-foot resin bolts on 4-foot centers. Entries are normally driven 18 feet in width. Entries wider than 20 feet receive supplemental support such as props or cribs. In extreme cases, steel yieldable arches are installed on 2- to 5-foot centers. Entries which are kept open for use as future tailgates for longwall panels are supported with two or more rows of wooden or concrete cribs.

(b) Ventilation:

Ventilation plans are submitted to MSHA for approval and are updated every six months.

The No. 2 Mine is ventilated with a 7-foot diameter Jeffery Aerodyne fan powered by a 150 HP electric motor. This fan exhausts approximately 208,000 cfm. As the No. 2 Mine is not being worked, this amount of air is not required and a portion of it is used to ventilate mine pumps and old workings.

The No. 3 Mine exhausts 230,000 cfm using an 8-foot Joy fan powered by a 300 HP electric motor. A diesel standby motor provides continuous ventilation in case of a power failure. An additional 8-foot diameter exhaust fan in No. 2 Canyon ventilates

NOV 01 1991

DIVISION OF
OIL GAS & MINING

CHAPTER III

the right longwall section in No. 3 Mine. This fan exhausts approximately 112,000 cfm.

A 7-foot diameter Jeffery fan powered by a 150 HP electric motor is located at the outcrop up-dip from the main slope area and is capable of providing 272,000 cfm. This fan is not currently being used.

An 8-foot diameter Joy fan is located on a 16-foot diameter shaft in Whitmore Canyon. This fan is powered by a 300 HP electric motor with a diesel standby. This fan blows 475,000 cfm.

The Twin Shafts fan is 8-foot diameter and exhausts 128,000 cfm from the manshaft dip area of No. 1 mine.

The amount of air at each working face and the amount flowing through the last open crosscut must meet MSHA and State minimum quantity requirements.

(c) Water Systems:

Underground water flows to small sumps at the lowest elevations in the mine. From the small sumps, water is pumped to a large main sump. Main pumps, activated by float switches in the sump, pump water to various underground sumps or to the outside. Water from the secondary sumps is pumped or flows by gravity to active areas of the mine to be used for dust control.

The water is pumped outside at the Manshaft (UPDES 001), Whitmore return shaft (UPDES 002), No. 1 Mine rock tunnel portal (UPDES 003), No. 3 Mine manway portal, and the Water Canyon portal (UPDES 005). Water from the Manshaft and Whitmore return shaft is ponded to allow settling of solids and separation of oil before discharge. Water from Water Canyon portal is discharged directly into the local drainage. The No. 1 Mine rock tunnel portal and No. 3 Mine manway portal water is piped to the mine water tanks and used in the Preparation Plant, discharged with the slurry, and monitored at UPDES discharge point 004, or allowed to overflow from the tanks and monitored at UPDES discharge point 015.

Some of the discharged water is used to irrigate the city parks, golf course, and alfalfa fields.

(d) Dust Suppression:

Dust suppression is accomplished by water sprays on all coal cutting equipment. Additional sprays are used along the longwall support lines, on conveyor belts, and transfer points. Line cur-

RECEIVED

NOV 0 1 1991

DIVISION OF
OIL GAS & MINING

CHAPTER III

tains are used in conjunction with continuous miner operations to direct dust away from the mining crews.

(e) Dewatering:

Details are covered in Section 7.1.3 (Groundwater Development and Mine Dewatering).

3.3.2 Barrier Pillars

Barriers around oil and gas wells will be in accordance with state laws and regulations. Such barriers will not be less than 300 feet in diameter, unless a lesser barrier is permitted by the regulatory authority. A greater barrier may be required as warranted by depths of mine, geologic conditions or other factors. Currently, no oil and gas wells exist within the permit area.

3.3.2.2 Protection of Surface Structures and Streams

See Section 3.4.8.1

3.3.2.3 Property Boundaries

Fifty-foot barriers are left at the boundaries with of the Columbia Mine and the B-Canyon property. The Columbia Mine has also left a 50-foot barrier yielding a total width of 100 feet between properties.

3.3.2.4 Outcrop Protection

An outcrop protection zone is left unmined between the outcrop and the mine workings (see Plate III-4).

RECEIVED

NOV 0 1 1991

DIVISION OF
OIL GAS & MINING

CHAPTER III

3.3.3 Conservation of Coal Resource

3.3.3.1 Projected Maximum Recovery

Longwall mining allows almost full extraction of the coal seam, within the height limitation of the equipment. Barrier pillars are left to protect haulage and ventilation entries (see Plate III-4). The percent of full seam extraction varies from 60% to 80%, depending on panel length and width, percent of seam being mined because of equipment limitations, and local mining conditions.

3.3.3.2 Justification for Non-Recovery

(a) Barrier pillars must be left to protect haulage and ventilation entries.

(b) Coal left unmined for various purposes described under Section 3.3.2.

(c) The Upper Sunnyside seam thins out to unmineable thickness in the No. 1 Mine (see Section 3.3.1.1).

(d) As noted in Section 3.3.1.1, in the northwestern part of the No. 1 Mine, the Lower Sunnyside seam is split into two approximately 6-foot seams with only a 2 to 20 foot separation. Mining of coal splits and adjacent mineable seams will depend on equipment technological limitations, economic considerations, and safety.

3.3.3.3 Access to future reserves

Future reserves in the Sunnyside Mines will be down-dip from the current mining areas (see Plate III-3). It is expected that present and future longwall technology would allow efficient extraction of these reserves. Future mining areas will be extensions of present workings so that access to such reserves should not be a problem.

RECEIVED

NOV 01 1991

DIVISION OF
OIL GAS & MINING

CHAPTER III

3.3.4 Equipment Selections

The Sunnyside Mines have been in operation for over eighty years. Changes are made continually in the various types of equipment used as new technology is developed.

3.3.4.1 Surface Equipment

Production equipment on the surface includes that associated with the preparation plant, car dump, conveyors, stockpile and loadout. The operation also uses various mobile equipment including dozers, front end loaders, refuse haulage trucks, water trucks, and other vehicles.

3.3.4.2 Underground Equipment

Major underground equipment includes:

- Continuous miners
- Cutting machines
- Loading machines
- Face drills
- Feeder breakers
- Shuttle cars
- Roof Bolters
- Scoop trams
- Rock dusters
- Longwall mining systems including shield type roof supports, shearers and face conveyors
- Belt haulage system
- Rail haulage system (hoists, locomotives, track systems)
- Power centers and electric distribution system
- High pressure spray pumps
- Ventilation fans
- Dewatering pumps and water lines
- Compressor stations and air lines

RECEIVED

NOV 01 1991

DIVISION OF
OIL GAS & MINING

CHAPTER III

3.3.5 Mine Safety, Fire Protection, Security

3.3.5.1 Signs

Signs and markers required by the regulations governing DOGM under UMC 817.11 are posted, maintained, and will be removed by the operator at the termination of the bond. The signs are of uniform design, can easily be seen and read, and are made of plastic or steel.

Identification signs showing the name, business address, and telephone number of the person who conducts underground coal mining activities and the identification number of the current regulatory program permit authorizing underground coal mining activities are posted at each point of access from public roads to areas of surface operations and facilities on permit areas for underground coal mining activities. Plate III-24 shows the location of identification signs.

Permit markers are posted and clearly show the perimeter of all areas affected by surface operations or facilities. The markers are four foot by 5/8 inch diameter steel roof bolts or four foot metal fence posts. Plates III-20 through 23 show the perimeter of the disturbed areas that the markers denote.

Stream buffer zone markers are posted and clearly shown the buffer zone along Grassy Trail Creek. However, due to pre-law disturbances the buffer zone is less than the 100 feet specified in UMC 817.57. Plate III-26 shows the location of buffer zone signs. Disturbance within the stream buffer zone will not be allowed by the operator.

Blasting signs will be posted prior to blasting at all entrances to areas of the surface operations and facilities in the permit area, from public roads or highways. The signs will say "Warning: Explosives in Use". The immediate area of blasting activities will be flagged or posted with signs that say "Danger: Blasting Area".

Topsoil stockpile signs will be posted and maintained on all topsoil stockpiles. The signs will say "Topsoil Stockpile, Do Not Disturb".

RECEIVED

NOV 0 1 1991

DIVISION OF
OIL GAS & MINING

CHAPTER III

3.3.5.2 Fences and Gates

Fences and gates have been installed where needed for safety and/or security purposes.

The openings of all mines declared to be temporarily inactive, for more than 90 days shall be adequately fenced or posted with conspicuous signs prohibiting the entrance of unauthorized persons.

Shaft openings will be protected by a substantial fence or removable cover constructed to eliminate the possibility of humans or wildlife accidentally entering such openings when not in use.

All drill holes used for ground water monitoring will be capped with a metal cap when not in use.

3.3.5.3 Fire Protection

A fire truck is maintained by the town of Sunnyside for use by the Sunnyside Mines and the town of Sunnyside. Fire hydrants are strategically located around the mine complex on the surface. This also includes the stockpile/loadout area.

Fires in the coarse refuse dump or fines slurry storage area will be extinguished by the operator in accordance with a plan approved by MSHA (Figure III-1). Only those persons authorized by the operator, and who have an understanding to the procedures to be used, shall be involved with the extinguishing operations. Extinguishing operations include using dozers and scoops to remove material with open flames. The material will be spread and covered with 6" to 18" of non-combustible borrow material. Areas that are hot but not in open flame will be covered with 6" to 18" of non-combustible borrow material to seal off the air supply.

Fire protection as well as rock dusting underground must meet MSHA's regulations. Compliance is monitored by MSHA.

RECEIVED

NOV 01 1991

DIVISION OF
OIL GAS & MINING

CHAPTER III

3.3.5.4 Explosives

Storage, handling and use of explosives are all in compliance with MSHA's rules and regulations. The powder magazine (M 1) and detonator caps magazine (M 2) are located in Number Two Canyon (see Plate III-1 and the photographs in Section 3.7.1).

Explosives are used only sparingly at the Sunnyside operation, normally to free blocked chutes or storage bins. Concrete foundations, walls, and large rocks are also broken with explosives when required. Sunnyside Mines will comply with all state and federal laws regarding the use of explosives. Blasting operations will be conducted by personnel that are trained, examined, and certified by the Utah State Industrial Commission.

At the request of a resident or owner of a dwelling or structure located within one-half mile of any surface blasting activity, the Sunnyside operator will conduct a preblast survey of the dwelling or structure and promptly submit a report of the survey to the Division. The survey will comply with the specifications of UMC 817.62.

All residents or owners of dwellings and structures located within one-half mile of the area affected by surface blasting will be notified 24 hours prior to the surface blasting event. Blasting will be conducted between sunrise and sunset. Audible warning and all-clear signals with a range of at least one half-mile will be given prior to and after the blast. All persons working or residing within one-half mile of the blast area will be notified of the meaning of the signals.

Access to the blasting area and areas subject to flyrock from blasting will be restricted. Unauthorized personnel and livestock will be controlled to prevent their presence during blasting and until the area is cleared of slides, undetonated charges, or other unusual safety hazards.

Airblast will be controlled so that it does not exceed the values listed in UMC 817.65 (e)(1). Measurements of airblast will be taken when required by the Division.

Flyrock will not be cast from the blasting vicinity more than one-half the distance to the nearest dwelling or other occupied structure and in no case beyond the line of property owned or leased by the Sunnyside Mines operator.

Blasting will be conducted to prevent injury to persons, damage to public or private property outside the permit area, adverse impacts on any underground mine, or change the course,

RECEIVED

NOV 01 1991

DIVISION OF
OIL GAS & MINING

CHAPTER III

channel, or availability of ground or surface waters outside the permit.

Blasting will not be conducted within 1,000 feet of any building used as a dwelling, church, hospital, or nursing facility; and 500 feet of facilities including, but not limited to, disposal wells, petroleum or gas storage facilities, municipal water storage facilities, fluid transmission pipelines, gas or oil collection lines, or water and sewage lines.

Maximum weight of explosives that will be detonated within an 8-millisecond period is three (3) pounds. Maximum peak particle velocity will not exceed 1 inch per second at any dwelling, private building, school, church, commercial, or institutional building.

A record of each blast will be retained for three years and will be available for public inspection on request. The record will contain the name of the operator conducting the blast; location, date, and time; name, signature, and license number of blaster-in-charge; direction, distance in feet to the nearest dwelling, school, church, commercial, or institutional building; weather conditions, including temperatures, wind directions and approximate velocity; type of material blasted, number of holes, burden and spacing, diameter and depth of holes, type of explosives used, total weight of explosives used, maximum weight of explosives detonated within any 8-millisecond period, maximum number of holes detonated within any 8 millisecond period, initiation system, type and length of stemming, mats or other protection used, type of delay detonators or delay period, sketch of the delay pattern and number of persons in the blasting crew.

3.3.6 Operations Schedule

3.3.6.1 Annual Production Per Year For Permit Term

Total potential production during the permit period will be between 600,000 and 1,000,000 tons of clean coal per year, depending on marketing and mining conditions.

Total tonnage for the period 1989 through 1994 will be between 4.2 million and 7.0 million tons of run-of-mine coal. The average clean coal yield is estimated to be 78%.

RECEIVED

NOV 01 1991

DIVISION OF
OIL GAS & MINING

CHAPTER III

3.3.6.2 Operating Schedule

The normal operating schedule is 5 days per week. The long-wall will operate one shift per day and a continuous miner unit will operate two shifts per day. This schedule may change, depending on sales requirements.

Sunnyside Reclamation and Salvage, Inc., will notify the Division if a temporary cessation of operations extends beyond a thirty (30) day period. The notice of intention to cease mining activities will comply with UMC 817.131(b).

3.3.6.3 Employment

Total employment at the present time is 106 people.

3.4.1 Preservation of Land-Use

3.4.1.1 Projected Impacts of Mining on Current and Future Land Use

Land-use is primarily mining fish and wildlife habitat, limited grazing, and minimal cropland (see Sections 4.4.2 and 4.4.3). The land-use picture has not changed significantly and is not expected to deviate in the future.

There is no prime farmland within the permit area.

The operator will notify the Division by the fastest available means when any slide or surface failure occurs that may have potential adverse affects on the public, the property, the health, the safety, or the environment and comply with any remedial measures required by the Division.

3.4.1.2 Control Measures to Mitigate Impact

Control measures to mitigate impacts on present land-uses include steps to protect surface waters (Section 7.2.5), soil resources (Section 8.11), vegetation (Section 9.6), and fish and wildlife (Section 10.5).

RECEIVED

NOV 0 1 1991

DIVISION OF

CHAPTER III

3.4.2 Protection of Human Values

3.4.2.1 Projected Impacts of Mining on Human Values, Historical and Cultural

A historical and cultural resources survey of the Sunnyside Mines permit area by the Consulting Services Branch, Antiquities Section of the Utah Division of State History has revealed no previously recorded sites in the listings of the National Register of Historic Places. However, sixteen prehistoric or historic sites were recorded during the survey; ten of these are eligible for nomination to the National Register. (See Chapter V)

These sites have coexisted with the Sunnyside Mines for over ninety years and have not been deleteriously affected by the mining operation. Present and future mining are and will be at depths of 1,200 to 2,500 feet such that surface subsidence which may impact these resources, will be very unlikely.

3.4.2.2 Control Measures to Mitigate Impacts

At present, none of the recorded historic sites noted in Section 3.4.2.1 are in danger of adverse impact. All identified and unidentified historic sites will be avoided or, if disturbance is unavoidable, the site will be documented by a trained historian before disturbance. Protection or mitigation measures may range from documentation and excavation to total avoidance.

3.4.3 Protection of Hydrologic Balance

3.4.3.1 Projected Impacts of Mining on Hydrologic Balance

Water collected in the mine workings in surplus of the needs of the underground operation is pumped to the surface for use in coal preparation and irrigation. At times of low usage, any excess is added to the natural flow of Grassy Trail Creek subject to an UPDES permit. There is no gravity discharge of water from mine openings (see Section 7.1.4). Table III-21 shows all available mine water discharge data from 1978 through 1988 in acre-feet.



NOV 01 1991

DIVISION OF
OIL GAS & MINING

CHAPTER III

If waters are discharged from the mine workings after cessation of operations but prior to bond release, water quality samples will be taken on a quarterly basis in order to ensure State and Federal discharge standards are met. Analysis will be according to the surface operational parameter list in Table III-23. In the event of non-compliance with state or federal regulations, Sunnyside Mines operator will provide treatment to achieve compliance with applicable standards.

There have been some UPDES discharge parameters exceeded in the past on isolated occasions in regard to "oil and grease" and "total suspended solids". Corrective action was taken to obtain compliance (see Section 3.4.3.2).

A quantitative assessment of the hydrologic consequences of underground mining activities with respect to the hydrologic regime and the quantity and quality of water in surface and ground water systems is not possible because of the complexity of the surface and ground water system. Probable consequences of mining are introduction of surface or near surface water from the surficial joint and alluvial aquifers into the subsurface mine works in limited quantities (see Chapter VII and Chapter III for aquifers and subsidence). Water pumped from the mine shows higher dissolved and suspended solids, total iron, total manganese and elevated pH (Table VII-1 and VII-2). Water quality diminution is insignificant and the water continues to meet water quality standards set by the EPA, State Board of Health and DOGM.

Mining with the associated discharge of water has had a positive effect on the availability of water for irrigation, livestock and industrial use due to increased flows of water year round in Grassy Trail Creek. Table III-40 shows yearly flow data for Grassy Trail Creek at U.S.G.S gaging station 09314340 through October 2, 1984. The Grassy Trail Creek gaging station was taken out of service on that date.

Over ninety years of mining at the Sunnyside Mines has not caused any significant diminution of ground or surface water sources. Adverse effect of subsidence on surface waters is not expected (see Section 7.2.4).

The Sunnyside Mines operator will replace the water supply of an owner of interest in real property who obtains all or part of his or her supply of water for domestic, agricultural, industrial, or other legitimate use from an underground or surface source where the water supply has been affected by underground mining or surface contamination by the Sunnyside operator. To be replaced, the water supply must be considered unsuitable for use as outlined by State Board of Health, USDA, or other accepted industrial water quality standards. If the water supply is inter-

RECEIVED

NOV 01 1991

DIVISION OF
OIL GAS & MINING

CHAPTER III

3.2.10 Permit Term Disturbance Area

The Sunnyside permit contains 14,475 acres. The permit boundary is delineated on Plate II-1. A total of 313 acres have been disturbed. An additional 5.88 acres have been contemporaneously reclaimed in Slaughter Canyon. 23 acres of the disturbed area are excluded for permanent roads and right-of-ways. The remaining 290 acres are to be reclaimed (Table III-24).

3.2.11 Additional Areas for Surface Disturbance for Life of Mine

There are no new planned areas of disturbance during the permit term.

3.2.12 Detailed Construction Schedule

There is no new planned construction during the permit term.

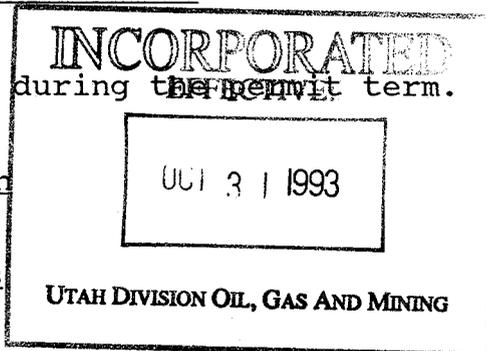
3.3 Operating Plans

3.3.1 Mining Plans

The Sunnyside coal property has been mined continuously since the late 1890's. Over sixty million tons of coal have been extracted during this period. Kaiser Steel Corporation leased the No. 2 Mine from Utah Fuel Company in 1942 to provide coking coal to the newly constructed steel mill at Fontana, California. In 1950, Kaiser Steel purchased the entire property. Since 1950, the major production areas have been shifted from the No. 2 Mine near the southeast boundary to the No. 1 Mine area to the northwest (see Plate III-3).

At the present time, the Sunnyside workings extend along the strike from the Columbia Mine northwestward to the boundary of the B Canyon Federal Lease a distance of approximately 6-1/2 miles. Workings down-dip from the outcrop have reached a maximum of 2-1/2 miles. Future workings will be further extensions down-dip (see Plate III-4).

The Sunnyside complex encompasses three mines, each with its separate ventilation, access and haulage systems. At present, the



CHAPTER III

Typical cross sections of each road and side ditch are located on Plate III-7.

Table III-2 lists roads and Table III-3 lists the specifications for the roads in the permit area. All of the roads existed prior to enactment of PL-95-87. No new roads are planned during the permit period.

A county owned road (extension of State Highway 123) traverses a portion of the permit area (see Plate III-1). Past mining, including full extraction of the coal seam, has not affected the road or its use by the public. Future mining planned under portions of the road is expected to have no effect on the road or its continued use by the public. There are no plans to relocate this or any other public road.

The roads in Fan Canyon, lower Water Canyon, and short access roads to the twin shafts and manshaft fan and ponds will be removed after the mine life. The remainder of roads are necessary for land access appropriate to the uses of fish and wildlife habitat, livestock grazing, and recreation. These roads are typically pre-law, occur on land owned by the Sunnyside Mines operator and provide access to the rodeo grounds, Grassy Trail Reservoir, water treatment facility, tar sands deposits, and private owners outside the permit area.

Roads will be maintained according to UMC 817 road performance standards throughout the life of the facility and during the 10-year responsibility period. Maintenance will consist of basic custodial care to control erosion, repair of structures and drainage systems, removal of debris from culverts and ditches, and replacement of road surface material as needed.

The transportation facilities will be restored at the end of the mine life to prevent damage to fish, wildlife, and related environmental values, as well as to prevent additional contributions of suspended solids to stream flow or runoff outside the permit area.

3.2.10 Permit Term Disturbance Area

The Sunnyside permit contains 14,475 acres. The permit boundary is delineated on Plate II-1. A total of 310.0 acres have been disturbed. Of the disturbed acres, 5.88 acres have been contemporaneously reclaimed in Slaughter Canyon, 6.81 acres Sunnyside City responsibility and 22.64 acres are excluded for permanent roads and rights-of way. The remaining 289.36 acres are to be reclaimed (Table III-24).

RECEIVED

NOV 0 1 1991

DIVISION OF
OIL GAS & MINING

CHAPTER III

3.2.11 Additional Areas for Surface Disturbance for Life of Mine

There are no new planned areas of disturbance during the permit term.

3.2.12 Detailed Construction Schedule

There is no new planned construction during the permit term.

3.3 Operating Plan

3.3.1 Mining Plans

The Sunnyside coal property has been mined continuously since the late 1890's. Over sixty million tons of coal have been extracted during this period. Kaiser Steel Corporation leased the No. 2 Mine from Utah Fuel Company in 1942 to provide coking coal to the newly constructed steel mill at Fontana, California. In 1950, Kaiser Steel purchased the entire property. Since 1950, the major production areas have been shifted from the No. 2 Mine near the southeast boundary to the No. 1 Mine area to the northwest (see Plate III-3).

At the present time, the Sunnyside workings extend along the strike from the Columbia Mine northwestward to the boundary of the B Canyon Federal Lease a distance of approximately 6-1/2 miles. Workings down-dip from the outcrop have reached a maximum of 2-1/2 miles. Future workings will be further extensions down-dip (see Plate III-4).

The Sunnyside complex encompasses three mines, each with its separate ventilation, access and haulage systems. At present, the bulk of the production comes from the No. 1 Mine. The No. 2 Mine in the southwestern portion of the property has not been mined since 1973. The No. 3 Mine is in the central part of the property and will be active during portions of the permit period.

RECEIVED

NOV 0 1 1991

DIVISION OF
OIL GAS & MINING

CHAPTER III

3.3.1.1 Orientation and Multiple Seam Considerations

There are two mineable seams present in certain areas of the property. Only one seam is mined because of the lack of sufficient interburden. See Figure VI-2 in Chapter VI (Geology).

The Upper Sunnyside seam, ranging from 4 feet to 7 feet in thickness is found in the No. 2 and No. 3 Mine area. Work in the No. 3 Mine is exclusively in the Upper seam. This Upper seam thins to an unmineable thickness in the No. 1 Mine area and all mining is done in the Lower Sunnyside seam. This seam ranges from 5.5 feet to 12 feet in the No. 1 Mine, from 5 feet to 7 feet in No. 3 Mine, and from 6 feet to 10 feet in the No. 2 Mine. Separation between the seams lessens towards the southeast and is less than five feet at the property boundary adjoining the Columbia Mine. In the northwesterly portion of the No. 1 Mine, a rock split separates the Lower seam into two seams, each approximately 6 feet in height.

Much of the initial work by previous operators was done in the Upper Sunnyside because of better roof conditions and coal quality. Extraction in those early days was erratic and created poor mining conditions in the Lower Sunnyside seam. The advent of longwall mining, with its almost complete extraction, has enabled lower seam mining to be accomplished with a much greater degree of success.

3.3.1.2 Mining Methods

Initial mining at Sunnyside Mines was by hand methods (pick and shovel, hand drilling and blasting, and hand loading) and conveying by horses and mules. Since these early days, the Sunnyside operations have utilized practically every type of equipment developed for the mining industry. During the 1950's, continuous miners replaced the cutting machines, face drills, and pick-up loaders. Longwall mining was introduced by Kaiser Steel in 1961 and the Sunnyside operation was among the first coal mines in the United States to use this technique.

Longwall mining presently accounts for 65 to 80 percent of the coal produced by the Sunnyside Mines. The remaining production comes from continuous miner sections developing future longwall panels or pillaring isolated areas not suitable for longwall mining.

The advent of longwall mining utilizing hydraulically operated, self-advancing support systems has enabled operators to in-

RECEIVED

NOV 01 1991

DIVISION OF
OIL GAS & MINING

CHAPTER III

rupted or diminished by underground mining or surface activities, the water supply will be replaced. The owner of interest in real property must prove water quality and or quantity previous to the contamination, diminution or interruption of the water supply to be eligible for replacement.

Water leaving alternate sediment control areas (ASCA) will be handled as indicated on Table III-50 (see 8 1/2" X 11" map attachments to Table III-50 and Plate III-1 for locations). Plate III-34 shows the methodology used to install silt fences.

3.4.3.2 Control Measures to Mitigate Impact

Water discharged from the mine into Grassy Trail Creek or the Icelander drainage will meet all State and Federal water quality standards. The water is ponded to settle suspended solids and to enhance the separation of oil and grease. Oil and grease is trapped in the pond by using a "skimmer" on the discharge (see Appendix III-1).

Water leaving a disturbed area will pass through silt fences when the area is very small (see Plate III-33(1-7) and Plate III-1 for locations). Plate III-34 shows the methodology used to install silt fences. A rock gabion will be used with a silt fence at the No. 1 Mine Outcrop fan site to slow water velocities.

To prevent possible erosion, the culvert discharges and ditches inside the disturbed area will be inspected by the operator for erosion problems three (3) times annually - spring, summer, and fall. Erosion problems will be noted in a log kept at the mine site. After logging the problem, the operator will have thirty (30) days in which to correct the problem with rip rap, concrete, U.V. resistant plastic or other protective channel liners. Plate III-36 shows protective measures for culvert inlets.

Where erosion problems in clear water diversion ditches are shown to be possible or discovered by an inspection, the ditch will be lined with anchored rip rap, concrete, U.V. resistant plastic or other protective channel liners for the full depth of the ditch. Plate III-35 shows typical placement methodology.

RECEIVED

NOV 01 1991

DIVISION OF
OIL GAS & MINING

CHAPTER III

Over ninety years of mining at the Sunnyside Mines has not caused any significant diminution of ground or surface water sources. Adverse effect of subsidence on surface waters is not expected (see Section 7.2.4).

The Sunnyside Mines operator will replace the water supply of an owner of interest in real property who obtains all or part of his or her supply of water for domestic, agricultural, industrial, or other legitimate use from an underground or surface source where the water supply has been affected by underground mining or surface contamination by the Sunnyside operator. To be replaced, the water supply must be considered unsuitable for use as outlined by State Board of Health, USDA, or other accepted industrial water quality standards. If the water supply is interrupted or diminished by underground mining or surface activities, the water supply will be replaced. The owner of interest in real property must prove water quality and or quantity previous to the contamination, diminution or interruption of the water supply to be eligible for replacement.

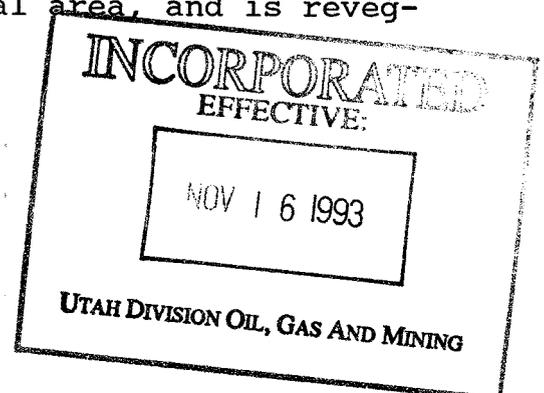
3.4.3.2 Control Measures to Mitigate Impact

Water discharged from the mine into Grassy Trail Creek or the Icelander drainage will meet all State and Federal water quality standards. The water is ponded to settle suspended solids and to enhance the separation of oil and grease. Oil and grease is trapped in the pond by using a "skimmer" on the discharge (see Appendix III-1).

Surface runoff from most areas is directed to sediment ponds.

Runoff from the remaining small disturbed areas, called BTCA areas, use sediment controls other than ponds. Runoff from such areas will pass through sediment control measures including, but not limited to silt fences, straw bales, and vegetative filters (Table III-50). Plate III-1 and Plate III-33 (1-12) show locations of BTCA areas. Plate III-34 shows the methodology used to install silt fences. A rock gabion will be used with a silt fence at the No. 1 Mine Outcrop Fan site to slow water velocities.

The Fan Canyon BTCA area addressed in DO 93A is shown on Plate III-33 (7 of 12). The area is pre-law disturbed, with material placed there during the construction phase of the portals. The area is across the channel from the portal area, and is reveg-



CHAPTER III

etated. Presently, SCC has no plans to use this material in its reclamation operation due to its location. In the event there is a change in plans which includes the use of this material, an amendment to that effect will be submitted to the Division.

The Central Metering Station at the southern end of the permitted property is controlled by BTCA practices. Refer to Appendix III-16.

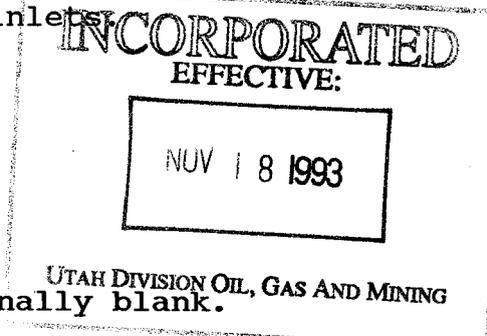
The Twinshafts Mine Water Topsoil Pile located by Grassy Trail Creek in Whitmore Canyon at the upper end of the permitted property is controlled by BTCA practices. Refer to Appendix III-16.

The 46 KV Powerline Corridor from Central Metering Station to the Hillside Substation is exempted from sediment control practices as discussed in Appendix III-16.

The topsoil stockpiles associated with the Clearwater Pond, Railcut Pond and SCA's Access Road are located outside of areas which drain to sediment ponds. These piles are classified also as BTCA areas and are identified in Table III-50. The sediment control method is primarily based upon the berm surrounding the stockpile acting as a containment for the sediment. The vegetative cover on the stockpile also controls the amount of sediment. Appendix III-16 contains the information supporting the use of these BTCA practices.

The pad above the Twin Shafts has been investigated and has been determined not to be a BTCA area because it is pre-law. The No. 2 Canyon area beneath the clean coal stock pile belt has been covered with arches.

To prevent possible erosion, the culvert discharges and ditches inside the disturbed area will be inspected by the operator for erosion problems three (3) times annually - spring, summer, and fall. Erosion problems will be noted in a log kept at the mine site. After logging the problem, the operator will have thirty (30) days in which to correct the problem with rip rap, concrete, U.V. resistant plastic or other protective channel liners. Plate III-35B shows protective measures for culvert inlets.



The remainder of this page left intentionally blank.

CHAPTER III

Where erosion problems in clear water diversion ditches are shown to be possible or discovered by inspection, the ditch will be lined with anchored rip rap, concrete, U.V. resistant plastic or other protective channel liners for the full depth of the ditch. Plate III-35 shows typical placement methodology.

Coal fine deposition in the No. 2 Canyon Channel from the washed coal pile between the Twin Tanks and the No. 2 Canyon wash is prevented by the construction of the arches in the No. 2 Channel. (See Figure III-14.)

Normal operation of the wash plant for processing the alternate coals starts with loading the coal into the raw coal bins for overnight storage. The following morning the alternate coal is processed, prior to the washing of any Sunnyside Mine coal. This avoids commingling of the coals. During the morning hours, the winds blow down canyon, further preventing the possibility on contaminating the No. 2 Canyon Channel with wind borne coal fines.

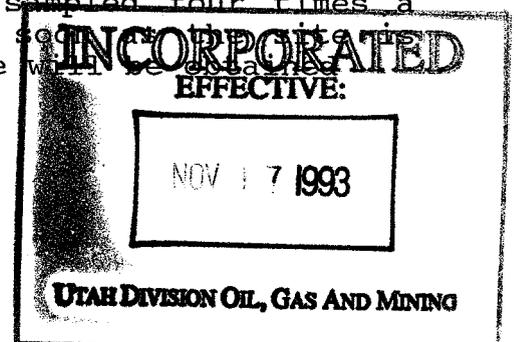
3.4.3.3 Monitoring Procedures to Measure and Control Impacts

Quality of water discharged from the mine is monitored on a monthly basis as prescribed in the UPDES discharge permit. Water samples are analyzed for surface operational parameters. Sampling parameters are located in Table III-23. Discharge Monitoring Reports are sent monthly to EPA, State Board of Health and DOGM. All water information is submitted quarterly to DOGM.

Water discharged from the sediment ponds are sampled for surface operational parameters while the ponds are being decanted. Any sample exceeding standards on discharge are reported to the State Board of Health and DOGM.

Perennial stream monitoring stations (GT-1, GT-2, GT-3, GT-4, ICE-1, ~~and CRB~~) are monitored monthly for flow and field measurement parameters, and quarterly for water quality. Ephemeral stream monitoring station parameters are monitored monthly for flow, field, and quality measurements for WC-1, BC-1, POC-1, PAC-1, and N2C-1. Field and quality operational parameters are shown in Table III-23. Locations of the monitoring stations are found on Plates III-1 and VII-3.

Springs WR-1, WR-2 and PC-1 will be sampled four times a year. The first sample will be taken as soon as the spring is accessible in the spring and the last sample will be taken as late as possible in the fall.



CHAPTER III

3.4.5 Protection of Vegetative Resources

3.4.5.1 Projected Impacts of Mining on Vegetative Resources

The Sunnyside Mines have been in operation from the end of the nineteenth century. The majority of the impacted vegetation was disturbed prior to the present resources protection laws. Past and future disturbances will account for 2.8 percent of the permit area vegetation.

3.4.5.2 Mitigating Measures to be Employed To Reduce Impacts on the Vegetative Resources

During any construction activities, surface disturbance will be confined to as small an area as feasible and equipment operators will be instructed to disturb as little vegetation as possible.

Federally listed threatened or endangered plant species are not located near or will not be jeopardized by any coal mine developments. No unique or critical germ plasm will be lost.

The intensive vegetation survey conducted in summer 1981 characterized the vegetation types that have been disturbed by mining activity. From the survey information, seed mixtures have been devised to aid re-establishment of several plant communities, capable of protecting the soil resource from erosion and developing through plant and soil succession (Section 3.5.5.2).

3.4.5.3 Monitoring Procedures, Reference Areas And Revegetation

Reference areas and revegetated areas will be monitored according to the methods discussed in Section 9.8.

3.4.6 Protection of Fish and Wildlife

Mining activity has occurred in Whitmore Canyon for the past ninety years. Some activities have been deleterious to wildlife resources, but in the time frame of mining activity, most affected populations have reached an equilibrium with their altered environment.

RECEIVED

NOV 01 1991

DIVISION OF
OIL GAS & MINING

CHAPTER III

Recent environmental laws, e.g. the National Environmental Policy Act, have heightened the awareness of the lay public to the problems and needs of wildlife. While it is too late for some remedies, problems encountered during the ongoing operations will be addressed promptly. The prevention of problems will be the objective and this will be accomplished by including wildlife resources in the planning process.

3.4.6.1 Projected Impacts of Mining on Fish and Wildlife

The ongoing operations have altered the environments of local aquatic and terrestrial faunal communities, e.g. mine water discharge and noise pollution. Unless problems arise, the environments will continue in their altered state until mining operations cease.

3.4.6.2 Mitigating Measures to be Employed to Protect Fish and Wildlife

All disturbed sites no longer needed for mining operations will be reclaimed according to current reclamation standards. The reclamation techniques and seed mixtures are designed to have the capability to support the post-mining land uses of wildlife habitat and grazing land.

The water quality of Grassy Trail Creek will be monitored during the life of the mine. Corrective measures will be undertaken if perimeters exceed limits set in state and federal standards.

3.4.7 Protection of Air Quality

3.4.7.1 Projected Impacts of Mining Operation on Air Quality

Air pollution sources come from two coal fired low pressure steam boilers, and fugitive dust from the coal stockpile and unpaved roads.

RECEIVED

NOV 01 1991

DIVISION OF
OIL GAS & MINING

CHAPTER III

3.4.7.2 Mitigating Measures to be Employed to Control Air Pollutants

The main roads and parking areas are paved. Chemical dust suppressants and/or water are applied during dry periods to control fugitive dust.

3.4.7.3 Air Quality Monitoring Plan

A weather station is located at the Sunnyside Town Hall.

No air quality monitoring devices are in use. The coal-fired boilers are inspected periodically by the Utah Department of Health, Bureau of Air Quality.

3.4.8 Subsidence Control Plan

Subsidence is expected to occur over much of the permit area as a result of controlled caving during the mining process. For economic and safety reasons, full extraction is required during mining. If a surface feature must be protected from subsidence, the area under the feature is not mined or partially mined depending upon depth of cover.

Visual surface mapping surveys for subsidence features over the Sunnyside Mine workings were made by the U.S. Geological Survey (Osterwald, 1962). Evidence of subsidence was found primarily in one area located on the steeply rising east wall of Whitmore Canyon, between the office complex and the mouth of Pasture Canyon. This is consistent with a later U.S. Geological Survey report which states that most subsidence cracks are formed on spurs or noses above mine workings and tend to be subparallel to joints. Joint orientation controls alignment of subsidence cracks because many en echelon subsidence cracks closely parallel joint trends (Mayberry, 1971, p. 3). The regional joint pattern is characterized by two major sets of joints at nearly right angles to each other, striking N. 75°-85° W. and N. 12°-20° W. (Osterwald and Eggleton, 1958, p. 13; Maberry, 1968, p. 9).

The subsidence base net was surveyed in August 1988 to determine the vertical extent of subsidence in the area that is monitored. Four monuments were installed before the being mined under(S-1 through S-4 on Table III-28). Three of the points have stabilized at 2.5 feet of subsidence. The fourth point seems to have stabilized at 1.76 feet of subsidence. The subsidence is

RECEIVED

NOV 01 1991

DIVISION OF
OIL GAS & MINING

CHAPTER III

less than the 3.5 feet predicted in Figure 3 of the Subsidence Engineer's Handbook for a 550' wide coal face and 1,050 feet of overburden. The lower than predicted subsidence might be accounted for by the geologically massive 150-foot thick Castlegate Sandstone that is about 200 feet above the Upper Sunnyside seam (see Figure IV-1). Plate III-38 shows the thickness of the Castlegate Sandstone beneath and adjacent to Grassy Trail Creek. The Castlegate Sandstone may limit the vertical extent of the cave and reduce the total amount of subsidence that is seen. Damage on the surface is reduced as evidenced by finding and mapping less than 35 acres with surficial subsidence cracks when over 4,000 acres were mined under at the time of the survey (Osterwald, 1962). The full extent of subsidence will be measured as the net is periodically monitored.

Wild T-2 1-second theodolites, TopCon EDM, and a Zeiss self-leveling level are used to measure subsidence movement. Twenty five permanent subsidence monuments (S-10-00 through S-10-25) were established in Whitmore Canyon from the mouth of Bear Canyon going north along the creek. One of the monuments, S-10-12, was destroyed by construction work. Monuments S-10-14 through S-10-25 have had an initial elevation control survey run but will not be included in the annual survey until mining approaches within 1500 feet of the monument. Ten permanent subsidence monuments (S-1 through S-010) are located upstream in Bear Canyon from the Bear Canyon drainage intersection with the Whitmore Canyon road. The monitoring points are set at approximately 500 foot centers within 150 feet of the creek. When mining activities are within 1500 feet of Grassy Trail Dam, 5 additional monuments will be added to the survey net. Results of the annual survey in August, along with a subsidence point location map, will be submitted to the Division within 30 days of the survey. The monuments are 6 foot long roof bolts driven 5.5 feet into the ground. Elevation accuracies are ± 0.2 feet.

Features possibly affected by subsidence over the coal seam are aquifers and their recharge areas, grazing lands, wildlife habitats, a perennial stream, surface structures, and cultural resources. Effects of subsidence on each and mitigation, if needed, are covered below.

Surficial alluvial joint aquifers overlies part of the permit area (see Chapter VII). These are located in north facing slopes and at the head of canyons covered with deep soils. Recharge occurs primarily from melting snow pack. Past mining in an area with overburden ranging between 500 feet to 2000 feet between Pasture Canyon and Fan Canyon to the south from 1915 to 1965 was under surficial aquifers and recharge areas. There is little or no inflow from these mined out areas into the mine at the present time. Springs and seeps presently flowing in this area

RECEIVED

NOV 0 1 1991

DIVISION OF
OIL GAS & MINING

CHAPTER III

are of good quality (see Chapter VII). Lack of quality and quantity data before mining took place prevents the actual comparison with present data. However, no evidence can be seen that the aquifer or recharge area were damaged by mining. Future mining and related subsidence should not cause material damage or loss of use of the aquifers or areas of recharge if overburden is over 500 feet. Flow of surface and underground water will be monitored to provide actual measurements of impacts of mining on these resources (see Chapter VII).

If the springs and aquifer recharge areas are damaged by mining, the Sunnyside Mines operator will restore or rehabilitate the resource to the extent technologically and economically feasible.

Water rights will be replaced as described in Section 3.4.3.1 of the permit, if necessary. No specific replacement plan can be formulated because the unpredictability of the location and extent of possible damage.

The Soil Conservation Service (SCS) made an inventory of grazing lands on Sunnyside Mines properties in 1976 and again in 1983, finding most of the area is very steep and yields only marginal grazing potential. Estimated Animal Unit Months (AUM's) is around 400. From the on-site investigation, it was felt that the range was being properly used and there were no signs of over stocking as of August 17, 1983 (Don Andrews, Range Conservationist, SCS). Visual surveys for subsidence by Osterwald, 1962 showed most evidence of subsidence in areas of steep slopes and on ridge tops where little grazing can take place. These areas are not critical for grazing and therefore mining will not cause material damage or loss of use of grazing areas.

If mining causes damage or loss of grazing, the Sunnyside Mines operator will restore or rehabilitate the resource to the extent technologically and economically feasible. The Sunnyside Mines operator will also provide the owner or lessor of those rights with pasture ground or an equivalent monetary value until such time that the damage is corrected.

Wildlife habitats found in the permit area (see Chapter X) that could be affected by mining are raptor nesting areas and a Class 3 put-and-take fishery on Grassy Trail Creek. Raptor nesting areas are primarily in cliff areas that can be affected by subsidence by spalling of the face and destruction of the nest or roosting area. Plate X-1 shows the locations of past recorded Golden Eagle nests in the permit area which are on the west facing slopes of the Book Cliffs. All future mining will be 1.5 miles to the east or down dip of the nest locations. Therefore future mining will not cause damage or loss of use of raptor

RECEIVED

NOV 01 1991

DIVISION OF
OIL GAS & MINING

CHAPTER III

nesting areas. If new nests are established over present or future mining areas, the operator will consult with the Division, USFWS and UDWR concerning mitigation. The operator will comply with the resultant mitigation plan.

The Class 3 put-and-take fishery on Grassy Trail Creek is located over present and future mining areas (see Plate III-3). Past mining under two miles of Grassy Trail Creek in areas of lower cover (500-1500 feet) have not resulted in ponding or draining of the creek. From historical effects of mining under the creek it can be concluded that future mining under deeper cover (1500-2500 feet) will not cause damage or loss of use of the fishery or water flow in the creek. Present plans are to continue full extraction under Grassy Trail Creek. Physical and visual surveys along the creek will be made to detect disturbance. If increased inflows into the mine show up in water monitoring or surface disruptions of the creek take place, the operation will consult with the Division and UDWR concerning mitigation and will to the extent technologically and economically feasible, restore the resource.

Mining has occurred under all inventoried cultural resources. The historical report in Chapter V states that subsidence will not cause damage to present sites. No mitigation is needed.

All present structures within the permit area over the coal seam are protected by barrier pillars, areas of limited extraction, or were constructed after mining took place; with exception of Grassy Trail Reservoir, Reservoir Road, Pasture Canyon Road, Manshaft Road and the Number Two Canyon Road. Historically, roads have been mined under with no visual or physical damage. Future mining under deeper cover will not cause material damage to the use of the roads.

If there is material damage to the roads, the Sunnyside Mines Operator will repair or restore them to the extent technologically and economically possible after consultation with the owner of the road and the Division. Detailed mitigation plans cannot be formulated because of the unpredictability of the location and extent of possible damage.

Grassy Trail Reservoir is located approximately 2000 feet over the coal seam at the Right and Left Forks of Whitmore Canyon. Disruption of the earthen structures is possible due to tension cracks and other displacement features. For this reason, no mining will be allowed under the reservoir (see Plate III-3). Using an angle of draw of 20° (personal communication - Boyd McKean, BLM), subsidence of the reservoir was calculated as

RECEIVED

NOV 01 1991

DIVISION OF
OIL GAS & MINING

CHAPTER III

follows (see Figure III-6 for graphical display of the calculation and Plate III-3 for plan view of the barrier.)

Up-Dip Subsidence Barrier

$$2000' \times \tan (20^{\circ}) = 727.94'$$

$$\frac{727.94 \times \sin (70^{\circ})}{\sin (105.4^{\circ})} = 709.52'$$

$$709.52 \times \cos (4.6) = \underline{707.23'}$$

Down-Dip Subsidence Barrier

$$2000' + \tan (4.6^{\circ}) \times 1400' = 2112.64'$$

$$\tan (20^{\circ}) \times 2112.64 = 768.94'$$

$$\frac{768.94 \times \sin (4.6^{\circ})}{\sin (110^{\circ})} = 65.63'$$

$$768.94 + 65.63 \times \sin (20^{\circ}) = \underline{791.39'}$$

The operator will notify each owner of property or resident within the area above underground workings and adjacent areas that could be affected by subsidence by mail six months prior to mining of the area. The notice will contain specific areas in which mining will take place, dates of the underground operations and measures taken to prevent or control adverse subsidence effects.

3.4.9 Waste Disposal Plans

During December 1987, the slurry and coarse refuse area was sold to Sunnyside Fuel Corporation. The company intends to use the low grade fine coal and coarse refuse as a fuel in a cogeneration power plant.

The slurry (refuse) ponds (D 1.1 and D 1.2) and coarse refuse disposal areas (D 2a and D 2b) are shown on Plate III-1 and in photographs in Section 3.7.1. Plate III-5 represents a more detailed plan and cross-section of the coarse refuse disposal facility.

RECEIVED

NOV 01 1991

DIVISION OF
OIL GAS & MINING

CHAPTER III

3.4.9.1 Projected Impacts of Disposal Areas on the Environment

(a) Coal slurry refuse

Coal slurry, a mixture of coal fines and water from the preparation plant is transported in an open ditch to three slurry settling ponds. Two of the settling ponds (SP1 and SP2) use a dike of coke breeze coarse refuse to filter the effluent before discharging into the third pond (Clear Water Pond). Final settling is completed before discharge through UPDES discharge point 004 into Icelander drainage or onto adjacent alfalfa fields. If both of the settling ponds are full, the old East Cell Slurry Pond (ESC) is used as an alternate evaporation location. Use of ESC is limited.

SP1 and SP2 are alternately filled and allowed to drain and dry. The dried coal fines are removed from SP1, SP2, and ESC by loader and trucks and stacked on the west side of the old West Cell Slurry Pond (WSC). A dozer spreads and compacts the coal fines.

WSC was the first slurry impoundment to be constructed. In the late 1950's, coarse refuse and borrow were used as fill material to block a wash at the mouth of Whitmore Canyon above Icelander drainage. As the level of slurry increased, additional coarse refuse was added to the top and sides of the impoundment. WSC was used until 1975 when ESC was constructed. SP1 and SP2 were constructed in 1978. The present slurry depth in WSC is over 200 feet above the bottom of the wash.

The East Slurry Cell was constructed by placing coarse refuse as dikes to contain the fine refuse. The dikes were compacted during placement and covered with borrow material. A geotechnical evaluation of the ESC embankment was completed (See Appendix III-7) which indicated a factor of safety of 0.5 for a saturated embankment. Subsequent field tests and installation of piezometers indicated that the embankment was not saturated.

Design and construction of the slurry ponds was pre-law and some of the design standards are deficient. A geotechnical evaluation and alternate construction methods to meet current standards was completed and results are found in Appendix III-7.

The Sunnyside Mines operator plans to reactivate WSC as soon as a second geotechnical evaluation is completed that evaluates the work that has been done to bring the impoundment into compliance with UMC 817.92-93. The operating plan and evaluation will be presented to DOGM and MSHA prior to reactivation.

RECEIVED

NOV 0 1 1991

DIVISION OF
OIL GAS & MINING

CHAPTER III

All surface drainage above ESC, WSC, and the coarse refuse embankment is diverted away from embankments by stabilized diversion channels designed to pass a 100-year, 24-hour precipitation event (Plate III-27). Calculations are found in Appendix III-1.

Visual inspections are conducted weekly by a certified impoundment inspector, qualified registered professional engineer or someone under his supervision to assess the stability of the impoundments and determine the amount of seepage if present. Piezometers installed in the East Slurry Cell embankment will be monitored weekly when water is present in the structure to assess the amount of embankment saturation. Records of the inspection findings and recommendations will be maintained at the mine site. If the inspection discloses that potential hazards exist, the Division will be informed promptly of the findings, the emergency procedures formulated for public protection, and remedial action measures that will be implemented.

Maintenance of the embankments will consist of filling and grading any erosion or other failure features discovered by weekly inspections.

Subsidence, mudflows, and landslides are not a problem because of the location of the embankments. Possibility of failure below the embankments is limited to thin layers of colluvial material on bedrock that would not threaten the embankments.

Reclamation of the slurry cells should pose little problem because the slurry material can be driven over after the material has dried for a short period of time.

(b) Coarse refuse

Coarse refuse or reject from the preparation plant is disposed of in a coarse refuse waste embankment. The refuse is hauled by truck from the refuse loadout at the preparation plant to the coarse refuse pile (Plate III-1) where it is end dumped in piles. When sufficient material has been hauled to the dump, the refuse is spread out in a 36-inch horizontal layer by a dozer. Loaded haul trucks transporting the next layer of refuse randomly compact the previous surface to prevent fires and increase the stability of the structure. The outer slope of the refuse pile is maintained at a 27 degree slope (see Plate III-5). At 50 feet vertical increments, a 20-foot wide terrace is constructed for water runoff and erosion control. A geotechnical study was completed on the coarse refuse embankment and results compiled in Appendix III-1.

RECEIVED

NOV 01 1991

DIVISION OF
OIL GAS & MINING

CHAPTER III

After the coarse refuse bank is completed, the surface will be covered with a minimum of 4-feet of non-toxic and non-combustible borrow material from nearby borrow pits. Vegetation will be planted to minimize surface erosion. Test plots are being used to determine the minimum soil depth required to revegetate the refuse pile (see Section 3.5). If results show that less than 4-feet of material can be used, the operator will request the amount of cover be reduced and the amount of bond reduced accordingly.

Surface drainage from the waste bank area is handled by ditches D1 - D5 and then discharges into the Railcut Pond ditch (areas and ditches are shown on plate III-40, Map D4-0174). These ditches have been designed to remain stable while passing the runoff of a 100 Year 6 Hour storm event (The ditch calculations and summary are shown in Appendix III-1). The runoff calculations shown in Appendix III-1 are based on a conservative curve number (CN) and are derived from OSM watershed model, Storm version 6.2. From observations, testing and history the amount of runoff may well approach zero for each terrace with the rainfall being absorbed by the refuse material in the first few feet of depth and then subsequently evaporated.

At each terrace, the junction of the ditches and the terrace will be protected with a soil fabric and rip rap (see cross section on Plate III-40, Map D4-0174).

The coarse refuse pile will be visually inspected on a quarterly basis by a qualified, registered professional engineer for appearances of instability, structural weakness and other hazardous conditions which could indicate potential failure. The annual inspection usually coincides with the fourth quarter inspection. The results of the inspection will be promptly submitted to DOGM and maintained at the mine site. If any inspection discloses that a potential hazard exists, the Division will be informed immediately.

Maintenance of the embankments will consist of filling and grading any erosion or other failure features discovered during weekly inspections. Ditches on the terraces will be cleaned and graded as needed. Rip rap in the drainage system will be repaired as needed.

Subsidence, mudflows, rock debris falls, or landslides are not expected to be a problem because of the topographical location. Possibility of failure below the embankments is limited to thin layers of colluvial material on bedrock that would not threaten the embankments.

RECEIVED

NOV 0 1 1991

DIVISION OF
OIL GAS & MINING

CHAPTER III

(c) Return of coal processing waste to underground workings

No coal processing waste is to be returned to abandoned underground workings during the permit period.

In the late 1950's and early 1960's a backfill plant was constructed to crush a portion of the preparation plant reject and pump the reject underground to fill air courses that were no longer needed and to fill voids above yieldable arch installations. Approximately 700,000 tons of material were pumped underground. The backfill equipment (crushers, screens, rod mill, pumps, etc.) have been removed and the building is now used as a warehouse for preparation plant equipment and materials. The backfilling was done to stabilize main access and ventilation entries and to lessen the occurrence of bumps in such areas.

(d) Underground development waste

The bulk of underground development waste generated by the mining operation at Sunnyside Mines is disposed of in mined-out areas underground. If the rock waste shows unacceptable levels of acidity or toxicity, the rock waste will be mixed with acceptable waste to achieve overall acceptable levels of acidity or toxicity, or hydrologically isolated from the rest of the mine with solid block seals. The operator will submit a map to the Division showing where the material will be placed and the locations of the block seals.

Any underground development waste not disposed of underground will be placed in the coarse refuse pile with the coal processing waste. There is no separate disposal structure for the underground development waste on the surface.

Each geological stratum above and below the coal seam to be mined has been tested for SAR, pH, boron, and acid-base potential (see Section 6.6.3.2 and Table 6.2). Adverse levels for SAR, pH, boron and acid-base potential are defined as: SAR values greater than 10, pH less than 5 or greater than 9, boron greater than 5 PPM, and acid base potential less than -5 tons CaCO₃ equivalent per 1000 tons material.

(e) Industrial waste

Non-coal waste is disposed in the East Carbon City landfill or the industrial waste dump.

Material placed in the industrial waste dump is primarily reject from the rotary breaker such as timbers, empty cans or other non-coal waste that comes out on the mine belt. The industrial waste dump has been approved by the State Board of Health



NOV 0 1 1991

DIVISION OF
OIL GAS & MINING

CHAPTER III

(Figure III-2). It is located at the northeast end of the East and West Slurry Pond Cells of the refuse disposal area (Plate III-1). The dump was constructed and is used by excavating a trench, compacting the sides and bottom for a water barrier, filling the trench with non-coal waste and then covering the waste with a minimum of two feet borrow material.

The present industrial waste location has one to two years additional capacity. The operator will submit a new location to DOGM for approval after a new site has been located.

All other non-coal waste is sent to the East Carbon City landfill for disposal. The Authorization letter from East Carbon City (Figure III-7) allows the operator use of their landfill for disposal of non-industrial wastes.

3.4.9.2 Control Measures to Mitigate Impacts

Based on the characteristics, handling and disposal of various waste products discussed in Section 3.4.9.1 above, the impact of the environment is expected to be minimal.

The slurry refuse does not go into the hydrologic system.

The coarse refuse is covered with non-combustible waste material and compacted to eliminate ignition effect, if any, on the surface.

No additional waste facilities are planned, since the existing structures should have sufficient capacity to last throughout the proposed permit period.

3.5.1 Reclamation Plan

The reclamation and revegetation plans are designed to return the disturbed lands to productive uses once mining activities have ceased. These post-mine land uses will be the same as the current and pre-mine uses, i.e., fish and wildlife habitat, recreation, and livestock grazing.

The majority of the areas were disturbed prior to the Coal Mine Reclamation Act of 1977. The affected acreage of all disturbed areas is minimal. Because topsoil was not saved prior to the Act, many of these areas will be revegetated without topsoil. Although the plans utilize state-of-the-art reclamation

RECEIVED

NOV 01 1991

DIVISION OF
OIL GAS & MINING

CHAPTER III

methods, these plans will be revised as new materials and techniques become available.

Site stabilization and erosion control will be obtained through application of the reclamation and revegetation procedures described in Chapters III, VIII and IX. All of the techniques described are proven techniques, either through the operators' experience or from the literature.

3.5.1.1 Contemporaneous Reclamation

Contemporaneous reclamation has been ongoing at Sunnyside for many years. Although written records were not kept, we do know that plantings of crested wheatgrass began in the late 1950's. The streambanks have been reseeded along channelized sections of Grassy Trail Creek, areas adjacent to roads and vacant areas next to buildings.

Variations in the coal market constantly affect the rate and occurrence of mining activities, therefore it is not practical or possible to present a specific timetable for most reclamation activities. Very few contemporaneous reclamation activities are scheduled during this permit term. No final reclamation is planned at the end of the five year permit term. Timing of all reclamation activities will generally follow the sequential schedule presented in Table III-42. The revegetation process will be most successful by adhering to the revegetation schedule in Table III-26.

Areas adjacent to any future disturbances will be revegetated as part of contemporaneous reclamation. Contemporaneous reclamation includes:

(1) Slaughter Canyon Portal Area portal (P 19,) which provided access to the outside raise areas of the No. 1 Mine (Plate III-4) and the adjacent materials storage facility was not needed after early 1981. The portal was sealed in 1982 according to MSHA regulations. The portal and road area were both revegetated in 1983 according to the plan submitted to and approved by DOGM (Appendix III-4).

(2) Coarse Refuse Disposal Area (D2) (Plate III-5) is in a state of ongoing construction and reclamation. The pile is constructed in 50-foot vertical increments with 20 foot wide terraces constructed for water runoff and erosion control. Lifts are made in 3-foot increments of compacted refuse. Revegetation test plots of coarse refuse are being used to determine the amount and type of cover material necessary to support diverse and effective

RECEIVED

NOV 01 1991

DIVISION OF
OIL GAS & MINING

CHAPTER III

vegetative growth. After the material and depth of cover are approved by DOGM, cover and revegetation will begin on the slopes and will be ongoing throughout the life of the mine.

Disturbances created prior to the ACT are delineated on Plates III-20 through III-23. Typically these pre-law disturbances were revegetated with crested wheatgrass. The maps make clear the level of reclamation required as currently interpreted by the DOGM.

Those disturbed areas which have been revegetated prior to the ACT were mapped in the fall of 1983 and are also shown on Plates III-20 through III-23. These maps delineate pre-law areas which remain to be revegetated and will enable determination of the level of reclamation required for any pre-law areas which may be redisturbed.

3.5.1.2 Soil Removal and Storage

Because the Sunnyside Mines have been active since the late 1800's, the permit area includes 136.645 acres of land were disturbed prior to the 1977 Act that did not require topsoil removal before mining or surface facilities construction. The present status of this land includes active and inactive non-reclaimed areas as well as some reclaimed sites.

The 83 acres encompassed by the refuse and slurry piles will remain active until cessation of mining activities, although some reclamation of this area will occur contemporaneously.

Very little topsoil will be available for use in reclamation for any lands that were disturbed prior to the 1977 Act because topsoil material was not salvaged. In addition, estimation of the available in-place soil quality or quantity is difficult because many large areas have been disturbed, regraded, and spread with clinker and some of these areas have been revegetated. No records exist about disturbances, but we do know that part of the main facilities are located on a pre-existing town-site and that much of Grassy Trail Creek has been channelized, resulting in increased perturbation of the soils.

Large portions of the facilities are located over the HBC (Haverson fine sandy loam) mapping unit, which has an average depth of sixty inches (Plate VIII-1). Potentially, this material is available for revegetation. Although this soil becomes increasingly alkaline with depth, the texture remains suitable for plant growth. The extent of activities on this soil series is unknown, but no toxic materials were present in the test pits.



NOV 01 1991

DIVISION OF
OIL GAS & MINING

CHAPTER III

In order to characterize and determine the extent of the in-place soils in these areas, several test pits were dug around the facilities in the fall of 1983.

Within each soil pit, soil samples were taken at twelve inch increments. A visual examination of soil texture, color, and quality was also made. Details concerning the sampling methods, laboratory procedures, and results are contained in Chapter VIII.

Prior to re-disturbance of some areas, seven stockpiles of soil materials were saved from several sites. The histories of these soils are unknown. The location of each soil material stockpile is indicated on Plate VIII-1, and the quantity of material contained within each stockpile is indicated as follows:

QUANTITIES OF STOCKPILED TOPSOIL

<u>Stockpile Location</u>	<u>Quantity</u>
East Borrow Pit	36,600 cu ft
No. 3 Hoisthouse Pond	4,200 cu ft
Slurry Pond Pile	127,900 cu ft
Haul Road Pile	102,200 cu ft
Reclamation Test Plot	67,500 cu ft
Twinshaft Pond	32,600 cu ft
Rail Cut Pile	<u>15,800 cu ft</u>
<u>Total</u>	<u>386,800 cu ft</u>

The soils contained in these stockpiles are currently committed for use in topsoiling the sites from where the soils were removed.

Several borrow areas have been identified for use in future reclamation (Plate III-1). The quantity of borrow material that will be required to cover the portals and other areas is identified by reclamation area in Table III-9. The quantity of borrow material that is available is identified by Borrow Area in the

RECEIVED

NOV 0 1 1991

DIVISION OF
OIL GAS & MINING

CHAPTER III

table shown below. The total amount of borrow material that will be required is about 427,700 cu yd; the amount of material available is 683,650 cu yd. It is anticipated that all of the borrow material will be taken from Borrow Areas 1 through 5. If more borrow material is required, Reclamation Area 1 can be expanded to the south for a considerable distance. Grassy Trail Dam Borrow Area will be used only if conditions at the end of mining warrant.

Available Industrial and Reclamation Borrow Material

<u>Borrow Area</u>	<u>Acres</u>	<u>Depth (ft.)</u>	<u>Cubic Yards Available</u>
(1) Industrial Area 1	3.42	8.5	46,899
(2) Industrial Area 2	3.25 ⁽¹⁾	0.0	-0-
(3) Industrial Area 3	3.36 ⁽²⁾	12.0	32,525
(4) Reclamation Area 1	30.14	12.0	550,726
(5) Grassy Trail Borrow ⁽³⁾	-----	-----	<u>8,500</u>
TOTAL			638,650

- (1) Industrial Borrow Area 2 has been used for industrial purposes and is substantially gone.
- (2) Approximately 10 ft. of this material has been used and 6 ft. remains in place.
- (3) Grassy Trail Dam Borrow Area is a slide area and the acres and depth have not been determined. This area was approved by DOGM in a letter dated November 27, 1984 (Figure III-4).

Some of the borrow areas fall on the property currently owned by Sunnyside Fuel Corporation. The Sunnyside Mines operator has rights to access the borrow areas to use topsoil and subsoil for reclamation on the Sunnyside Mines property during contemporaneous or final reclamation.

Test pits were dug to identify and evaluate the soil materials in these borrow areas. Information concerning the test methods, laboratory procedures, and results are discussed in Chapter VIII. It should be noted that the extent and quantity of these borrow materials is limited, and the material available will not adequately cover all areas that have been disturbed. In order to cover the entire 282.55 acres of disturbance with 12" of topsoil, 455,847 cu. yds. of material would be required.

RECEIVED

NOV 0 1 1991

DIVISION OF
OIL GAS & MINING

CHAPTER III

Because the practice of borrowing topsoil material requires the area be disturbed, this ultimately results in more acres being disturbed and reduces the total productivity. Therefore, borrow area materials use will be limited. These soils will only be used on areas where vegetation is not successful, or in other required circumstances such as covering the coal seams, refuse areas or portals.

Revegetation test plots have been approved by the DOGM and will evaluate revegetation success under several soil depths, amendments, and seeding regimes (Appendix VIII-3). The results of these tests should provide information concerning the most appropriate reclamation techniques and procedures to ensure revegetation success.

Any areas contaminated with oil or other petroleum products will be excavated and the material disposed in the refuse pile. These areas are expected to be few and small in extent, and will be covered with soil material and then revegetated.

Additional surface disturbances within the permit area are not currently anticipated. If any new areas are to be disturbed in the future, a permit amendment will be submitted to DOGM containing details of the site specific plans for topsoil removal, testing, stockpiling, and redistribution.

Handling of topsoil during mining operations involves removal of vegetation, topsoil stripping, stockpiling, and replacement of the topsoil onto the areas to be reclaimed. Trees and large shrubs will be removed prior to topsoil removal. Small shrubs, grasses, and forbs will be collected with the topsoil material since these materials increase both the available organic matter in the soil and the available seed stock. Topsoil will be removed to a depth determined by information contained in Appendix VIII-1 and confirmed in the field.

Stockpiles will be contoured, stabilized, and protected from wind and water erosion by seeding with rapidly establishing grass and forb species. Fertilizer will not be required for stockpiles. Stockpiles will be seeded with the sage/grass seed mix shown in Figure III-8 that was approved by DOGM on November 4, 1986. Because contractors are frequently used at the Mines for reclamation efforts, the precise equipment that will be used cannot be predicted. However, standard reclamation equipment and techniques will be employed in order to ensure stabilization and vegetation success.

RECEIVED

NOV 01 1991

DIVISION OF
OIL GAS & MINING

CHAPTER III

Those disturbed areas which have been revegetated prior to the ACT were mapped in the fall of 1983 and are also shown on Plates III-20 through III-23. These maps delineate pre-law areas which remain to be revegetated and will enable determination of the level of reclamation required for any pre-law areas which may be redisturbed.

Upon completion of the Methane Drainage Borehole facility, as soon as weather conditions allow, the drill pad will be permanently reclaimed as outlined in section 3.5.5., except for the wellhead and shack. The access road shown on Plate III-1Di is temporary, to be used only during facility construction. The temporary access road will also be reclaimed upon completion of the facility, and will not be used except for emergencies after reclamation.

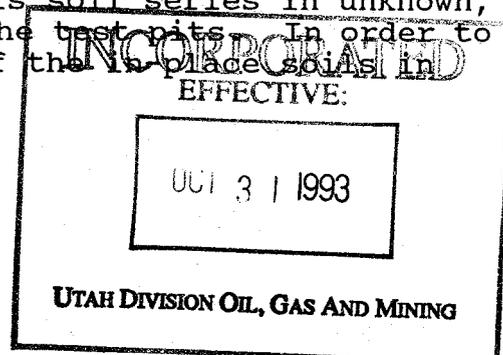
3.5.1.2 Soil Removal and Storage

Because the Sunnyside Mines have been active since the late 1800's, the permit area includes 136.645 acres of land were disturbed prior to the 1977 Act that did not require topsoil removal before mining or surface facilities construction. The present status of this land includes active and inactive non-reclaimed areas as well as some reclaimed sites.

The 83 acres encompassed by the refuse and slurry piles will remain active until cessation of mining activities, although some reclamation of this area will occur contemporaneously.

Very little topsoil will be available for use in reclamation for any lands that were disturbed prior to the 1977 Act because topsoil material was not salvaged. In addition, estimation of the available in-place soil quality or quantity is difficult because many large areas have been disturbed, regraded, and spread with clinker and some of these areas have been revegetated. No records exist about disturbances, but we do know that part of the main facilities are located on a pre-existing townsite and that much of Grassy Trail Creek has been channelized, resulting in increased perturbation of the soils.

Large portions of the facilities are located over the HBC (Haverson fine sandy loam) mapping unit, which has an average depth of sixty inches (Plate VIII-1). Potentially, this material is available for revegetation. Although this soil becomes increasingly alkaline with depth, the texture remains suitable for plant growth. The extent of activities on this soil series is unknown, but no toxic materials were present in the test pits. In order to characterize and determine the extent of the in-place soils in

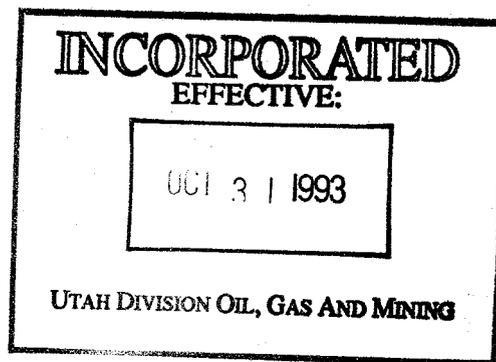


CHAPTER III

these areas, several test pits were dug around the facilities in the fall of 1983.

Within each soil pit, soil samples were taken at twelve inch increments. A visual examination of soil texture, color, and quality was also made. Details concerning the sampling methods, laboratory procedures, and results are contained in Chapter VIII.

The remainder of this page intentionally left blank.



CHAPTER III

No topsoil is currently stockpiled for the reclamation of the West Slurry Cell Area. Consequently, SCC intends to use substitute soil from the Topsoil Borrow Area (Plate III-1, 1 of 3, "Surface Facilities, Hydrology, and Pre-law Disturbance Vegetation"). The substitute soil material available from the Topsoil Borrow Area is virtually the same soil material adjacent to the Coarse Refuse Pile. The soil is the Strych soil type, and is discussed in Chapter VIII.

3.5.3 Final Abandonment

3.5.3.1 Sealing of Mine Openings

Shaft openings required to be sealed shall be effectively capped (Plate III-18 1 of 3). The cap will consist of a six-inch thick concrete and a steel plate cap with a 25-foot high, 2-inch steel vent pipe above the surface of the shaft.

Slope or drift openings will be sealed with an MSHA approved seal or be completely filled with noncombustible material for a distance of at least 25 feet into such openings.

There are 41 mine portals and shafts within the Sunnyside permit area that will be permanently sealed during abandonment. These portals are specifically located on Plate III-1.

At most mine openings, highwall reduction will place sufficient material over any concrete portal material to eliminate any additional work. In instances where the concrete portal material may be visible after regrading, the portal structure will be demolished and placed inside the portal against the permanent seal.

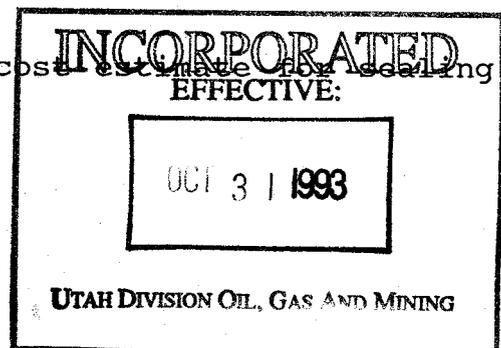
There are a limited number of portals that were broken to the surface from workings inside the mine. Many of these portals are located on top of sandstone cliffs and are inaccessible except by walking and pack horse. These portals will be blasted shut for at least 25 feet from the portal, if possible, to prevent access.

The plugging and management of drill holes will adhere to the procedures stipulated by the United States Geological Survey as detailed in Table III-4. See Table III-10 for drill hole sealing and casing costs.

The Methane Drainage Borehole will be reclaimed as shown on Table III-10 unless a Permit Change designating a post mining use is approved by the Division.

Refer to Section 3.5.7.1 for the cost estimate for sealing shafts and portals.

AT
4307,



CHAPTER III

3.5.3.2 Removal of Surface Structures

(a) At the conclusion of mining, all surface structures, with the exception of those permanent structures marked on Plate III-1 and noted on Table III-1, will be dismantled, removed and the land graded to blend with the surrounding areas. The archway over the No. 2 Canyon Drainage is a temporary design and will be removed during final reclamation.

(b) Outlying surface facilities including portals, ventilation shafts, substations, upper bathhouse, equipment and material storage areas, preparation plant, power transmission lines, mine water lines, methane borehole pad and pipeline, and unit train loadout, will be dismantled and eliminated.

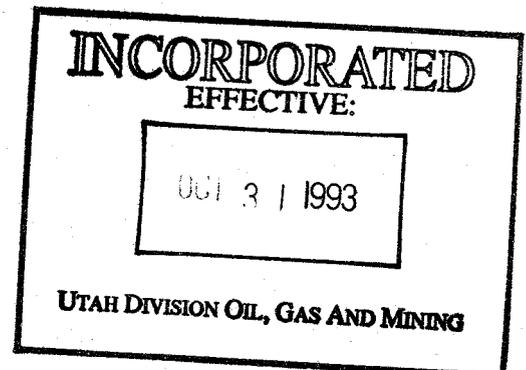
(c) Most roads will be left to provide access for grazing and recreational activities. Those roads not left for future use will be ripped, contoured and revegetated. The roads which will not be reclaimed are illustrated on Plate III-1.

(d) The area at the mouth of Pasture Canyon, containing the rodeo grounds and stables will be left intact.

(e) The water supply facilities will remain after completion of mining to supply culinary water to residents of the towns. Since new mines are being planned in nearby areas, it is believed the towns will remain occupied beyond the projected life of the existing mines.

(f) The preparation plant reject and industrial waste disposal facilities are in areas approved by MSHA and the Utah State Department of Health (see Plates III-1 and III-5). During the period the disposal sites are active, they will conform to applicable state regulations such as degree of slope, compaction, and coverage with inert material. Upon completion of mining activity, these areas will be scarified, covered with topsoil or material capable of supporting plant life, if necessary, and revegetated. Disposal and regrading are ongoing processes. Plans for final revegetation for the refuse are still being evaluated (Chapter VIII and 3.5), however, a conservative estimate of borrow cover and revegetation are included in the bond calculations.

4307



CHAPTER III

3.5.3 Final Abandonment

3.5.3.1 Sealing of Mine Openings

Shaft openings required to be sealed shall be effectively capped (Plate III-18 1 of 3). The cap will consist of a six-inch thick concrete and a steel plate cap with a 25-foot high, 2-inch steel vent pipe above the surface of the shaft.

Slope or drift openings will be sealed with an MSHA approved seal or be completely filled with noncombustible material for a distance of at least 25 feet into such openings.

There are 41 mine portals and shafts within the Sunnyside permit area that will be permanently sealed during abandonment. These portals are specifically located on Plate III-1.

At most mine openings, highwall reduction will place sufficient material over any concrete portal material to eliminate any additional work. In instances where the concrete portal material may be visible after regrading, the portal structure will be demolished and placed inside the portal against the permanent seal.

There are a limited number of portals that were broken to the surface from workings inside the mine. Many of these portals are located on top of sandstone cliffs and are inaccessible except by walking and pack horse. These portals will be blasted shut for at least 25 feet from the portal, if possible, to prevent access.

The plugging and management of drill holes will adhere to the procedures stipulated by the United States Geological Survey as detailed in Table III-4. See Table III-41 for drill hole sealing and casing costs.

Refer to Section 3.5.7.1 for the cost estimate for sealing shafts and portals.

3.5.3.2 Removal of Surface Structures

(a) At the conclusion of mining, all surface structures, with the exception of those permanent structures marked on Plate III-1 and noted on Table III-1, will be dismantled, removed and the land graded to blend with the surrounding areas.

RECEIVED

NOV 01 1991

DIVISION OF
OIL GAS & MINING

CHAPTER III

(b) Outlying surface facilities including portals, ventilation shafts, substations, upper bathhouse, equipment and material storage areas, preparation plant, power transmission lines, and unit train loadout, will be dismantled and eliminated.

(c) Most roads will be left to provide access for grazing and recreational activities. Those roads not left for future use will be ripped, contoured and revegetated. The roads which will not be reclaimed are illustrated on Plate III-1.

(d) The area at the mouth of Pasture Canyon, containing the rodeo grounds and stables will be left intact.

(e) The water supply facilities will remain after completion of mining to supply culinary water to residents of the towns. Since new mines are being planned in nearby areas, it is believed the towns will remain occupied beyond the projected life of the existing mines.

(f) The preparation plant reject and industrial waste disposal facilities are in areas approved by MSHA and the Utah State Department of Health (see Plates III-1 and III-5). During the period the disposal sites are active, they will conform to applicable state regulations such as degree of slope, compaction, and coverage with inert material. Upon completion of mining activity, these areas will be scarified, covered with topsoil or material capable of supporting plant life, if necessary, and revegetated. Disposal and regrading are ongoing processes. Plans for final revegetation for the refuse are still being evaluated (Chapter VIII and 3.5), however, a conservative estimate of borrow cover and revegetation are included in the bond calculations.

3.5.3.3 Disposition of Dams, Ponds and Diversions

(a) Grassy Trail Dam and Reservoir

This facility, constructed in 1952, is jointly owned by Sunnyside Reclamation and Salvage, Inc., and BP Coal America Inc. who holds the majority interest. It provides culinary water to the towns of Sunnyside and East Carbon as well as mine facilities of the two companies.

The Sunnyside Mines operator will maintain ownership and liability of the reservoir after the permit if the ownership is not transferred to the towns.

RECEIVED

NOV 0 1 1991

DIVISION OF
OIL GAS & MINING

CHAPTER III

If ownership of Grassy Trail Reservoir is transferred to another party, public or private, prior to bond release, Kaiser Coal Corporation will renovate the dam to design specifications previously approved by the Dam Safety Division of the State of Utah prior to transfer.

(b) Sediment ponds

All sediment control ponds no longer needed when reclamation of the disturbed area is completed, will be contoured and revegetated. See Table III-21 for pond reclamation requirements.

(c) Diversions

No diversion structures are currently planned, but if they are constructed, permits will be obtained prior to construction and reclamation will be in conjunction with adjacent disturbed areas.

(d) Slurry Ponds

Fine refuse from coal cleaning is sent to several slurry ponds. Clarified water is recovered for irrigation of alfalfa or released to Grassy Trail Creek. Upon completion of mining, these ponds will be filled, graded, covered with soil or suitable borrow material and, if necessary, revegetated.

(e) Coarse Refuse Pile

During Final Reclamation the surface drainage from the slopes and terraces of the reclaimed waste banks will be handled by a 36" concrete culvert and drop boxes shown on Plate III-40, Map D4-0130 & Plate III-40, Map D4-0174. The runoff from each slope will be conducted by its terrace to each drop box in the concrete culvert. The 36" concrete culvert will deliver the runoff to the Railcut Pond ditch at the bottom of the refuse pile.

3.5.4 Backfilling and Grading Plans

3.5.4.1 Recontouring

Recontouring and regrading will be done with bulldozers, scrapers, maintainers, backhoes or front-end loaders. The work will be done prior to replacement of any soil material and after removal of any facilities.

Each site to be disturbed will be contoured to blend with adjacent undisturbed areas. They may not be returned to original contours, as those are unknown in several instances.



NOV 01 1991

DIVISION OF
OIL GAS & MINING

CHAPTER III

Small area cuts and fills will be restored using a front-end loader, bulldozer, or backhoe. Road bases, such as Fan Canyon, will be regraded to blend with rugged topography. Berms will be removed and the road bed ripped to blend with rugged topography.

The post-mine contours will remain approximately the same as the current contours. Final leveling and regrading changes will typically be so small, they will not appear on the map. The final contours will approximate those shown on Plate III-1.

The coarse refuse pile is contoured throughout its construction according to UMC 817.81-93 and the plan submitted in Section III. Any coal seam exposed because of a portal opening will be covered with four feet of non-toxic material.

Specific postmining drainage designs and measures that will be used during the final reclamation phase is contained in Appendix III-12, Post Mining Hydrologic Design.

3.5.4.2 Removal or Reduction of Highwalls

Small highwalls have been created at several portal and shaft locations. Most of these highwalls will be regraded to blend with adjacent surroundings. If highwall reduction decreases the stability of adjacent slopes to a point that is potentially dangerous, the highwall will be left intact.

Coal seams naturally outcrop throughout the permit area. Coal seams that are uncovered during mining operations, i.e. at portals or along highwalls, will be backfilled and graded with 4 feet of non-toxic cover so that the coal material is no longer exposed. These seams will be stabilized so that contamination of ground or surface waters by coal or acid/toxic forming materials will not occur and then revegetated according to the procedures outlined in Section 3.5.5.

3.5.4.3 Terracing and Erosion Control

Regrading by terracing will be done on the contour when possible for erosion control purposes. The large acreages of pre-law revegetation also aid in erosion control. A diversion ditch (Plate III-12) has been installed to surround part of the surface facilities to minimize erosion across the disturbed area.

RECEIVED

NOV 01 1991

DIVISION OF
OIL GAS & MINING

CHAPTER III

To aid in the control of runoff and erosion, drainages will be constructed during the regrading process to compliment the natural existing drainages and riprapped if necessary. Any rills or gullies greater than nine (9) inches which form on the regraded or topsoiled areas will be filled, stabilized and re-seeded.

3.5.4.4 Soil Distribution and Stabilization

There is very little topsoil to redistribute and will be used where it will be needed the most. Pre-law revegetation has generally been successful without topsoil and it is assumed that reclamation can be accomplished without topsoil.

The common depth of topsoil for the mapping units described from the disturbed sites is three inches. Most soil mapping units have only a thin A horizon situated directly over the C horizon. The HBC mapping unit has a 6-inch A horizon, 30-inch B horizon, and 24-inch C horizon. All of this mapping unit located within the permit area has been previously disturbed.

Any borrow material to be used will remain in place (Plate III-1) until the material is needed. For placement on large areas the material will be loaded, moved, and spread to an even depth determined by revegetation studies.

On all areas that are regraded without topsoil or covered with topsoil, material will be tested for fertility and potential toxicities at an average sampling rate of three samples per acre. Soil samples will be taken from each site after the soil has been spread and prepared for seeding. Samples will be taken both from the surface (0-3" depth), and at a depth greater than six inches. Samples will be analyzed for fertility, texture, pH, conductivity, lime, organic matter, nitrogen, phosphorous, potassium, zinc, iron, manganese, and copper. Analyses for metal toxicities will also be run if the material has not yet been evaluated, or if field conditions warrant.

Native plants are typically adapted to soils of low fertility and certain texture and chemical characteristics. When reclaiming with the use of topsoil, addition of fertilizer is commonly not necessary. However, this may not be the case with soils still in place beneath buildings and other facilities. For instance, zinc, a necessary micronutrient for plant growth, was absent from one source of borrow material.

Any necessary soil nutrients will be spread prior to revegetation according to interpretation of test results and the spe-

RECEIVED

NOV 01 1991

DIVISION OF
OIL GAS & MINING