APPLICATION FOR AN UNDERGROUND COAL MINE PERMIT

KAISER STEEL CORPORATION
SUNNYSIDE MINES
CARBON COUNTY, UTAH

BOOK 1

MRP Update Register

Mine Name	File Number
Sunnyside	ACT/007/007

Date Inserted Rec.	Page #s	Plate #s	Approval Date	Insert By	Content/Remarks	
6-7-88	41 (after page 31)			slo	Modification - monthly monitoring of coarse refuse toe seep	book 1
"	43		10-8-87	slo	Temporary Waste Disposal Area	book 1
"		C4-0161 Plate III-1A	10-8-87	"	" " "	book 3
"		D4-0159 Plate III-12	2-4-88 2 of 3	"	SSSF Drainage	book 3-A
"		D4-0159 Plate III-12	2-4-88 3 of 3	"	SSSF Drainage	book 3A
"		D4-0157 Plate III-12	2-4-88 1 of 3	"	SFS Pond As Built	book 3A
"		D4-0158 Plate III-5	2-4-88	"	CRTS Pond As Built	book 3A
"		D4-0102 Plate III-28		"	Permanent Bridges and Culverts	book 4
1-12-89		D4-0166 Plate III-42		SM	borrow area drainage pond	book 3A

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 to III-3
Book 3	Chapter 3 (continued) Appendix III-4 Plates III-1 to III-14
Book 4	Chapter 3 (continued) Plates III-15 to III-31
ok 5	Chapters 4 and 5
ok 6	Chapters 6 and 7
ok 7	Chapters 8 and 9
ok 8	Chapters 10, 11, 12, 13, 14, and 15

CHAPTER I

INTRODUCTION AND SUMMARY OF PERMIT APPLICATION

TABLE OF CONTENTS

CHAPTER II

LEGAL, FINANCIAL, COMPLIANCE AND RELATED INFORMATION

TABLE OF CONTENTS

CHAPTER III

OPERATION AND RECLAMATION PLAN

TABLE OF CONTENTS

CHAPTER IV

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

TABLE OF CONTENTS

CHAPTER VI

GEOLOGY

TABLE OF CONTENTS

CHAPTER VII

GROUND HYDROLOGY

TABLE OF CONTENTS

CHAPTER VIII

SOIL RESOURCES

TABLE OF CONTENTS

CHAPTER IX

VEGETATION RESOURCES

TABLE OF CONTENTS

CHAPTER X

FISH AND WILDLIFE RESOURCES

TABLE OF CONTENTS

CHAPTER XI

CLIMATOLOGY AND AIR QUALITY

TABLE OF CONTENTS

CHAPTER XII

GEOTECHNICAL INFORMATION

TABLE OF CONTENTS

CHAPTER XIII

DESIGNS

TABLE OF CONTENTS

CHAPTER XIV

CONSULTTION AND COORDINATION

TABLE OF CONTENTS

CHAPTER XV

RESOURCE RECOVERY AND PROTECTION PLAN

TABLE OF CONTENTS

CHAPTER XVI

B-CANYON REVISION

TABLE OF CONTENTS

Call S.L. to Sunnyside? See if we are missing book

CHAPTER XVI

TABLE OF CONTENTS

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

CHAPTER I

INTRODUCTION AND SUMMARY OF PERMIT APPLICATION

TABLE OF CONTENTS

CHAPTER I

1.1 Scope of Operation

This permit application is submitted by Kaiser Steel 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 14,300 acres, the bulk of which is owned in fee by Kaiser Steel with Federal and Carbon County coal leases making up the balance. It has been in continuous operation since the 1890's (under Kaiser Steel 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.

Mine-run 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 244.62 acres, or 1.7 percent of the permit area. Because the Sunnyside Mines is an existing operations, all environmental impacts are being monitored by regulatory agencies including the DOGM, OSM and EPA. 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 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 disturbances occurred prior to the Act. The disturbed areas will be lost from vegetation use during the life of the mine. The disturbed soil will required loosening and possible nutrient addition before revegetation.

For areas to be disturbed in the future, topsoil will be removed and properly stockpiled for later revegetation.

(e) Vegetative Resources:

Approximately 1.7 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 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 limited to fugitive dust on some unpaved roads and to three 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 244.62 acres. Included are 5.88 acres that are being contemporaneously reclaimed.

At the conclusion of mining, which may 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 it is expected to remain to serve this purpose.

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.

The estimated reclamation cost, which is also the performance bond liability, amounts to $1,297,546.42 for the life of the mine.

1.3 Introduction to Document Organization

This application has been prepared following 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.)

CHAPTER I

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-opertion 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 Steel 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
John S. Huefner, Civil Engineer
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

CHAPTER I

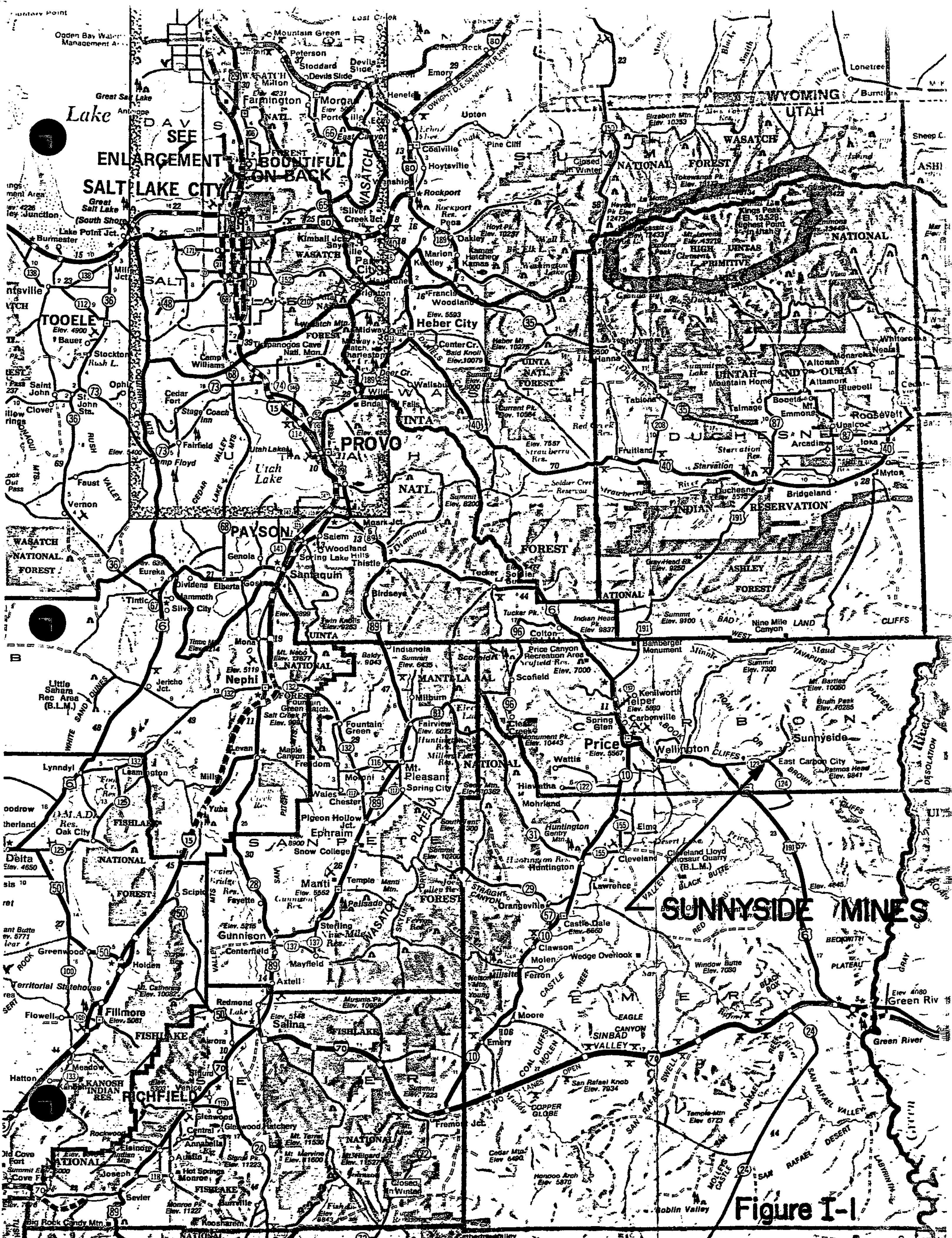
Kevin Lackey, Reclamation Engineer
Les Boothe, Reclamation Engineer
Ronald Jepson, Reclamation Engineer

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



SEE ENLARGEMENT ON BACK
SALT LAKE CITY
BOUNTIFUL
Farmington
TOOELE
PROVO
PAYSON
Heber City
Nephi
Price
Helper
Wellington
Sunnyside
East Carbon City
SUNNYSIDE MINES
WYOMING
UTAH
Delta
Fillmore
RICHFIELD
Salina
Manti
Ephraim
Mt. Pleasant
Huntington
Castle Dale
Green River
Roosevelt
Duchesne
Myton
Santaquin
Utah Lake
Great Salt Lake
Kings Peak
HIGH UINTAS PRIMITIVE
WASATCH NATIONAL FOREST
UINTAH AND OURAY
INDIAN RESERVATION
ASHLEY NATIONAL FOREST
MANTI-LA SAL NATIONAL FOREST
FISHLAKE NATIONAL FOREST
UINTA NATL. FOREST
SINBAD VALLEY
SAN RAFAEL SWELL
SAN RAFAEL DESERT
BOOK CLIFFS

Figure I-1

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,

RW Daniels

RONALD W. DANIELS
COORDINATOR OF MINED
LAND DEVELOPMENT

CHAPTER I
Figure I-2

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.

OFFICIAL SEAL
JENNIFER J. GRISWOLD
NOTARY PUBLIC-CALIFORNIA
COUNTY OF ALAMEDA
My Commission Expires Nov. 3, 1986

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

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:

Joseph R. Fielder
Mine Manager
Sunnyside Coal Company
P. O. Box 99
Sunnyside, Utah 84539

RECEIVED
AUG 24 1993
DIVISION OF OIL
GAS & MINING PRICE UTAH

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

[2]

John Donnelly
Controller
Sunnyside Coal Company
P.O. Box 99
Sunnyside, Utah 84539

INCORPORATED
EFFECTIVE:
AUG 14 1993
UTAH DIVISION OIL, GAS AND MINING

[2] Revised August 4, 1993

RECEIVED
AUG 24 1993
DIVISION OF OIL
GAS & MINING PRICE UTAH

Chapter II

(3.) 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
Joseph R. Fielder	Vice President	P.O. Box 99 Sunnyside, UT 84539
Tawnie Hintze	Secretary	P.O. Box 99 Sunnyside, UT 84539

Directors of Applicant

Robert M. Burnham	The Registry 1113 Spruce Street Boulder, CO 80302
Joseph R. Fielder	P.O. Box 99 Sunnyside, UT 84539
Tawnie Hintze	P.O. Box 99 Sunnyside, UT 84539

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

[3]

Officers of SMI

Robert M. Burnham	President	The Registry 1113 Spruce Street Boulder, CO 80302
Joseph R. Fielder	Vice President	P.O. Box 99 Sunnyside, UT 84539
Tawnie Hintze	Secretary	P.O. Box 99 Sunnyside, UT 84539

[3] Revised August 4, 1993

Chapter II

[4]

Directors of SMI

Robert M. Burnham	The Registry 1113 Spruce Street Boulder, CO 80302
Joseph R. Fielder	P.O. Box 99 Sunnyside, UT 84539
Tawnie Hintze	P.O. Box 99 Sunnyside, UT 84539

(4a.) Applicant has previously conducted mining activities under the name of Sunnyside Reclamation & Salvage, Inc.

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.

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

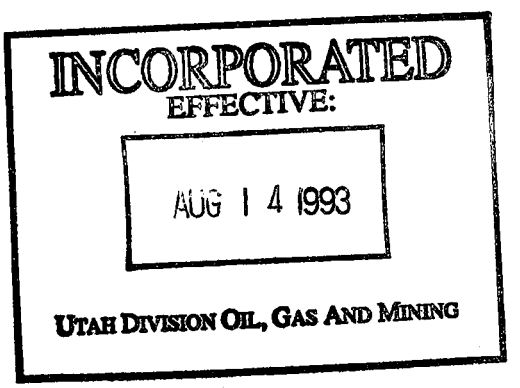
(1) Sunnyside Mine, Carbon County, Utah ACT/007/007 Reformatted, Renewal Permit Application Package

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

(2) International Anthracite Corporation, Schuykill County, Pennsylvania

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

State of Pennsylvania
Department of Environmental Resources
Harrisburg, PA 17120



[4] Revised August 4, 1993

(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

(5a.) The legal identity of equitable owner of record of areas to be affected by surface operations and facilities and of the coal to be mined is:

[5]

Surface Owners within Permit Area

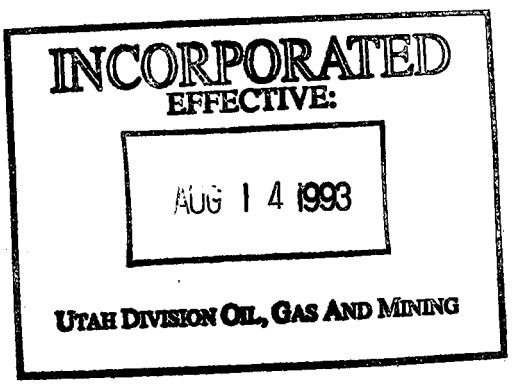
(1) United States of America
Department of the Interior
Bureau of Land Management
324 South State
Salt Lake City, UT 84111-203

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

(3) City of Sunnyside
Mayor
Town Hall
Sunnyside, UT 84539

(4) East Carbon City
Mayor
Columbia Branch
East Carbon, UT 84520

(5) Oliveto, Dominic
P.O. Box 598
Price, UT 84501



[5] Revised August 2, 1993

(6) Jay G. Pagano Estate (GNC)
Harold Marston personal representative
P.O. Box 136
Wellington, UT 84542

(7) Sunnyside Coal Company
P.O. Box 99
Sunnyside, UT 84539

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

[6]

Mineral Owners within Permit Area

(1) United States of America
Department of the Interior
Bureau of Land Management
324 South State
Salt Lake City, UT 84111-203

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

(3) Carbon County, Utah
County Commissioners
County Building
Price, UT 84501

(4) Sunnyside Coal Company
P.O. Box 99
Sunnyside, UT 84539

(5b.) The 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

---

[6] Revised August 4, 1993

(5c.) No purchaser of record under real estate contract exists in areas to be affected by surface operations and facilities and of the coal to be mined.

(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 II-1 and II-2):

[7]

Surface Owners Contiguous to Permit Area

(1) United States of America
Department of the Interior
Bureau of Land Management
324 South State
Salt Lake City, UT 84111-203

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

(3) Sunnyside Cogeneration Association
P.O. Box 58087
Salt Lake City, UT 84158-0087

(4) Intermountain Power Agency (IPA)
Los Angeles Department of Water & Power
P.O. Box 111
Los Angeles, CA 90051

(5) City of Sunnyside
Mayor
Town Hall
Sunnyside, UT 84539

(6) Oliveto, Dominic
P.O. Box 598
Price, UT 84501

(7) Jay G. Pagano Estate (GNC)
Harold Marston personal representative
P.O. Box 136
Wellington, UT 84542

[7] Revised August 4, 1993

(8) Sunnyside Coal Company
P.O. Box 99
Sunnyside, UT 84539

(9) C&P Coal Corporation (Robert K. Peper)
1366 East Murray-Holiday Road
Salt Lake City, UT 84117

[8]

Mineral Owners Contiguous to Permit Area

(1) United States of America
Department of the Interior
Bureau of Land Management
324 South State
Salt Lake City, UT 84111-203

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

(3) Carbon County, Utah
County Commissioners
County Building
Price, UT 84501

(4) Sunnyside Coal Company
P.O. Box 99
Sunnyside, UT 84539

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[8] Revised August 4, 1993

Chapter II

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

[9]

Mine No 1	MSHA ID No. 42-00093	
Mine No 2	MSHA ID No. 42-00094	(Sealed)
Mine No 3	MSHA ID No. 42-00092	(Retired)
Surface	MSHA ID No. 42-01813	
Preparation Plant Tailings Ponds	1211-UT-09-01813-01	
Coarse Refuse	1211-UT-09-01813-02	
Grassy Trail Reservoir	1211-UT-0031	

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.

(8.) Changes in any information contained in this section will be submitted to the Division as they may occur or at the Division's request.

Remaining Portion of Page

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[9] Revised August 4, 1993

(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
Schuykill 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°51E, 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 S89o50'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°51E, 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 S89o50'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)

CHAPTER II

LEGAL, FINANCIAL, COMPLIANCE AND RELATED INFORMATION

TABLE OF CONTENTS

AMENDMENT)

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

by _____ date 3/2/90

CHAPTER II

2.1 Scope

It identifies the applicant, Sunnyside Reclamation & Salvage, Inc., including information on principal shareholder, directors and officers, 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 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.

Also included is information on liability insurance, proposed performance bond, public office for filing application, and newspaper advertisement of the application.

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

The proposed performance bond is $2,873,165.00 for the life of the mine.

2.2 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 Reclamation & Salvage, Inc.
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:

AMENDMENT

APPROVED Mining Plan
Approved, Division of Oil, Gas & Mining

by _____ date 3/12/90

Sunnyside Reclamation & Salvage, Inc.
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 Reclamation & Salvage, Inc.
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 Reclamation & Salvage, Inc.
Sunnyside Mines
P. O. Box 99
Sunnyside, Utah 84539

(b) The applicant, Sunnyside Reclamation & Salvage, Inc., 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 Reclamation & Salavage, Inc., are as follows:

AMENDMENT TO
APPROVED Mining & Reclamation Plan
Approved, Division of Oil, Gas & Mining
by _____ date 3/12/90

CHAPTER II

Officers of Applicant

James T. Cooper	President	The Registry 1113 Spruce Street Boulder, CO 80302
David B. Corman	Treasurer	The Registry 1113 Spruce Street Boulder, CO 80302
Jeffrey L. Vigil	Secretary	The Registry 1113 Spruce Street Boulder, CO 80302

Directors of Applicant

James T. Cooper	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 Reclamation & Salvage, Inc., is owned and/or controlled 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 not previously conducted mining activities under the name Sunnyside Reclamation & Salvage, Inc.

AMENDMENT TO
APPROVED Mining & Reclamation Plan
Approved, Division of Oil, Gas & Mining
by _____ date 3/12/90

CHAPTER II

Applicants principal Shareholder, Sunnyside Reclamation & Salvage, Inc., has not previously conducted mining activities prior to the acquisition of Sunnyside Mines.

(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

(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

AMENDMENT TO
APPROVED Mining & Reclamation Plan
Approved, Division of Oil, Gas & Mining
By _____ date 3/12/90

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

Jensen, Glen E.
Elmo, UT 84521

Sunnyside Reclamation & Salvage, Inc.
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

AMENDMENT TO
APPROVED Mining & Reclamation Plan
5 Approved, Division of Oil, Gas & Mining
by _____ date 3/12/90

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

(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 Reclamation & Salvage, Inc., holds surface rights on various parcels of lands contiguous to the permit area (see Surface Ownership Map, Plate II-1).

(ii) Sunnyside Reclamation & Salvage, Inc., 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.

* Please note that SRS is currently working to combine MSHA ID No. 42-00092 for Mine No. 3 and MSHA ID No. 42-00093 for Mine No. 1; therefore, in the future, only one ID No. (probably ID No. 42-00093) will be used for No. 1 and No. 3 Mines.

AMENDMENT TO
APPROVED Mining & Reclamation Plan
Approved, Division of Oil, Gas & Mining
by _____ date 3/12/90

United States Steel Corporation
1230 Kennecott Building
10 East South Temple
Salt Lake City, UT 84133

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

(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) Kaiser Steel Corporation holds surface rights on various parcels of lands contiguous to the permit area (see Surface Ownership Map, Plate II-1).

(ii) Kaiser Steel Corporation does not presently hold any coal rights in areas contiguous to the permit area. Some such areas existed previously, but in the interest of good mining practice, they were exchanged with United States Steel Corporation for coal rights on other tracts of land through several mining agreements which have been described in detail under Section 2.4, (a), (5).

(iii) Currently, there are options and pending bids on interests held or made by the applicant for lands contiguous to the permit area which are known as the B-Canyon Federal leases held by SOHIO. The B-Canyon area is located north of the Sunnyside permit area.

2.3 Compliance Information

(a) The applicant, Kaiser Steel Corporation, any subsidiary, affiliate, or persons controlled by or under common control with the applicant:

(1) Has not had a Federal or State mining permit suspended or revoked in the last five (5) years;

(2) Has not forfeited a mining bond or similar security deposited in lieu of bond.

(b) Such a suspension, revocation or forfeiture has not occurred. See (a) above.

(c) A listing of violation notices received by Kaiser Steel Corporation 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:

NOTICE OF VIOLATION 1/23/81 NOV #81-2-1-2

Part 1 of 2 MC 717.17(b) 1 (v)

Failure to provide regular reports of all surface water monitoring data to the regulatory authority within 60 days of sample collection.

Complete tabulation of chemical analysis of both surface and mine waters sent to DOGM on 1/29/81.

Terminated by DOGM on 1/29/80; $110 assessment paid.

Part 2 of 2 MC 717.17(7) 1 & 2

Failure to monitor ground water in a manner approved by the regulatory authority.

DOGM inspector unaware that this had been previously done, therefore, violation vacated on 2/10/81.

NOTICE OF VIOLATION 2/19/81 NOV #81-3-3-1

Part 1 of 1 UMC 817.21(2) 6

Failure to remove segregate, protect and immediately redistribute topsoil.

Accomplish recommended abatement measures as suggested.

Terminated by DOGM on 3/24/81; $320 assessment paid.

NOTICE OF VIOLATION 6/18/81 nov #81-1-3-5

CHAPTER II

Part 1 OF 5 UMC 817.23(B)

Failure to protect stockpiled topsoil from wind and water erosion.

Segregated original pile, established additional new pile, constructed interceptor ditch, bermed around each pile, and seeded to include ordering a special seed mix.

Abated on 8/28/81; $480 assessment paid.

Part 2 of 5 UMC 817.41(a) 7 817.44

Failure to obtain approval from regulatory authority for stream channel diversions and failure to minimize changes to hydrologic balance.

Removed dam placed in Water Canyon and dressed area for reseeding. Constructed bypass ditch along side of Icelander sedimentation pond.

Abated on 6/26/81; $600 assessment paid.

Part 3 of 5 UMC 817.42 (a)

Failure to pass surface drainage from disturbed area through a sediment pond or treatment facility before leaving the permit area.

Constructed ditches and installed straw filters prior to entrance into existing sediment ponds. Submitted map outlining disposal disturbed area to DOGM.

Abated on 8/28/81; $600 assessment paid.

Part 4 of 5 UMC 817.49

Operating a pond without a permit.

Drafted plans for the Mine Water Discharge Pond including calculations for interceptor ditch and overflow pipe and sent to DOGM.

Abated on 7/15/81 and terminated by DOGM on 8/6/81; $340 assessment paid.

Part 5 of 5 UMC 817.170(b) & 817.175(a)

Failure to maintain Class II roads to minimize erosion and prevent additional contributions of suspended solids to streamflow or runoff outside the permit area.

CHAPTER II

CESSATION ORDER

Part 1 of 1 UMC 817.23(b) UCA 40-10-17(e)

Failure to protect stockpiled topsoil from wind and water erosion. This Cessation Order was vacated on 2/23/82.

NOTICE OF VIOLATION 81-3-19-1 (10/27/81)

Part 1 of 1 UMC 817.45(i)(iii) UCA 40-10-17 (ii)(A) UCA 40-10-17 (ii)(B)(V)

Failure to design, construct and maintain sediment control facilities to prevent, to the extent possible, sediment contribution to streamflow outside the permit area and to minimize erosion.

Submitted plans to properly address the area with respect to drainage and sediment control. When plans were approved work to implement those plans was performed.

Abated on Nov. 6, 1981; $260 assessment paid.

NOTICE OF VIOLATION 82-3-1-2

Part 1 of 2 UMC 817.21(a)(b) UMC 817.22(a)(b) UMC 817.23 Utah Code 40-10-17(z)(e)

Failure to salvage, store and protect topsoils. Areas at tar sands crushing site operated by Great National Corporation.

Determine if material around pad is topsoil, if so, consolidate and protect with berms, ditches and mulch. Provide barrier to prevent vehicle encroachment. Save any topsoil and place in existing topsoil pile. Protect topsoil sidecast in road construction.

This violation was vacated 2/10/82.

Part 2 of 2 UMC 817.41(a)(b) UMC 817.45(i)(ii)

Failure to plan and conduct activities to minimize impact on prevailing hydrologic balance.

Failure to maintain sediment control facilities.

Provide sediment control facilities.

Violation terminated 12/6/82. $540 assessment paid by Great

CHAPTER II

National Corporation, assessment conference 2/10/83.

CESSATION ORDER 82-4-1-2 (2/19/82)

Part 1 of 2 UCA 40-10-9(1) UMC 771.11

Conducting underground mining activities without approval from the Division.

Cease construction activities on new refuse haul road, including use of coarse refuse.

Activities ceased as of 10 AM 2/19/82.

Violation terminated 2/19/82.

Violation vacated at conference 5/6/82.

Part 2 of 2 UCA 40-10-17(e) UMC 817.21(a) UMC 817.22(a)

Failure to remove topsoil prior to disturbance.

Cease construction activities on new refuse haul road.

Activities ceased as of 10 AM 2/19/82.

Violation terminated 2/19/82. Assessment of $380 paid 6/14/82.

NOTICE OF VIOLATION 82-4-3-3 (3/2/82)

Part 1 of 3 UMC 817.41(d) UMC 817.42(a)(1) UMC 817.45

Failure to pass all disturbed area runoff through a sediment pond and failure to minimize erosion to the extent possible, No. 2 Mine Outcrop Fan.

Establish berm fill side of substation pad. Install water bar across road with straw bales at outlet.

Backfill and revegetate slope where gullying has occurred.

Conference held 5/6/82. No penalty assessed because of the small size of the area in question.

Part 2 of 3 UMC 817.41(d) UMC 817.163(a)(2) UMC 817.42(a)(1) UMC 817.180(a)(z) UMC 817.45

Failure to pass disturbed area runoff through a sediment pond.

CHAPTER II

Submit plans detailing how runoff problems can be handled to comply with regulations.

Implement plans upon Division approval. Conference held 5/6/82. Penalty of $240 assessed.

Part 3 of 3 — UMC 817.41(d) UMC 817.46(s) UMC 817.45 UMC 817.47

Failure to conduct activities to minimize changes to the prevailing hydrologic balance and minimize erosion.

Rip-rap discharge channel of pond. Grade disturbed area to IV:2H. Revegetate disturbed area with approved revegetation plan. Install straw bales along base of disturbed area and maintain until vegetation is established.

Conference held 5/6/82. Violation was vacated - pond in question to be removed from sediment collection system. Pond is to be removed from disturbed area on maps.

CESSATION ORDER 82-4-2-1 (4/21/82)

Part 1 of 1 — UMC 817.41(d) UMC 817.45 UMC 817.42(a)(1)

Failure to pass disturbed area runoff through a sediment pond and failure to minimize erosion to the extent possible.

Meet remedial action required initially set forth in NOV N82-4-3-3, 1 of 3.

Terminated effective 7/23/82.

Violation vacated 5/14/82. No penalty assessed.

NOTICE OF VIOLATION 82-6-1-1 (12/8/82)

Part 1 of 1 — UMC 817.45(i) UCA 40-10-18 2(i)(ii) UMC 817.46(c)

Failure to maintain sediment control measures to prevent additional distribution of sediment to stream flow outside the permit area.

Failure to maintain sediment ponds to prevent short circuit to the extent possible.

Maintenance of present structure. Submit plans addressing areas inadequately designed and constructed to ensure proper conveyance and treatment of disturbed area runoff. Implement plans upon approval by the Division.

Penalty assessed $680. Placed in escrow account on 1/12/83. Conference held 1/11/83. Revised penalty of $480 assessed on 1/23/83.

NOTICE OF VIOLATION

Part 1 of 3 — UCA 1953 40-10-9 UCA 1953 40-10-15(s)(i)(i) UMC 771.19 UMC 817.45 UMC 817.46

Failure to operate in accordance with an approved plan. Failure to design, construct and maintain sediment controls to prevent additional contributions of sediment to runoff outside the permit area.

Submit plans for sediment pond to meet requirements of regulation of Surface Effects of Underground Coal Mining Activities and implement those plans upon approval by the Division.

Terminated 4/21/83. Conference held 3/10/83. Penalty of $880 assessed on 4/25/83.

Part 2 of 3 — UMC 817.21 UMC 817.23

Failure to stockpile topsoil on a stable surface, protected from wind and water erosion, unnecessary compaction and contaminents.

Submit plans for replacing the volume created by the violation. Implement plans upon approval by the Division.

Terminated 4/21/83. Conference held 3/10/83. Penalty of $340 assessed on 4/25/83.

Part 3 of 3 — UMC 817.41(c)(d) UMC 817.42(c) UMC 817.42(a)(1) UMC 817.42(a)(7)

Failure to conduct operations to minimize water pollution. Failure to meet State and Federal water quality effluent limitations. Failure to pass drainage from the disturbed area through a treatment facility before leaving the permit area.

Submit plans to ensure operations are conducted to minimize water pollution and meet effluent limitations. Submit plans for treatment facilities needed to meet these ends. Implement plans upon approval by the Division.

Terminated 4/21/83. Conference held 3/10/83. Penalty of $920 assessed on 4.25.83.

Notices of Violations for York Canyon Surface and Underground Mines, York Canyon, New Mexico

CHAPTER II

NOTICE OF VIOLATION 013 (7/29/81)

Part 1 OF 1 Rule 79-1 Section 16

Expiration of blasting permit #90026.

Current permit was on file but not located the day of inspection.

A copy of the current permit was submitted to the regulatory agency on 7/30/81 and violation was vacated.

NOTICE OF VIOLATION 021 (1/19/82)

Part 1 of 1 Rule 79-1 Section 23 30 CFR 715.17

Failure of the operator to maintain sediment control berm.

Berm required.

Terminated on January 22, 1982.

Assessment conference held February 26, 1982. No penalty assessed.

NOTICE OF VIOLATION 002 (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.

Terminated on April 4, 1982.

Informal hearing held May 27, 1982.

NOTICE OF VIOLATION (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.

Terminated April 28, 1982.

Informal hearing held June 24, 1982, no penalty assessed.

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.

Terminated May 7, 1982.

Informal hearing held June 24, 1982, no penalty assessed.

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.

Terminated on April 26, 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.

Terminated May 14, 1982.

Informal hearing held June 24, 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.

Deficiency repaired.

Informal hearing held on June 24, 1982, paid 60% of penalty assessed.

NOTICE OF VIOLATION OSM NOV 83-II-244-1 (7/29/83)

Operating without a permit: The pumphouse on the Vermejo River.

2.4 Right of Entry and Operation Information

(a) A description of the documents upon which the applicant, Kaiser Steel Corporation, basis its legal right to enter and begin underground coal mining activities in the permit are as follows:

None of such rights is currently the subject of pending litigation.

(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.

The specific lands and surface rights for the Sunnyside Mines area included in this Deed, a portion of which is within the permit area, are identified and described as follows:

The following described real property in the County of Carbon, State of Utah:

(2) Modified Coal Lease, Salt Lake 062966-063383-Utah-010140, as of November 12, 1943, issued on February 1, 1971 by the United States of America, the lessor, through the Bureau of Land Management to Kaiser Steel Corporation, the lessee. The modified lease embraces the following described lands in Carbon County, Utah, nearly all of which are within the permit area:

Salt Lake Meridian, Utah
T14S, R13E
Sec. 1, Lots 6, 7, SE1/4SW1/4, W1/2SE1/4;
Sec. 12, Lots 1,2,3,4, S1/2N1/2, NE1/4SW1/4, SE1/4
Sec. 13, NE1/4NE1/4;
Sec. 24, S1/2SE1/4;
Sec. 25, Lot 1.

T14S,R14E
Sec. 7, Lots 3 & 4;
Sec. 18, Lot 1, E1/2NW1/4;
Sec. 30, Lot 1, SE1/4NW1/4, E1/2SE1/2, SW1/4SE1/4, NE1/4SW1/4;
Sec. 31, NW1/4NE1/4.

(3) Coal Lease U-32083, dated March 1, 1979, issued by the United States of America, the lessor, through the Bureau of Land Management 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,
Sec. 6, Lot 6, NE1/4SW1/4;
Sec. 8, SW1/4, SW1/4SE1/4;
Sec. 17, N1/2NW1/4, SW1/4NW1/4, N1/2SE1/4.

(4) 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
Sec. 21, SE1/4;
Sec. 27, SW1/4, SW1/4NW1/4
Sec. 34, E1/2.

T15S, R14E
Sec. 3, E1/2;
Sec. 10, NE1/4.

(5) In the interest of good mining practice, mining rights on various tracts of land in Carbon County, Utah have been exchanged between Kaiser Steel Corporation and United States Steel Corporation as evidenced by the following described documents. The specific lands affecting the permit area are also described.

(i) Mining Agreement dated March 13, 1962 between Kaiser Steel Corporation ("Kaiser") and United States Steel Corporation, Columbia-Geneva Steel Division ("Geneva") pertaining to:

Kaiser granting Geneva the right to mine and dispose of all coal from fractional parts of Kaiser's United States Coal Lease No. Salt Lake 062966-063383-Utah-010140, specifically in Sections 12 and 13, T14S, R13E, SLB&M, described as follows:

Beginning at a point which bears South 1,320 ft. from the NE corner of Section 13:
thence N. 89° 51' W., 1327.76 ft.;
thence N. 1,320 ft.;
thence N. 89° 51' W., 1,327.43 ft.;

thence N. 1,320 ft.;
thence N. 89° 51' W., 1,327.22 ft.
thence N. 1.320 ft.;
thence N. 89° 51' W., 1,327.01 ft.;
thence N. 1,320 ft.;
thence S. 45° 05' E., 7.497.68 ft. to
place of beginning and containing 80 acres
more or less.

and Geneva granting Kaiser the right to mine and dispose of all coal from fractional parts of Geneva's United States Coal Lease No. SL-068754-Utah-01214, specifically in Section 24, T14S, R13E, SLB7M, described as follows:

Beginning at a point which bears N. 0° 02'
E., 1,294.59 ft. from the SE corner of said
Section 24:
thence N. 0° 02' E., 1,294.59 ft.'
thence N. 0° 07' E., 830.41 ft.;
thence S. 57° 11' W., 3,905.58 ft.;
thence S. 89° E., 3,280.00 ft.; to
place of beginning and containing 80 acres
more or less.

(ii) Mining Agreement dated October 2, 1973 between Kaiser Steel Corporation ("Kaiser") and United States Steel Corporation (U.S. Steel") which provides that Kaiser in exchange for a 120.57 acre tract in Kaiser's Federal Lease U-039706, is granted the right to mine and dispose of all coal from a 70.25 acre tract in U.S. Steel's Federal Lease No. SL-068754-U-01215, specifically in Sections 13 and 24, T14S, R13E, Salt Lake Meridian, described as follows:

Beginning at the NE corner of Section 24, T14S,
R13E:
thence S. 0° 07' W., 1,860.41 ft.;
thence N. 57° 11' W., 430.00 ft.;
thence N. 38° 23' W., 1,165.91 ft.;
thence N. 42° 26' W., 810.00 ft.;
thence N. 39° 25' E., 2,576.00 ft.;
thence S. 1408.38 ft to place of
beginning.

(iii) Mining Agreement dated December 1, 1975 between Kaiser Steel Corporation ("Kaiser") and United States Steel Corporation ("U.S. Steel") which provides for the exchange of mining rights on various parcels of land including:

U.S. Steel granting Kaiser the right to mine and dispose of all coal from a 2.99 acre tract in U.S. Steel's Federal Lease No. SL-068754-Utah-01215, specifically in Sections 13 and 24, T14S, R13E, SLB&M, described as follows:

Beginning at a point N. 1,408.38 ft. from the SE corner of Section 13, T14S, R13E;
thence S. 39° 25' W., 2,576 ft.;
thence N. 42° 26' W., 50.51 ft.;
thence N. 39° 25' E., 2,629.68 ft.;
thence S. 78.75 ft. to point of beginning.

And Kaiser granting U.S. Steel the right to mine and dispose of all coal from a 31.71 acre tract, in Kaiser's fee land in Section 18, T14S, R14E, SLB&M, described as follows:

Beginning at the NW corner SW1/4 of NW1/4 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.

(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 no involve 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) Kaiser Steel Corporation made substantial legal and financial committments before January 4, 1977 and has engaged in underground coal mining in the proposed permit area for more than thirty years.

(c) There are not any 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 production will continue beyond that point if the property can remain economically competitive. This estimate is based on a yearly production of approximately one million tons. Plate II-3 delineates the proposed mining activities in five (5) year increments for the twenty-five year period. 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 covers 14,300 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.

FEDERAL
(February 1985)

Permit Number ACT/007/007 , 1/86

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

This permit, ACT/007/007, which incorporates the Office of Surface Mining (OSM) Permit UT-0014, 1/86, is issued for the state of Utah by the Utah Division of Oil, Gas and Mining (DOGM) to:

Sunnyside Reclamation and Salvage, Inc.
1200 Hudson's Bay Centre
1600 Stout Street
Denver, Colorado 80202-3133

for the Sunnyside Mine. Sunnyside Reclamation and Salvage, Inc. is the lessee of federal coal leases SL 062966-063383, U 010140, U 32083, SL 068754, and/or the lessee/owner of certain fee-owned parcels listed in the Legal Description following Section 2. The permit is not valid until DOGM has received a copy of this permit signed and dated by the permittee.

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

Sec. 2 The permittee is authorized to conduct surface coal mining and reclamation operations on the following described lands (as shown on ownership map) within the permit area at the Sunnyside Mines situated in the state of Utah, Carbon County, and located:

Fee Land

Township 14 South, Range 14 East, SLB&M, Utah
Sec. 6: N1/2, S1/2 SW1/4, S1/2 SE1/4, NW1/4 SE1/4
Sec. 7: NW1/4, SW1/4 NE1/4, E1/2 SW1/4, S1/2 SE1/4, NW1/4 SE1/4
Sec. 17: NE1/4, SE1/4 NW1/4, SW1/4, S1/2 SE1/4
Sec. 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 SW1/4 NW1/4 of Section 18, Township 14 South, Range 14 East:

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.

Sec. 19 and 20: All
Sec. 21: W1/2
Sec. 28 and 29: All
Sec. 30: NE1/4, NE1/4 NW1/4, NW1/4 SE1/4
Sec. 31: S1/2 NE1/4, NE1/4 NE1/4
Sec. 32 and 33: All
Sec. 34: W1/2

Township 15 South, Range 14, East, SLB&M, Utah
Sec. 3: W1/2
Sec. 4: All
Sec. 5: NE1/4, N1/2 SE1/4, SE1/4 SE1/4, W1/2, SW1/4 SE1/4
Sec. 6: S1/2 SE1/4, SE1/4 SW1/4, portions of N1/2 SE1/4 and NE1/4 SW1/4, South of the D&RGW Railroad right-of-way.
Sec. 7: N1/2 NE1/4, N3/4 NW1/4
Sec. 8: NE1/4 NE1/4, N1/2 NW1/4, NW1/4 NE1/4
Sec. 9: All
Sec. 10: W1/2, SE1/4
Sec. 15: W1/2, N1/2 NE1/4
Sec. 16: E1/2, NW1/4, E1/2 SW1/4
Sec. 17: E1/2 NE1/4

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:

Township 14 South, Range 13 East, SLB&M, Utah
Sec. 1: SE1/4, SE1/4 SW1/4
Sec. 12: NW1/4, NE1/4, SE1/4, NE1/4 SW1/4 less the following described area:

Beginning at a point which bears S 1,320 ft from the NW corner of Section 12:
thence S, 1,320 ft;
thence S 89° 55'30" E, 1,327.01 ft;
thence S, 1,320 ft;
thence S 89° 53' 15" E, 1,327.22 ft;
thence S, 1,320 ft;
thence S 89° 51' E, 1,327.43 ft;
thence N 45° 05' 07" W, 5,623.40 ft to the place of beginning.

Sec. 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 shown on Plate II-2 of the Mining and Reclamation Plan (MRP).
Sec. 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 shown on Plate II-2 of the MRP.
Sec. 14: Portions of: NE1/4 which is shown on Plate II-2 of the MRP.
Sec. 11: Portions of: SW1/4 SE1/4 which is shown on Plate II-2 of the MRP.
Sec. 25: NE1/4 NE1/4

Township 14 South, Range 14 East, SLB&M, Utah
Sec. 6: N1/2 SW1/4
Sec. 7: W1/2 SW1/4
Sec. 8: SW1/4, SW1/4 SE1/4
Sec. 17: W1/2 NW1/4, NE1/4 NW1/4, N1/2 SE1/4
Sec. 18: E1/2 NW1/4, NW1/4 NW1/4
Sec. 30: NW1/4 NW1/4, SE1/4 NW1/4, NE1/4 SW1/4, S1/2 SE1/4, NE1/4 SE1/4
Sec. 31: NW1/4 NE1/4

Carbon County Lease

Salt Lake Meridian, Utah
Township 14 South, Range 14 East
Sec. 21: SE1/4
Sec. 27: SW1/4, SW1/4 NW1/4
Sec. 34: E1/2

Township 15 South, Range 14 East
Sec. 3: E1/2
Sec. 10: NE1/4

This legal description is for the permit boundary (as shown on the permit area map) of the Sunnyside Mines. The permittee is authorized to conduct surface and reclamation operations connected with mining on the foregoing described property subject to the conditions of the leases, the approved mining plan, and OSM permit UT-0014, 1/86, to be issued January 6, 1986, including all conditions and all other applicable conditions, laws and regulations.

Sec. 3 This permit is issued for a term of five (5) years commencing from January 20, 1986 and expiring on January 20, 1991, except that this permit will terminate if the permittee has not begun the surface coal mining and reclamation operations covered herein within three (3) years of the date of issuance.

Sec. 4 The permit rights may not be transferred, assigned or sold without the approval of the Director, DOGM. Request for transfer, assignment or sale of permit rights must be done in accordance with applicable regulations including but not limited to 30 CFR 740.13(e) and UMC 788.17-.19.

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

A. have the rights of entry provided for in 30 CFR 840.12, UMC 840.12, 30 CFR 842.13 and UMC 842.13; and,

B. be accompanied by private persons for the purpose of conducting an inspection in accordance with UMC 842.12 and 30 CFR 842, when the inspection is in response to an alleged violation reported by the private person.

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

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

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

B. immediate implementation of measures necessary to comply; and

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

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

Sec. 9 The lessee shall conduct its operations:

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

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

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

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

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

Sec. 13 If during the course of mining operations, previously unidentified cultural resources are discovered, the applicant shall ensure that the site(s) is not disturbed and shall notify the state Regulatory Authority (RA). The state RA, after coordination with OSM, shall inform the operator of necessary actions required.

Sec. 14 APPEALS - The lessee shall have the right to appeal: (a) under 30 CFR 775 from actions or decisions of any official of OSM; (b) under 43 CFR 3000.4 from an action or decision of any official of the Bureau of Land Management; (c) under 30 CFR 290 from an action, order or decision of any official of the Minerals Management Service; or (d) under applicable regulations from any action or decision of any other official of the Department of the Interior arising in connection with this permit. In addition, the lessee shall have the right to appeal as provided for under UMC 787.

Sec. 15 SPECIAL CONDITIONS - In addition to the general obligations and of performance set out in the leases, OSM permit UT-0014, 1/86 and this permit, the permittee shall comply with the special conditions of OSM permit UT-0014, 1/86 and the conditions appended hereto as Attachment A.

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

THE STATE OF UTAH

By: Dianne R. Nielson

Date: May 26, 1989

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

James T. Cooper
Authorized Representative of
the Permittee

Date: June 6, 1989

APPROVED AS TO FORM:

By: Richard W. Roberts
Assistant Attorney General

Date: May 26, 1989

0591R

ACT/007/007
#3

/read all

Message 575-232
Su[redacted]: AVSCH RECOMMENDATION: UT

TO: Joe Helfrich, AVS Representative, UT

FROM: Frank Frideczky, AVS Clearinghouse

SUBJECT: UT Pending Applications

DATE: May 30, 1989

The following pending applications have been researched, and the AVS Clearinghouse recommendation is ISSUE:

APPLICATION NUMBER	APPLICANT
ACT007007	SUNNYSIDE RECLAMATION & SALVAGE INC
ACT015032	GENWAL COAL CO INC
ACT015021	Co Op Mining Co

CC: Robert Postle, Casper Field Office

[PC ID 20:DOI370025:14841]

15[redacted] for 152G22 10:22 MDT 01-Jun-89 Message 575-232 [1]
* RECEIPT notice pending *

Receipt of Message 575-232 acknowledged to 152E on 16:04 MDT 01-Jun-89
Action?:
[Done]
/bye

Off at 16:05 MDT 1-Jun-89

Host Name: BYE
CB

ACT/007/007
File # 3

SUNNYSIDE MINE NOS. 1, 2, AND 3
PERMIT ACT/007/007

UMC 788.18 APPLICATION FOR APPROVAL TRANSFER, ASSIGNMENT OR SALE OF PERMIT RIGHT

UMC 788.18 APPLICATION FOR APPROVAL TRANSFER ASSIGNMENT OR SALE OF PERMIT RIGHT

This is an application of transfer of all permit rights under the Utah Coal Program for the Sunnyside Mine Nos 1, 2, and 3, an underground coal mine located in Carbon County, Utah, and the associated gob, coal tailings and waste piles, from the existing permittee Kaiser Coal Corporation (hereinafter sometimes referred to as "Kaiser") to Sunnyside Reclamation & Salvage, Inc., a Colorado corporation.

788.18(a)(2)(i)
Existing Permittee
Kaiser Coal Corporation
P. O. Box 10
Sunnyside, Utah 84539

788.18(a)(2)(ii)
Applicant
Sunnyside Reclamation & Salvage, Inc.
1113 Spruce Street
Boulder, Colorado 80302

Local Office Representing the Proposed Permittee
Sunnyside Reclamation & Salvage, Inc.
Sunnyside Coal Mine
P. O. Box 99
Sunnyside, Utah 84539

Resident Agent of Service
Denise A. Dragoo
Fabian & Clendenin
215 South State Street, Suite 1200
Salt Lake City, Utah 84111-2309

782.13 Identification of Interests

(a) Names and Addresses

(1) Permit Applicant
Sunnyside Reclamation & Salvage, Inc.
1113 Spruce Street
Boulder, Colorado 80302
Telephone: (303) 449-5012

(2) Legal or Equitable Owners of Record

The legal or equitable owners of the areas to be affected by the surface operations and facilities are:

Sunnyside Reclamation & Salvage, Inc.
1113 Spruce Street
Boulder, Colorado 80302
Telephone: (303) 449-5012

Sunnyside Cogeneration Associates
2920 North Academy Boulevard, Suite 201
Colorado Springs, Colorado 80917

The legal or equitable owners of the coal to be mined are:

Sunnyside Reclamation & Salvage, Inc.
1113 Spruce Street
Boulder, Colorado 80302
Telephone: (303) 449-5012

State of Utah
Division of State Lands and Forestry
III Triad Center, Third Floor
Salt Lake City, Utah 84180
Telephone: (801) 538-5508

United States of America
Bureau of Land Management
Utah State Office
324 South State, Suite 301
Salt Lake City, Utah 84111
Telephone: (801) 539-4030

County of Carbon, Utah
County Commissioners
County Building
Price, Utah 84501

(3) The holders of record of any leasehold interest in areas to be affected by surface operations or facilities:

Sunnyside Reclamation & Salvage, Inc.
1113 Spruce Street
Boulder, Colorado 80302
Telephone: (303) 449-5012

The holders of record of any leasehold interest in the coal to be mined:

Sunnyside Reclamation & Salvage, Inc.
1113 Spruce Street
Boulder, Colorado 80302
Telephone: (303) 449-5012

(4) There are no purchasers of record under a real estate contract of the areas affected by surface operations and facilities nor any purchaser of record under a real estate contract of the coal to be mined.

(5) The Operator is:

James T. Cooper, President
Sunnyside Reclamation & Salvage, Inc.
Sunnyside Coal Mine
P. O. Box 99
Sunnyside, Utah 84539
Telephone: (801) 888-4421

(6) The Resident Agent of the Applicant who will accept service of process:

Denise A. Dragoo
Fabian & Clendenin
215 South State Street, Suite 1200
Salt Lake City, Utah 84111-2309
Telephone: (801) 531-8900

782.13(b)

Applicant is a Colorado corporation.

782.13(b)(1) Names and addresses of officers and directors of the applicant:

Officers of Applicant

Name	Office	Address
James T. Cooper	President	1113 Spruce Street Boulder, CO 80302
David B. Corman	Vice President; Secretary	1113 Spruce Street Boulder, CO 80302
Kenneth R. Oldham	Assistant Secretary	1600 Stout Street, #1200 Denver, Colorado 80202

Director of Applicant

Name	Address
David B. Corman	1113 Spruce Street Boulder, Colorado 80302

782.13(b)(2) Name and address of Principal Shareholder of Applicant

Name	Address

Sunnyside Mines, Inc. 1113 Spruce Street
Boulder, Colorado 80302

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

N/A

782.13c) See 788.18(a)(2)(ii), 782.13(b)(1) and 782.13(b)(2) above

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

None

782.13(e) Owners of record of surface and subsurface areas contiguous to the permit area:

Surface Owners:

United States of America
Department of the Interior
Bureau of Land Management
Utah State Offices
324 South State, Suite 301
Salt Lake City, UT 84111

State of Utah
Division of State Lands and Forestry
III Triad Center, Third Floor
Salt Lake City, UT 84180

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

Kaiser Steel Corporation
P. O. Box 10
Sunnyside, UT 84539

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

GNC Energy Corp.
2305 Cedar Springs, #300
Dallas, TX 75281

Sunnyside Fuel Company
102 So. Tejon, #400
Colorado Springs, CO 80903

Sunnyside Reclamation & Salvage, Inc.
1113 Spruce Street
Boulder, CO 80302

Subsurface Owners:

United States of America
Department of the Interior
Bureau of Land Management
Utah State Offices
324 South State, Suite 301
Salt Lake City, UT 84111

State of Utah
Division of State Lands and Forestry
III Triad Center, Third Floor
Salt Lake City, UT 84180

County of Carbon
County Commissioners
County Building
Price, Utah 84501

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

*continued on page 5(a)

782.13(f) Mine Name and Number

The name of the mine is the Sunnyside Mine. The 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

Subsurface Owners: (continued)

GNC Energy Corp.
2305 Cedar Springs #300
Dallas, Texas 75201

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

Reba I. Dennis
Address unknown

Glen E. Jensen
Elmo, Utah 84521

Kaiser Coal Corporation
102 South Tejon, Suite 800
P. O. Box 2679
Colorado Springs, CO 80903

Sunnyside Reclamation & Salvage, Inc.
1113 Spruce Street
Boulder, Colorado 80203

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

East Carbon City
East Carbon City, Utah 84520

Shana Fay T. Edwards
Salt Lake City (address unknown)

Myra Ann T. Manzanares
Price, Utah (address unknown)

Dick Cloyd Tidwell
Wellington, Utah 84542

Alex Reed Tidwell
Helper, Utah 84526
Leland and Carol Loboto
917 Highway 123
Sunnyside, Utah 84539

Laurie Bowman
1310 South Highway 10
Price, Utah 84501

782.13(g) Information Concerning Contiguous Lands

The following is a statement of all lands, interests in lands, 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) Applicant holds surface rights on various parcels of lands contiguous to the permit area previously held by Kaiser Coal Corporation (see surface ownership map, Plate 2-1 of Kaiser Coal Corporation Application for Reclamation Permit ACT/007/007, June 12, 1985).

(ii) Applicant holds coal rights in areas contiguous to the permit area previously held by Kaiser Coal Corporation (see subsurface ownership map, Plate 2-2 of Kaiser Coal Corporation Application for Reclamation Permit ACT/007/007, June 12, 1985).

(iii) A 72.5 acre parcel of property currently leased to Sunnyside Cogeneration Associates ("SCA") by Applicant is subject to an Option to Purchase pursuant to a Land Lease Agreement between Kaiser Coal Corporation and SCA, dated as of March 30, 1987, amended December 28, 1987 and assigned from Kaiser Coal Corporation to Applicant by Deed and Assignment dated March 9, 1989. A copy of the Deed and Assignment is attached hereto in response to UMC 782.15, Right of Entry information.

782.14 Compliance Information

(a) Statement of Compliance

Neither the applicant, nor any of its subsidiaries, affiliates or persons controlled by or under common control with the applicant has had a federal or state mining permit suspended or revoked in the last five years; nor forfeited a mining bond or similar security deposited in lieu of bond.

(b) This section does not apply.

(c) A listing of violation notices received by Sunnyside Reclamation and Salvage, Inc., 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:

1. Notice of Violation N 89-26-1-1 (89-26-16-1)
Issued: March 29, 1989
Issued by:

State of Utah
Department of Natural Resources
Division of Oil, Gas & Mining
3 Triad Center, Suite 350
Salt Lake City, UT 84180-1203

Regulatory Provisions Alleged to Have Been Violated:
UMC 817.97; UMC 817.50

Brief Description of Violation Alleged:

Hydraulic fluid valve located underground that supplies an oil emulsion to a longwall miner broke. Fluid mingled with mine water and was pumped to a detention pond and then from the detention pond to Grassy Trail, a perennial stream. 72 dead trout were found in the stream in approx. 3 miles.

Abatement Actions Taken by Applicant:
*Straw Bail Dikes and silt fence were placed in the discharge channel between the 002 outfall and Grassy Trail Creek
*Injection of Flocculant
*Removal of Valve that Failed
*Sample Waters for Oil and Grease

Current Status:

N.O.V. abated April 12, 1989

2. Cessation Order C-89-25-1-1
Issued: April 19, 1989
Issued by:

State of Utah
Department of Natural Resources
Division of Oil, Gas & Mining
3 Triad Center, Suite 350
Salt Lake City, UT 84180-1203

Regulatory Provisions Alleged to Have Been Violated:
UMC 817.97
UMC 843.11 (b)

Brief Description of Violation Alleged:

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

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

Abatement Actions Taken by Applicant:

*Raised mine water discharge pipe from pond bottom.
*Installation of oil-absorbent booms around existing pond discharge skimmer.
*Installation of three (3) additional straw fences in the Pole Canyon discharge channel.
*Installation of silt fence with oil-absorption fabric across discharge channel.
*Installation of five (5) oil-absorbent booms across discharge channel.

Current Status: Applicant and the Division of Oil, Gas & Mining are working on a process of resolution following procedures set forth in the Division's Rules.

3. Cessation Order C-89-25-2-1
Issued: April 19, 1989
Issued by:

State of Utah
Department of Natural Resources
Division of Oil, Gas & Mining
3 Triad Center, Suite 350
Salt Lake City, UT 84180-1203

Regulatory Provisions Alleged to Have Been Violated:

817.97
817.42 (a) (i)
40-10-9 UCA 1953, et sec

Brief Description of Violation Alleged:

Conducting mining activities without a permit (deposition 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.

Abatement Actions Taken by Applicant:

*Valves to city waterlines were closed eliminating flow of sediment-laden flow into Grassy Trail Creek.
*Waterlines were repaired by city personnel.
*SRS and city officials are investigating automatic shutoff systems to prevent future occurrences should city waterline break again.

*SRS has provided alternate overflow discharge through slurry cells and clear water ponds should the intermittent discharge from the tanks be cloudy.
*No discharge from NPDES 015 has occurred since April 19, 1989.

Current Status: Applicant and the Division of Oil, Gas & Mining are working on a process of resolution following procedures set forth in the Division's Rules.

782.15 Right of Entry and Operations Information:

(a) Applicant, Sunnyside Reclamation & Salvage, Inc., bases its legal right to enter upon and begin underground coal mining activities in the permit area upon an Acquisition Agreement between Kaiser Coal Corporation, Kaiser Coal Corporation of Utah and Kaiser Coal Corporation of Sunnyside (herein "Kaiser"), as sellers, and Sunnyside Reclamation & Salvage, Inc., as buyer, dated February 20, 1989, and instruments of conveyance and assignment executed pursuant to the terms thereof. The principal instruments are a Deed and Assignment from Kaiser and Kaiser Fuel Corporation to Applicant dated March 9, 1989 and recorded March 10, 1989 in Book 287 at pages 52 through 95 of the Carbon County, Utah Records and a Bill of Sale dated March 9, 1989 from Kaiser to Applicant. A copy of the Deed and Assignment with Exhibits attached is attached to this Application and made a part hereof.

The Acquisition Agreement (and the sale of the Sunnyside Mine to Applicant pursuant to the terms thereof and the terms and conditions detailed in a Notice of Sale given by Kaiser dated February 6, 1989) were approved by the United States District Court for the District of Colorado in Bankruptcy by Order dated February 27, 1989 in Bankruptcy No. 87 B 01552 E.

(b) This section does not apply.

782.16 Relationship to Areas Designated Unsuitable for Mining

(c) Surface operations are not located with 300 feet of an occupied dwelling.

782.18 Personal Injury and Property Damage Insurance Information

A copy of Sunnyside Reclamation & Salvage, Inc.'s Certificate of Liability Insurance is attached hereto. The original is on file in Applicant's offices in Boulder, Colorado.

782.19 Identification of 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 Reclamation & Salvage, Inc. to conduct the underground coal mining activities are as follows:

(1) NPDES Discharge Permit for Sunnyside Reclamation & Salvage, Inc., Sunnyside Mines, UT-0022942

Issued effective June 1, 1988, amended effective January 26, 1989 by:

U.S. Environmental Protection Agency
Enforcement Division
Denver Place
999-18th Street, Suite 500
Denver, CO 80202-2405

(2) MSHA Identification Number 1211-UT-0031 for Grassy Trail Reservoir, Sunnyside Mines, Sunnyside Reclamation & Salvage, Inc.

Issued on August 29, 1978 by:

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

(3) Application to Appropriate Water for Miscellaneous Purposes, State of Utah. Application Number 28812 (91-231) by Sunnyside Mines, Sunnyside Reclamation & Salvage, Inc.

Approved on June 14, 1961 by:

Utah State Engineer
Division of Water Rights
1636 West North Temple
Salt Lake City, UT 84140

(4) 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.

(5) Surface Mining Control and Reclamation Permit - Permanent Program Permit was issued for the Sunnyside Mine on January 20, 1986 by the Utah Division of Oil, Gas & Mining

(6) 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

(7) 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 Mines Safety and Health Administration, Department of Labor, in 1983.

(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.

(9) Approval Order for Expanded Coal Refuse Pile issued September 30, 1987 by Utah Department of Health, Carbon County CDS A 1

(10)"Spill Prevention Control and Counter Measure Plan" is in preparation and will be filed within 14 days from the date of this Application

RESPECTFULLY SUBMITTED this 3rd day of May, 1989.

SUNNYSIDE RECLAMATION & SALVAGE, INC.

BY: _____
Vice President

Attest:

_____
Assistant Secretary

August 1988

CERTIFICATE OF LIABILITY INSURANCE
Issued To:
State of Utah
Department of Natural Resources
Division of Oil, Gas and Mining
--ooOOoo--

THIS IS TO CERTIFY THAT:

Federal Insurance Company (Chubb Insurance)
(Name of Insurance Company)

15 Mountain View Road, Warren, NJ 07060
(Home Office Address of Insurance Company)

HAS ISSUED TO:

SUNNYSIDE RECLAMATION & SALVAGE, INC.
(Name of Permit Applicant)

SUNNYSIDE MINE (Mine Name) — ACT/007/007 (Permit Number)

CERTIFICATE OF INSURANCE:

3528-55-64 (Policy Number) — December 2, 1988 - 1989 (Effective Date)

UNDER THE FOLLOWING TERMS AND CONDITIONS:

Per UMC/SMC Part 800.60 Terms and Conditions for Liability Insurance;

A. The Division shall require the applicant to submit as part of its permit application a certificate issued by an insurance company authorized to do business in the state of Utah certifying that the applicant has a public liability insurance policy in force for the surface coal mining and reclamation operations for which the permit is sought. Such policy shall provide for personal injury and property damage protection in an amount adequate to compensate any persons injured or property damaged as a result of the surface coal mining and reclamation operations, including the use of explosives and who are entitled to compensation under the applicable provisions of state law. Minimum insurance coverage for bodily injury and property damage shall be $300,000 for each occurrence and $500,000 aggregate.

B. The policy shall be maintained in full force during the life of the permit or any renewal thereof, including the liability period necessary to complete all reclamation operations under this chapter.

C. The policy shall include a rider requiring that the insurer notify the Division whenever substantive changes are made in the policy including any termination or failure to renew.

IN ACCORDANCE WITH THE ABOVE TERMS AND CONDITIONS, and the Utah Code Annotated 40-10-1 et seq., the Insurance Company hereby attests to the fact that coverage for said Permit Application is in accordance with the requirements of the State of Utah and agrees to notify the Division of Oil, Gas and Mining in writing of any substantive change, 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. Any change unauthorized by the Division is considered breach of the RECLAMATION AGREEMENT and the Division may pursue remedies thereunder.

UNDERWRITING AGENT:

Suzanne L. Swafford
(Agent's Name)

(303) 592-5550
(Phone)

Alexander & Alexander, Inc.
(Company Name)

370 17th Street, Suite 2300
(Mailing Address)

Denver, Colorado 80202
(City, State, Zip Code)

August 1988
CERTIFICATE OF LIABILITY INSURANCE

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. (An Affidavit of Qualification must be completed and attached to this form for each authorized agent or officer.)

5/1/89 Suzanne L. Swafford - assistant Vice President
(Date, Signature and Title of Authorized Agent of Insurance Company)

Signed and sworn before me by Suzanne L. Swafford

this 2nd day of May, 1989.

Mary Jo Bachetta
(Signature)

My Commission Expires: June 11, 1989
(Date)

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

State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

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

May 8, 1989

TO: Pamela Grubaugh-Littig

FROM: Joseph C. Helfrich

RE: Compliance Review for Section 510(c) Finding, Sunnyside Reclamation Salvage, Inc., Permit Transfer ACT/007/007 From Kaiser Coal Corporation to Sunnyside Reclamation & Salvage Inc.

As of the writing of this letter, there are no NOV's or CO's which are not corrected or in the process of being corrected. Any NOV's or CO's that are outstanding are in the process of administrative or judicial review. There are no finalized Civil Penalties which are outstanding and overdue in the name of Kaiser Coal Corporation or Sunnyside Reclamation & Salvage Inc.

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

cl
BT37/19

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

State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

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

May 18, 1989

TO: Richard V. Smith, Permit Supervisor

FROM: Pamela Grubaugh-Littig, Reclamation Engineer pgl

RE: Permit Transfer Approval, Sunnyside Reclamation and Salvage, Inc., Sunnyside Mine, ACT/007/007, Folder #2 and #3, Carbon County, Utah

Attached is a copy of the approved Sunnyside Mine permit transfer document from Kaiser Coal Corporation to Sunnyside Reclamation and Salvage, Inc.

The compliance review for Section 510(c) was cleared May 8, 1989. Publication commenced April 25, 1989 and therefore the permit transfer will be effective May 25, 1989.

djh
Attachment
AT4/55

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

State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

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

May 17, 1989

Mr. Robert Hagen, Director
Office of Surface Mining
Reclamation and Enforcement
Albuquerque Field Office
Suite 310, Silver Square
625 Silver Avenue, S. W.
Albuquerque, New Mexico 87102

Dear Mr. Hagen:

Re: Approval of Amendment for Borrow Area Pond As-Built Drawings, Kaiser Coal Corporation, Sunnyside Reclamation and Salvage, Inc., Sunnyside Mines, ACT/007/007-88D, Folder No. 3, Carbon County, Utah

Enclosed is one copy of Kaiser Coal Corporation's approved plans for amending the Sunnyside Mines Permit Application Package (PAP). These materials should be used to update your file copy of the approved PAP.

The Division approved this permit change on May 16, 1989.

Sincerely,

Richard V. Smith

Richard V. Smith
Acting Permit Supervisor

djh
Enclosure
AT8/70

Mine file ACT/007/007
Routethru L Braxton
13

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

State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

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

October 26, 1989

Mr. James T. Cooper, President
Sunnyside Reclamation and Salvage
The Registry
1113 Spruce Street
Boulder, Colorado 80302

Dear Jim:

Re: OSM/DOGM/SRS Memorandum of Understanding, Reclamation Surety, Sunnyside Mine, Carbon County, Utah, ACT/007/007

As we discussed, enclosed are three originals of the above-referenced MOU per our discussion. Please have all copies executed for Sunnyside Reclamation and Salvage and return to me. When OSM has signed, we will send you an original.

If you have any questions, please call me. Thank you for your assistance with this matter.

Best regards,

Dianne R. Nielson
Director

ksg
Enclosures (3)
AD553/21

MEMORANDUM OF UNDERSTANDING

This Memorandum of Understanding is made this 19th day of October, 1989, by and between the Utah Division of Oil, Gas, and Mining (DOGM), Sunnyside Reclamation and Salvage (SRS), a Colorado corporation, and the United States Department of the Interior, by and through the Office of Surface Mining Reclamation and Enforcement (OSM).

RECITALS

A. On or about the 3rd day of March, 1989, DOGM and SRS entered into a reclamation contract (the Contract).

B. The Contract set forth the agreement of SRS and DOGM concerning, inter alia, the reclamation of Sunnyside Mine Nos. 1, 2 and 3, Carbon County, Utah, together with the associated gob, coal tailings, and waste piles (the Mine and the Tailings).

C. Pursuant to paragraph 9 of the Contract, on or about March 9, 1989, SRS, DOGM and South Eastern Title Company entered into a Deed of Trust and Security Agreement (the Instrument), which document was recorded in Emery County, Utah, on or about March 10, 1989 in Book 176 at Pages 580-639, and in Carbon County, Utah, on or about March 10, 1989 in Book 287 at Pages 96-155.

D. In the Instrument, SRS conveyed to DOGM a first lien and security interest in and to certain undisturbed real property, water rights, fixtures, buildings, tangible equipment and personal property.

E. On or about the 28th day of August, 1989, SRS and DOGM executed an Agreement and Release of Reclamation Contract (the Agreement and Release), which instrument terminated the Contract, released SRS from certain financial obligations, and granted to DOGM certain other rights.

F. On or about the 28th day of August, 1989, SRS and DOGM also executed a Subordination Agreement (the Subordination Agreement), which agreement, inter alia, subordinated to Zions First National Bank (Zions), DOGM's first lien and security interest in and to certain tangible equipment and personal property, which lien and security interest was conveyed by SRS to DOGM in the Instrument.

G. In the Agreement and Release, and notwithstanding the fact that OSM was not a party thereto, a recital was made that OSM and DOGM had determined that the Instrument, as modified by the Subordination Agreement, provided adequate security for ensuring SRS's reclamation of the Mine and the Tailings.

H. The Cooperative Agreement between the Governor of the State of Utah and the Secretary of the United States Department of the Interior (the Cooperative Agreement), 30 C.F.R. § 944.30, in Article IX states that DOGM and the Secretary will require each operator who conducts operations on Federal lands to submit a single performance bond payable to Utah and the United States to cover the operator's responsibilities under the Surface Mining Control and Reclamation Act of 1977 (SMCRA), 30 U.S.C. §§ 1201 et seq., and the State program.

I. The Mine and the Tailings are operations involving Federal lands, and the Instrument, as modified by the Agreement and Release and the Subordination Agreement, comprises a collateral security bond which, under the terms of the Cooperative Agreement, should accrue jointly to the benefit of DOGM and OSM.

J. The purposes of this Memorandum of Understanding are, without limitation, to (1) set forth the express intent, acknowledgment, understanding and agreement of the parties with respect to the terms of the Instrument, the Agreement and Release, and the Subordination Agreement; (2) include OSM as a co-beneficiary to the first lien and security interest conveyed by SRS to DOGM in the Instrument; and (3) include OSM as a co-beneficiary to any and all other rights accruing to DOGM in the Agreement and Release.

AGREEMENT

NOW THEREFORE, in consideration of the premises and the mutual covenants and agreements hereinafter set forth, the parties hereto agree as follows:

1. Irrespective of the date on which this Memorandum of Understanding is executed by the parties, it shall retroactively be effective, nunc pro tunc, as of the effective date of the Instrument.

2. It is the express intent and understanding of the parties that this Memorandum of Understanding shall, and hereby does, constitute the agreement of the parties concerning the Instrument, the Agreement and Release, and the Subordination Agreement, the express agreement of the parties being that all rights conferred upon DOGM by SRS in the Instrument and the Agreement and Release shall and hereby do accrue jointly to DOGM and OSM as if OSM had originally been a party to said documents, it being the express intent and understanding of the parties that by execution of this Memorandum of Understanding, privity of contract as to said documents shall be and hereby is established among DOGM, SRS and OSM.

3. The parties expressly understand and hereby acknowledge that by executing this Memorandum of Understanding OSM does not

release, waive or otherwise discharge, either expressly or impliedly, Kaiser Coal Corporation, Kaiser Coal Corporation of Sunnyside, or Kaiser Coal Corporation of Utah, or said entities' officers or directors, from any reclamation liability enforceable by OSM under SMCRA.

4. By execution of this Memorandum of Understanding, OSM claims no interest in the personal property and tangible equipment described in the Subordination Agreement. Nonetheless, upon execution of this Memorandum of Understanding, and upon satisfying itself that the lien provided by the Instrument, as modified by the Agreement and Release and the Subordination Agreement, provides adequate security for ensuring the reclamation of the Mine and the Tailings, OSM shall, if required to do so by DOGM or Zions, execute whatever lawful document is deemed necessary by DOGM or Zions to subordinate the appropriate portion of OSM's first lien and security interest to Zions.

UTAH DIVISION OF OIL, GAS, AND MINING

By: Dianne R. Nielson

SUNNYSIDE RECLAMATION AND SALVAGE

By: _____

OFFICE OF SURFACE MINING RECLAMATION AND ENFORCEMENT

By: _____

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

State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

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

October 18, 1989

Mr. Karl Houskeeper
Sunnyside Reclamation and Salvage Inc.
P.O. Box 99
Sunnyside, Utah 84539

Dear Mr. Houskeeper:

Re: Approval of Time Extension for Submitting Updated Reclamation Cost Estimate, Sunnyside Reclamation and Salvage, Inc., Sunnyside Mines, ACT/007/007-89G, Folder #3, Carbon County, Utah

In response to your letter dated October 17, 1989, requesting a time extension for submitting the above-identified information, the Division hereby grants an extension until October 31, 1989. This extension should be adequate to allow requisite information to be derived and compiled.

Sincerely,

Richard V. Smith

Richard V. Smith
Permit Supervisor

cl
cc: P. Grubaugh-Littig
W. Warmack
BT40/53

2.7 Personal Injury and Property Damage Insurance

A copy of the certificate of liability insurance is shown on the following page.

2.8 Proposed Performance Bond

The proposed performance bond, as forecasted in Section 3.5.7, is $1,297,546.42 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 Steel Corporation to conduct the underground coal mining activities are as follows:

(1) NPDES Discharge Permit for Kaiser Steel 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 Steel 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 Steel 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 Steel 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. No record of Notice of Intent Application.

(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.

(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

CHAPTER II

2.11 Newspaper Advertisement

A copy of the newspaper advertisement is Figure II-2.

CHAPTER II

LIST OF EXHIBITS

(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 (Name of Permit Applicant) of P.O. Box 5050, Fontana, CA 92335 (Address of Permit Applicant) Policy No. GLA 9456838 RA 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 Barbaro (Notary)

ANN BARBARO
NOTARY PUBLIC-CALIFORNIA
CITY AND COUNTY OF
SAN FRANCISCO
My Commission Expires July 25, 1986

My Commission Expires:

Figure II- 1
Verification of Insurance

NOTICES PEOPLE MUST KNOW

LEGAL NOTICE

Pursuant to Utah Mining Code Part UMC 786, notice is hereby given that Kaiser Steel Corporation, P.O. Box D, Sunnyside, Utah 84539, has submitted a Mining and Reclamation Plan for the Sunnyside Mines. The Plan is jointly submitted 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: N½, S½SW¼, S½SE¼, NW¼SE¼

Sect. 7: NW¼, SW¼NE¼, E½SW¼, S½SE¼, NW¼SE¼

Sect. 17: NE¼, SE¼NW¼, SW¼, S½SE¼

Sect. 18: E½, S½SW¼, NE¼SW¼, portion of NW¼SW¼, portion of SW¼NW¼

Sect. 19 and 20: All

Sect. 21: W½

Sect. 28 and 29: All

Sect. 30: NE¼, NE¼NW¼, NW¼SE¼

Sect. 31: S½NE¼, NE¼NE¼

Sect. 32 and 33: All

Sect. 34: W½

T15S, R14E, SLB&M, Utah

Sect. 3: W½

Sect. 4: All

Sect. 5: NE¼, N½SE¼, SE¼SE¼

Sect. 8: NE¼NE¼

Sect. 9: All

Sect. 10: W½, SE¼

Sect. 15: W½, N½NE¼

Sect. 16: E½, NW¼, E½SW¼

Sect. 17: E½NE¼

2. Federal Leases

Federal Lease Nos. Salt Lake 062966 - 063383 - Utah - 010140 and U - 32083. Also certain parcels under SL-068754 - Utah - 01215 by special agreements.

T14S, R13E, SLB&M, Utah

Sect. 12: NE¼, N½NW¼, SE¼NW¼, SE¼SE¼, N½SE¼, portions of: SW¼NW¼, NE¼SW¼, and SW¼SE¼

Sect. 13: Portions of: NE¼NE¼ and E½SE¼

Sect. 24: S½SE¼, portions of: N½NE¼, SE¼NE¼, N½SE¼, and NE¼SW¼

Sect. 25: NE¼NE¼

T14S, R14E, SLB&M, Utah

Sect. 6: N½SW¼

Sect. 7: W½SW¼

Sect. 8: SW¼, SW¼SE¼

Sect. 17: W½NW¼, NE¼NW¼, N½SE¼

Sect. 18: E½NW¼, NW¼NW¼

Sect. 30: NW¼NW¼, SE¼NW¼, NE¼SW¼, S½SE¼, NE¼SE¼

Sect. 31: NW¼NE¼

3. Carbon County Leases

T14S, R14E, SLB&M, Utah

Sect. 21: SE¼

Sect. 27: SW¼, SW¼NW¼

Sect. 34: E½

T15S, R14E, SLB&M, Utah

Sect. 3: E½

Sect. 10: NE¼

4. Surface Rights

T14S, R14E, SLB&M, Utah

Sect. 31: SE¼

T15S, R14E, SLB&M, Utah

Sect. 5: W½, SW¼SE¼

Sect. 6: S½SE¼, SE¼SW¼, portions of N½SE¼ and NE¼NW¼ south of the D&RGW Railroad right-of-way.

Sect. 7: N½NE¼, N¾NW¼

Sect. 8: N½NW¼, NW¼NE¼

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 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, 1588 West North Temple, Salt Lake City, Utah 84116 and to the Office of Surface Mining, Reclamation and Enforcement, Brooks Towers, 1020 15th Street, Denver, Colorado 80202.

Published in the Sun Advocate March [illegible] April

Figure II-2

Copy of actual newspaper advertisement and proof of publication

Chapter II

Plates are to be obtained from the most recent source indicated in the following table.

	Permit	ACR	DOC	TA
Plate II-1*				
Plate II-2	X			
Plate II-3	X			

Please discard this page after transfering the Plates from the previous submissions.

* Resubmitted seperate from the above submissions to DOGM.

CHAPTER III

OPERATION AND RECLAMATION PLAN

TABLE OF CONTENTS

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.

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 Manshaft (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.

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:

I.D. Number	Description
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.

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.

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

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.

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).

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.

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-

crease the recovery ratio and to successfully mine coal in conditions that would make room and pillar mining extremely hazardous. This technique allows essentially full extraction of the seam, within the height limitations of the equipment, except for barrier pillars left to protect haulage and ventilation entries. This system also allows safe extraction in areas of high overburden that would be extremely hazardous for room and pillar mining.

Mining Schedule

The No. 1 Mine longwall will operate one shift per day and a continuous miner section two shifts per day. The No. 3 Mine longwall will be idle unless there is a major breakdown on the No. 1 Mine longwall. The production schedule may change if sales are higher than forecast.

3.3.1.3 Mine Development

New mine development and old works are illustrated on Plates III-2 and III-3. It has also been discussed in Sections 3.3.1.1 in relation to the coal seams.

Strikes and dips of the coal seams as well as the applicable drill holes are identified on Plate III-4.

The mines have been developed with main slopes driven down the pitch and development entries driven on the strike. See Plate III-4. Motor haulage roads are driven on the strike to intersect the main hoist slopes.

Prior to the installation of the belt conveyor haulage system, coal was hoisted up the main slopes from the working sections in thirteen car trips of 5-ton capacity each. Four rope trips were assembled at the main partings and the fifty-two car trip was then transported to the preparation plant by electric locomotives. Now, all the coal is transported by belt conveyor across a strike entry to the No. 3 Mine main slope from No. 1 Mine then transferred to the main slope conveyor and brought to the surface to a belt feeding the rotary breaker.

At present, development is utilized in blocking out longwall panels from 500 to 600 feet in width and from 4,000 to 7,500 feet in length. Two development entries are driven off the main slope on the strike and extend to bleeder entries. Barrier pillars are left to protect the main slopes and bleeders at each end of the longwall panel.

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

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-

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).

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.

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.

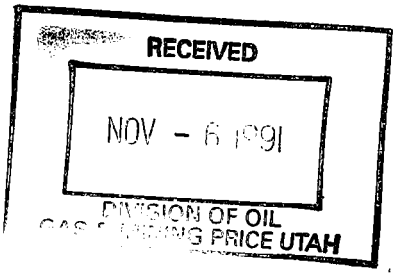
3.3.4.1 Surface Equipment

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



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.

Steam 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".

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.

The Division has authorized operations inside of the 100' stream buffer zone required in UMC 817.57 due to the existence of pre-SMCRA installations and operations. The location of the stream buffer zone and the location of the stream buffer zone signs are shown on Plate III-26. Two areas exist that require signs. they are the prep plant area and the upper manshaft area. The signs are placed in locations where operations are in close proximity, and indicate either the actual width of the stream buffer zone as authorized by the Division or the regulation 100' buffer zone. Disturbance within the stream buffer zone will not be allowed by the operator. [4]

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".

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.

[4] Revised 7/8/93

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 remainder of this page intentionally left blank.

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 inpacts on any underground mine, or change the course,

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%.

3.3.6.2 Operating Schedule

The normal operating schedule is 5 days per week. The longwall 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).

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.

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-

CHAPTER III

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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).

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-

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 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. [5]

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.

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[5] Revised 7/8/93

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 under surface operational parameters. Sampling parameters are located in Table III-23. Results of the samples are sent on a quarterly basis to EPA, State Board of Health and 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 site is accessible in the spring and the last sample will be obtained between August and October. Winter sampling is not possible because of the access problems. The samples will be analyzed for ground water operational parameters (see Table III-23). A report on the spring activity will be submitted to the Division.

Water inflows into the mine in quantities greater than three gallons per minute will be sampled for quantity and quality provided the source of inflow can be reached without exposing the sampler to unsafe conditions. On an annual basis, the results of the monitoring program including a map of all observed inflow points with an indication of the geologic source will be provided to the Division. When new points or areas of measurable flow are encountered, flow data and field water quality parameter will be measured quarterly. The groundwater operational monitoring schedule will be used. Details of the mine water sampling program are located in Section 7.1.6.

The sampling program will result in a determination of the effect of mining on surface and subsurface waters. If a measurable prolonged decrease in surface flows, reduction of quality or increased flows occur underground the operator will notify the Division concerning mitigation and will reassess the current mining program.

3.4.4 Preservation of Soil Resources

3.4.4.1 Projected Impacts of Mining on Soil Resources

Most of the disturbances caused by mining activities at the Sunnyside Mines occurred prior to the Act of 1977. The primary effects of mining operations upon these soils include compaction; loss of microorganisms and consequently, a loss of organic matter and nitrogen; some contamination of topsoil material with coal fines; and some mixing of topsoil with subsoil materials. Generally, soil disturbances usually accelerate erosion by wind and water, especially on steep slopes. During topsoil removal, some subsurface materials will be mixed with topsoil and consequently will lower total soil fertility. Long periods of stockpiling topsoil will cause some loss of microorganisms and soil nutrients. All of these soil conditions are considered during mining operations and reclamation activities so the proper reclamation practices and mitigation techniques can be employed.

3.4.4.2 Control Measure to Mitigate Impacts

Standard soil conservation techniques and reclamation practices are used to mitigate impacts of mining activities on soil resources. For areas that were disturbed prior to the Act of 1977, the facilities will be abandoned according to the procedures outlined in Chapter III. The surface materials will be ripped, disked, and analyzed for soil nutrients. These areas will then be amended or topsoiled as needed. Revegetation will be completed according to the procedures outlined in section 3.5.5.

Although the extent of future disturbances will be small, protective measures will be employed to ensure the conservation of soil resources. In all cases, topsoil will be removed and stockpiled for future reclamation use. Stockpiles will be graded and seeded with a grass seed mix to minimize the loss of soil. Further details are discussed in section 3.5.5.

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.

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.

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^{o}-85^{o} W. and N. 12^{o}-20^{o} 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

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 with in 30 days of the survey. The monuments are 6 foot long roof bolts driven 5.5 feet into the ground. Elevation accuracies are $\pm$ 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 overlie 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

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

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^{o} (personal communication - Boyd McKean, BLM), subsidence of the reservoir was calculated as

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

$2000' \times \tan(20^{o}) = 727.94'$

$$\frac{727.94 \times \sin(70^{o})}{\sin(105.4^{o})} = 709.52'$$

$709.52 \times \cos(4.6) = 707.23'$

Down-Dip Subsidence Barrier

$2000' + \tan(4.6^{o}) \times 1400' = 2112.64'$

$\tan(20^{o}) \times 2112.64 = 768.94'$

$$\frac{768.94 \times \sin(4.6^{o})}{\sin(110^{o})} = 65.63'$$

$768.94 + 65.63 \times \sin(20^{o}) = 791.39'$

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.

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.

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.

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 ia 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 water shed 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.

(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 stratums 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 $CaCO_3$ 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

(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

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 streamsides 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

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 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 in 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 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

Stockpile Location	Quantity
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	15,800 cu ft
Total	386,800 cu ft

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

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

Borrow Area	Acres	Depth (ft.)	Cubic Yards Available
(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)	-----	----	8,500
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.

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.

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.

(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.

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.

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 no appear on the map. The final contours will approximate those shown on Plate III-1.

The coarse refuse pile is contoured throughout is 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.

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 reseeded.

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-

cies to be planted. If needed, phosphorous (P_2O_5) will be disked into the soil prior to planting. Nitrogen fertilizer (ammonium nitrate) will also be added if soil testing and interpretations indicate it is necessary.

Soil material will be worked on the contour whenever possible, unless there are steep slope limitations. Soil will be placed as evenly as possible. After facility removal on areas where no soil material will be replaced, the ground will be ripped with a bulldozer to a depth of eighteen to twenty inches to loosen the surface material and increase infiltration. The site will then be graded to its final contour and sampled for chemical analysis prior to planting as described above.

3.5.5 Revegetation Plan

The revegetation plan has been designed to re-establish several plant communities on the disturbed sites that are self-sustaining and capable of controlling erosion. Species have been selected which are important for supporting and complementing the planned post-mine land uses of fish and wildlife habitat, recreation and livestock grazing. Perennial forage species selected will minimize the amount of disclimax species such as Bromus tectorum.

Little variation in revegetation techniques are expected to be necessary at Sunnyside, with the exception of techniques required on the coarse refuse. The revegetation techniques on the coarse refuse are currently under study. The purposes of this study are presented in Appendix III-7. Other supporting information is in Chapter VIII.

The primary differences between sites will be application of seed mixes appropriate to each habitat type. The amount of tackifer is doubled on steep slopes. Soil preparation equipment varies, e.g. bulldozer, tractor, disk, maintainer, front-end loader, etc. depending on site specific conditions and equipment availability. Seeding will be by a drill on level to gently sloping areas and hydroseeding on steeper or less accessible areas. When the hydroseeder is used the seed rate is increased (Tables III-15 through III-18).

3.5.5.1 Soil Preparation

Prior to seeding, soil will be disked or scarified if a crust has developed since final grading or disking of phosphor-

ous. Otherwise, no special soil preparation will be necessary after final grading and addition of any necessary nutrients.

Special soil preparation, such as the addition of lime, may be necessary prior to revegetation of coarse coal refuse. This factor is currently under study (Chapter VIII).

3.5.5.2 Seeding and Transplanting

The revegetation plan addresses each habitat type or vegetation type and not each disturbed site. As the disturbed areas are relatively small, each facility or area will be reclaimed to the appropriate habitat type in which it occurs. These are illustrated on Plate III-1.

The exception to the revegetation plan is the coarse refuse and slurry ponds. Until research is completed, it is uncertain what habitat type will be created. It is likely, however, that the area will be returned to a shrub/grass type rather than a woodland.

All disturbed areas will be seeded the first planting season after site preparation is complete. The Soil Conservation Service recommends autumn seeding (George Cook, personal communication). Many native shrub seeds have a stratification requirement and autumn planting will allow these seeds to overwinter (Monson and Christensen, 1975). Spring seeding of grasses and forbs can also be done. If any transplanting becomes necessary, it will be in early spring to allow the trees and shrubs to naturally break dormancy.

The seed mixes have been carefully prepared according to the habitat type to be reseeded, the post-mine land uses, erosion control capability and seed availability (Tables III-15 through III-18 and Figure III-8).

Experience has proven the addition of annual and exotic grasses, which have quick establishment rates, is detrimental to the establishment of nature species, both seeded and invaded (Oaks 1981, Wolfe 1982). Therefore these have been omitted. All species combined will provide erosion control. Table IX-39 describes documented forage values of the species to be used for deer and elk. The mixes may vary from year-to-year, depending on seed availability and cost.

Each seed mixture is titled for the habitat to be reclaimed. Locations of the disturbed areas, mapped according to habitat type, are shown on Plate III-1. The revegetation plan is designed to return each site to a community similar to what is

thought to have occurred prior to the mining disturbance. The species and procedures may be changed if data becomes available from the test plots that establishes a clear need for change.

Seeding rates are based upon critical areas (Merkel and Herbel 1973, EPA 1975). The main facility sites and other similar gently sloping areas will be drilled with a native seed drill. Slopes and areas difficult to reach will be seeded with a hydroseeder. The seed will be applied in a water slurry. Mulch will be applied in a separate step.

The current plan will require the establishment of about 1,800 shrubs and trees per acre to equal the densities in the pinyon-juniper/grass reference area. This live stem density, as required in UMC 817.117, can be achieved from the shrub seed currently in the seed mix. Shrub transplants (containerized stock) will be hand planted to achieve required stem density only if it is necessary to supplement the seed mix.

The tree type (pinyon-juniper) is only fifteen acres which consist of small sites or long narrow strips. No trees or shrubs will be transplanted here, as natural invasion should fill in these areas. The shrub seed in the seed mix will provide enough stems per acre to equal the densities (550 stems/acre) in the pinyon-juniper reference area.

The two shrub types (mountain brush and sagebrush/grass) will not require transplanting. The amount of shrub seed mix will provide enough stems/acre to comply with UMC 817.117.

3.5.5.3 Mulching

Seeded areas will typically be mulched with native hay at a rate of two tons/acre. The hay will be installed with a hay blower or by hand on small areas. It will be crimped in place on level areas and/or tacked with an application of about 150 pounds/acre wood fiber and liquid organic tackifer such as J-tac. A rate of forty pounds/acre is used on level to gently sloping areas. On steep slopes, the rate of the liquid tackifer is doubled.

Jute matting or excelsior blankets will be used to aid seed establishment in drainage areas or to control localized gullying. Gullies are a common component of the local and regional topography. Therefore drainages through planned sites will be constructed during regrading to help control erosion.

Within limitation of equipment, much of the rock will be replaced. Rocks help act as a deterrent to erosion, improve water retention, and create micro-environments which enhance seed germination.

The rock is not intended to be used as a mulch, but rather to re-create a particular habitat type. Similar use of rocky soils in New Mexico has proven successful (Wolfe 1981), whereas loamy soils without rocks replaced on slopes undergo accelerated erosion until a "stone pavement" of small included pebbles develop. Meanwhile, soil losses of six inches and more are visible as demonstrated by pedestalled grasses.

3.5.5.4 Management

Grazing Protection

The reseeded areas will be protected from livestock grazing. Protection from wildlife is generally impractical. However, plastic net guards will be used when necessary to prevent browsing of trees and shrub transplants.

Irrigation

Irrigation will not be necessary to establish vegetation. The revegetation at Sunnyside will be mulched to increase germination and improve soil moisture retention. The Bureau of Land Management range improvement seedings, in chained pinyon-juniper north of the town of Sunnyside, have been successful without supplementary water.

Weed Control

All seed purchased will be labeled in accordance with the Federal Seed Act, Section 201. This law limits or restricts the presence of certain noxious plant species.

Native hay will be selected to introduce a minimum of weed seed. Revegetation experience has shown that after a couple of years, most weeds are naturally eliminated from the stands. If weeds should become a problem for some reason, mowing may be used where terrain permits (EPSA 1975), or in extreme cases, herbicides could be applied.

CHAPTER III

Disease and Pest Control

Any necessary insect or rodent control will be guided by the U.S. Fish and Wildlife Services, The Utah State Cooperative Extension Service, and the Animal, Plant, Health Inspection Service.

3.5.5.5 Monitoring

Revegetated areas will be monitored on a schedule recommended by DOGM. Revegetated sites not subject to final reclamation will not be monitored until after final revegetation. (Monitoring is discussed in Section 9.8).

3.5.6 Schedule of Reclamation

3.5.6.1 Detailed Timetable

Contemporaneous reclamation is discussed in Section 3.5.1; these activities will continue until the mine closure. Upon completion of mining, reclamation will be performed as described in Sections 3.5.3, 3.5.4 and 3.5.5. Table III-10 presents the proposed reclamation and revegetation time schedule.

3.5.6.2 Reclamation Monitoring

Reclamation success of post 1977 disturbed areas will be determined by comparing data from DOGM approved reference areas with the corresponding reclaimed sites, in accordance with UMC 817.116 and 817.117. The parameters to be compared include vegetation cover and stem density.

Reclamation and revegetation are generally inspected and monitored by OSM and DOGM. Revegetation monitoring is discussed in Section 9.8. On federal lands, disturbed acreage and reclaimed areas will be surveyed regularly and reports submitted according to CFR 211.62.

Qualitative inspections and monitoring of the final reclamation will be done on an annual basis throughout the bonding period. All sites will be inspected at least once a year for seeding or soil stability failure or problem areas (actual or potential). Any damaged areas will be repaired.

The monitoring begins following the final seeding and mulching of the reclaimed areas. According to UMC 817.116(b)(1), the 10-year responsibility period cannot begin until ground cover in the reclaimed site equals (within 70%) that in the reference area.

Vegetation sampling will commence on the reclaimed sites and the reference areas the second year after reseeding. This sampling will continue on a biennial basis until ground cover and stem density reaches the approved standards needed for the ten year responsibility period to begin.

3.5.6.3 Responsibility Period Monitoring

Once the approved densities [UMC 817.111(c)(2)] and ground cover [UMC 817.116(b)(1)] have been achieved, the 10-year responsibility period can begin. Statistically adequate samples and statistical comparisons between the reclaimed sites and the reference areas will be conducted at least four (4) years during the 10-year period. The first two sampling periods will be in the third and sixth years to assure the revegetated areas are progressing and maintaining sufficient cover and density. During the last two years, the areas will be adequately sampled and statistically compared (one tailed t-test) for ground cover and stem density to prove reclamation success and allow for bond release.

Water monitoring during the period between final reseeding and bond release will consist of sampling eight sediment ponds. These ponds being left are limited discharge ponds and only need to be sampled when discharge occurs. The ponds are designed to discharge only after a ten year, twenty-four hour storm event.

Subsidence monitoring will be done annually for three years to make sure that all subsidence has stabilized.

3.5.6.4 Statistical Methodology

Any sampling on reclaimed areas or reference areas will be done at statistically adequate levels. To determine adequate samples a two-tailed t-test (Snedecor and Cochran, 1976) $(t^2s^2)/(dx)^2$ will be used at the 80% confidence level with a 10% (d=10%) change in the mean. The 80% confidence level is because all vegetation types at Sunnyside are either shrublands or woodlands (shrub cover greater than 20% of total cover).

Once adequate samples are obtained for cover and stem density, these parameters will be compared between reference areas and the corresponding reclaimed sites. These parameters will be compared using a one tailed t-test (Larsen, 1980). Since the primary land use is wildlife, under Section UMC 817.116, the revegetation will be considered successful when ground cover of a reclaimed site is 70% of the ground cover in the reference area with 90% statistical confidence. The stem densities on the reclaimed areas must be within 90% of densities on the reference areas with 80% statistical confidence.

3.5.6.5 Sampling Methodology

Ground cover will be estimated using the point line method, where a pin is dropped through a frame every 1/2 meter on a 25 meter transect. The first object encountered by the pin will be recorded as cover for that point. However, only understory cover will be estimated and this will not include canopy cover provided by trees or tall shrubs (shrubs over five feet tall). It would not be reasonable to expect trees or shrubs after only ten years' growth in the reclaimed sites to achieve the canopy cover found in the reference area.

The success of tree and shrub establishment will be determined by comparing stem densities of the reclaimed sites with the reference areas. In accordance with UMC 817.117, only shrubs or trees over one foot in height, over two years old, and with at least one-third of its length in the live crown will be counted. Densities will be estimated by counting the number of stems in a known unit area. In the pinyon-juniper types an elbow shaped plot illustrated in Plate IX-5 of the MRP will be used to estimate densities. This plot is two rectangular shaped plots each, 6 x 30 meters, with one parallel to the slope and the other perpendicular. In the mountain brush and sagebrush vegetation types, a plot 13.2 ft x 33 ft (0.01 acre) will be used to estimate shrub density. This size plot was developed because of the size and density of shrubs in this type.

3.5.7 Cost Estimate for Reclamation

3.5.7.1 Forecast of Performance Bond Liability During Permit Term and Forecast of Liability for the Life of the Mine

There is no difference between bond for the permit term and a bond for the life of the mine. There are no additional disturbances planned for the Sunnyside Mine during the 5-year permit term.

Table III-29 gives the estimated bond cost for facility removal, entry sealing and reclamation costs for the reclaimed areas delineated and identified in Table III-25. In addition to the total contract and reclamation costs, there are a number of add-on costs including supervision, overhead and monitoring costs. Equipment mobilization and demobilization cost includes the cost of transporting necessary reclamation equipment.

The reclamation bond has been computed for post-law disturbances and pre-law disturbed areas which have been used since 1977.

No bond is calculated for areas disturbed and revegetated prior to 1977 and illustrated on Plates III-20-23.

There will be additional revegetation of unbonded pre-law areas in the future. These areas have been mapped (Plates III-20 through III-23) illustrating the current condition of the pre-law disturbances. In Appendix III-10 these areas are described and the acreages are listed in Table 2. About 50% of these pre-law disturbances were revegetated in the 1960's and about 33% remains in a completely disturbed condition.

The costs for equipment use and ownership have been taken at current (1988) Blue Book values (Table III-31). For those pieces of equipment not in the Blue Book costs, depreciation, repair frequency and cost of operating similar size pieces of equipment were used to estimate ownership and operating costs. The hours used for estimating equipment usage are based on the Caterpillar Handbook and field or supervisory experience in reclamation and revegetation or as cited.

3.5.7.2 Bond Estimate

Mine Portal Sealing

There are 33 portals (Table III-5) and 8 shafts (Table III-5) within the Sunnyside permit area that have not been reclaimed. Nine portals have been sealed but not covered and reclaimed. The portals and shafts are located on Plate III-1. The descriptive parameters are described in Plate III-18 (1 of 2) and Plate III-18 (2 of 2). Tables III-6 and III-8 give a summary and details of shaft sealing costs. Table III-5 gives detail and summary costs for portal sealing.

CHAPTER III

Portal Closure and Fill

Portal closure and fill costs (Table III-9) include the transport of enough fill material to cover portals to blend with topography where no highwall regrading was calculated. Costs are also included to blast shut portals on top of cliffs that cannot be accessed by equipment. There would be major surface disturbance to construct access roads to close the portals that the operator is proposing to blast shut.

Dismantling and Removing Facilities

A complete list of facilities is included in Table III-1 and shown on Plate III-1. Several of the facilities are to remain after closure for use by the towns of Sunnyside and East Carbon. The cost of facilities removal was derived from the Means Construction Handbook (1986). These costs include facility dismantling and removal from the site. Foundation breakage and burial sufficient for regrading and reclamation is included. Table III-1 gives the breakdown and cost estimate for facility removal. Unit costs for floor slab removal were converted from costs per square foot to costs per cubic foot for slabs and foundations to allow for ease of calculations when slab thickness varied. Footing removal unit costs were also converted from cost per linear foot to cubic foot. Some of the foundations are covered when the area is regraded and will not be removed.

Power line removal costs were an average of previous removal cost estimates and bids.

Culvert Removal

A total of 26 culverts (Table III-22) are to be removed inside the permit boundary during reclamation. Cost and source of information are shown on the table.

Drill Hole Plugging

Two drill holes are known to be open, based on presently available records. Cementing costs are shown in Table III-10.

Highwall Regrading

Highwall regrading will be done at portal and shaft locations where cut/fill excavations were done on side hills to place facilities. Regrading involves pulling previous cut material back into the cut with a backhoe and dozing the material into approximate original contours using a dozer. Volumes for areas 2 through 9 were based on cross-sections on Plate III-32. Volumes

for the unit train loadout and preparation plant highwalls were based on regrade contour volumes shown on Plate III-42. Cost calculations are shown on Table III-20.

Regrade Outside Highwall

General area regrading involves scarifying and recontouring general areas to achieve positive drainage and break up the ground surface for seeding. The Water Canyon refuse will require the placement of 6,018 cu. yds. (1' depth) of borrow material for suitable cover prior to revegetation. There are 47.04 acres of refuse (4-ft. of cover) and 71.49 acres of slurry (1-ft. of cover) that will require scarifying. All unit costs are developed in backup cost calculations on Tables III-32 through III-36.

Pond Reclamation Costs

There are eleven sediment ponds and two mine water discharge ponds (Table III-21) on the Sunnyside permit that will require filling and leveling during abandonment. Yardage developed to fill and blend the pond with surrounding topography was assumed to be equal to the pond capacity to the top of the embankment. Material movement costs were from Table III-36 based on average push distances shown in Table III-21 with no ripping required.

For bonding purposes, it was assumed eight sediment ponds would have to be sampled only once each over the ten year period. Labor and lab costs are shown on Table III-30.

The monitoring costs are calculated and listed on Table III-35.

Soil Testing, Preparation, and Fertilizing

The soil testing will be done following the removal of facilities and after ripping and regrading. For bond purposes it was assumed that soil tests would be needed on all disturbed acreage. It was estimated that an average of three samples per acre would be needed to determine soil quality and fertility. Sample costs are from Bookcliffs/ACZ Laboratory.

Nitrogen (ammonium nitrate) and Phosphorus (P_{205}) will be applied at the locations and rate that soil tests indicate. Assuming worst case, the soil tests indicate some soils could use 40 lb/acre of nitrogen and 30 lb/acre of phosphorus (recommendation - Colorado State University Soils Laboratory). Fertilizer would be applied with a tractor and spreader and ground will be

disked to break surface crusting. Table III-12 details unit cost and Table III-25 summarizes cost by area.

Revegetation

Revegetation costs were calculated for drilled (Table III-14) and hydroseeded (Table III-13) areas using four different vegetation seed mixtures. All areas will have hay mulch and/or tackifier applied. The cost of the seed mix for each vegetation type is presented in Tables III-15 through 18. The weighted average cost of revegetation at Sunnyside is found in Table III-11.

Responsibility Period Monitoring

Costs for responsibility period monitoring, described in Section 3.5.6.1, are shown on Table III-30.

Contractor Mobilization & Demobilization

A fixed cost of $10,000 was included for costs of moving equipment and necessary portable facilities in and out of the job site for one or more contractors during the job period.

Revegetation Failure

Revegetation failure is high in the high desert environment of Utah where the rainfall is light and erratic during the summer months. A 40 percent failure rate was assumed for all disturbed acreage. Additional cost would include unit costs covered in soil testing, preparation, and fertilizing and revegetation costs described above.

Reclamation Management

A full time on-site manager during the reclamation phase of the project has been added for eight months at $4,000 per month.

Contingency

A contingency of 10 percent for the reclamation has been added to cover unforseen costs.

CHAPTER III

3.6 Bibliography

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CHAPTER III

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CHAPTER III

LIST OF EXHIBITS

FIGURES

TABLES

CHAPTER III

TABLE

CHAPTER III

Plate	III-3	Approximate timing and sequence of underground map
Plate	III-4	The Sunnyside underground geology and hydrology description map (revised)
Plate	III-5	Coarse refuse toe (revised) 1. Coarse refuse toe sediment pond 2. Typical small dam cross-section 3. Coarse refuse toe sediment pond cross sections 4. Rail cut pond drainage plan
Plate	III-6	Rail cut pond (1-4)
Plate	III-7	Pasture pond (1-3)
Plate	III-8	Refuse road I (1-3)
Plate	III-9	No. 3 Hoisthouse pond (1-2)
Plate	III-10	Number Two Canyon upper and lower ponds (1-3)
Plate	III-11	Manshaft (1-3)
Plate	III-12	Sunnyside surface facilities sediment control plan map
Plate	III-13	Slurry pond
Plate	III-14	Twin shaft discharge pond Manshaft 001 Discharge)
Plate	III-15	Pole Canyon mine water discharge pond
Plate	III-16	Road and utility right-of-way
Plate	III-17	Road cross sections
Plate	III-18	Shaft and mine opening seals (2 maps)
Plate	III-19	Topsoil stockpile cross sections
Plate	III-20	Pre and post law disturbances map 1
Plate	III-21	Pre and post law disturbances map 2
Plate	III-22	Pre and post law disturbances map 3
Plate	III-23	Pre and post law disturbances map 4
Plate	III-24	Disposal area post mine contours

DISTRICT 9

April 5, 1976

In Reply Refer To:
EMS - H&S 3-1-8

J. T. Paluso
Asst. Chief Mine Engineer
Kaiser Steel Corporation
Sunnyside Coal Mines
Sunnyside, Utah 84539

Re: Slurry Impoundment
I.D. No. 1211-UT-9-0017
Fire Extinguishing Plan

Dear Mr. Paluso:

The fire extinguishing plan submitted on March 26, 1976, for the subject slurry impoundment has been approved by this office. Please submit a schedule showing tentative start-up and completion dates for the work required by this plan.

Please note that Section 77.215(h) requires that all refuse be disposed of in compacted layers not to exceed two (2) feet in thickness with maximum slopes of 2.0 horizontal to 1.0 vertical (approximately 27°). These specifications apply to all material to be placed in extinguishing the fires and all additions to the existing slurry impounding structure.

Sincerely yours,

John W. Barton
John W. Barton
District Manager BCA

Enclosure

Figure III-1

Scott M. Matheson
Governor

STATE OF UTAH
DEPARTMENT OF HEALTH
DIVISION OF ENVIRONMENTAL HEALTH
150 West North Temple, P.O. Box 2500, Salt Lake City, Utah 84110

Alvin E. Rickers, Director
Room 426 801-533-6121

James O. Mason, M.D., Dr.P.H.
Executive Director
801-533-6111

DIVISIONS
Community Health Services
Environmental Health
Family Health Services
Health Care Financing and Standards

OFFICES
Administrative Services
Health Planning and Policy Development
Medical Examiner
State Health Laboratory

June 27, 1980
533-4145

John Huefner
Kaiser Steel Corporation
P.O. Box D
Sunnyside, Utah 84539

Dear Mr. Huefner:

This letter is in regards to a previous approval (March 20, 1980) which was given for operation of a scrap metal and timber storage area at the Kaiser Steel Corporation Sunnyside Mine.

It was intended that the previous letter also give approval for the industrial waste disposal site located adjacent to the old tailings pond. Approval of this site, however, was inadvertantly omitted from our letter.

The industrial waste disposal site is hereby approved on condition that it be operated in accordance with applicable rules and regulations which include the following provisions:

1. Open burning must be prohibited.
2. Surface and groundwater supplies must be protected.
3. Deposited material must be covered.
4. Materials defined as hazardous must be excluded from this site.

We appologize for any inconvenience that the omission in our previous letter may have caused. If we may be of further assistance, please feel free to contact this office.

Sincerely,

Dale D. Parker, Ph.D., Director
Bureau of Solid Waste Management

DRD:cw

cc: Gerald Story, Southeastern Utah District Health Dept.
Thomas J. Suchoski, Division of Oil, Gas and Mining

Figure III-2

Figure III-3

UTAH WATER RIGHTS - GRASSY TRAIL CREEK
(Other Than Diligence Claims for Stockwatering)

HUC No.	Right Application (Decree)	Certificate	Owner	Footnote	Priority	Quantity cfs	Quantity Acre Ft.	Storage	Included In KSC/USS Water Agreements	(7)
91-360	(#3028)	a-312; a-529	J.W. Gailbreath	(1)	1878	2.000		March 15-Dec. 15	Yes	Irrigation-Apr. 1-Oct. 15; Munic., Indust. & Domestic-Yr. Round
91-361	"	a-313; a-531	U.S. Steel		"	0.500			"	
91-362	"	a-523	KSC		"	1.000			"	
91-363	"	a-314; a-530	J.W. Gailbreath		"	1.500				
Basic First Priority Right - Whitmore Decree (2)						5.000				
91-372	(#3028)	a-556	D&RG Railroad	(3)	1885	5.575		Yes-Under KSC/USS Agreem't	"	
91-367	"	a-524	City of Sunnyside	(4)	1888	0.875		March 15-Dec. 15	"	Irrigation-Apr. 1-Oct. 31; Munic., Indust. & Domestic-Yr. Round
91-368	"	a-522	City of Sunnyside		"	0.625			"	
91-369	"	a-520	City of Sunnyside		"	0.250			"	
91-28	#5250	808 & a-519	City of Sunnyside		6/10/13	2.200			"	
91-84	#19462	2047 & a-525	City of Sunnyside		1/31/24	2.000			"	
91-100	#10402	2024	Kaiser Steel	(5)	11/7/28	0.500		Yes-Under KSC/USS Agreem't	"	Irrigation-June 15-Sept. 15
91-114	#11774	2426 & a-521	City of Sunnyside		7/3/35	1.800		March 15-Dec. 15	"	Irrigation-Apr. 1-Oct. 31; Munic., Indust. & Domestic-Yr. Round
91-118	#12554	4137 & a-532	U.S. Steel		11/5/37	5.000			"	Irrigation-Apr. 1-Oct. 15; Munic., Indust. & Domestic-Yr. Round
91-125	#13333	7765	KSC		2/13/40	5.000			"	
91-140	#15617	6520	J.W. Gailbreath		12/18/43		50	Yr. Round	"	Irrigation-Apr. 1-Oct. 31; Domestic-Yr. Round
91-141	#15618	7791	J.W. Gailbreath		12/18/43			March 15-Dec. 15	"	Munic., Indust. & Domestic-Yr. Round
91-142	#15619	6614	J.W. Gailbreath		12/18/43		50	Yr. Round	"	Domestic-Yr. Round
91-143	#15620	6510	U.S. Steel		12/18/43		16-2/3	Yr. Round	"	Munic., Indust. & Domestic-Yr. Round
91-144	#15620a	7959	City of Sunnyside		12/18/43		33-1/3	Yr. Round	"	Municipal-Yr. Round
91-145	#15621	6684	U.S. Steel		12/18/43		16-2/3	Yr. Round	"	Irrigation-Apr. 1-Oct. 31; Munic., Indust. & Domestic-Yr. Round
91-146	#15621a	7958	City of Sunnyside		12/18/43		33-1/3	Yr. Round	"	
91-158	#19041	7792	U.S. Steel		8/19/47		65	March 15-Dec. 15	No	Irrigation-Apr. 1-Oct. 15; Munic., Indust. & Domestic-Yr. Round
91-159	#19136	5670	U.S. Steel		9/24/47	5.000		Yr. Round	Yes	Irrigation-Apr. 1-Oct. 31; Industrial & Domestic-Yr. Round
91-178	#20409	5901	KSC		12/21/43		500	Yr. Round	Yes	Munic., Indust. & Domestic-Yr. Round
				(6)	12/19/51		503	Yr. Round	Yes	
							1003			

Footnotes:
(1) (#3028) - Whitmore Decree 11/7/17.
(2) First priority to water in the stream.
(3) Second priority to water in the stream. This right held under lease by Royal Land Co. and is available for use under the KSC/U.S. Steel Joint Venture Water Agreement.
(4) Three rights of equal priority and to share prorata if water flowing in the stream is not sufficient to furnish these three rights in their totality.
(5) Spring in bed of Grassy Trail Creek.
(6) 500 acre ft. has priority of 12/21/48 and 503 acre ft. 12/19/51.
(7) A full compilation of the water rights included in the KSC/USS Joint Water Agreement should include six that are in Range Creek. See Range Creek tabulation.

2/1/84

Table III-1 List of Surface Structures and Facilities

I.D. Number	Surface Structure	Approximate Year Of Completion
B 1	Warehouse/office	1953, Office added in 1974
B 2	Main changehouse	1953
B 3	Shop	1953
B 4	Warehouse annex	1960's
B 5	Engineering office	1975-76
B 6.1,6.2, 6.3,6.4	Preparation plant, unit train loadout and rotary car dumper	Original structure pre-1950; modernized 1950's; unit train loadout 1968-69
B 7	Materials foreman's office	1978
B 8	No. 3 Mine hoist house	1956
B 9	Upper changehouse	1973
B10	Manshaft hoist house	1973
B11	Bulk rock dust tank	1977
D 1.1	New slurry ponds	1977
D 1.2	Old slurry ponds	
D 2a,2b	Coarse refuse disposal	
D 3a,3b	Number Two Canyon storage area	
D 4	Sedimentation pond at Manshaft	1979
D 5	Sedimentation pond, south slope, Coarse Refuse Haul Road	1980
D 6	Sedimentation pond, coarse refuse pile	1980
D 7	Sedimentation pond, Slaughter Canyon	1980
D 8	Methane vent	1979
E 1	Substation, No. 2 Mine Outcrop	Pre-1950
E 2	Substation, No. 1 Mine Outcrop	Pre-1950
E 3	Substation, above rotary dumper	Pre-1950
E 4	Substation, across road from prep plant	1979
E 5	Substation, near Whitmore Canyon fan	Late 1950's
F 1	No. 2 Mine fan	Early 1950's
F 2	No. 3 Mine fan	Early 1950's
F 3	No. 3 Mine fan, in Number Two Canyon	1977
F 4	No. 1 Mine Outcrop fan	Early 1950's
F 5	No. 1 Mine, Whitmore Canyon fan	Late 1950's
F 6	No. 1 Mine, Twin shaft fan	1975
M 1	Powder magazine	
M 2	Detonator caps magazine	
P 2.1,2.2	No. 2 fan area portals, Lower and Upper Sunnyside Seams	
P 3.1,3.2, 3.3,3.4	Water Canyon portals to No. 2 and No. 3 Mines	
P 4.1,4.2, 4.3	No. 3 Mine: Main portal, belt slope portal, and manway portal	
P 5	No. 1 Mine rock tunnel portal	1951
P 6.1,6.2, 6.3,6.4	No. 1 Mine fan area portals (left and right return portals)	
P 7	No. 1 Mine Whitmore Canyon return air shaft	Late 1950's
P 8	No. 1 Mine Pole Canyon shaft	1973
P 9	No. 1 Mine Slaughter Canyon portal	1973
R 1	Haul road, tipple to coarse refuse area	
R 2	Road to No. 2 fan and Water Canyon	
R 3	Road in Number Two Canyon to fan and shaft	
R 4	Road to No. 1 Outcrop fan	
R 5	Road to Slaughter Canyon	1973
R 6	Road to Pole Canyon shaft	1973
R 7	Road to Manshaft and twin shaft fans	1974
R 8	Road to Grassy Trail reservoir	
W 1	Mine water tanks	1955
W 2	Culinary water tank	1953
W 3a,3b	Grassy Trail Reservoir	1952

Table III-2 Roads Within Permit Area

R 1 Refuse Road - The refuse road is used as a haul road for waste rock from the coarse refuse bin to the coarse refuse disposal area and as access to the Water Canyon Road.

R 2 Water Canyon Road - The Water Canyon Road is used as an access road for the No. 2 Mine fan and associated outcrop portals.

R 3 Number Two Canyon Road - The Number Two Canyon Road is used as an access for the No. 3 Mine fan in Number Two Canyon.

R 4 Fan Canyon Road - The Fan Canyon Road is used as an access for the No. 1 Mine fan.

R 5 Slaughter Canyon Road - The Slaughter Canyon Road was used as an access for the Slaughter Canyon Portal. This road was reclamed in 1982.

R 6 Pole Canyon Road - The Pole Canyon Road is used as an access for the Pole Canyon exhaust shaft.

R 7 Manshaft Road - The Manshaft Road is used as an access for the upper bathhouse and manshaft.

Manshaft Fan Road - The Manshaft Fan Road is used as an access for the Twin Shaft fan. (Total length for both roads - 0.7 mile.)

R 8 Reservoir Road - The Reservoir Road is used as an access for the Whitmore Canyon Dam and as an access for private lands above the dam.

R 9 Pasture Canyon Road - The Pasture Canyon Road will be used as an access for a future air shaft and fan.

R10 Complex Roads - The Complex Roads are used as an access around the mine offices, shop, bathhouse, and preparation plant.

Table III-3 Specification for Roads in the Sunnyside Permit Area

		Length	Average Grade	Max. Grade	Average Width
A.	Constructed of Dirt by Grading:				
R 2	Water Canyon Road	2.2 mi.	4%	33%	22'
R 4	Fan Canyon Road	1.5 mi.	13%	16%	20'
R 6	Pole Canyon Road	.7 mi.	6%	20%	18'
R 7	Manshaft Fan Road	.7 mi.	6%	18%	24'
R 8	Reservoir Road	1.6 mi.	7%	16%	20'
R 9	Pasture Canyon Road	1.1 mi.	5%	8%	18'
B.	Constructed Using Local Fill as Base and 6" of Coarse Refuse for Surface:				
R 1	Refuse Road	2.5 mi.	4%	8%	30'
R 3	Number Two Canyon Road	1.7 mi.	5%	20%	27'
R 5	Slaughter Canyon Road	.8 mi.	13%	26%	21'
R 7	Manshaft Road	.7 mi.	6%	18%	24'
R10	Complex Road	2.2 mi.	3%	6%	26'

Table III-4

USGS STIPULATIONS COVERING SURFACE DRILLING PROGRAMS

1. Archeological, historical and endangered species clearances are required prior to the approval of any operation.

2. Any operation will immediately cease upon the discovery of any significant archeological or historical site. The Area Mining Supervisor shall be immediately notified of any such find.

3. When artesian flows or water horizons with possible development potential are encountered, the Area Mining Supervisor and the surface management agency shall be notified immediately so that a determination can be made concerning their development potential. Where possible, clean water samples shall be collected by the operator for analysis by the USGS.

4. Drill holes shall be cemented with proper slurry from the bottom to the collar. The lessee shall be responsible for the proper plugging of each hole unless a written request to keep the hole open is made by the Area Mining Supervisor. If drill hole cannot be fully cemented, possibly due to sloughing or fractures, the Area Mining Supervisor must be notified, and his instructions for subsequent plugging followed.

5. The slurry shall be made using 5.2 - 5.5 gallons of water per bag of cement. The drill stem shall be lowered to the bottom of the hole and sufficient slurry pumped through the stem to fill 200 feet of the hole. The drill stem will then be raised 200 feet and the process repeated. The drill hole shall be completely plugged using this method.

6. The Area Mining Supervisor shall be notified as to the time when the first hole is to be plugged so that a representative of his office can arrange to observe the procedure if circumstances permit. Subsequent observations of other holes being plugged will be arranged as deemed necessary.

7. The hole location is to be marked by placing an approved marker such as a capped pipe, steel fencepost, or metal plate in the concrete plug. Such markers are to show hole number, year drilled, lessee name, and as feasible, the section, township, and range in which hole is located. Top of concrete plug, if located in cultivated field, must be set below normal plow depth (10 to 12 inches).

8. Mud pits must be backfilled and leveled. Liquids or mud in the pits must be pumped out and removed from the premises or allowed to dry before they are backfilled.

Table III-4 Cont.

9. Drill sites must be cleaned and all material, including drill cuttings, foreign to the natural setting must be buried or removed. Trash will be removed from the area. Revegetation of disturbed area will generally be required. If excavation is required in preparing a drill site, topsoil will be stockpiled separately. Before the drill site is permanently abandoned, the location will be regraded to a natural contour and the topsoil redistributed. Type, method, and scheduling of revegetation will be specified by the surface management agency through the Area Mining Supervisor.

10. The Area Mining Supervisor shall be notified as to the anticipated completion date of the program.

11. A monthly report shall be submitted to the Area Mining Supervisor within 10 days after the end of the month. It will include:

    (1) The holes completed during the month and the total depth of each hole.
    (2) The date each hole was completed.
    (3) The date each hole was plugged.
    (4) The type of drilling plug or core.

12. The following reports shall be submitted to the Area Mining Supervisor in duplicate after the completion of the program:

    (1) Hydrologic logs using the attached form.
    (2) Geophysical and lithologic logs and all geologic interpretations of each log.
    (3) Coal analysis.
    (4) Total acreage of surface disturbed per hole, including acreage disturbed by access roads.

Note: All information submitted must contain the lease number. All logs must contain the surface elevation of drill hole and the location of the drill site. The sites will be located using coordinates and or measured distances from the nearest section line.