MOUNTAIN COAL COMPANY

1992 ANNUAL REPORT

C.V. SPUR

AET/007/022 #6

Annual Reports Review

Please note when you review. TAX.

Mine Name C.V. Spur

Date Submitted 3/31/93

Sections to be reviewed:

Cover Sheet and Mine Sequence Map - Jesse
Date Reviewed _____

Summarized Water Monitoring Data - Ken
Date Reviewed _____

Precipitation and Climatological Data - Ken
Date Reviewed _____

Subsidence Monitoring Report - Jesse
Date Reviewed _____

Vegetation Data and Revegetation Success Monitoring - Susan
Date Reviewed _____

Annual Impoundment Certification - Jesse
Date Reviewed _____

Annual Overburden, Spoil, Refuse, Roof, Floor, etc - Henry
Date Reviewed _____

RECEIVED
MAR 31 1993
DIVISION OF OIL
GAS & MINING PRICE UTAH

MOUNTAIN COAL COMPANY

1992 ANNUAL REPORT

C.V. SPUR

BLACKHAWK ENGINEERING, CO.

Rt. 1, Box 146-H5 - Helper, Utah 84526 - Telephone (801) 637-2422

March 26, 1993

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

Re: Mountain Coal Company
1992 Annual Report
C.V. Spur Loadout Facility
ACT/007/022
Carbon County, Utah

Dear Mr. Braxton:

Enclosed is the Annual Report for Coal Mining and Reclamation Operations for 1992 for the C.V. Spur Loadout Facility.

The report is being submitted on behalf of Mountain Coal Company. If you have any questions, or need any further information, please contact me at the above address or Kathleen Welt at Mountain Coal Company, West Elk Mine, P.O. Box 591, Somerset, Colorado 81434.

Respectfully,

Dan W. Guy

Dan W. Guy P.E.
President

cc: Kathleen Welt- MCC
File - Annual Report

COAL MINING AND RECLAMATION OPERATIONS FOR 1992

(Must be submitted to the Division by March 31, 1993)

State of Utah
Department of Natural Resources
Division of Oil, Gas and Mining
3 Triad Center, Suite 350
355 West North Temple
Salt Lake City, Utah 84180-1203
(801) 538-5340

Permittee: Mountain Coal Company

Mine Name: C.V. Spur Loadout Facility

Mailing Address: P.O. Box 591, Somerset, Colo. 81434

Company Representative: Kathleen G. Welt

Resident Agent: The Corporation Trust Co. 1209 Orange St. Wilmington, Delaware 19801

Permit Number: ACT/007/022

MSHA ID Number: 42-01444

Date of Initial Permanent Program Permit: 9/24/81

Date of Permit Renewal: 9/12/91 (Expires 8/7/94)

Quantity of Coal Mined (tonnage) 1992: 490,868 Tons (Shipped)

Attach Updated Mine Sequence Map(s) showing mine development through December 31, 1992. (Same as Lease Royalty Payment Map and/or MSHA Progress Map) (N/A)

All monitoring activities during the report period to be submitted with this report (including, but not limited to):

A. Summarized Water Monitoring Data: (Enclosed)

1. **List of monitoring points and their locations and respective frequencies of monitoring (monthly, quarterly, etc.) as approved in the PAP;**
2. **UPDES permit number, UPDES discharge points and their locations;**
3. **Summary of findings based on water monitoring during 1992; and**
4. **Submit water monitoring as database files (ASCII, Lotus, dBase, etc.) (Please contact Ken Wyatt if you have any questions).**

B. Precipitation or Other Climatological Data (please submit as database files: ASCII, Lotus, dBase, etc.-- Contact Ken Wyatt if you have any questions).

C. **Subsidence Monitoring Report:** (N/A)

1. **Brief description of monitoring system (monuments or aerial surveys, how monitoring is done, how frequently monitoring is done);**
2. **List of all monitoring points (if any) and their locations and amount of displacement of each;**
3. **Map showing either monitoring points (if any) or a representation of subsidence which has occurred; and**
4. **Any owners and/or occupants of surface property and structures above the underground workings who were or will be mailed notification six months prior to mining (R645-301-525.300).**

D. **Vegetation Data (test plots) or Revegetation Success Monitoring (includes interim and final):**

1. **Test plot monitoring data or implementation;**
2. **Quantitative results from interim or final seeding efforts;**
3. **If quantitative monitoring was not required, then at minimum, a qualitative description of the interim or final vegetation; and**
4. **Describe any seeding done on site during the current year.**

E. **Annual Impoundment Certification, (R645-301-514.312) which includes the following information:**

1. **Any appearances of instability;**
2. **Structural weakness or other hazardous conditions;**
3. **Depth and elevation of any impounded waters;**
4. **Existing storage capacity;**
5. **Any existing or required monitoring procedures and instrumentation; and**
6. **Any other aspects of the structure affecting stability.**

Suggested form enclosed

F. **Annual Overburden, Spoil, Refuse, Roof, Floor, and Mid-Seam Data. For Consistency and completeness, please submit data for this reporting requirement in the following manner:**

1. **Location of sample site, sample interval, and sample matrix (if roof or floor, then include lithologic unit and if coal, then thickness of seam at sample site);**
2. **Sampling technique employed in the field (i.e., grab sample, composite, depth segregated or specific procedure outlined in the permit by chapter and page) and preparation prior to analysis (i.e., sieved sample, ground sample, air dried, oven dried, etc.);**
3. **Laboratory analysis report sheet which includes:**
   - **I. Sample time and date;**
   - **II. Date and time of lab analysis; and**
   - **III. Analytical method(s) employed and references. Include the soil/spoil: water ratio.**
4. **Summary of findings based on monitoring.**

G. **A current copy of the annual report of officers submitted to the Department of Commerce and any changes in the ownership and control information required under R645-301-110.**

H. **Any Other Information Required to be Submitted as Specified in your Permit Application Package and Permit.**

C.V. Spur Mine

Amendments Approved	Date
92A --Sediment Markers	05/29/92

Outstanding Issues

PERMIT

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

June 30, 1992

Mr. Dan Guy, Manager
Mountain Coal Company
P.O. Box 1378
Price, Utah 84501

Dear Mr. Guy:

Re: Approval of Midterm Review, Mountain Coal Company, C.V. Spur Loadout Facility, ACT/007/022, Folder #3, Carbon County, Utah

The midterm for the C.V. Spur Loadout Facility is completed. Responses received June 25, 1992 have been reviewed and have been determined complete and technically adequate.

Thank you for your continued cooperation.

Sincerely,

Pamela Grubaugh-Littig
Permit Supervisor

jbe
007022.AMR

an equal opportunity employer

FEDERAL

PERMIT
ACT/007/022

September 12, 1991

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/007/022, is issued for the State of Utah by the Utah Division of Oil, Gas and Mining (Division) to:

Mountain Coal Company
P.O. Box 1378
Price, Utah 84501
(801) 637-5050

for the C.V. Spur Coal Processing and Loadout Facility. Mountain Coal Company is the owner of certain fee-owned parcels. A Surety Bond is filed with the Division in the amount of $2,441,745, payable to the State of Utah, Division of Oil, Gas and Mining, and the Office of Surface Mining, Reclamation and Enforcement (OSM). The Division must receive a copy of this permit signed and dated by the permittee.

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

Sec. 2 **PERMIT AREA** - The permittee is authorized to conduct underground coal mining activities on the following described lands within the permit area at the C.V. Spur Coal Processing and Loadout Facility, situated in the State of Utah, Emery County, and located:

Township 15 South Range 10 East, Section 11, SLBM

W1/2 SW1/4 except 0.24 acres in the northwest corner, NE1/4 SW1/4 except East 100 ft., SE1/4 SW1/4, except East 100 ft.

This legal description is for the permit area of the C.V. Spur Coal Processing and Loadout Facility. The permittee is authorized to conduct underground coal mining activities and related surface activities on the foregoing described property subject to the conditions of all applicable conditions, laws and regulations.

Sec. 3 **COMPLIANCE** - The permittee will comply with the terms and conditions of the permit, all applicable performance standards and requirements of the State Program.

Sec. 4 **PERMIT TERM** - This permit becomes effective on September 12, 1991, and expires on August 7, 1994.

Sec. 5 **ASSIGNMENT OF PERMIT RIGHTS** - The permit rights may not be transferred, assigned or sold without the prior written approval of the Division Director. Transfer, assignment or sale of permit rights must be done in accordance with applicable regulations, including but not limited to 30 CFR 740.13{e} and R614-303-300.

Sec. 6 **RIGHT OF ENTRY** - The permittee shall allow the authorized representative of the Division, including but not limited to inspectors, and representatives of the Office of Surface Mining Reclamation and Enforcement (OSM), without advance notice or a search warrant, upon presentation of appropriate credentials, and without delay to:

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

(b) be accompanied by private persons for the purpose of conducting an inspection in accordance with R614-400-100 and R614-400-200 when the inspection is in response to an alleged violation reported to the Division by the private person.

Sec. 7 **SCOPE OF OPERATIONS** - The permittee shall conduct underground coal mining activities only on those lands specifically designated as within the permit area on the maps submitted in the approved plan and approved for the term of the permit and which are subject to the performance bond.

Sec. 8 **ENVIRONMENTAL IMPACTS** - The permittee shall take all possible steps to minimize any adverse impact to the environment or public health and safety resulting from noncompliance with any term or condition of the permit, including, but not limited to:

(a) Any accelerated or additional monitoring necessary 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. 9 **CONDUCT OF OPERATIONS** - The permittee shall conduct its operations:

(a) in accordance with the terms of the permit to prevent significant, imminent environmental harm to the health and safety of the public; and

(b) utilizing methods specified as conditions of the permit by the Division 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 **EXISTING STRUCTURES** - As applicable, the permittee will comply with R614-301 and R614-302 for compliance, modification, or abandonment of existing structures.

Sec. 11 **RECLAMATION FEE PAYMENTS** - The operator shall pay all reclamation fees required by 30 CFR Part 870 for coal produced under the permit, for sale, transfer or use.

Sec. 12 **AUTHORIZED AGENT** - The permittee shall provide the names, addresses and telephone numbers of persons responsible for operations under the permit to whom notices and orders are to be delivered.

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

Sec. 14 **PERMIT RENEWAL** - Upon expiration, this permit may be renewed for areas within the boundaries of the existing permit in accordance with the Act, the approved Utah State Program and the Federal Lands Program.

Sec. 15 **CULTURAL RESOURCES** - If during the course of mining operations, previously unidentified cultural resources are discovered, the permittee shall ensure that the site(s) is not disturbed and shall notify the Division. The Division, after coordination with OSM, shall inform the permittee of necessary actions required. The permittee shall implement the mitigation measures required by Division within the time frame specified by Division.

Sec. 16 APPEALS - The permittee shall have the right to appeal as provided for under R614-300-200.

The above conditions (Secs. 1-16) 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 Division and the permittee at any time to adjust to changed conditions or to correct an oversight. The Division may amend these conditions at any time without the consent of the permittee in order to make them consistent with any federal or state statutes and any regulations.

THE STATE OF UTAH

By: Dennis R. Nelson

Date: 9-12-91

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

Richard P. Rich

Authorized Representative of the Permittee

Date: 10/15/91

A:\PERMIT.CVS

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

August 7, 1989

Mr. Richard D. Pick, President
Mountain Coal Operations
Beaver Creek Coal Company
P. O. Box 1378
Price, Utah 84501

Dear ~~Mr. Pick~~ Dick:

Re: State Permit and Decision Package, Five-Year Permit Renewal, Beaver Creek Coal Company, C. V. Spur Coal Processing and Loadout Facility, ACT/007/022, Folder #3, Carbon County, Utah

Enclosed are two State Permits and a Decision Package for the C. V. Spur Coal Processing and Loadout Facility Five-Year Permit Renewal. Please read the Stipulations in Attachment A of the State Permit, then sign both State Permits and return one to the Division.

Your staff's cooperation during the permitting process has been appreciated.

Best regards,

Dianne

Dianne R. Nielson
Director

RVS/djh
Enclosure
cc: P. Rutledge, OSM-Denver
R. Hagen, OSMRE-Albq.
AT8/68

an equal opportunity employer

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/007/022, is issued for the state of Utah by the Utah Division of Oil, Gas and Mining (DOGM) to:

Beaver Creek Coal Company
P. O. Box 1378
Price, Utah 84501
(801) 637-5050

for the C.V. Spur Coal Processing and Loadout Facility. Beaver Creek Coal Company is the owner of certain fee-owned parcels. A performance bond is filed with the DOGM in the amount of $2,441,745.00, payable to the state of Utah, Division of Oil, Gas and Mining and the Office of Surface Mining Reclamation and Enforcement (OSMRE). DOGM must receive a copy of this permit signed and dated by the permittee.

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

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

<u>Township 15 South, Range 10 East, Section 11, SLBM</u>

W1/2 SW1/4 except 0.24 acres in the northwest corner, NE1/4 SW1/4 except East 100 ft., SE1/4 SW1/4, except East 100 ft.

This legal description is for the permit area (as shown on Attachment B) of the C.V. Spur Coal Processing and Loadout Facility. The permittee is authorized to conduct underground coal mining operations and related surface activities on the foregoing described property subject to the conditions of applicable conditions, laws and regulations.

Sec. 3 **PERMIT TERM** - This permit becomes effective on August 7, 1989 and expires on August 7, 1994.

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

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

A. have the rights of entry provided for in 30 CFR 840.12, 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 **SCOPE OF OPERATIONS** - The permittee shall conduct underground coal mining activities only on those lands specifically designated as within the permit area on the maps submitted in the mining and reclamation plan and permit application and approved for the term of the permit and which are subject to the performance bond.

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

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

B. immediate implementation of measures necessary to comply; and

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

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

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

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

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

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

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

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

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

Sec. 14 **APPEALS** - The permittee shall have the right to appeal as provided for under UMC 787.

Sec. 15 **SPECIAL CONDITIONS** - The permittee shall comply with the special 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 DOGM and the permittee at any time to adjust to changed conditions or to correct an oversight. DOGM may amend these conditions at any time without the consent of the permittee in order to make them consistent with any new federal or state statutes and any new regulations.

THE STATE OF UTAH

By: Dianne R. Nielson

Date: 8-7-89

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

Richard L. Pick

Authorized Representative of the Permittee

Date: 8-7-89

APPROVED AS TO FORM:

By: David S. Shintani

Assistant Attorney General

Date: 8/7/89

AT95/10-13

Attachment A

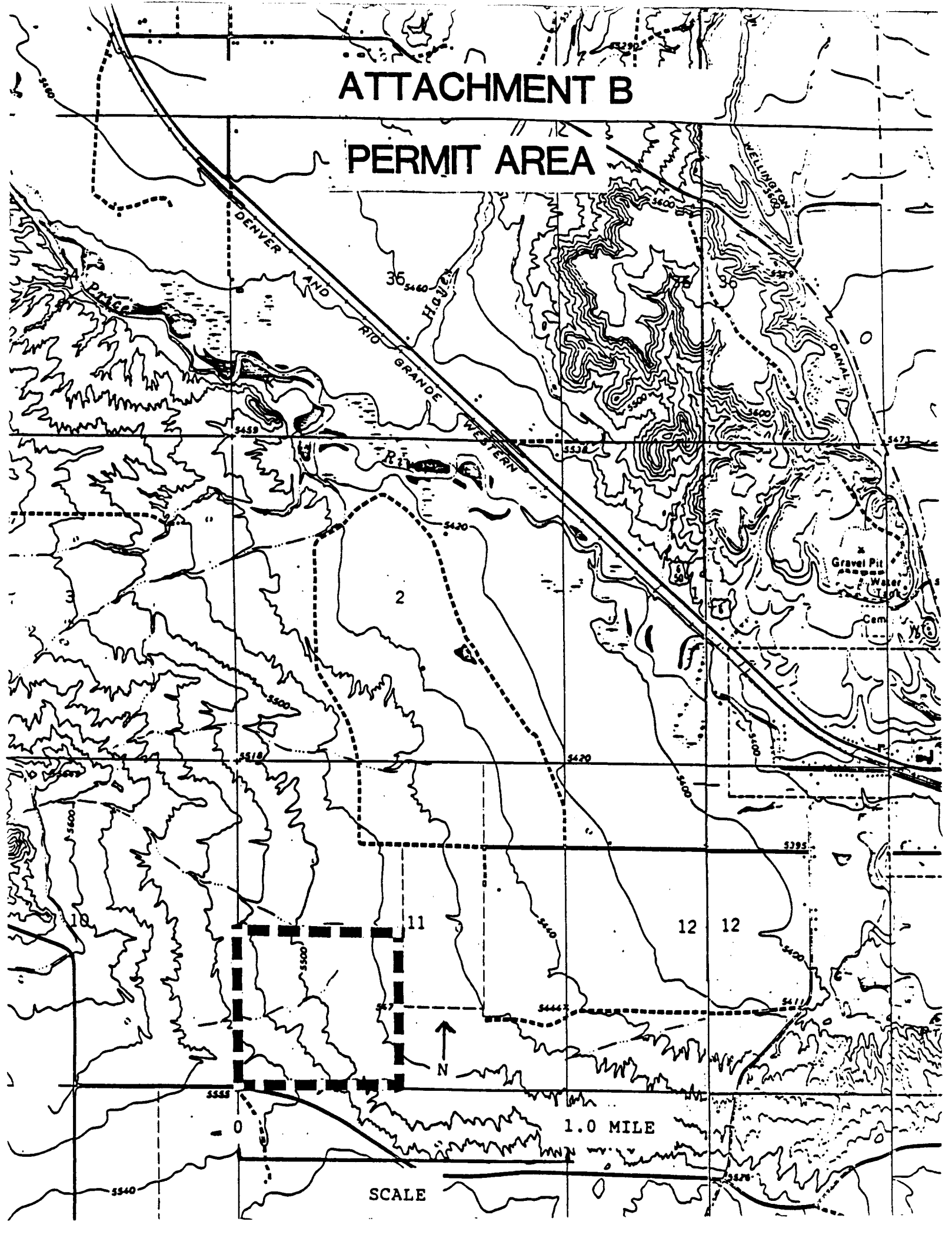
Utah Division of Oil, Gas and Mining
Five-Year Permit Renewal
C.V. Spur Coal Processing and Loadout Facility
ACT/007/022
August 7, 1989

Stipulation UMC 817.23-(HS)-(1)

1. Within 30 days of permit approval, the applicant must submit an as-built survey of the soil stockpiles. This survey must include the volume of topsoil stored, maximum and minimum heights, slopes, and all other pertinent dimensions.

ATTACHMENT B

PERMIT AREA



AMENDMENTS

OTHER PERMITS

State of Utah
DEPARTMENT OF HEALTH
DIVISION OF ENVIRONMENTAL HEALTH

Norman H. Bangerter
Governor
Suzanne Dandoy, M.D., M.P.H.
Executive Director
Kenneth L. Alkema
Director

288 North 1460 West
P.O. Box 16690
Salt Lake City, Utah 84116-0690
(801) 538-6121

May 1, 1989

Dan W. Guy
Manager of Permitting/Compliance
Beaver Creek Coal Company
P.O. Box 1378
Price, Utah 84501

Re: Issuance of General Permits for Coal Mining UTG040003, UTG040004 and UTG040005

Dear Mr. Guy:

We hereby acknowledge receipt by EPA and the State of five Notices of Intent (NOIs) for coverage under the Utah General Permit for Coal Mining. The NOI's for Beaver Creek Coal Company's Trail Mountain No. 9 Mine, Gordon Creek No. 2 Mine, Huntington Canyon No. 4 Mine, Gordon Creek No. 3 & 6 Mines and the CV Spur Processing/Loadout Facility are considered adequate. Three of the facilities will be issued a general permit and two of the existing facility permits will be inactivated because of completion of reclamation activities. Trail Mountain No. 9 Mine has been reassigned a new permit number UTG040003, Gordon Creek No. 2 Mine has been reassigned a new permit number UTG040004 and the CV Spur Processing/Loadout Facility has been assigned a new permit number UTG040005. Any future correspondence regarding these three facilities should refer to these numbers. The permits for Huntington Canyon No. 4 Mine UT0023116 and Gordon Creek No. 3 & 6 Mines UT0023060 will be inactivated.

A copy of the final signed permits are enclosed. Coverage shall begin June 1, 1989 and all requirements and conditions of the permits will be in full force and effect at that time.

Preprinted Discharge Monitoring Report forms (EPA form 3320-1) for self monitoring and reporting requirements as specified in the permits will be sent to Beaver Creek Coal by June 1st.

Also enclosed is the billing information for the issuance of your Utah Pollutant Discharge Elimination System (UPDES) permits. A fee schedule was included in the Utah Department of Health budget appropriation request at the direction of the Legislature and in accordance with Utah Code Annotated 26-1-6. The fee schedule as approved by the Legislature includes a $100.00 filing fee and a charge equal to the Bureau of Water Pollution Control's actual costs for writing and issuance of a UPDES permit. It is Division policy to charge either the filing fee or the actual cost plus 7% whichever is greater. Please remit $300.00 to the Utah Department of Health, Bureau of Water Pollution Control, P.O. Box 16690, Salt Lake City, Utah 84116-0690.

If you have any questions please contact Mike Herkimer at 538-6146.

Sincerely,

Utah Water Pollution Control Committee

Don A. Ostler

Don A. Ostler, P.E.
Executive Secretary

Enclosure

MDH:st

cc: Janet Fujita, EPA Region VIII, w/enclosure
Joel Helfrich, DOGM, w/enclosure

1571-28

BOND

Revised August 1988
RECLAMATION AGREEMENT

Permit Number ACT/007/022
Date Permit Issued Aug. 7, 1989
Effective Date of Agreement Aug. 7, 1989

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

COAL RECLAMATION AGREEMENT

--ooOOoo--

For the purposes of this RECLAMATION AGREEMENT the terms below are defined as follows:

"PERMIT" (Mine Permit No.)	ACT/007/022 (County) Carbon
"MINE" (Name of Mine)	C.V. Spur Processing & Loadout Facility
"OPERATOR" (Company or Name)	Beaver Creek Coal Co.
(Address)	P.O. Box 1378
	Price, Utah 84501
"OPERATOR'S REGISTERED AGENT" (Name)	C.T. Corporation System
(Address)	175 South Main St.
(Phone)	Salt Lake City, Utah 84111
"COMPANY OFFICERS":	R.D. Pick, President
	D.R. Meadors, Operations Manager
"BOND TYPE" (Form of Bond)	Surety
"BOND" (Bond Amount-Dollars)	$2,441,745
(Year-Dollars)	1994
INSTITUTION	United Pacific Insurance Company
POLICY OR ACCOUNT NUMBER	U-629894
"LIABILITY INSURANCE" (Exp.)	Life of Permit or Renewal
(Insurance Company)	Insurance Company of North America
"STATE":	Utah (Department of Natural Resources)
"DIVISION":	Division of Oil, Gas and Mining
"DIVISION DIRECTOR"	Dianne R. Nielson

EXHIBITS:

		Revision Dates		
"SURFACE DISTURBANCE"	Exhibit "A"			
"BONDING AGREEMENT"	Exhibit "B"			
"LIABILITY INSURANCE"	Exhibit "C"			
"STIPULATION TO CHANGE BOND"	Exhibit "D"			

RECLAMATION AGREEMENT

This RECLAMATION AGREEMENT (hereinafter referred to as "Agreement") is entered into by the Operator.

WHEREAS, on August 7, 1989, the Division approved the Permit Application Package, hereinafter "PAP", submitted by Beaver Creek Coal Co., hereinafter "Operator"; and

WHEREAS, prior to issuance of a permit to conduct mining and reclamation operations on the property described in the PAP, hereinafter "Property", the Operator is obligated by Title 40-10-1, et seq., Utah Code Annotated (1953, as amended), hereinafter "Act", to file with the Division a bond ensuring the performance of the reclamation obligations in the manner and by the standards set forth in the PAP, the Act, and the State of Utah Division of Oil, Gas and Mining Rules pertaining to Coal Mining and Reclamation Activities, hereinafter "Rules"; and

WHEREAS, the Operator is ready and willing to file the bond in the amount and in a form acceptable to the Division and to perform all obligations imposed by the Division relating to the reclamation of the Property; and

WHEREAS, the Division is ready and willing to issue the subject a mining and reclamation permit upon acceptance and approval of the bond.

NOW, THEREFORE, the Division and the Operator agree as follows:

1. The provisions of the Act and the Rules are incorporated by reference herein and hereby made a part of this Agreement. Provisions of the Act or Rules shall supercede conflicting provisions of this Agreement.

2. The Operator shall provide a legal description of the property including the number of acres approved by the Division to be disturbed by surface mining and reclamation operations during the permit period. The description is attached as Exhibit "A", and is incorporated by reference and shall be referred to as the "Surface Disturbance".

3. The Operator shall provide a bond to the Division in the form and amount acceptable to the Division ensuring the performance of the reclamation obligations in the manner and by the standards set forth in the PAP, the Act and the Rules. Said bond is attached as Exhibit "B" and is incorporated by reference.

4. The Operator shall maintain in full force and effect the public liability insurance policy submitted as part of the permit application. The Division shall be listed as an additional insured on said policy.

5. In the event that the Surface Disturbance is increased through expansion of the coal mining and reclamation operations or decreased through partial reclamation, the Division shall adjust the bond as appropriate.

6. The Operator does hereby jointly and severally agree to indemnify and hold harmless the State of Utah and the Division from any claim, demand, liability, cost, charge, or suit initiated by a third party as a result of the Operator or Operator's agent or employees failure to abide by the terms and conditions of the approved PAP and this Agreement.

7. The terms and conditions of this Agreement are non-cancellable until such time as the Operator has satisfactorily, as determined by the Division, reclaimed the Surface Disturbance in accordance with the approved PAP, the Act, and the Rules. Notwithstanding the above, the Division may direct, or the Operator may request and the Division may approve, a modification to this Agreement.

8. The Operator may, at any time, submit a request to the Division to substitute the bonding method. The Division may approve the substitution if the bond meets the requirements of the Act and the Rules, but no bond shall be released until the Division has approved and accepted the replacement bond.

9. Any revision in the Surface Disturbance, the bond amount, the bond type, the liability insurance amount coverage, and/or the liability insurance company, or other revisions affecting the terms and conditions of this Agreement shall be submitted on the form entitled "Stipulation to Revise Reclamation Agreement" and shall be attached hereto as Exhibit "D".

10. This Agreement shall be governed and construed in accordance with the laws of the State. The Operator shall be liable for all costs required to comply with this agreement, including any attorney fees.

11. Any breach of the provisions of this Agreement, the Act, the Rules, or the PAP may, at the discretion of the Division, result in an order to cease coal mining and reclamation operations, revocation of the Operator's permit to conduct coal mining and reclamation operations and/or forfeiture of the bond.

RECLAMATION AGREEMENT

12. In the event of forfeiture, the Operator shall be liable for additional costs in excess of the bond amount which are required to comply with this Agreement. Any excess monies resulting from the forfeiture of the bond amount upon compliance with this contract shall be refunded to the appropriate party.

13. Each signatory below represents that he/she is authorized to execute this Agreement on behalf of the named party. Proof of such authorization is provided on a form acceptable to the Division and is attached hereto.

SO AGREED this _____ day of _____, 19 ___

STATE OF UTAH:

_____
Dianne R. Nielson, Director
Division of Oil, Gas and Mining

OPERATOR:

_____
Company Officer - Position
Richard D. Pick - President

_____
Company Officer - Position
D.R. Meadors, Operations Manager

NOTE: An Affidavit of Qualification must be completed and attached to this form for each authorized agent or officer. Where one signs by virtue of Power of Attorney for a company, such Power of Attorney must be filed with this Agreement. If the principal is a corporation, the Agreement shall be executed by its duly authorized officer.

EXHIBIT "A"

SURFACE DISTURBANCE

LEGAL DESCRIPTION

Permit Number ACT/007/022
Effective Date Aug. 7, 1989

SURFACE DISTURBANCE
--ooOOoo--

In accordance with the RECLAMATION AGREEMENT, the OPERATOR intends to conduct coal mining and reclamation activities on or within the surface DISTURBANCE as described hereunder:

Total acres of SURFACE DISTURBANCE 160 acres (more or less)

Legal Description of SURFACE DISTURBANCE:

W½SW¼ (except 0.24 ac. in NW corner), and E½SW¼ (except East 100'), Section 11, T15S, R10E, S.L.B.&M.

E X H I B I T "B"

S U R E T Y B O N D
(NON-FEDERAL COAL)

August 1988
Exhibit "B" - BONDING AGREEMENT
SURETY BOND

Permit Number ACT/007/022
Expiration Date Aug. 7, 1994

(NON-FEDERAL COAL)
SURETY BOND
--ooOOoo--

THIS SURETY BOND entered into and by and between the undersigned OPERATOR, and SURETY COMPANY, hereby jointly and severally bind ourselves, our heirs, administrators, executors, successors and assigns unto the State of Utah, Division of Oil, Gas and Mining in the penal sum of ($ 2,441,745.00) (Surety Bond Amount) for the timely performance of reclamation responsibilities of the surface disturbance described in Exhibit "A" of this Reclamation Agreement.

This SURETY BOND shall remain in effect until all applicable rules and the OPERATOR's reclamation obligation have been met and released by the Division of Oil, Gas and Mining.

Terms for release or adjustment of this BOND are as written and agreed to by the DIVISION and the OPERATOR in the RECLAMATION AGREEMENT incorporated by reference herein, to which this SURETY AGREEMENT has been attached as Exhibit "B".

August 1988

AFFIDAVIT OF QUALIFICATION
OPERATOR
--ooOOoo--

I, Richard D. Pick, being first duly sworn under oath, deposes and says that he/she is the (officer or agent) _____ of Beaver Creek Coal Co. ; and that he/she is duly authorized to execute and deliver the foregoing obligations; and that said OPERATOR is authorized to execute the same and has complied in all respects with the laws of Utah in reference to commitments, undertakings and obligations herein.

(Signed) Richard D. Pick
Name - Position

Subscribed and sworn to before me this 11th day of September, 1989.

Rosina Sugarin
Notary Public

My Commission Expires:

4/1/, 1993.

Attest:

STATE OF Utah)
) ss:
COUNTY OF Carbon)

STATE #ACT/007/022

ORIGINAL

R I D E R

RIDER to be attached to and form a part of Bond Number U-629894

on behalf of BEAVER CREEK COAL COMPANY
(Name)

P.O. BOX AU, PRICE, UTAH 84501
(Address)

as Principal, and in favor of STATE OF UTAH, DIVISION OF OIL, GAS AND MINING

as Obligee, executed by UNITED PACIFIC INSURANCE COMPANY as Surety,
in the amount of TWO MILLION FOUR HUNDRED FORTY-ONE THOUSAND SEVEN HUNDRED FORTY-FIVE AND NO/100----------

Dollars ($ 2,441,745.00) effective AUGUST 6, 19 89.

It is hereby understood and agreed that effective as of SEPTEMBER 5, 1991, the said bond has been amended as follows:

1) **The Principal's Name has been changed from: BEAVER CREEK COAL COMPANY**
to: MOUNTAIN COAL COMPANY

2) **Specific Language has been added:**
"In the event the Cooperative Agreement between the DIVISION and OSM is terminated, then the portion of the bond covering the Federal Lands will be payable only to the United States, Department of Interior, Office of Surface Mining."

Nothing herein contained shall vary, alter or extend any provisions or conditions of the bond other than as above stated.

SIGNED, SEALED AND DATED this 5TH day of SEPTEMBER, 19 91.

MOUNTAIN COAL COMPANY
Principal

BY: Thomas H. Parker
Vice President

UNITED PACIFIC INSURANCE COMPANY
Surety

BY: Dorothy M. Iwanoff
DOROTHY M. IWANOFF
ATTORNEY-IN-FACT

R I D E R

RIDER to be attached to and form a part of Bond Number U-629894

on behalf of BEAVER CREEK COAL COMPANY
(Name)

P.O. Box AU, Price, Utah 84501
(Address)

as Principal, and in favor of STATE OF UTAH

as Obligee, executed by UNITED PACIFIC INSURANCE COMPANY as Surety,

in the amount of TWO MILLION SEVENTEEN THOUSAND SIX HUNDRED SIXTY-NINE---------

Dollars ($ 2,017,669.00) effective APRIL 22, 19 87.

It is hereby understood and agreed that, effective as of AUGUST 6, 1989, the Bond Amount on said bond has been increased as follows:

FROM: TWO MILLION SEVENTEEN THOUSAND SIX HUNDRED SIXTY-NINE AND NO/100 DOLLARS ($2,017,669.00)

TO: TWO MILLION FOUR HUNDRED FORTY-ONE THOUSAND SEVEN HUNDRED FORTY-FIVE DOLLARS ($2,441,745.00)

Nothing herein contained shall vary, alter or extend any provisions or conditions of the bond other than as above stated.

SIGNED, SEALED AND DATED this 15TH day of AUGUST, 19 89.

GAL

BEAVER CREEK COAL COMPANY
Principal

By: [signature]

UNITED PACIFIC INSURANCE COMPANY
Surety

By: [signature]
W. C. DOYLE, ATTORNEY-IN-FACT

UNITED PACIFIC INSURANCE COMPANY

HEAD OFFICE, FEDERAL WAY, WASHINGTON

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS, That the UNITED PACIFIC INSURANCE COMPANY, a corporation duly organized under the laws of the State of Washington, does hereby make, constitute and appoint

W. C. DOYLE of LOS ANGELES, CALIFORNIA ----------

its true and lawful Attorney-in-Fact, to make, execute, seal and deliver for and on its behalf, and as its act and deed

ANY AND ALL BONDS AND UNDERTAKINGS OF SURETYSHIP ------

and to bind the UNITED PACIFIC INSURANCE COMPANY thereby as fully and to the same extent as if such bonds and undertakings and other writings obligatory in the nature thereof were signed by an Executive Officer of the UNITED PACIFIC INSURANCE COMPANY and sealed and attested by one other of such officers, and hereby ratifies and confirms all that its said Attorney(s)-in-Fact may do in pursuance hereof.

This Power of Attorney is granted under and by authority of Article VII of the By-Laws of UNITED PACIFIC INSURANCE COMPANY which became effective September 7, 1978, which provisions are now in full force and effect, reading as follows:

ARTICLE VII - EXECUTION OF BONDS AND UNDERTAKINGS

1. The Board of Directors, the President, the Chairman of the Board, any Senior Vice President, any Vice President or Assistant Vice President or other officer designated by the Board of Directors shall have power and authority to (a) appoint Attorneys-in-Fact and to authorize them to execute on behalf of the Company, bonds and undertakings, recognizances, contracts of indemnity and other writings obligatory in the nature thereof, and (b) to remove any such Attorney-in-Fact at any time and revoke the power and authority given to him.

2. Attorneys-in-Fact shall have power and authority, subject to the terms and limitations of the power of attorney issued to them, to execute and deliver on behalf of the Company, bonds and undertakings, recognizances, contracts of indemnity and other writings obligatory in the nature thereof. The corporate seal is not necessary for the validity of any bonds and undertakings, recognizances, contracts of indemnity and other writings obligatory in the nature thereof.

3. Attorneys-in-Fact shall have power and authority to execute affidavits required to be attached to bonds, recognizances, contracts of indemnity or other conditional or obligatory undertakings and they shall also have power and authority to certify the financial statement of the Company and to copies of the By Laws of the Company or any article or section thereof.

A power of attorney is signed and sealed by facsimile under and by authority of the following Resolution adopted by the Board of Directors of UNITED PACIFIC INSURANCE COMPANY at a meeting held on the 6th day of June, 1978, at which a quorum was present, and said Resolution has not been amended or repealed.

> "Resolved, that the signatures of such directors and officers and the seal of the Company may be affixed to any such power of attorney or any certificate relating thereto by facsimile, and any such power of attorney or certificate bearing such facsimile signatures or facsimile seal shall be valid and binding upon the Company and any such power so executed and certified by facsimile signatures and facsimile seal shall be valid and binding upon the Company in the future with respect to any bond or undertaking to which it is attached."

IN WITNESS WHEREOF, the UNITED PACIFIC INSURANCE COMPANY has caused these presents to be signed by its Vice President, and its corporate seal to be hereto affixed, this 23rd day of June 19 87

UNITED PACIFIC INSURANCE COMPANY

Charles B. Schmalz

Vice President

STATE OF Washington
COUNTY OF King } ss.

On this 23rd day of June, 19 87 personally appeared Charles B. Schmalz

to me known to be the Vice-President of the UNITED PACIFIC INSURANCE COMPANY, and acknowledged that he executed and attested the foregoing instrument and affixed the seal of said corporation thereto, and that Article VII, Section 1, 2, and 3 of the By-Laws of said Company, and the Resolution, set forth therein, are still in full force.

My Commission Expires:

May 15, 19 90

Pamela Young

Notary Public in and for State of Washington

Residing at Tacoma

Lawrence W. Carlstrom, Assistant Secretary of the UNITED PACIFIC INSURANCE COMPANY, do hereby certify that the foregoing is a true and correct copy of a Power of Attorney executed by said UNITED PACIFIC INSURANCE COMPANY, which is still in full force and effect.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of said Company this 15TH day of AUGUST 19 89

Assistant Secretary

Lawrence W. Carlstrom

BDU-1431 Ed. 4/80

CALIFORNIA
ACKNOWLEDGEMENT BY SURETY

'E OF CALIFORNIA

NTY OF LOS ANGELES } ss.

iis 15TH day of AUGUST in the year 19 89, before me CORA V. RODRIGUEZ personally

ared W. C. DOYLE,

nally known to me (or proved to me on the basis of satisfactory evidence) to be the person who executed the within

ument as attorney-in-fact of UNITED PACIFIC INSURANCE COMPANY

icknowledged to me that the corporation executed it.

OFFICIAL SEAL
CORA V. RODRIGUEZ
NOTARY PUBLIC - CALIFORNIA
PRINCIPAL OFFICE IN
LOS ANGELES COUNTY
My Commission Expires March 24, 1993

Cora V. Rodriguez
Notary Public

ARCO Coal Company
555 Seventeenth Street
Denver, Colorado 80202
Telephone 303 293 4000

August 17, 1987

Pamela Grubaugh-Littig
State of Utah
Natural Resources
Oil, Gas & Mining
355 W. North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203

Re: Bond No. U-629894

Dear Ms. Littig:

As we discussed by telephone, enclosed is a rider increasing the bond on CV Spur to $2,017,669.00.

Please contact me if you need anything further in this regard.

Sincerely,

Mickey L. Love

Mickey L. Love
Senior Lease Adminsitrator

MLL:mjb
enclosure
cc: Dan Guy

UNITED PACIFIC INSURANCE COMPANY

HOME OFFICE, FEDERAL WAY, WASHINGTON

POWER OF ATTORNEY

"NOW ALL MEN BY THESE PRESENTS, That the UNITED PACIFIC INSURANCE COMPANY, a corporation duly organized under the laws of the ste of Washington, does hereby make, constitute and appoint

W. C. DOYLE of LOS ANGELES, CALIFORNIA-------

its true and lawful Attorney-in-Fact, to make, execute, seal and deliver for and on its behalf, and as its act and deed

ANY AND ALL BONDS AND UNDERTAKINGS OF SURETYSHIP----

and to bind the UNITED PACIFIC INSURANCE COMPANY thereby as fully and to the same extent as if such bonds and undertakings and other writings obligatory in the nature thereof were signed by an Executive Officer of the UNITED PACIFIC INSURANCE COMPANY and sealed and attested by one other of such officers, and hereby ratifies and confirms all that its said Attorney(s)-in-Fact may do in pursuance hereof.

This Power of Attorney is granted under and by authority of Article VII of the By-Laws of UNITED PACIFIC INSURANCE COMPANY which became effective September 7, 1978, which provisions are now in full force and effect, reading as follows:

ARTICLE VII – EXECUTION OF BONDS AND UNDERTAKINGS

1. The Board of Directors, the President, the Chairman of the Board, any Senior Vice President, any Vice President or Assistant Vice President or other officer designated by the Board of Directors shall have power and authority to (a) appoint Attorneys-in-Fact and to authorize them to execute on behalf of the Company, bonds and undertakings, recognizances, contracts of indemnity and other writings obligatory in the nature thereof, and (b) to remove any such Attorney-in-Fact at any time and revoke the power and authority given to him.

2. Attorneys-in-Fact shall have power and authority, subject to the terms and limitations of the power of attorney issued to them, to execute and deliver on behalf of the Company, bonds and undertakings, recognizances, contracts of indemnity and other writings obligatory in the nature thereof. The corporate seal is not necessary for the validity of any bonds and undertakings, recognizances, contracts of indemnity and other writings obligatory in the nature thereof.

3. Attorneys-in-Fact shall have power and authority to execute affidavits required to be attached to bonds, recognizances, contracts of indemnity or other conditional or obligatory undertakings and they shall also have power and authority to certify the financial statement of the Company and to copies of the By-Laws of the Company or any article or section thereof.

This power of attorney is signed and sealed by facsimile under and by authority of the following Resolution adopted by the Board of Directors of UNITED PACIFIC INSURANCE COMPANY at a meeting held on the 5th day of June, 1979, at which a quorum was present, and said Resolution has not been amended or repealed:

> "Resolved, that the signatures of such directors and officers and the seal of the Company may be affixed to any such power of attorney or any certificate relating thereto by facsimile, and any such power of attorney or certificate bearing such facsimile signatures or facsimile seal shall be valid and binding upon the Company and any such power so executed and certified by facsimile signatures and facsimile seal shall be valid and binding upon the Company in the future with respect to any bond or undertaking to which it is attached."

IN WITNESS WHEREOF, the UNITED PACIFIC INSURANCE COMPANY has caused these presents to be signed by its Vice President, and its corporate seal to be hereto affixed, this 1st day of March 19 82.

UNITED PACIFIC INSURANCE COMPANY

Charles B. Schmalz

Vice President

STATE OF Washington
COUNTY OF King } ss.

On this 1st day of March, 19 82, personally appeared Charles B. Schmalz

to me known to be the Vice-President of the UNITED PACIFIC INSURANCE COMPANY, and acknowledged that he executed and attested the foregoing instrument and affixed the seal of said corporation thereto, and that Article VII, Section 1, 2, and 3 of the By-Laws of said Company, and the Resolution, set forth therein, are still in full force.

My Commission Expires:

June 12 , 1982

Nancy Stames

Notary Public in and for State of Washington

Residing at Tacoma

Charles J. Falskow , Assistant Secretary of the UNITED PACIFIC INSURANCE COMPANY, do hereby certify that the above and foregoing is a true and correct copy of a Power of Attorney executed by said UNITED PACIFIC INSURANCE COMPANY, which is still in full force and effect.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of said Company this 4TH day of AUGUST 19 87

Assistant Secretary Charles J. Falskow

BDU-1431 Ed. 4/80

LIABILITY INSURANCE

ERTIFICATE OF INSURANCE 01-18-93 ejl

CIGNA Property and Casualty Companies

his Certificate of Insurance neither affirmatively nor negatively nends, extends or alters the coverage, limits, terms or conditions the policies it certificates.)

Original Fireproof File : Copy #4

ORIGINAL

Act/007/022

CIGNA

Bill - FYI

COMPANY CODES

[2] CIGNA INSURANCE COMPANY

[3] CIGNA INS. CO. OF TEXAS

[5] PACIFIC EMPLOYERS INS. CO.

[9] INSURANCE COMPANY OF NORTH AMERICA

[A] CIGNA INS. CO. OF ILLINOIS

[B] CIGNA INS. CO. OF OHIO

[ ] (OTHER: — SPECIFY)

FOLD

hi to Certify to

State of Utah
Dept., of Natural Resources
Division of Oil, Gas and Mining
355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 94180-1203

hat the following described policy or policies, issued by The Company as coded below, roviding insurance only for hazards checked by "X" below, have been issued to:

NAME AND ADDRESS OF INSURED: Atlantic Richfield Company, its Subsidiaries and subsidiaries thereof as now or hereinafter constituted, Atlantic Richfield Plaza, 515 So. Flower Street, Los Angeles, CA 90071

overing in accordance with the terms thereof, at the following location(s):

Including Mountain Coal Company and ARCO Coal Company

TYPE OF POLICY	HAZARDS	CO. CODE	POLICY NUMBER	POLICY PERIOD	LIMITS OF LIABILITY
(a) Standard Workmen's Compensation & Employers' Liability	[ ]	[ ]			$ Statutory W. C. One Accident and Aggregate Disease
(b) General Liability — Bodily Injury: Premises—Operations (including "Incidental Contracts" as defined below)	[X]	[9]	ISL G1 519134-A	01-01-93 to 01-01-96	$*See Below Each Person; Each [ ] Accident [ ] Occurrence
Independent Contractors	[X]	[9]			$
Completed Operations/Products	[X]	[9]			
ntractual, (Specific type as ribed in footnote below)	[X]	[9]			$ Aggregate—Completed Operations/Products
Property Damage: Premises—Operations (Including "Incidental Contracts" as defined below)	[X]	[9]	ISL G1 519134-A	01-01-93 to 01-01-96	$*See Below Each [ ] Accident [ ] Occurrence
Independent Contractors	[X]	[9]			$ Aggregate—Prem./Oper.
					$ Aggregate—Protective
Completed Operations/Products	[X]	[9]			$ Aggregate—Completed Operations/Products
Contractual, (Specific type as described in footnote below)	[X]	[9]			$ Aggregate—Contractual
(c) Automobile Liability — Bodily Injury: Owned Automobiles	[ ]	[ ]			$ Each Person
Hired Automobiles	[ ]	[ ]			Each [ ] Accident [ ] Occurrence
Non-owned Automobiles	[ ]	[ ]			$
Property Damage: Owned Automobiles	[ ]	[ ]			$ Each [ ] Accident [ ] Occurrence
Hired Automobiles	[ ]	[ ]			
Non-owned Automobiles	[ ]	[ ]			
(d) **INCLUDES "XCU" COVERAGE					* $500,000 Combined Single Limit, per occurrence/aggregate where applicable.

Contractual Footnote: Subject to all the policy terms applicable, specific contractual coverage is provided as respects

(Check Applicable Box) [ ] a contract [ ] purchase order agreements [ ] all contracts } between the Insured and:

In the event of cancellation of the policy or policies by the company, Forty Five (45) days' written notice of such cancellation will be given to you at the address stated above.

NAME OF OTHER PARTY

DATE (if applicable)

CONTRACT NO. (if any)

DESCRIPTION (OR JOB)

C.V. Spur Coal Processing and Loadout Facility Act/007/022

Definitions: "Incidental contract" means any written (1) lease of premises (2) easement agreement, except in connection with construction or demolition operations on or adjacent to a railroad, (3) undertaking to indemnify a municipality required by municipal ordinance, except in connection with work for the municipality, (4) sidetrack agreement, or (5) elevator maintenance agreement.

DIVISION ORDERS

WATER MONITORING

Water Monitoring Program
Castle Valley Spur

Station	Location	Type	Frequency	Flow Device	Results To	Remarks
CV-0-W	N.W. Corner of Property	Well	Bi-Annually	Level Rod	DOGM, OSM	
CV-1-W	Pumphouse	French Drain	Bi-Annually	Time/Volume	DOGM, OSM	
CV-3-W	South Central Property	Well	Bi-Annually	Level Rod	DOGM, OSM	
CV-4-W	NE Corner Property	Well	Bi-Annually	Level Rod	DOGM, OSM	
CV-5-W	North Central Property	Well	Bi-Annually	Level Rod	DOGM, OSM	
V-6-W	E. Central Property	Well	Bi-Annually	Level Rod	DOGM, OSM	
-10-W	S.E. Adjacent Property	Well	Bi-Annually	Level Rod	DOGM, OSM	
-11-W	N.E. Adjacent Property	Well	Bi-Annually	Level Rod	DOGM, OSM	
-12-W	North Adjacent Property	Well	Bi-Annually	Level Rod	DOGM, OSM	
14-W	N.E. Corner Property	Ditch	Bi-Annually	Level Rod	DOGM, OSM	
5-W	Sed. Pond Discharge	Pond Outlet	Monthly	Hand-Held Time/Volume	E.P.A., DOGM Utah Health Dept.	Monitored per NPDES Permit
6-W	West Property Line	Surface Ditch	Bi-Annually	Time/Volume	DOGM	Baseline thru 6/91

BLACKHAWK ENGINEERING, CO.

Rt. 1, Box 146-H5 - Helper, Utah 84526 - Telephone (801) 637-2422

January 29, 1993

Ms. Pamela Grubaugh-Littig
Utah Division of Oil, Gas & Mining
355 West North Temple
#3 Triad Center, Suite 350
Salt Lake City, Utah 84190-1203

Dear Ms. Littig:

Enclosed are the results of the Mountain Coal company water monitoring for the fourth quarter of 1992.

If you have any questions or need any additional information, please contact me

Respectfully,

Dan W. Guy
President

DWG/cr

Enclosures

cc: Kathy Welt
File 4-E-2-1
WTRMON

E.I.S. Hydrology
Field Measurements Form

Date 12-8-92 Station # CU-6

Company CU-5 Pur

Time 9:00

Flow/Depth

pH

Specific Conductivity

Water Temperature

Air Temperature

Dissolved Oxygen

Type: Spring___ Stream___ Well ✓ Discharge___ NPDES___

Collection Point

Appearance of Water: Clear___ Milky___ Cloudy___ Opaque___

Quality Sample Taken: Yes___ No ✓

Pump Reading

Comments

Field Monitor Randy

When Sample or Measurements Not Taken:

Reason: Dry

D = Dry F = Frozen N/A = Not Accessable N/R = Not Required

WATER MONITORING REPORT

Property: CV Spur
Station: CV-O-W
Location: NW Corner of Property
Type: Well
Frequency: Bi-Annually

Field Measurements	Date Sampled 06/08/92	12/08/92	Mean
Flow [gpm]	DRY	DRY	DRY
PH			
Sp. Cond. [ohms]			
Temp. [C]			
Diss. O [ppm]			

Lab. Meas. [mg/l]			
TDS			
TSS			
O & G			
Al CaCO3			
Hd CaCO3			
Ac CaCO3			
HCO3			
CO3			
Cl			
SO4			
Ca			
Mg			
K			
Na			
Cat/An			
Fe			
Mn			

E.I.S. Hydrology
Field Measurements Form

Date 12-8-92 Station # CU-1

Company CU-SPur

Time 8:45

Flow/Depth Upper Culvert - 16'

pH 7.5

Specific Conductivity 15,000

Water Temperature 7°

Air Temperature 28

Dissolved Oxygen N/A

Type: Spring___ Stream___ Well ✓ Discharge___ NPDES___

Collection Point Ground water - French Drain

Appearance of Water: Clear ✓ Milky___ Cloudy___ Opaque___

Quality Sample Taken: Yes ✓ No___

Pump Reading___

Comments___

Field Monitor Randy ? M.C. Pearson

When Sample or Measurements Not Taken:

Reason: ___

D = Dry F = Frozen N/A = Not Accessable N/R = Not Required

Inter-Mountain Laboratories, Inc.

2506 W. Main Street
Farmington, New Mexico 87401

CLIENT:	EIS	DATE REPORTED:	12/23/92
ID:	CV-1		
SITE:	CV-Spur	DATE RECEIVED:	12/11/92
LAB NO:	F1444	DATE COLLECTED:	12/08/92

Lab pH (s.u.).....	7.52
Lab Conductivity, umhos/cm @ 25C....	14900
Lab Resistivity, ohm-m.....	0.671
Total Dissolved Solids (180C), mg/L.	14500
Total Dissolved Solids (calc), mg/L.	13900
Total Suspended Solids, mg/L.....	22
Total Alkalinity as CaC03, mg/L.....	447
Total Hardness as CaC03, mg/L.....	2530
Sodium Adsorption Ratio.....	29.7
Oil and Grease (IR), mg/L.....	<0.26

	mg/L	meq/L
Bicarbonate as HC03.....	545	8.94
Carbonate as C03.....	<0.10	<0.01
Chloride.....	189	5.34
Sulfate.....	9190	191
Calcium.....	363	18.1
Magnesium.....	396	32.5
Potassium.....	22.8	0.58
Sodium.....	3440	150
Major Cations.....		201
Major Anions.....		206
Cation/Anion Difference.....		1.2 %

Trace Metals by AA (Dissolved Concentration), mg/L

	Analytical Result:	Detection Limit:
Iron (Fe).....	0.20	<0.05
Manganese (Mn).....	0.06	<0.02

ND - Analyte "not detected" at the stated detection limit.

Wanda Orso
Water Lab Supervisor

WATER MONITORING REPORT

Property: CV Spur
Station: CV-1-W
Location: NE Corner of Property
Type: French Drain
Frequency: Bi-Annually

Field Measurements	Date Sampled 06/08/92	12/08/92	Mean
Flow [GPM]	<.2	16'	
PH	7.60	7.50	7.55
Sp. Cond. [ohms]	8,240.00	15,000.00	11,620.00
Temp. [C]	6.00	7.00	6.50
Diss. O [ppm]	N/R	N/R	N/R
Lab. Meas. [mg/l]			
TDS	7,050.00	13,900.00	10,475.00
TSS	10.00	22.00	16.00
O & G	N/R	<0.26	
Al CaCO3	417.00	447.00	432.00
Hd CaCO3	1,660.00	2,530.00	2,095.00
Ac CaCO3	0.00	0.00	0.00
HCO3	509.00	545.00	527.00
CO3	0.00	<0.10	0.00
Cl	128.00	189.00	158.50
SO4	4,520.00	9,190.00	6,855.00
Ca	303.00	363.00	333.00
Mg	219.00	396.00	307.50
K	13.10	22.80	17.95
Na	1,577.00	3,440.00	2,508.50
Cat/An	1.92	1.20	1.56
Fe	1.12	0.20	0.66
Mn	0.21	0.06	0.14

E.I.S. Hydrology
Field Measurements Form

Date 12-8-92 Station # [illegible]-3

Company CU Spur

Time 820

Flow/Depth 0" 11"

pH 7.3

Specific Conductivity 4000

Water Temperature 8

Air Temperature 28

Dissolved Oxygen NA

Type: Spring___ Stream___ Well ✓ Discharge___ NPDES___

Collection Point Well #3 - Jensen yard

Appearance of Water: Clear ✓ Milky___ Cloudy___ Opaque___

Quality Sample Taken: Yes ✓ No___

Pump Reading

Comments

Field Monitor Randy O [illegible]

When Sample or Measurements Not Taken:

Reason:

D = Dry F = Frozen N/A = Not Accessable N/R = Not Required

Inter-Mountain Laboratories, Inc.

2506 W. Main Street
Farmington, New Mexico 87401

CLIENT:	EIS	DATE REPORTED:	12/23/92
ID:	CV-3		
SITE:	CV-Spur	DATE RECEIVED:	12/11/92
LAB NO:	F1445	DATE COLLECTED:	12/08/92

Lab pH (s.u.).....	7.31
Lab Conductivity, umhos/cm @ 25C....	3830
Lab Resistivity, ohm-m.....	2.61
Total Dissolved Solids (180C), mg/L.	3790
Total Dissolved Solids (calc), mg/L.	3480
Total Suspended Solids, mg/L.....	260
Total Alkalinity as CaC03, mg/L.....	256
Total Hardness as CaC03, mg/L.....	37.2
Sodium Adsorption Ratio.....	3.55

	mg/L	meq/L
Bicarbonate as HC03.....	312	5.12
Carbonate as C03.....	<0.10	<0.01
Chloride.....	27.4	0.77
Sulfate.....	2320	48.3
Calcium.....	416	20.8
Magnesium.....	200	16.5
Potassium.....	10.5	0.27
Sodium.....	353	15.3
Major Cations.....		52.8
Major Anions.....		54.1
Cation/Anion Difference.....		1.23 %

Trace Metals by AA (Total Concentration), mg/L

	Analytical Result:	Detection Limit:
Iron (Fe).....	5.22	<0.05
Manganese (Mn).....	1.04	<0.02

ND - Analyte "not detected" at the stated detection limit.

Wanda Orso
Water Lab Supervisor

WATER MONITORING REPORT

Property: CV Spur
Station: CV-3-W
Location: South Truckyard
Type: Well
Frequency: Bi-Annual

Field Measurements	Date Sampled 06/08/92	12/08/92	Mean
DFS (INCHES)	38.00	71.00	54.50
PH	7.00	7.30	7.15
Sp. Cond. [ohms]	3,350.00	4,000.00	3,675.00
Temp. [C]	7.00	8.00	7.50
Diss. O [ppm]	N/R	N/R	N/R
Lab. Meas. [mg/l]			
TDS	3,320.00	3,480.00	3,400.00
TSS	1,660.00	260.00	960.00
O & G	N/R	N/R	N/R
Al CaCO3	289.00	256.00	272.50
Hd CaCO3	1,780.00	37.20	908.60
Ac CaCO3	0.00	0.00	0.00
HCO3	353.00	312.00	332.50
CO3	0.00	<0.10	0.00
Cl	27.00	27.40	27.20
SO4	2,091.00	2,320.00	2,205.50
Ca	493.00	416.00	454.50
Mg	134.00	200.00	167.00
K	102.00	10.50	56.25
Na	310.00	353.00	331.50
Cat/An	1.56	1.23	1.40
Fe	18.70	5.22	11.96
Mn	2.32	1.04	1.68

E.I.S. Hydrology
Field Measurements Form

Date 12-8-92 Station #CU-4

Company CUSPOT

Time 8:50

Flow/Depth

pH

Specific Conductivity

Water Temperature

Air Temperature

Dissolved Oxygen

Type: Spring___ Stream___ Well ✓ Discharge___ NPDES___

Collection Point

Appearance of Water: Clear___ Milky___ Cloudy___ Opaque___

Quality Sample Taken: Yes___ No ✓

Pump Reading

Comments

Field Monitor Ravell

When Sample or Measurements Not Taken:

Reason: Dry

D = Dry F = Frozen N/A = Not Accessable N/R = Not Required

WATER MONITORING REPORT

Property: CV Spur
Station: CV-4-W
Location: NE Corner of Property
Type: Well
Frequency: Bi-Annually

Field Measurements	Date Sampled 06/08/92	12/08/92	Mean
Flow [gpm]	DRY	DRY	
PH			
Sp. Cond. [ohms]			
Temp. [C]			
Diss. O [ppm]			

Lab. Meas. [mg/l]			
TDS			
TSS			
O & G			
Al CaCO3			
Hd CaCO3			
Ac CaCO3			
HCO3			
CO3			
Cl			
SO4			
Ca			
Mg			
K			
Na			
Cat/An			
Fe			
Mn			

E.I.S. Hydrology
Field Measurements Form

Date 12/8/92 Station # W-5

Company MN. Coal W Spur

Time 8:40

Flow/Depth — Dry

pH

Specific Conductivity

Water Temperature

Air Temperature 21

Dissolved Oxygen

Type: Spring Stream Well ✓ Discharge NPDES

Collection Point Well #5

Appearance of Water: Clear Milky Cloudy Opaque

Quality Sample Taken: Yes No ✓

Pump Reading

Comments

Field Monitor M A Coomroe

When Sample or Measurements Not Taken:

Reason:

D = Dry F = Frozen N/A = Not Accessable N/R = Not Required

WATER MONITORING REPORT

Property: CV Spur
Station: CV-5-W
Location: N Central Property
Type: Well
Frequency: Bi-Annually

Field Measurements	Date Sampled 06/08/92	12/08/92	Mean
Flow [gpm]	DRY	DRY	
PH			
Sp. Cond. [ohms]			
Temp. [C]			
Diss. O [ppm]			
Lab. Meas. [mg/l]			
TDS			
TSS			
O & G			
Al CaCO3			
Hd CaCO3			
Ac CaCO3			
HCO3			
CO3			
Cl			
SO4			
Ca			
Mg			
K			
Na			
Cat/An			
Fe			
Mn			

E.I.S. Hydrology
Field Measurements Form

Date 12-8-92 Station # [illegible]

Company CV-Spur-MH Coal

Time 8:30

Flow/Depth 6' 10"

pH 8

Specific Conductivity 2000

Water Temperature 7

Air Temperature 28

Dissolved Oxygen N/A

Type: Spring___ Stream___ Well ✓ Discharge___ NPDES___

Collection Point Well #6 Next to Pond

Appearance of Water: Clear ✓ Milky___ Cloudy___ Opaque___

Quality Sample Taken: Yes ✓ No___

Pump Reading

Comments

Field Monitor Rank — & [illegible]

When Sample or Measurements Not Taken:

Reason:

D = Dry F = Frozen N/A = Not Accessable N/R = Not Required

Inter-Mountain Laboratories, Inc.

2506 W. Main Street
Farmington, New Mexico 87401

CLIENT:	EIS	DATE REPORTED:	12/23/92
ID:	CV-6		
SITE:	CV-Spur	DATE RECEIVED:	12/11/92
LAB NO:	F1446	DATE COLLECTED:	12/08/92

Lab pH (s.u.).....	7.76
Lab Conductivity, umhos/cm @ 25C....	2160
Lab Resistivity, ohm-m.....	4.63
Total Dissolved Solids (180C), mg/L.	1890
Total Dissolved Solids (calc), mg/L.	1740
Total Suspended Solids, mg/L.....	240
Total Alkalinity as CaC03, mg/L.....	209
Total Hardness as CaC03, mg/L.....	1120
Sodium Adsorption Ratio.....	1.42

	mg/L	meq/L
Bicarbonate as HC03.....	255	4.18
Carbonate as C03.....	<0.10	<0.01
Chloride.....	48.1	1.36
Sulfate.....	1070	22.4
Calcium.....	258	12.9
Magnesium.....	115	9.43
Potassium.....	6.97	0.18
Sodium.....	109	4.74
Major Cations.....		27.2
Major Anions.....		27.9
Cation/Anion Difference.....		1.18 %

Trace Metals by AA (Total Concentration), mg/L

	Analytical Result:	Detection Limit:
Iron (Fe).....	6.08	<0.05
Manganese (Mn).....	0.13	<0.02

ND - Analyte "not detected" at the stated detection limit.

Wanda Orso
Water Lab Supervisor

WATER MONITORING REPORT

Property: CV Spur
Station: CV-6-W
Location: East Central Property
Type: Well
Frequency: Bi-Annual

Field Measurements	Date Sampled 06/08/92	12/08/92	Mean
DFS [ft]	38"	6'10"	
PH	7.20	8.00	
Sp. Cond. [ohms]	2,990.00	2,000.00	
Temp. [C]	9.00	7.00	
Diss. O [ppm]	N/R	N/R	
Lab. Meas. [mg/l]			
TDS	2,880.00	1,740.00	
TSS	107.00	240.00	
O & G	N/R	N/R	
Al CaCO3	241.00	209.00	
Hd CaCO3	1,860.00	1,120.00	
Ac CaCO3	0.00	0.00	
HCO3	293.00	255.00	
CO3	0.00	<0.10	
Cl	61.20	48.10	
SO4	1,750.00	1,070.00	
Ca	513.00	258.00	
Mg	140.00	115.00	
K	8.79	6.97	
Na	108.00	109.00	
Cat/An	1.12	1.18	
Fe	2.80	6.08	
Mn	0.09	0.13	

E.I.S. Hydrology
Field Measurements Form

Date 12-2-92 Station # CC-K.

Company CU-SPCR

Time 10:00

Flow/Depth

pH

Specific Conductivity

Water Temperature

Air Temperature

Dissolved Oxygen

Type: Spring___ Stream___ Well ✓ Discharge___ NPDES___

Collection Point

Appearance of Water: Clear___ Milky___ Cloudy___ Opaque___

Quality Sample Taken: Yes___ No ✓

Pump Reading

Comments

Field Monitor Rayvell

When Sample or Measurements Not Taken:

Reason: Obstruction in tube

D = Dry F = Frozen N/A = Not Accessable N/R = Not Required

WATER MONITORING REPORT

Property: CV Spur
Station: CV-10-W
Location: SE Adj. to Property
Type: Well
Frequency: Bi-Annually

Field Measurements	Date Sampled 06/08/92	12/08/92	Mean
Flow [gpm]	DRY	NOT TAKEN*	
PH			
Sp. Cond. [ohms]			
Temp. [C]			
Diss. O [ppm]			
Lab. Meas. [mg/l]			
TDS			
TSS			
O & G			
Al CaCO3			
Hd CaCO3			
Ac CaCO3			
HCO3			
CO3			
Cl			
SO4			
Ca			
Mg			
K			
Na			
Cat/An			
Fe			
Mn			

*SEE FIELD NOTES

E.I.S. Hydrology
Field Measurements Form

Date 12-8-92 Station # CC-11

Company CW-SPur

Time 10:15

Flow/Depth 4' 8"

pH 7.8

Specific Conductivity 30,000 +

Water Temperature 8°

Air Temperature 22

Dissolved Oxygen NA

Type: Spring___ Stream___ Well ✓ Discharge___ NPDES___

Collection Point

Appearance of Water: Clear___ Milky___ Cloudy ✓ Opaque___

Quality Sample Taken: Yes ✓ No___

Pump Reading

Comments Yellow Cast to Water

Field Monitor Randy [illegible]

When Sample or Measurements Not Taken:

Reason:

D = Dry F = Frozen N/A = Not Accessable N/R = Not Required

Inter-Mountain Laboratories, Inc.

2506 W. Main Street
Farmington, New Mexico 87401

CLIENT:	EIS	DATE REPORTED:	12/23/92
ID:	CV-11		
SITE:	CV-Spur	DATE RECEIVED:	12/11/92
LAB NO:	F1447	DATE COLLECTED:	12/08/92

Lab pH (s.u.).....	7.74
Lab Conductivity, umhos/cm @ 25C....	32100
Lab Resistivity, ohm-m.....	0.312
Total Dissolved Solids (180C), mg/L.	39700
Total Dissolved Solids (calc), mg/L.	37400
Total Suspended Solids, mg/L.....	88
Total Alkalinity as CaC03, mg/L.....	1070
Total Hardness as CaC03, mg/L.....	8730
Sodium Adsorption Ratio.....	38.5

	mg/L	meq/L
Bicarbonate as HC03.....	1300	21.3
Carbonate as C03.....	<0.10	<0.01
Chloride.....	346	9.77
Sulfate.....	25430	530
Calcium.....	414	20.7
Magnesium.....	1870	154
Potassium.....	18	0.46
Sodium.....	8680	378
Major Cations.....		553
Major Anions.....		561
Cation/Anion Difference.....		0.75 %

Trace Metals by AA (Total Concentration), mg/L

	Analytical Result:	Detection Limit:
Iron (Fe).....	3.65	<0.05
Manganese (Mn).....	0.99	<0.02

ND - Analyte "not detected" at the stated detection limit.

Wanda Orso
Water Lab Supervisor

WATER MONITORING REPORT

Property: CV Spur
Station: CV-11-W
Location: NE Adj to Property
Type: Well
Frequency: Bi-Annually

Field Measurements	Date Sampled 06/08/92	12/08/92	Mean
DFS [ft]	5.00	4.80	
PH	7.90	7.80	
Sp. Cond. [ohms]	>20,000.00	30,000.00	
Temp. [C]	7.00	8.00	
Diss. O [ppm]	N/R	N/R	
Lab. Meas. [mg/l]			
TDS	36,300.00	37,400.00	
TSS	136.00	88.00	
O & G	N/R	N/R	
Al CaCO3	981.00	1,070.00	
Hd CaCO3	8,530.00	8,730.00	
Ac CaCO3	0.00	0.00	
HCO3	1,200.00	1,300.00	
CO3	0.00	<0.10	
Cl	408.00	346.00	
SO4	23,500.00	25,430.00	
Ca	353.00	414.00	
Mg	1,860.00	1,870.00	
K	15.00	18.00	
Na	7,932.00	8,680.00	
Cat/An	0.46	0.75	
Fe	1.28	3.65	
Mn	0.60	0.99	

E.I.S. Hydrology
Field Measurements Form

Date 12-8-92 Station # CU-12

Company BCU-SPur

Time 9:30

Flow/Depth

pH

Specific Conductivity

Water Temperature

Air Temperature

Dissolved Oxygen

Type: Spring___ Stream___ Well ✓ Discharge___ NPDES___

Collection Point

Appearance of Water: Clear___ Milky___ Cloudy___ Opaque___

Quality Sample Taken: Yes___ No ✓

Pump Reading

Comments

Field Monitor Randy

When Sample or Measurements Not Taken:

Reason: Dry

D = Dry F = Frozen N/A = Not Accessable N/R = Not Required

WATER MONITORING REPORT

Property: CV Spur
Station: CV-12-W
Location: North Adj. To Property
Type: Well
Frequency: Bi-Annually

Field Measurements	Date Sampled 06/08/92	12/08/92	Mean
Flow [FS]	DRY	DRY	
PH			
Sp. Cond. [ohms]			
Temp. [C]			
Diss. O [ppm]			
Lab. Meas. [mg/l]			
TDS			
TSS			
O & G			
Al CaCO3			
Hd CaCO3			
Ac CaCO3			
HCO3			
CO3			
Cl			
SO4			
Ca			
Mg			
K			
Na			
Cat/An			
Fe			
Mn			

E.I.S. Hydrology
Field Measurements Form

Date 10-8-92 Station # CC-14

Company CC-Spur

Time 8:40

Flow/Depth

pH

Specific Conductivity

Water Temperature

Air Temperature

Dissolved Oxygen

Type: Spring___ Stream ✓ Well___ Discharge___ NPDES___

Collection Point

Appearance of Water: Clear___ Milky___ Cloudy___ Opaque___

Quality Sample Taken: Yes___ No ✓

Pump Reading

Comments

Field Monitor Rands

When Sample or Measurements Not Taken:

Reason: Dry

D = Dry F = Frozen N/A = Not Accessable N/R = Not Required

WATER MONITORING REPORT

Property: CV Spur
Station: CV-14-W
Location: NE Property
Type: Ditch
Frequency: Bi-Annually

Field Measurements	Date Sampled 06/08/92	12/08/92	Mean
Flow [gpm]	DRY	DRY	
PH			
Sp. Cond. [ohms]			
Temp. [C]			
Diss. O [ppm]			
Lab. Meas. [mg/l]			
TDS			
TSS			
O & G			
Al CaCO3			
Hd CaCO3			
Ac CaCO3			
HCO3			
CO3			
Cl			
SO4			
Ca			
Mg			
K			
Na			
Cat/An			
Fe			
Mn			

E.I.S. Hydrology
Field Measurements Form

Date 10/20/92 Station # CU-15W

Company MH Coal

Time 14:10

Flow/Depth D

pH

Specific Conductivity

Water Temperature

Air Temperature 71

Dissolved Oxygen NA

Type: Spring___ Stream___ Well___ Discharge ✓ NPDES___

Collection Point Culvert - outflow

Appearance of Water: Clear___ Milky___ Cloudy___ Opaque___

Quality Sample Taken: Yes___ No ✓

Pump Reading

Comments

Field Monitor [signature]

When Sample or Measurements Not Taken:

Reason: D

D = Dry F = Frozen N/A = Not Accessable N/R = Not Required

E.I.S. Hydrology
Field Measurements Form

Date 11/17/92 Station # CV-15

Company MN Coal

Time 15:40

Flow/Depth 2

pH

Specific Conductivity

Water Temperature

Air Temperature

Dissolved Oxygen

Type: Spring___ Stream___ Well___ Discharge ✓ NPDES___

Collection Point

Appearance of Water: Clear___ Milky___ Cloudy___ Opaque___

Quality Sample Taken: Yes___ No ✓

Pump Reading

Comments

Field Monitor M A Coonroe

When Sample or Measurements Not Taken:

Reason: D

D = Dry F = Frozen N/A = Not Accessable N/R = Not Required

E.I.S. Hydrology
Field Measurements Form

Date 10-08-92 Station # CU45

Company CU-Spar

Time 8:35

Flow/Depth

pH

Specific Conductivity

Water Temperature

Air Temperature

Dissolved Oxygen

Type: Spring___ Stream___ Well___ Discharge✓ NPDES___

Collection Point

Appearance of Water: Clear___ Milky___ Cloudy___ Opaque___

Quality Sample Taken: Yes___ No✓

Pump Reading

Comments

Field Monitor Randy

When Sample or Measurements Not Taken:

Reason: Dry

D = Dry F = Frozen N/A = Not Accessable N/R = Not Required

WATER MONITORI

Property: Castl
Station: CV-15
Location: Sed.
Type: Pond
Frequency: Month

Field Measurements	01/06/92	02/26/92	03/30/92	04/23/92	Date Sampl 05/13/92
Flow [gpm]	N/A	N/A	N/A	DRY	DRY
PH					
Sp.Con. [ohms]					
Temp [C]					
Diss. O. [ppm]					
Lab. Meas. [mg/l]	NPDES - See Lab Sheet				
TDS					
TSS					
O & G					
Al CaCO3					
Hd CaCO3					
Ac CaCO3					
HCO3					
CO3					
Cl					
SO4					
Ca					
Mg					
K					
Na					
Cat/An					
Fe					
Mn					

06/08/92	07/03/92	08/29/92	09/01/92	10/20/92	11/17/92	12/0892
DRY	DRY	DRY	DRY	DRY	DRY	DRY

E.I.S. Hydrology
Field Measurements Form

Date 12-8-92 Station # CU-16

Company CU SPCU

Time 8:15

Flow/Depth

pH

Specific Conductivity

Water Temperature

Air Temperature

Dissolved Oxygen

Type: Spring___ Stream___ Well___ Discharge___ NPDES___

Collection Point

Appearance of Water: Clear___ Milky___ Cloudy___ Opaque___

Quality Sample Taken: Yes___ No ✓

Pump Reading

Comments

Field Monitor Randy

When Sample or Measurements Not Taken:

Reason: Dry

D = Dry F = Frozen N/A = Not Accessable N/R = Not Required

E.I.S. Hydrology
Field Measurements Form

Date 11/17/92 Station # EV-16

Company Mt Coal

Time 15:50

Flow/Depth D

pH

Specific Conductivity

Water Temperature

Air Temperature

Dissolved Oxygen

Type: Spring___ Stream ✓ Well___ Discharge___ NPDES___

Collection Point

Appearance of Water: Clear___ Milky___ Cloudy___ Opaque___

Quality Sample Taken: Yes___ No___

Pump Reading

Comments

Field Monitor [signature]

When Sample or Measurements Not Taken:

Reason: D

D = Dry F = Frozen N/A = Not Accessable N/R = Not Required

E.I.S. Hydrology
Field Measurements Form

Date 10/20/92 Station # CU-16W

Company MT Coal

Time 14:00

Flow/Depth D

pH

Specific Conductivity

Water Temperature

Air Temperature 70

Dissolved Oxygen

Type: Spring___ Stream ✓ Well___ Discharge___ NPDES___

Collection Point fence line

Appearance of Water: Clear___ Milky___ Cloudy___ Opaque___

Quality Sample Taken: Yes___ No ✓

Pump Reading

Comments

Field Monitor [signature]

When Sample or Measurements Not Taken:

Reason: D

D = Dry F = Frozen N/A = Not Accessable N/R = Not Required

WATER MONITORING REPORT

Property: CV Spur
Station: CV-16-W
Location: West [Central]
Type: Ditch
Frequency: Quarterly [Baseline]

Field Measurements	Date Sampled 02/26/92	06/08/92	08/29/92	12/08/92	Mean
Flow [gpm]	N/A	DRY	DRY	DRY	DRY
PH					
Sp. Cond. [ohms]					
Temp. [C]					
Diss. O [ppm]					
Lab. Meas. [mg/l]					
TDS					
TSS					
O & G					
Al CaCO3					
Hd CaCO3					
Ac CaCO3					
HCO3					
CO3					
Cl					
SO4					
Ca					
Mg					
K					
Na					
Cat/An					
Fe					
Mn					

Inter-Mountain Laboratories, Inc.

2506 W. Main Street
Farmington, New Mexico 87401

EIS

Sample # 1444-1447

Analysis	Date analyzed	Technician
TSS	12/14/92	S. Groves
H2S		
Conductivity	12/14/92	T. Adkins
pH/Alkalinity	12/14/92	T. Adkins
Total Hardness	12/15/92	T. Adkins
Calcium	12/15/92	L. Encarnacion
Magnesium	12/15/92	L. Encarnacion
Potassium	12/16/92	S. Groves
Sodium	12/16/92	S. Groves
Chloride	12/16/92	T. Adkins
Sulfate	12/16/92	T. Adkins
TDS	12/15/92	S. Groves
Fluoride		
NO3/NO2		
NH3		
Oil & Grease	12/18/92	J. Thomas
Metals (Total)		
As		
Cd		
Hg		
Pb		
Se		
Al		
B		
Ba		
Cr		
Cu		
Fe	12/15/92	L. Encarnacion
Mn	12/15/92	L. Encarnacion
Mo		
Ni		
P		
Zn		

Inter·Mountain Laboratories, Inc.

2506 W. Main Street
Farmington, New Mexico 87401

TOTAL OIL and GREASE
EPA Method 413.2

EIS

Project ID:	CV-Spur	Report Date:	12/18/92
Sample Matrix:	Water	Date Sampled:	12/08/92
Preservative:	Cool	Date Received:	12/11/92
Condition:	Intact	Date Extracted:	12/17/92
		Date Analyzed:	12/18/92

Sample ID	Lab ID	Concentration (mg/L)	Detection Limit (mg/L)
CV-1	1444	ND	0.26

ND- Analyte not detected at the stated detection limit.

Reference: Method 3510 - Separatory Funnel Liquid - Liquid Extraction; Test Methods for Evaluating Solid Waste, SW-846, United States Environmental Protection Agency, September, 1986; Method 413.2, Oil and Grease, Total Recoverable; Chemical Analysis of Waste Water, United States Environmental Protection Agency, 1978

Comments:

Analyst

Review

Inter- Mountain Laboratories, Inc.

CHAIN OF CUSTODY RECORD

Client/Project Name	Project Location
EIS	CV-SPUR

Sampler: (Signature)	Chain of Custody Tape No.

ANALYSES / PARAMETERS

Sample No./ Identification	Date	Time	Lab Number	Matrix	No. of Containers	[illegible]				Remarks
CV-1	1/1/92	0945		H_2O	3	X				
CV-3	1/1/92	1020		H_2O	2	X				
CV-6	1/1/92	1030		H_2O	2	X				
CV-11	1/1/92	1015		H_2O	2	X				

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
			[illegible]	1/1/92	1345
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Relinquished by: (Signature)	Date	Time	Received by laboratory: (Signature)	Date	Time

Inter-Mountain Laboratories, Inc.

☐ 1633 Terra Avenue, Sheridan, Wyoming 82801, Telephone (307) 672-8945

☐ 1714 Phillips Circle, Gillette, Wyoming 82716, Telephone (307) 682-8945

☑ 2506 West Main Street, Farmington, NM 87401, Telephone (505) 326-4737

☐ 910 Technology Blvd. Suite B, Bozeman, Montana 59715, Telephone (406) 586-8450

☐ Route 3, Box 256, College Station, TX 77845, Telephone (409) 776-8945

☐ 3304 Longmire Drive, College Station, TX 77845, Telephone (409) 774-4999

11265

U.P.D.E.S.

DISCHARGE DATA

BLACKHAWK ENGINEERING, CO.

Rt. 1, Box 146-H5 - Helper, Utah 84526 - Telephone (801) 637-2422

January 29, 1993

Mr. Donald A Hilden, PH.D., Chief
Permits and Compliance Section
Bureau of Water Pollution Control
Utah Division of Environmental Health
288 North 1460 West
P.O. Box 16690
Salt Lake City, Utah 84116-0690

Dear Mr. Hilden:

Enclosed please find Quarterly Discharge Monitoring Reports for Mountain Coal Company's UPDES Permit Numbers UTG040004, UTG040005, UTG040014 and UTG040015. These reports are on the preprinted DMRs provided by the State of Utah, and cover the fourth quarter of 1992.

Please note that the Trail Mountain Mine has been sold to Pacificorp and permit UTG04003 has been transferred to them.

If you have any questions or need any additional information, please contact me.

Respectfully,

Dan W. Guy
President

Enclosures

cc: Donna Franklin, E.P.A.
Lowell Braxton, UDOGM
Kathy Welt
File

DWG/cr

BLACKHAWK ENGINEERING, CO.

Rt. 1, Box 146-H5 - Helper, Utah 84526 - Telephone (801) 637-2422

January 29, 1993

Ms. Donna Franklin
U.S.E.P.A., Region VIII
999 18th Street
Denver, Place - Suite 500 WM-C
Denver, CO 80202-2405

Dear Ms. Franklin:

Enclosed please find Quarterly Discharge Monitoring Reports for Mountain Coal Company's UPDES Permit Numbers UTG040004, UTG040005, UTG040014 and UTG040015. These reports are on the preprinted DMRs provided by the State of Utah, and cover the fourth quarter of 1992.

Please note that the Trail Mountain Mine has been sold to Pacificorp and permit UTG04003 has been transferred to them.

If you have any questions or need any additional information, please contact me.

Respectfully,

Dan W. Guy
President

Enclosures

cc: Kathy Welt

DWG/cr

BLACKHAWK ENGINEERING, CO.

Rt. 1, Box 146-H5 - Helper, Utah 84526 - Telephone (801) 637-2422

January 29, 1993

Mr. Lowell Braxton, Administrator
Utah Division of Oil, Gas & Mining
355 West North Temple
#3 Triad Center, Suite 350
Salt Lake City, Utah 84190-1203

Dear Mr. Braxton:

Enclosed please find Quarterly Discharge Monitoring Reports for Mountain Coal Company's UPDES Permit Numbers UTG040004, UTG040005, UTG040014 and UTG040015. These reports are on the pre-printed DMRs provided by the State of Utah, and cover the fourth quarter of 1992.

Please note that the Trail Mountain Mine has been sold to Pacificorp and permit UTG04003 has been transferred to them.

If you have any questions or need any additional information, please contact me.

Respectfully,

Dan W. Guy
President

DWG/cr

Enclosures

cc: Kathy Welt
File

ENVIRONMENTAL INDUSTRIAL SERVICES
4855 N. Spring Glen Rd., Spring Glen, UT 84526 - Telephone (801) 472-3814 - FAX (801) 472-8780

January 22, 1993

Utah Department of Health
Bureau of Water Pollution Control
288 North 1460 West, P.O. Box 16690
Salt Lake City, Utah 84116-0690

Re: New UNPDES Forms

Dr. Hilden:

Please find enclosed the fourth quarter, 1992 UNPDES for Mountain Coal (Beaver Creek).

As of this date, Mt. Coal has ~~no~~ one active property in Utah and subsequently, we would like to order new pre-printed UNPDES forms reflecting this change.

The new forms need to be changed as follows:

Name: Mountain Coal Co.
Address: P.O. Box 591
Somerset, CO 81434

ATTN: Kathleen Welt

The property locations are as follows:

	Permit #	Discharge #	Location
#2 & 7 Mine	UTG040004	001 A	Gordon Creek
#4 Mine	UTG040015	001 A	Huntington-Mill Fork
(Active) CV Spur	UTG040005	001 A	CV Spur
#3 & 6 Mine	UTG040014	001 A	Coal Canyon

Since our firm, E.I.S. will continue to monitor the locations and fill out the forms, would you please direct the new forms and your correspondence to our new address.

E.I.S.
4855 N. Spring Glen Road
Helper, Utah 84526

ATTN: Melvin A. Coonrod

If you have any questions please feel free to call at 801 472-3814.

Sincerely,

Melvin A. Coonrod

Melvin A. Coonrod

MC/njc

cc: Dan W. Guy, Mt. Coal Co.

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
NAME BEAVER CREEK COAL--CV SPUR
ADDRESS P.O. BOX 1378
PRICE UT 84501

FACILITY
LOCATION
ATTN: DAN W. GUY, MANAGER

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(2-16) PERMIT NUMBER	(17-19) DISCHARGE NUMBER
UTG040005	001 A

P - FINAL
SED PND OTFL-DRNG DTCH/PRC RVR

MONITORING PERIOD	YEAR	MO	DAY		YEAR	MO	DAY
FROM	92	10	01	TO	92	10	31
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

*** NO DISCHARGE [X] ***
MINOR
NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
FLOW RATE	SAMPLE MEASUREMENT				******	******	******				
00056 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	REPORT 30 DA AV	REPORT DAILY MX	GPD	******	******	******	*** ****		ONCE/ MONTH	MEASRD
PH	SAMPLE MEASUREMENT	******	******			******					
00400 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	******	******	*** ****	6.5 DAILY MN	******	9.0 DAILY MX	SU		ONCE/ MONTH	GRAB
SOLIDS, TOTAL SUSPENDED	SAMPLE MEASUREMENT	******	******		******						
00530 P 0 0 SEE COMMENTS BELOW	PERMIT REQUIREMENT	******	******	*** ****	******	25 30 DA AV	70 DAILY MX	MG/L		ONCE/ MONTH	GRAB
SOLIDS, SETTLEABLE	SAMPLE MEASUREMENT	******	******		******	******					
00545 R 0 0 SEE COMMENTS BELOW	PERMIT REQUIREMENT	******	******	*** ****	******	******	0.5 DAILY MX	ML/L		ONCE/ MONTH	GRAB
OIL AND GREASE FREON EXTR-GRAV METH	SAMPLE MEASUREMENT	******	******		******	******					
00556 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	******	******	*** ****	******	******	10 DAILY MX	MG/L		ONCE/ MONTH	GRAB
IRON, TOTAL (AS FE)	SAMPLE MEASUREMENT	******	******		******	******					
01045 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	******	******	*** ****	******	******	2.0 DAILY MX	MG/L		ONCE/ MONTH	GRAB
FLOATING SOLIDS OR VISIBLE FOAM-VISUAL	SAMPLE MEASUREMENT	******			******	******	******				
45613 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	******	DAILY MX	YES=1 NO=0	******	******	******	*** ****		ONCE/ MONTH	VISUAL

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER		SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE		DATE		
Kathleen Welt Environmental Supervisor	I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT. SEE 18 USC § 1001 AND 33 USC § 1319. (Penalties under these statutes may include fines up to $10,000 and/or maximum imprisonment of between 6 months and 5 years.)	Dan W. Guy	303	9295015	93	01	29
TYPED OR PRINTED			AREA CODE	NUMBER	YEAR	MO	DAY

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

TDS IS LIMITED TO ONE TON PER DAY FROM ALL OUTFALLS. DURING PRECIPITATION EVENTS, SETTLEABLE SOLIDS SHALL BE LIMITED INSTEAD OF TSS. REPORT "DOES NOT APPLY" IN THE APPROPRIATE ROW.

PERMITTEE NAME (Facility Name/Location) BEAVER CREEK COAL--CV SPUR
ADDRESS (Include if different) P.O. BOX 1378
PRICE UT 84501

FACILITY
LOCATION
ATTN: DAN W. GUY, MANAGER

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

PERMIT NUMBER (2-16): UTG040005
DISCHARGE NUMBER (17-19): 001 A

F - FINAL
SED PND OTFL-DRNG DTCH/PRC RVR

MONITORING PERIOD
FROM YEAR 92 (20-21) MO 10 (22-23) DAY 01 (24-25) TO YEAR 92 (26-27) MO 10 (28-29) DAY 31 (30-31)

MINOR

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) (46-53) QUANTITY OR LOADING (54-61) AVERAGE	MAXIMUM	UNITS	(4 Card Only) (38-45) QUALITY OR CONCENTRATION (46-53) MINIMUM	AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
SANITARY WASTE DISCHARGED-ASSESSMNT 45614 1 0 0 EFFLUENT GROSS VALUE	SAMPLE MEASUREMENT	******			******	******	******				
	PERMIT REQUIREMENT	******	0 DAILY MX	YES=1 NO=0	******	******	******	**** ****		CHECK/ MONTH	VISUAL
SOLIDS, TOTAL DISSOLVED 70295 0 0 0 SEE COMMENTS BELOW	SAMPLE MEASUREMENT	******			******	******					
	PERMIT REQUIREMENT	******	2000 DAILY MX	LBS/DY	******	******	REPORT DAILY MX	MG/L		CHECK/ MONTH	GRAB
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Kathleen Welt
Environmental Supervisor
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN; AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT. SEE 18 USC § 1001 AND 33 USC § 1319 (Penalties under these statutes may include fines up to $10,000 and/or maximum imprisonment of between 6 months and 5 years.)

Dan W. Guy
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE		DATE		
303	929 5015	93	01	29
AREA CODE	NUMBER	YEAR	MO	DAY

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

TSS IS LIMITED TO ONE TON PER DAY FROM ALL OUTFALLS. DURING PRECIPITATION EVENTS, SETTLEABLE SOLIDS SHALL BE LIMITED INSTEAD OF TSS. REPORT "DOES NOT APPLY" IN THE APPROPRIATE ROW.

PERMITTEE Facility Name, ADDRESS (Include if different)

NAME BE[illegible]R CREEK COAL--CV SPUR

ADDRESS P.O. BOX 1378

PRICE UT 84501

FACILITY

LOCATION

ATTN: DAN W. GUY, MANAGER

NATIONAL POLL[illegible] DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHA[illegible] MONITORING REPORT (DMR)

(2-10) UTG040005 PERMIT NUMBER

(17-19) 001 A DISCHARGE NUMBER

F - FINAL

SED PND OTFL-DRNG DTCH/PRC RVR

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	92	11	01	TO	92	11	30
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

*** NO DISCHARGE [X] ***

MINOR

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PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
FLOW RATE	SAMPLE MEASUREMENT				******	******	******				
00056 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	REPORT 30 DA AV	REPORT DAILY MX	GPD	******	******	******	**** ****		[illegible]	[illegible]
PH	SAMPLE MEASUREMENT	******	******			******					
00400 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	******	******	**** ****	6.5 DAILY MN	******	9.0 DAILY MX	SU		[illegible]	[illegible]
SOLIDS, TOTAL SUSPENDED	SAMPLE MEASUREMENT	******	******		******						
00530 P 0 0 SEE COMMENTS BELOW	PERMIT REQUIREMENT	******	******	**** ****	******	25 30 DA AV	70 DAILY MX	MG/L		ONCE/ GRAB MONTH	
SOLIDS, SETTLEABLE	SAMPLE MEASUREMENT	******	******		******	******					
00545 R 0 0 SEE COMMENTS BELOW	PERMIT REQUIREMENT	******	******	**** ****	******	******	0.5 DAILY MX	ML/L		ONCE/ GRAB MONTH	
OIL AND GREASE FREON EXTR-GRAV METH	SAMPLE MEASUREMENT	******	******		******	******					
00556 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	******	******	**** ****	******	******	10 DAILY MX	MG/L		ONCE/ GRAB MONTH	
IRON, TOTAL (AS FE)	SAMPLE MEASUREMENT	******	******		******	******					
01045 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	******	******	**** ****	******	******	2.0 DAILY MX	MG/L		ONCE/ GRAB MONTH	
FLOATING SOLIDS OR VISIBLE FOAM-VISUAL	SAMPLE MEASUREMENT	******			******	******	******				
45613 1 0 0 EFFLUENT GROSS VALUE				ES=1 NO=0	[illegible]	[illegible]	******	**** ****		ONCE/ [illegible]	[illegible]

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Kathleen Welt
Environmental Supervisor

TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN; AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT. SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319. (Penalties under these statutes may include fines up to $10,000 and/or maximum imprisonment of between 6 months and 5 years.)

[signature]

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE		DATE		
303	9295015	93	01	29
AREA CODE	NUMBER	YEAR	MO	DAY

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

[illegible] IS LIMITED TO ONE TON PER DAY FROM ALL OUTFALLS. DURING PRECIPITATION EVENTS, SETTLEABLE SOLIDS [illegible] LIMITED INSTEAD OF TSS. REPORT "DOES NOT APPLY" IN THE APPROPRIATE ROW.

PERMITTEE N[illegible] ADDRESS (Include Facility Name/Loca[illegible] if different)

NAME BEAVER CREEK COAL--CV SPUR

ADDRESS P.O. BOX 1378

PRICE UT 84501

FACILITY

LOCATION

ATTN: DAN W. GUY, MANAGER

NATIONAL POLLUT[illegible] SCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARG[illegible] MONITORING REPORT (DMR)

(2-16)	(17-19)
UTG040005	001 A
PERMIT NUMBER	DISCHARGE NUMBER

F - FINAL

SED PND OTFL-DRNG DTCH/PRC RVR

MONITORING PERIOD	YEAR	MO	DAY		YEAR	MO	DAY
FROM	92	11	01	TO	92	11	30
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

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SANITARY WASTE DISCHARGED-ASSESSMNT 45614 1 0 0 EFFLUENT GROSS VALUE	SAMPLE MEASUREMENT	******			******	******	******				
	PERMIT REQUIREMENT	******	0 DAILY MX	YES=1 NO=0	******	******	******	**** ****		[illegible]/ [illegible] MONTH	
SOLIDS, TOTAL DISSOLVED 70295 0 0 0 SEE COMMENTS BELOW	SAMPLE MEASUREMENT	******			******	******					
	PERMIT REQUIREMENT	******	2000 DAILY MX	LBS/DY	******	******	REPORT DAILY MX	MG/L		ONCE/ GRAB MONTH	
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	[illegible]										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER			TELEPHONE		DATE		
Kathleen Welt Environmental Aupervisor	I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN; AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION. I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT. SEE 18 USC § 1001 AND 33 USC § 1319. (Penalties under these statutes may include fines up to $10,000 and/or maximum imprisonment of between 6 months and 5 years.)	Dan W. Guy SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	303	929 5015	93	01	29
TYPED OR PRINTED			AREA CODE	NUMBER	YEAR	MO	DAY

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

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PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)
NAME BEAVER CREEK COAL--CV SPUR
ADDRESS P.O. BOX 1378
PRICE UT 84501

FACILITY
LOCATION
ATTN: DAN W. GUY, MANAGER

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(2-16) PERMIT NUMBER	(17-19) DISCHARGE NUMBER
UTG040005	001 A

F - FINAL
SPD PND OTFL-DRNS DTCH/PRC RVR

MONITORING PERIOD	YEAR	MO	DAY		YEAR	MO	DAY
FROM	92	12	01	TO	92	12	31
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

*** NO DISCHARGE [X] ***
MINOR
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PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
FLOW RATE	SAMPLE MEASUREMENT				******	******	******				
00056 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	REPORT 30 DA AV	REPORT DAILY MX	GPD	******	******	******	*** ****		ONCE/ MONTH	MEASRD
PH	SAMPLE MEASUREMENT	******	******			******					
00400 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	******	******	*** ****	6.5 DAILY MN	******	9.0 DAILY MX	SU		TWICE/ MONTH	GRAB
SOLIDS, TOTAL SUSPENDED	SAMPLE MEASUREMENT	******	******		******						
00530 P 0 0 SEE COMMENTS BELOW	PERMIT REQUIREMENT	******	******	*** ****	******	25 30 DA AV	70 DAILY MX	MG/L		ONCE/ MONTH	GRAB
SOLIDS, SETTLEABLE	SAMPLE MEASUREMENT	******	******		******	******					
00545 R 0 0 SEE COMMENTS BELOW	PERMIT REQUIREMENT	******	******	*** ****	******	******	0.5 DAILY MX	ML/L		ONCE/ MONTH	GRAB
OIL AND GREASE FREON EXTR-GRAV METH	SAMPLE MEASUREMENT	******	******		******	******					
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IRON, TOTAL (AS FE)	SAMPLE MEASUREMENT	******	******		******	******					
01045 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	******	******	*** ****	******	******	[illegible] DAILY MX	MG/L		ONCE/ MONTH	GRAB
FLOATING SOLIDS OR VISIBLE FOAM	SAMPLE MEASUREMENT	******			******	******	******				
45613 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	******	[illegible] DAILY MX	YES=1 NO=0	******	******	******	*** ****		ONCE/ MONTH	VISUAL

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER		TELEPHONE		DATE		
Kathleen Welt Environmental Supervisor	I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN; AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT. SEE 18 USC § 1001 AND 33 USC § 1319. *(Penalties under these statutes may include fines up to $10,000 and/or maximum imprisonment of between 6 months and 5 years.)*	Dan W. Guy SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	303 9295015 AREA CODE NUMBER	93 YEAR	01 MO	29 DAY
TYPED OR PRINTED						

COMMENT AND EXPLANATION OF ANY VIOLATIONS (*Reference all attachments here*)

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PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)

NAME BEAVER CREEK COAL--CV SPUR

ADDRESS P.O. BOX 1378

PRICE UT 84501

FACILITY

LOCATION

ATTN: DAN W. GUY, MANAGER

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(2-16) UTG040005 PERMIT NUMBER

(17-19) 001 A DISCHARGE NUMBER

F - FINAL

SED PND OTFL-DRNG DTCH/PRC RVR

MONITORING PERIOD

FROM YEAR	MO	DAY	TO YEAR	MO	DAY
92	12	01	92	12	31
(20-21)	(22-23)	(24-25)	(26-27)	(28-29)	(30-31)

MINOR

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SANITARY WASTE DISCHARGED-ASSESSMENT 45514 1 0 0 EFFLUENT GROSS VALUE	SAMPLE MEASUREMENT	******			******	******	******				
	PERMIT REQUIREMENT	******	0 DAILY MX	YES=1 NO=0	******	******	******	*** ****			
SOLIDS, TOTAL DISSOLVED 70295 2 0 0 SEE COMMENTS BELOW	SAMPLE MEASUREMENT	******			******	******					
	PERMIT REQUIREMENT	******	2000 DAILY MX	LBS/DY	******	******	REPORT DAILY MX	MG/L		ONCE/ MONTH	GRAB
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER			TELEPHONE		DATE		
Kathleen Welt Environmental Supervisor	I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN; AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT. SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319 (Penalties under these statutes may include fines up to $10,000 and/or maximum imprisonment of between 6 months and 5 years.)	Dan W. Guy SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	303	929 5015	93	01	29
TYPED OR PRINTED			AREA CODE	NUMBER	YEAR	MO	DAY

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

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Mountain Coal Company
Trail Mountain Mine
Post Office Box 1378
Price, Utah 84501
Telephone 801 637-5050 (Price Office)
801 637-5203 (Mine Office)
801 748-2140 (Mine Site)

October 30, 1992

Mr. Donald A Hilden, PH.D., Chief
Permits and Compliance Section
Bureau of Water Pollution Control
Utah Division of Environmental Health
288 North 1460 West
P.O. Box 16690
Salt Lake City, Utah 84116-0690

Dear Mr. Hilden:

Enclosed please find Quarterly Discharge Monitoring Reports for Mountain Coal Company's UPDES Permit Numbers UTG040003, UTG040004, UTG040005, UTG040014 and UTG040015. These reports are on the preprinted DMRs provided by the State of Utah, and cover the third quarter of 1992.

If you have any questions or need any additional information, please contact me.

Respectfully,

Dan W. Guy
Manager Permitting/Compliance

DWG/cr

Enclosures

cc: Donna Franklin, E.P.A.
Lowell Braxton, UDOGM
File

Mountain Coal Company
Trail Mountain Mine
Post Office Box 1378
Price, Utah 84501
Telephone 801 637-5050 (Price Office)
801 637-5203 (Mine Office)
801 748-2140 (Mine Site)

October 30, 1992

Ms. Donna Franklin
U.S.E.P.A., Region VIII
999 18th Street
Denver, Place - Suite 500 WM-C
Denver, CO 80202-2405

Dear Ms. Franklin:

Enclosed please find Quarterly Discharge Monitoring Reports for Mountain Coal Company's UPDES Permit Numbers UTG040003, UTG040004, UTG040005, UTG040014 and UTG040015. These reports are on the preprinted DMRs provided by the State of Utah, and cover the third quarter of 1992.

If you have any questions or need any additional information, please contact me.

Respectfully,

Dan W. Guy
Manager Permitting/Compliance

DWG/cr

Enclosures

Mountain Coal Company
Trail Mountain Mine
Post Office Box 1378
Price, Utah 84501
Telephone 801 637-5050 (Price Office)
801 637-5203 (Mine Office)
801 748-2140 (Mine Site)

October 30, 1992

Mr. Lowell Braxton, Administrator
Utah Division of Oil, Gas & Mining
355 West North Temple
#3 Triad Center, Suite 350
Salt Lake City, Utah 84190-1203

Dear Mr. Braxton:

Enclosed please find Quarterly Discharge Monitoring Reports for Mountain Coal Company's UPDES Permit Numbers UTG040003, UTG040004, UTG040005, UTG040014 and UTG040015. These reports are on the pre-printed DMRs provided by the State of Utah, and cover the third quarter of 1992.

If you have any questions or need any additional information, please contact me.

Respectfully,

Dan W. Guy
Manager Permitting/Compliance

DWG/cr

Enclosures

PERMITTEE NAME ADDRESS (Include Facility Name/Location if different)

NAME BEAV REEK COAL--CV SPUR

ADDRESS P.O. BOX 1379

PRICE UT 84501

FACILITY

LOCATION

ATTN: DAN W. GUY, MANAGER

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) MONITORING REPORT (DMR)

DISCHARGE (2-16): UTG040005 — PERMIT NUMBER

(17-19): 001 A — DISCHARGE NUMBER

F - FINAL

SED PND DTFL-DRNS DTCH RC RVR

MONITORING PERIOD

FROM YEAR	MO	DAY	TO YEAR	MO	DAY
92	07	01	92	07	31
(20-21)	(22-23)	(24-25)	(26-27)	(28-29)	(30-31)

MINOR

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
FLOW RATE	SAMPLE MEASUREMENT	NO DISCHARGE			******	******	******				
00056 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	REPORT 30 DA AV	REPORT DAILY MX	GPD	******	******	******	**** ****		ONCE/ MONTH	MEASRD
PH	SAMPLE MEASUREMENT	******	******			******					
00400 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	******	******	**** ****	6.5 DAILY MN	******	9.0 DAILY MX	SU		TWICE/ MONTH	GRAB
SOLIDS, TOTAL SUSPENDED	SAMPLE MEASUREMENT	******	******		******						
00530 P 0 0 SEE COMMENTS BELOW	PERMIT REQUIREMENT	******	******	**** ****	******	25 30 DA AV	70 DAILY MX	MG/L		ONCE/ MONTH	GRAB
SOLIDS, SETTLEABLE	SAMPLE MEASUREMENT	******	******		******	******					
00545 P 0 0 SEE COMMENTS BELOW	PERMIT REQUIREMENT	******	******	**** ****	******	******	0.5 DAILY MX	ML/L		ONCE/ MONTH	GRAB
OIL AND GREASE FREON EXTR-GRAV METH	SAMPLE MEASUREMENT	******	******		******	******					
00556 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	******	******	**** ****	******	******	10 DAILY MX	MG/L		ONCE/ MONTH	GRAB
IRON, TOTAL (AS FE)	SAMPLE MEASUREMENT	******	******		******	******					
01045 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	******	******	**** ****	******	******	2.0 DAILY MX	MG/L		ONCE/ MONTH	GRAB
FLOATING SOLIDS OR VISIBLE FOAM-VISUAL	SAMPLE MEASUREMENT	******			******	******	******				
45613 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	******	0 DAILY MX	YES=1 NO=0	******	******	******	**** ****		ONCE/ MONTH	VISUAL

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Dan W. Guy
Chief Engineer

TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN, AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT. SEE 18 USC § 1001 AND 33 USC § 1319. *(Penalties under these statutes may include fines up to $10,000 and/or maximum imprisonment of between 6 months and 5 years.)*

Dan W. Guy

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 801 NUMBER 637-7742

DATE: YEAR 92 MO 10 DAY 29

COMMENT AND EXPLANATION OF ANY VIOLATIONS (*Reference all attachments here*)

TDS IS LIMITED TO ONE TON PER DAY FROM ALL OUTFALLS. DURING PRECIPITATION EVENTS, SETTLEABLE SOLIDS SHALL BE LIMITED INSTEAD OF TSS. REPORT "DOES NOT APPLY" IN THE APPROPRIATE ROW.

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)

NAME BEA CREEK COAL--CV SPUR

ADDRESS P.O. BOX 1378

PRICE UT 84501

FACILITY

LOCATION

ATTN: DAN W. GUY, MANAGER

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

(2-16) UTG040000 — PERMIT NUMBER

(17-19) 001 A — DISCHARGE NUMBER

F - FINAL

SED PND OTFL-ORNG DTCH/PRC RVR

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	92	07	01	TO	92	07	31
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

MINOR

NOTE: Read instructions before completing this form.

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SANITARY WASTE DISCHARGED-ASSESSMNT 45610 1 0 0 EFFLUENT GROSS VALUE	SAMPLE MEASUREMENT	******			******	******	******				
	PERMIT REQUIREMENT	******	0 DAILY MX	YES=1 NO=0	******	******	******	**** ****		ONCE/ MONTH	VISUAL
SOLIDS, TOTAL DISSOLVED 70295 0 0 0 SEE COMMENTS BELOW	SAMPLE MEASUREMENT	******			******	******					
	PERMIT REQUIREMENT	******	2000 DAILY MX	LBS/DY	******	******	REPORT DAILY MX	MG/L		ONCE/ MONTH	GRAB
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Dan W. Guy
Chief Engineer

TYPED OR PRINTED

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Dan W. Guy

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 801 NUMBER 637-7742

DATE: YEAR 92 MO 10 DAY 29

COMMENT AND EXPLANATION OF ANY VIOLATIONS *(Reference all attachments here)*

TDS IS LIMITED TO ONE TON PER DAY FROM ALL OUTFALLS. DURING PRECIPITATION EVENTS, SETTLEABLE SOLIDS SHALL BE LIMITED INSTEAD OF TSS. REPORT "DOES NOT APPLY" IN THE APPROPRIATE BOX.

PERMITTEE NAME / ADDRESS (Include Facility Name/Location if different)

NAME BEAV CREEK COAL--CV SPUR

ADDRESS P.O. BOX 1378

PRICE UT 84501

FACILITY

LOCATION

ATTN: DAN W. GUY, MANAGER

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) DISCHARGE MONITORING REPORT (DMR)

(2-16) UT0040005 — PERMIT NUMBER

(17-19) 001 A — DISCHARGE NUMBER

F - FINAL

SED PND DTFL-DRNG DTCH/PRC RVR

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	92	08	01	TO	92	08	31
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

MINOR

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) (46-53) QUANTITY OR LOADING (54-61) AVERAGE	MAXIMUM	UNITS	(4 Card Only) (38-45) QUALITY OR CONCENTRATION (46-53) MINIMUM	AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
FLOW RATE	SAMPLE MEASUREMENT	NO DISCHARGE			******	******	******				
00056 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	REPORT 30 DA AV	REPORT DAILY MX	GPD	******	******	******	**** ****		ONCE/ MONTH	MEASRD
PH	SAMPLE MEASUREMENT	******	******			******					
00400 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	******	******	**** ****	6.5 DAILY MN	******	9.0 DAILY MX	SU		TWICE/ MONTH	GRAB
SOLIDS, TOTAL SUSPENDED	SAMPLE MEASUREMENT	******	******		******						
00530 P 0 0 SEE COMMENTS BELOW	PERMIT REQUIREMENT	******	******	**** ****	******	25 30 DA AV	70 DAILY MX	MG/L		ONCE/ MONTH	GRAB
SOLIDS, SETTLEABLE	SAMPLE MEASUREMENT	******	******		******	******					
00545 P 0 0 SEE COMMENTS BELOW	PERMIT REQUIREMENT	******	******	**** ****	******	******	0.5 DAILY MX	ML/L		ONCE/ MONTH	GRAB
OIL AND GREASE FREON EXTR-GRAV METH	SAMPLE MEASUREMENT	******	******		******	******					
00556 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	******	******	**** ****	******	******	10 DAILY MX	MG/L		ONCE/ MONTH	GRAB
IRON, TOTAL (AS FE)	SAMPLE MEASUREMENT	******	******		******	******					
01045 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	******	******	**** ****	******	******	2.0 DAILY MX	MG/L		ONCE/ MONTH	GRAB
FLOATING SOLIDS OR VISIBLE FOAM-VISUAL	SAMPLE MEASUREMENT	******			******	******	******				
45613 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	******	0 DAILY MX	YES=1 NO=0	******	******	******	**** ****		ONCE/ MONTH	VISUAL

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER		TELEPHONE		DATE		
Dan W. Guy Chief Engineer	I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN, AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT. SEE 18 USC § 1001 AND 33 USC § 1319. *(Penalties under these statutes may include fines up to $10,000 and/or maximum imprisonment of between 6 months and 5 years.)*	Dan W. Guy SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	801 637-7742		92	10	29
TYPED OR PRINTED			AREA CODE / NUMBER	YEAR	MO	DAY

COMMENT AND EXPLANATION OF ANY VIOLATIONS *(Reference all attachments here)*

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PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)

NAME BEAR CREEK COAL--CV SPUR

ADDRESS P.O. BOX 1378

PRICE UT 84501

FACILITY

LOCATION

ATTN: DAN W. GUY, MANAGER

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) DISCHARGE MONITORING REPORT (DMR)

(2-16) UTG040005 PERMIT NUMBER

(17-19) 001 A DISCHARGE NUMBER

F - FINAL

SED PND OTFL-DRNG DTCH/PRC RVR

MONITORING PERIOD

FROM YEAR (20-21)	MO (22-23)	DAY (24-25)	TO YEAR (26-27)	MO (28-29)	DAY (30-31)
92	08	01	92	08	31

MINOR

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SANITARY WASTE DISCHARGED-ASSESSMNT 45614 1 0 0 EFFLUENT GROSS VALUE	SAMPLE MEASUREMENT	******			******	******	******				
	PERMIT REQUIREMENT	******	0 DAILY MX	YES=1 NO=0	******	******	******	**** ****		ONCE/ MONTH	VISUAL
SOLIDS, TOTAL DISSOLVED 70295 0 0 0 SEE COMMENTS BELOW	SAMPLE MEASUREMENT	******			******	******					
	PERMIT REQUIREMENT	******	2000 DAILY MX	LBS/DY	******	******	REPORT DAILY MX	MG/L		ONCE/ MONTH	GRAB
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
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	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Dan W. Guy
Chief Engineer

TYPED OR PRINTED

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SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 801 NUMBER 637-7742

DATE: YEAR 92 MO 10 DAY 29

COMMENT AND EXPLANATION OF ANY VIOLATIONS *(Reference all attachments here)*

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ADDRESS P.O. BOX 1378

PRICE UT 84501

FACILITY

LOCATION

ATTN: DAN W. GUY, MANAGER

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) MONITORING REPORT (DMR)

(2-16) UTG040005 PERMIT NUMBER

(17-19) 001 A DISCHARGE NUMBER

P - FINAL

SED PND OTFL-DRNG DTCH/PRC RVR

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	92	09	01	TO	92	09	30
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

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FLOW RATE	SAMPLE MEASUREMENT	NO DISCHARGE			******	******	******				
00056 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	REPORT 30 DA AV	REPORT DAILY MX	GPD	******	******	******	**** ****		ONCE/ MONTH	MEASRD
PH	SAMPLE MEASUREMENT	******	******			******					
00400 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	******	******	**** ****	6.5 DAILY MN	******	9.0 DAILY MX	SU		TWICE/ MONTH	GRAB
SOLIDS, TOTAL SUSPENDED	SAMPLE MEASUREMENT	******	******		******						
00530 P 0 0 SEE COMMENTS BELOW	PERMIT REQUIREMENT	******	******	**** ****	******	25 30 DA AV	70 DAILY MX	MG/L		ONCE/ MONTH	GRAB
SOLIDS, SETTLEABLE	SAMPLE MEASUREMENT	******	******		******	******					
00545 R 0 0 SEE COMMENTS BELOW	PERMIT REQUIREMENT	******	******	**** ****	******	******	0.5 DAILY MX	ML/L		ONCE/ MONTH	GRAB
OIL AND GREASE FREON EXTR-GRAV METH	SAMPLE MEASUREMENT	******	******		******	******					
00556 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	******	******	**** ****	******	******	10 DAILY MX	MG/L		ONCE/ MONTH	GRAB
IRON, TOTAL (AS FE)	SAMPLE MEASUREMENT	******	******		******	******					
01045 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	******	******	**** ****	******	******	2.0 DAILY MX	MG/L		ONCE/ MONTH	GRAB
FLOATING SOLIDS OR VISIBLE FOAM-VISUAL	SAMPLE MEASUREMENT	******			******	******	******				
45613 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	******	0 DAILY MX	YES=1 NO=0	******	******	******	**** ****		ONCE/ MONTH	VISUAL

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Dan W. Guy
Chief Engineer

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SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE: AREA CODE 801 NUMBER 637-7742

DATE: YEAR 92 MO 10 DAY 29

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ADDRESS P.O. BOX 1378

PRICE UT 84501

FACILITY

LOCATION

ATTN: DAN W. GUY, MANAGER

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F - FINAL

SED PND OTFL-DRNG DTCH/PRC RVR

MONITORING PERIOD

FROM YEAR (20-21)	MO (22-23)	DAY (24-25)	TO YEAR (26-27)	MO (28-29)	DAY (30-31)
92	09	01	92	09	30

MINOR

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SANITARY WASTE DISCHARGED-ASSESSMNT 45614 1 0 0 EFFLUENT GROSS VALUE	SAMPLE MEASUREMENT	******			******	******	******				
	PERMIT REQUIREMENT	******	0 DAILY MX	YES=1 NO=0	******	******	******	**** ****		ONCE/ MONTH	VISUAL
SOLIDS, TOTAL DISSOLVED 70295 Q 0 0 SEE COMMENTS BELOW	SAMPLE MEASUREMENT	******			******	******					
	PERMIT REQUIREMENT	******	2000 DAILY MX	LBS/DY	******	******	REPORT DAILY MX	MG/L		ONCE/ MONTH	GRAB
	SAMPLE MEASUREMENT										
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	PERMIT REQUIREMENT										

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Chief Engineer

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C.V.

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Trail Mountain Mine
Post Office Box 1378
Price, Utah 84501
Telephone 801 637-5050 (Price Office)
801 637-5203 (Mine Office)
801 748-2140 (Mine Site)

July 30, 1992

Mr. Donald A Hilden, PH.D., Chief
Permits and Compliance Section
Bureau of Water Pollution Control
Utah Division of Environmental Health
288 North 1460 West
P.O. Box 16690
Salt Lake City, Utah 84116-0690

Dear Mr. Hilden:

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If you have any questions or need any additional information, please contact me.

Respectfully,

Dan W. Guy
Manager Permitting/Compliance

DWG/cr

Enclosures

cc: Donna Franklin, E.P.A.
Lowell Braxton, UDOGM
File

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Trail Mountain Mine
Post Office Box 1378
Price, Utah 84501
Telephone 801 637-5050 (Price Office)
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July 30, 1992

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Utah Division of Oil, Gas & Mining
355 West North Temple
#3 Triad Center, Suite 350
Salt Lake City, Utah 84190-1203

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Respectfully,

Dan W. Guy
Manager Permitting/Compliance

DWG/cr

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Trail Mountain Mine
Post Office Box 1378
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July 30, 1992

Ms. Donna Franklin
U.S.E.P.A., Region VIII
999 18th Street
Denver, Place - Suite 500 WM-C
Denver, CO 80202-2405

Dear Ms. Franklin:

Enclosed please find Quarterly Discharge Monitoring Reports for Mountain Coal Company's UPDES Permit Numbers UTG040003, UTG040004, UTG040005, UTG040014 and UTG040015. These reports are on the preprinted DMRs provided by the State of Utah, and cover the second quarter of 1992.

If you have any questions or need any additional information, please contact me.

Respectfully,

Dan W. Guy

Dan W. Guy
Manager Permitting/Compliance

DWG/cr

Enclosures

PERMITTEE NA DDRESS (Include Facility Name/Loc ifferent)
NAME BEA CREEK COAL--CV SPUR
ADDRESS P.O. BOX 1378
PRICE UT 84501

FACILITY
LOCATION
ATTN: DAN W. GUY, MANAGER

NATIONAL POLLUT SCHARGE ELIMINATION SYSTEM (NPDES)
DISCHAR ONITORING REPORT (DMR)

(2-16) UTG040005 PERMIT NUMBER

(17-19) 001 A DISCHARGE NUMBER

F - FINAL
SED PND DTFL-DRNG DTCH/PRC RVR

MONITORING PERIOD

FROM YEAR	MO	DAY	TO YEAR	MO	DAY
92	04	01	92	04	30
(20-21)	(22-23)	(24-25)	(26-27)	(28-29)	(30-31)

MINOR

NOTE: Read instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53) AVERAGE	(54-61) MAXIMUM	UNITS	(4 Card Only) QUALITY OR CONCENTRATION (38-45) MINIMUM	(46-53) AVERAGE	(54-61) MAXIMUM	UNITS	NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
FLOW RATE	SAMPLE MEASUREMENT	NO DISCHARGE			******	******	******				
00056 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	REPORT 30 DA AV	REPORT DAILY MX	GPD	******	******	******	**** ****		ONCE/ MONTH	MEASRD
PH	SAMPLE MEASUREMENT	******	******			******					
00400 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	******	******	**** ****	6.5 DAILY MN	******	9.0 DAILY MX	SU		TWICE/ MONTH	GRAB
SOLIDS, TOTAL SUSPENDED	SAMPLE MEASUREMENT	******	******		******						
00530 P 0 0 SEE COMMENTS BELOW	PERMIT REQUIREMENT	******	******	**** ****	******	25 30 DA AV	70 DAILY MX	MG/L		ONCE/ MONTH	GRAB
SOLIDS, SETTLEABLE	SAMPLE MEASUREMENT	******	******		******	******					
00545 R 0 0 SEE COMMENTS BELOW	PERMIT REQUIREMENT	******	******	**** ****	******	******	0.5 DAILY MX	ML/L		ONCE/ MONTH	GRAB
OIL AND GREASE FREON EXTR-GRAV METH	SAMPLE MEASUREMENT	******	******		******	******					
00556 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	******	******	**** ****	******	******	10 DAILY MX	MG/L		ONCE/ MONTH	GRAB
IRON, TOTAL (AS FE)	SAMPLE MEASUREMENT	******	******		******	******					
01045 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	******	******	**** ****	******	******	2.0 DAILY MX	MG/L		ONCE/ MONTH	GRAB
FLOATING SOLIDS OR VISIBLE FOAM-VISUAL	SAMPLE MEASUREMENT	******			******	******	******				
45613 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	******	DAILY MX	YES=1 NO=0	******	******	******	**** ****		ONCE/ MONTH	VISUAL

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER

Dan W. Guy
Chief Engineer

TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN; AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT. SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319. *(Penalties under these statutes may include fines up to $10,000 and/or maximum imprisonment of between 6 months and 5 years.)*

Dan W. Guy
SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE AREA CODE	NUMBER	DATE YEAR	MO	DAY
801	637-7742	92	07	15

COMMENT AND EXPLANATION OF ANY VIOLATIONS *(Reference all attachments here)*

TDS IS LIMITED TO ONE TON PER DAY FROM ALL OUTFALLS. DURING PRECIPITATION EVENTS, SETTLEABLE SOLIDS SHALL BE LIMITED INSTEAD OF TSS. REPORT "DOES NOT APPLY" IN THE APPROPRIATE ROW.

PERMITTEE NAME / ADDRESS (Include Facility Name/Location if different)

NAME BEAL CREEK COAL--CV SPUR

ADDRESS P.O. BOX 1378

PRICE UT 84501

FACILITY

LOCATION

ATTN: DAN W. GUY, MANAGER

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) DISCHARGE MONITORING REPORT (DMR)

(2-16) UTG040005 — PERMIT NUMBER

(17-19) 001 A — DISCHARGE NUMBER

F - FINAL

SED PND OTFL-DRNG DTCH/PRC RVR

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SANITARY WASTE DISCHARGED-ASSESSMNT 45614 1 0 0 EFFLUENT GROSS VALUE	SAMPLE MEASUREMENT	******			******	******	******				
	PERMIT REQUIREMENT	******	0 DAILY MX	YES=1 NO=0	******	******	******	**** ****		ONCE/ MONTH	VISUAL
SOLIDS, TOTAL DISSOLVED 70295 0 0 0 SEE COMMENTS BELOW	SAMPLE MEASUREMENT	******			******	******					
	PERMIT REQUIREMENT	******	2000 DAILY MX	LBS/DY	******	******	REPORT DAILY MX	MG/L		ONCE/ MONTH	GRAB
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
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Chief Engineer

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ADDRESS P.O. BOX 1378

PRICE UT 84501

FACILITY

LOCATION

ATTN: DAN W. GUY, MANAGER

NATIONAL POLLUT[illegible] DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHAR[illegible] MONITORING REPORT (DMR)

(2-1[illegible]) (17-19)

UTG040005 — PERMIT NUMBER

001 A — DISCHARGE NUMBER

F - FINAL

SED PND OTFL-DRNG DTCH/PRC RVR

MONITORING PERIOD

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FLOW RATE	SAMPLE MEASUREMENT	NO DISCHARGE			******	******	******				
00056 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	REPORT 30 DA AV	REPORT DAILY MX	GPD	******	******	******	**** ****		ONCE/ MONTH	MEASRD
PH	SAMPLE MEASUREMENT	******	******			******					
00400 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	******	******	**** ****	6.5 DAILY MN	******	9.0 DAILY MX	SU		TWICE/ MONTH	GRAB
SOLIDS, TOTAL SUSPENDED	SAMPLE MEASUREMENT	******	******		******						
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45613 1 0 0 EFFLUENT GROSS VALUE	[illegible]	[illegible]	[illegible]	ES=1 NO=0	******	******	******	**** ****		ONCE/ MONTH	VISUAL

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Dan W. Guy
Chief Engineer

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TELEPHONE		DATE		
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ADDRESS P.O. BOX 1378

PRICE UT 84501

FACILITY

LOCATION

ATTN: DAN W. GUY, MANAGER

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

(2-16) UT0040005 PERMIT NUMBER

(17-19) 001 A DISCHARGE NUMBER

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SED PND DTPL-DRNG DTCH/PRC RVR

MONITORING PERIOD

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ATTN: DAN W. GUY, MANAGER

NATIONAL POLLUT[illegible] [illegible]CHARGE ELIMINATION SYSTEM (NPDES)

DISCHAR[illegible] [illegible]NITORING REPORT (DMR)

(2-16) UTG040005 PERMIT NUMBER

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Chief Engineer

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ADDRESS P.O. BOX 1378

PRICE UT 84501

FACILITY

LOCATION

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DISCHARGE MONITORING REPORT (DMR)

PERMIT NUMBER (2-16)	DISCHARGE NUMBER (17-19)
UTG040005	001 A

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cv

Mountain Coal Company
Trail Mountain Mine
Post Office Box 1378
Price, Utah 84501
Telephone 801 637-5050 (Price Office)
801 637-5203 (Mine Office)
801 748-2140 (Mine Site)

April 29, 1992

Mr. Donald A Hilden, PH.D., Chief
Permits and Compliance Section
Bureau of Water Pollution Control
Utah Division of Environmental Health
288 North 1460 West
P.O. Box 16690
Salt Lake City, Utah 84116-0690

Dear Mr. Hilden:

Enclosed please find Quarterly Discharge Monitoring Reports for Mountain Coal Company's UPDES Permit Numbers UTG040003, UTG040004, UTG040005, UTG040014 and UTG040015. These reports are on the preprinted DMRs provided by the State of Utah, and cover the first quarter of 1992.

If you have any questions or need any additional information, please contact me.

Respectfully,

Dan W. Guy
Manager Permitting/Compliance

DWG/cr

Enclosures

cc: Donna Franklin, E.P.A.
Lowell Braxton, UDOGM
File

Mountain Coal Company
Trail Mountain Mine
Post Office Box 1378
Price, Utah 84501
Telephone 801 637-5050 (Price Office)
801 637-5203 (Mine Office)
801 748-2140 (Mine Site)

April 29, 1992

Ms. Donna Franklin
U.S.E.P.A., Region VIII
999 18th Street
Denver, Place - Suite 500 WM-C
Denver, CO 80202-2405

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Trail Mountain Mine
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Telephone 801 637-5050 (Price Office)
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801 748-2140 (Mine Site)

April 29, 1992

Mr. Lowell Braxton, Administrator
Utah Division of Oil, Gas & Mining
355 West North Temple
#3 Triad Center, Suite 350
Salt Lake City, Utah 84190-1203

Dear Mr. Braxton:

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DWG/cr

Enclosures

ENVIRONMENTAL INDUSTRIAL SERVICES
P.O. Box 358 - Desert Lake Road - Elmo, Utah 84521 - Telephone (801) 653-2606

April 29, 1992

Mr. Dan Guy
Permitting and Compliance
Mountain Coal Comapany
P.O. Box 1378
Price, Utah 84501

RE: NPDES Discharge Points
Mt. Coal Properties

Dear Mr. Guy:

During the first quarter of 1992, no discharge was recorded for any of the discharge points on the Mountain Coal Properties.

If you have any questions, please feel free to call me at 801 653-2606.

Sincerely,

Melvin A. Coonrod

njc

MC/njc

POND INSPECTIONS

POND INSPECTION REPORT

POND: 1,2,3,4

LOCATION: W. Spurr

ITEM	REMARKS
(1) Potential Safety Hazards	None
(2) Slope Stability	Stable
(3) Erosion	None
(4) Construction and Maintenance Performance Standards	Good
(5) Recommendations/Comments	Ponds - 2, 3 Dry - 4 at 60% and 1 at 30%

I have performed the above inspection on this pond and do hereby certify it to be a true and accurate representation of the pond at this time.

[signature]

12/8/92
Date

POND INSPECTION REPORT

POND: #8

LOCATION: [illegible]

ITEM	REMARKS
(1) Potential Safety Hazards	None
(2) Slope Stability	Stable
(3) Erosion	None
(4) Construction and Maintenance Performance Standards	Good
(5) Recommendations/Comments	No Discharge - Pond at 70% Capacity

I have performed the above inspection on this pond and do hereby certify it to be a true and accurate representation of the pond at this time.

[illegible]

12/8/92
Date

POND INSPECTION REPORT

POND: #5

LOCATION: Next to Refuse Pile

ITEM	REMARKS
(1) Potential Safety Hazards	None
(2) Slope Stability	Stable
(3) Erosion	None
(4) Construction and Maintenance Performance Standards	Good
(5) Recommendations/Comments	None - No Discharge

I have performed the above inspection on this pond and do hereby certify it to be a true and accurate representation of the pond at this time.

12/8/92
Date

E.I.S Hydrology
Pond Inspection Report

POND: CV-1,2,3 LOCATION: CV Spare

ITEM	REMARKS
(1) Potential Safety Hazards	None
(2) Slope Stability	Stabel
(3) Erosion	None
(4) Construction and Maintenance Performance Standards	- Pond 1 2 & 3 in series - 1 has 8" Water - 2 & 3 Dry
(5) Recommendations/Comments	No Discharge

I have performed the above inspection on this pond and do hereby certify it to be a true and accurate representation of the pond at this time.

[signature]
Inspector

9/3/92
Date

E.I.S Hydrology
Pond Inspection Report

POND: #4 CV

LOCATION: CV Pond

ITEM	REMARKS
(1) Potential Safety Hazards	None
(2) Slope Stability	Stable
(3) Erosion	None
(4) Construction and Maintenance Performance Standards	Need Pond Cleaned 11/92 - 60% Water level
(5) Recommendations/Comments	No Discharge

I have performed the above inspection on this pond and do hereby certify it to be a true and accurate representation of the pond at this time.

Inspector

Date 9/3/92

E.I.S Hydrology
Pond Inspection Report

POND: [illegible] 5 [illegible]

LOCATION: [illegible]

ITEM	REMARKS
(1) Potential Safety Hazards	None
(2) Slope Stability	Stable
(3) Erosion	None
(4) Construction and Maintenance Performance Standards	Good - Pond Clean
(5) Recommendations/Comments	No Discharge

I have performed the above inspection on this pond and do hereby certify it to be a true and accurate representation of the pond at this time.

[illegible] Connor
Inspector

9/3/90
Date

E.I.S Hydrology
Pond Inspection Report

POND: [redacted] - CV-6 DT

LOCATION: EVS

ITEM	REMARKS
(1) Potential Safety Hazards	None
(2) Slope Stability	Stabel
(3) Erosion	None
(4) Construction and Maintenance Performance Standards	Good - Pond Clean at 20% - Water @ 60%
(5) Recommendations/Comments	No Discharge

I have performed the above inspection on this pond and do hereby certify it to be a true and accurate representation of the pond at this time.

[signature]
Inspector

9/3/92
Date

POND INSPECTION REPORT

POND: 1-3-3 c Pond (overflow) * #6

LOCATION: CU Spence

ITEM	REMARKS
(1) Potential Safety Hazards	None
(2) Slope Stability	Stable
(3) Erosion	None
(4) Construction and Maintenance Performance Standards	Good Clean & Dry * Pond 6 @ 10 to No Overflow
(5) Recommendations/Comments	None

I have performed the above inspection on this pond and do hereby certify it to be a true and accurate representation of the pond at this time.

[signature]

6/13/92
Date

E.I.S Hydrology
Pond Inspection Report

POND: 5-84

LOCATION: CV Spur

ITEM	REMARKS
(1) Potential Safety Hazards	None
(2) Slope Stability	Stable
(3) Erosion	None
(4) Construction and Maintenance Performance Standards	Good
(5) Recommendations/Comments	No Discharge

I have performed the above inspection on this pond and do hereby certify it to be a true and accurate representation of the pond at this time.

[signature]
Inspector

5/12/92
Date

E.I.S Hydrology
Pond Inspection Report

POND: ~~3, 4, 5~~ 1, 2 & 3 and overflow Pond #5 - (by Refuse) LOCATION: CV Spruce

ITEM	REMARKS
(1) Potential Safety Hazards	None
(2) Slope Stability	Stable
(3) Erosion	None
(4) Construction and Maintenance Performance Standards	Good
(5) Recommendations/Comments	Pond 4 - Plant overflow @ 10% Water 1, 2 & 3 Dry Pond 5 at 60 - No Overflow

I have performed the above inspection on this pond and do hereby certify it to be a true and accurate representation of the pond at this time.

[signature]
Inspector

1/25/92
Date

E.I.S Hydrology
Pond Inspection Report

POND: #6

LOCATION: CV Spur

ITEM	REMARKS
(1) Potential Safety Hazards	None
(2) Slope Stability	Stable
(3) Erosion	None
(4) Construction and Maintenance Performance Standards	Upper end - sed loading
(5) Recommendations/Comments	Frozen - No Discharge

I have performed the above inspection on this pond and do hereby certify it to be a true and accurate representation of the pond at this time.

[signature]
Inspector

3/30/92
Date

AIR QUALITY

VEGETATION

MONITORING

VEGETATION MONITORING
OF THE
C.V. SPUR NO. 1 TEST PLOT
C.V. SPUR NO. 2 TEST PLOT
1992

VEGETATION MONITORING
OF THE
C.V. SPUR NO.1 TEST PLOTS: 1992

Prepared by

MT. NEBO SCIENTIFIC RESEARCH & CONSULTING
Post Office Box 337
Springville, Utah 84663
(801) 489-6937

for

MOUNTAIN COAL COMPANY
Price, Utah 84501

Report: Patrick D. Collins, Ph.D.

Fieldwork: Patrick D. Collins
Dean Collins

Date: March 1993

VEGETATION MONITORING
OF THE
C.V. SPUR NO.1 TEST PLOTS: 1992

SCOPE

The following is a report to describe the fourth year results of quantitatively and/or qualitatively monitoring the reclamation test plot at the C.V. Spur site that was established by Beaver Creek Coal Company, Price Utah. Monitoring methodologies were performed in accordance with the guidelines supplied by the State of Utah, Division of Oil, Gas and Mining (DOGM).

INTRODUCTION

General Site Description

The Beaver Creek C.V. Spur area is located approximately 4 miles southeast of Price in Carbon County, Utah. The area is comprised of nearly 120 acres of potential disturbance land associated with coal cleaning activities. This disturbance area lies within a salt desert community on soils derived from Mancos Shale.

Revegetation test plots investigating different treatments were established in the fall of 1987 by Beaver Creek Coal Company. The plot size is approximately 120 ft by 140 ft. This area was divided into sixteen 25 ft by 25 ft "subplots" to test different reclamation treatments. The treatments consisted of comparing controls, topsoil depths, coarse refuse mixtures and mulches. More specifically, the treatments investigated with their respective subplot numbers are listed below.

SUBPLOT NUMBER	TREATMENT
1, 9	6 in. soil, seed, (control)
2, 6	6 in. soil, seed, wood fiber mulch

3, 7	4 in. soil, 2 in. coal refuse, seed, wood fiber mulch
4, 8	3 in. soil, 3 in. coal refuse, seed, wood fiber mulch
5	6 in. soil, wood fiber mulch, (strip planting)
10, 14	6 in. soil, seed, hay mulch
11, 15	4 in. soil, 2 in. coal refuse, seed, hay mulch
12, 16	3 in. soil, 3 in. coal refuse, seed, hay mulch
13	6 in. soil, hay mulch, (strip planting)

METHODS

Quantitative and qualitative data were taken on each of the subplots of the C.V. Spur No. 1 test site. Vegetation sampling was accomplished September 2, 1992. Sampling methodogies were nearly identical to the previous year's sampling to insure appropriate comparisons between years. These methods are described below.

Cover and Composition

Bi-directional random placement of sampling plots were designed to provide unbiased accuracy of the data compiled. This was accomplished by placing surveying tapes perpendicularly on two sides of each subplot, forming X and Y axes. The intersection of random numbers along each axis dictated the sample point locations within the subplots. Six of these samples were placed in each of the 25 ft X 25 ft subplots.

Cover estimates were made (to the nearest percentage point) using ocular methods with meter square quadrats in each of the subplots (with the exception of the "strip-planted" areas). Species composition by lifeform and relative frequencies were also assessed from the quadrats. Additional information recorded on data sheets were: estimated precipitation, slope, exposure, grazing use, animal disturbance and other appropriate notes.

Sample means, standard deviations, and sample sizes were included in this report to enable the reviewers to apply further statistical tests if desired. Plant nomenclature follows Welsh et al. (1987).

Photographs

A color photograph was taken of the plot and was included in this report.

Raw Data

Summarized raw data were included in this report to facilitate additional statistical analyses by the reviewer if desired.

RESULTS

Summaries and results from all sampling are given on Tables 1 - 32. Comparisons of much of the information from the tables can easily be made by examining the graphs that are also included in this report (Figs. 1 - 7).

Figures 1 shows the total cover for each subplot taken from the data listed in the summary tables. Figure 2 compares the composition of the cover for each of the subplots.

Because the cover graphs can be somewhat misleading when predicting revegetation success because much of the cover consists of weedy, annual forbs. Therefore, the remainder of the graphs were prepared showing total cover of shrub and grass species only (excluding forbs). Justification for excluding the forbs as a method for comparing treatments and predicting revegetation success comes from the fact that over 95% of the forbs in the plot were annual, weedy species. For comparison of treatments shown graphically of non-weedy plant species, refer to Figures 5 - 7.

TABLE 1: Subplot 1 - Total cover and composition summary for the C.V. Spur No. 1 Test Plot. The table shows the mean percent cover and composition with standard deviations and sample sizes.

TOTAL COVER	% MEAN COVER	STANDARD DEVIATION	SAMPLE SIZES
Total Living Cover	37.50	2.50	6
Litter	9.50	3.59	6
Bareground	48.33	3.73	6
Rock	4.67	0.75	6
COMPOSITION			
Trees/Shrubs	6.55	6.57	6
Forbs	93.45	6.57	6
Grasses	0.00	0.00	6

TABLE 2: Subplot 1 - Species cover and frequency summary for the C.V. Spur No. 1 Test Plot. The table shows the mean percent cover, standard deviation, sample size and relative frequency by species.

SPECIES	% MEAN COVER	STANDARD DEVIATION	SAMPLE SIZE	RELATIVE FREQUENCY
TREES & SHRUBS				
Ceratoides lanata	2.50	2.50	6	50.00
FORBS				
Halogeton glomeratus	30.00	2.89	6	100.00
Iva axillaris	5.00	2.89	6	83.33
GRASSES				

TABLE 3: Subplot 2 - Total cover and composition summary for the C.V. Spur No. 1 Test Plot. The table shows the mean percent cover and composition with standard deviations and sample sizes.

TOTAL COVER	% MEAN COVER	STANDARD DEVIATION	SAMPLE SIZES
Total Living Cover	33.33	3.73	6
Litter	5.83	1.86	6
Bareground	55.33	6.10	6
Rock	5.50	2.14	6
COMPOSITION			
Shrubs	9.52	21.30	6
Forbs	90.48	21.30	6
Grasses	0.00	0.00	6

TABLE 4: Subplot 2 - Species cover and frequency summary for the C.V. Spur No. 1 Test Plot. The table shows the mean percent cover, standard deviation, sample size and relative frequency by species.

SPECIES	% MEAN COVER	STANDARD DEVIATION	SAMPLE SIZE	RELATIVE FREQUENCY
TREES & SHRUBS				
Atriplex canescens	2.50	5.59	6	16.67
Ceratoides lanata	0.83	1.86	6	16.67
FORBS				
Halogeton glomeratus	29.17	7.31	6	100.00
Salsola iberica	0.83	1.86	6	16.67
GRASSES				

TABLE 5: Subplot 3 - Total cover and composition summary for the C.V. Spur No. 1 Test Plot. The table shows the mean percent cover and composition with standard deviations and sample sizes.

TOTAL COVER	% MEAN COVER	STANDARD DEVIATION	SAMPLE SIZES
Total Living Cover	35.00	5.00	6
Litter	8.00	5.77	6
Bareground	50.00	5.00	6
Rock	7.00	4.28	6
COMPOSITION			
Trees/Shrubs	7.98	10.52	6
Forbs	81.55	19.80	6
Grasses	10.48	15.22	6

TABLE 6: Subplot 3 - Species cover and frequency summary for the C.V. Spur No. 1 Test Plot. The table shows the mean percent cover, standard deviation, sample size and relative frequency by species.

SPECIES	% MEAN COVER	STANDARD DEVIATION	SAMPLE SIZE	RELATIVE FREQUENCY
TREES & SHRUBS				
Atriplex canescens	2.83	3.67	6	50.00
FORBS				
Halogeton glomeratus	28.33	7.45	6	100.00
GRASSES				
Agropyron cristatum	1.33	1.97	6	33.33
Stipa hymenoides	2.50	3.82	6	33.33

TABLE 7: Subplot 4 - Total cover and composition summary for the C.V. Spur No. 1 Test Plot. The table shows the mean percent cover and composition with standard deviations and sample sizes.

TOTAL COVER	% MEAN COVER	STANDARD DEVIATION	SAMPLE SIZES
Total Living Cover	30.00	8.66	6
Litter	6.67	2.36	6
Bareground	26.67	8.50	6
Rock	36.87	3.73	6
COMPOSITION			
Trees/Shrubs	24.23	20.95	6
Forbs	37.26	29.89	6
Grasses	38.51	35.10	6

TABLE 8: Subplot 4 - Species cover and frequency summary for the C.V. Spur No. 1 Test Plot. The table shows the mean percent cover, standard deviation, sample size and relative frequency by species.

SPECIES	% MEAN COVER	STANDARD DEVIATION	SAMPLE SIZE	RELATIVE FREQUENCY
TREES & SHRUBS				
Ceratoides lanata	2.17	2.27	6	50.00
Atriplex canescens	5.83	4.49	6	66.67
FORBS				
Halogeton glomeratus	11.17	9.84	6	83.33
GRASSES				
Agropyron cristatum	7.50	6.29	6	66.67
Stipa hymenoides	3.33	4.11	6	50.00

TABLE 9: Subplot 5 - Total cover and composition summary for the C.V. Spur No. 1 Test Plot. The table shows the mean percent cover and composition with standard deviations and sample sizes.

TOTAL COVER	% MEAN COVER	STANDARD DEVIATION	SAMPLE SIZES
Total Living Cover*	28.50	12.76	6
Litter	3.67	1.37	6
Bareground	63.17	14.26	6
Rock	4.67	1.37	6
COMPOSITION			
Trees/Shrubs	1.11	2.48	6
Forbs	97.22	6.21	6
Grasses	1.67	3.73	6

* Subplots 5 and 13 planting techniques were different than the other subplots.

TABLE 10: Subplot 5 - Species cover and frequency summary for the C.V. Spur No. 1 Test Plot. The table shows the mean percent cover, standard deviation, sample size and relative frequency by species.

SPECIES	% MEAN COVER	STANDARD DEVIATION	SAMPLE SIZE	RELATIVE FREQUENCY
TREES & SHRUBS				
Atriplex canescens	0.33	0.75	6	16.67
FORBS				
Halogeton glomeratus	27.33	12.50	6	100.00
Kochia scoparia	0.33	0.75	6	16.67
GRASSES				
Stipa hymenoides	0.50	1.12	6	16.67

* Subplots 5 and 13 planting techniques were different than the other subplots.

TABLE 11: Subplot 6 - Total cover and composition summary for the C.V. Spur No. 1 Test Plot. The table shows the mean percent cover and composition with standard deviations and sample sizes.

TOTAL COVER	% MEAN COVER	STANDARD DEVIATION	SAMPLE SIZES
Total Living Cover	37.00	7.30	6
Litter	7.17	3.18	6
Bareground	50.83	5.34	6
Rock	5.00	0.00	6
COMPOSITION			
Trees/Shrubs	28.20	13.89	6
Forbs	71.80	13.89	6
Grasses	0.00	0.00	6

TABLE 12: Subplot 6 - Species cover and frequency summary for the C.V. Spur No. 1 Test Plot. The table shows the mean percent cover, standard deviation, sample size and relative frequency by species.

SPECIES	% MEAN COVER	STANDARD DEVIATION	SAMPLE SIZE	RELATIVE FREQUENCY
TREES & SHRUBS				
Ceratoides lanata	4.17	1.86	6	83.33
Atriplex canescens	7.00	5.16	6	83.33
FORBS				
Halogeton glomeratus	28.83	4.49	6	100.00
GRASSES				

TABLE 13: Subplot 7 - Total cover and composition summary for the C.V. Spur No. 1 Test Plot. The table shows the mean percent cover and composition with standard deviations and sample sizes.

TOTAL COVER	% MEAN COVER	STANDARD DEVIATION	SAMPLE SIZES
Total Living Cover	38.33	2.36	6
Litter	5.33	2.36	6
Bareground	45.50	3.82	6
Rock	10.83	3.44	6
COMPOSITION			
Trees/Shrubs	13.39	19.00	6
Forbs	86.61	19.00	6
Grasses	0.00	0.00	6

TABLE 14: Subplot 7 - Species cover and frequency summary for the C.V. Spur No. 1 Test Plot. The table shows the mean percent cover, standard deviation, sample size and relative frequency by species.

SPECIES	% MEAN COVER	STANDARD DEVIATION	SAMPLE SIZE	RELATIVE FREQUENCY
TREES & SHRUBS				
Atriplex canescens	5.00	7.07	6	33.33
FORBS				
Halogeton glomeratus	33.33	7.99	6	100.00
GRASSES				

TABLE 15: Subplot 8 - Total cover and composition summary for the C.V. Spur No. 1 Test Plot. The table shows the mean percent cover and composition with standard deviations and sample sizes.

TOTAL COVER	% MEAN COVER	STANDARD DEVIATION	SAMPLE SIZES
Total Living Cover	35.00	4.08	6
Litter	7.50	3.82	6
Bareground	25.83	7.31	6
Rock	31.67	7.99	6
COMPOSITION			
Trees/Shrubs	23.43	25.40	6
Forbs	67.16	21.99	6
Grasses	9.40	10.73	6

TABLE 16: Subplot 8 - Species cover and frequency summary for the C.V. Spur No. 1 Test Plot. The table shows the mean percent cover, standard deviation, sample size and relative frequency by species.

SPECIES	% MEAN COVER	STANDARD DEVIATION	SAMPLE SIZE	RELATIVE FREQUENCY
TREES & SHRUBS				
Ceratoides lanata	0.33	0.75	6	16.67
Atriplex canescens	7.00	7.75	6	66.67
FORBS				
Halogeton glomeratus	24.17	9.75	6	100.00
GRASSES				
Agropyron dasystachyum	1.67	3.73	6	16.67
Agropyron cristatum	0.83	1.86	6	16.67
Stipa hymenoides	1.00	1.41	6	33.33

TABLE 17: Subplot 9 - Total cover and composition summary for the C.V. Spur No. 1 Test Plot. The table shows the mean percent cover and composition with standard deviations and sample sizes.

	% MEAN COVER	STANDARD DEVIATION	SAMPLE SIZES
TOTAL COVER			
Total Living Cover	35.00	5.77	6
Litter	4.00	1.41	6
Bareground	56.33	6.37	6
Rock	4.67	0.75	6
COMPOSITION			
Trees/Shrubs	0.00	0.00	6
Forbs	100.00	0.00	6
Grasses	0.00	0.00	6

TABLE 18: Subplot 9 - Species cover and frequency summary for the C.V. Spur No. 1 Test Plot. The table shows the mean percent cover, standard deviation, sample size and relative frequency by species.

SPECIES	% MEAN COVER	STANDARD DEVIATION	SAMPLE SIZE	RELATIVE FREQUENCY
TREES & SHRUBS				
FORBS				
Halogeton glomeratus	35.00	5.77	6	100.00
GRASSES				

TABLE 19: Subplot 10 - Total cover and composition summary for the C.V. Spur No. 1 Test Plot. The table shows the mean percent cover and composition with standard deviations and sample sizes.

	% MEAN COVER	STANDARD DEVIATION	SAMPLE SIZES
TOTAL COVER			
Total Living Cover	36.67	6.87	6
Litter	4.50	1.12	6
Bareground	54.00	7.64	6
Rock	4.83	0.37	6
COMPOSITION			
Trees/Shrubs	20.28	20.15	6
Forbs	76.39	26.95	6
Grasses	3.33	7.45	6

TABLE 20: Subplot 10 - Species cover and frequency summary for the C.V. Spur No. 1 Test Plot. The table shows the mean percent cover, standard deviation, sample size and relative frequency by species.

SPECIES	% MEAN COVER	STANDARD DEVIATION	SAMPLE SIZE	RELATIVE FREQUENCY
TREES & SHRUBS				
Atriplex canescens	8.67	10.19	6	66.67
FORBS				
Halogeton glomeratus	26.33	7.89	6	100.00
GRASSES				
Agropyron cristatum	1.67	3.73	6	16.67

TABLE 21: Subplot 11 - Total cover and composition summary for the C.V. Spur No. 1 Test Plot. The table shows the mean percent cover and composition with standard deviations and sample sizes.

TOTAL COVER	% MEAN COVER	STANDARD DEVIATION	SAMPLE SIZES
Total Living Cover	45.00	5.77	6
Litter	7.50	2.50	6
Bareground	34.17	10.57	6
Rock	13.33	7.45	6
COMPOSITION			
Trees/Shrubs	24.74	20.81	6
Forbs	66.61	28.37	6
Grasses	8.65	11.80	6

ABLE 22: Subplot 11 - Species cover and frequency summary for the C.V. Spur No. 1 Test Plot. The table shows the mean percent cover, standard deviation, sample size and relative frequency by species.

SPECIES	% MEAN COVER	STANDARD DEVIATION	SAMPLE SIZE	RELATIVE FREQUENCY
TREES & SHRUBS				
Ceratoides lanata	1.67	2.36	6	33.33
Atriplex canescens	10.33	8.50	6	66.67
FORBS				
Halogeton glomeratus	29.17	11.32	6	100.00
GRASSES				
Stipa hymenoides	3.83	5.34	6	50.00

TABLE 23: Subplot 12 - Total cover and composition summary for the C.V. Spur No. 1 Test Plot. The table shows the mean percent cover and composition with standard deviations and sample sizes.

	% MEAN COVER	STANDARD DEVIATION	SAMPLE SIZES
TOTAL COVER			
Total Living Cover	46.67	3.73	6
Litter	13.33	3.73	6
Bareground	16.67	6.24	6
Rock	23.33	6.87	6
COMPOSITION			
Trees/Shrubs	11.00	16.07	6
Forbs	44.49	22.38	6
Grasses	44.51	28.17	6

ABLE 24: Subplot 12 - Species cover and frequency summary for the C.V. Spur No. 1 Test Plot. The table shows the mean percent cover, standard deviation, sample size and relative frequency by species.

SPECIES	% MEAN COVER	STANDARD DEVIATION	SAMPLE SIZE	RELATIVE FREQUENCY
TREES & SHRUBS				
Ceratoides lanata	0.83	1.86	6	16.67
Atriplex canescens	4.67	6.62	6	33.33
FORBS				
Halogeton glomeratus	20.83	10.57	6	83.33
GRASSES				
Agropyron cristatum	5.00	2.52	6	83.33
Stipa hymenoides	15.33	14.51	6	83.33

TABLE 25: Subplot 13 - Total cover and composition summary for the C.V. Spur No. 1 Test Plot. The table shows the mean percent cover and composition with standard deviations and sample sizes.

	% MEAN COVER	STANDARD DEVIATION	SAMPLE SIZES
TOTAL COVER			
Total Living Cover*	40.00	4.08	6
Litter	4.50	1.12	6
Bareground	49.17	3.44	6
Rock	6.33	2.69	6
COMPOSITION			
Trees/Shrubs	1.85	4.14	6
Forbs	98.15	4.14	6
Grasses	0.00	0.00	6

* Subplots 5 and 13 planting techniques were different than the other subplots, therefore sampling methods varied (see METHODS).

.BLE 26: Subplot 13 - Species cover and frequency summary for the C.V. Spur No. 1 Test Plot. The table shows the mean percent cover, standard deviation, sample size and relative frequency by species.

SPECIES	% MEAN COVER	STANDARD DEVIATION	SAMPLE SIZE	RELATIVE FREQUENCY
TREES & SHRUBS				
Atriplex canescens	0.83	1.86	6	16.67
FORBS				
Halogeton glomeratus	39.17	3.44	6	100.00
GRASSES				

* Subplots 5 and 13 planting techniques were different than the other subplots, therefore sampling methods varied (see METHODS).

TABLE 27: Subplot 14 - Total cover and composition summary for the C.V. Spur No. 1 Test Plot. The table shows the mean percent cover and composition with standard deviations and sample sizes.

TOTAL COVER	% MEAN COVER	STANDARD DEVIATION	SAMPLE SIZES
Total Living Cover	42.50	5.59	6
Litter	5.33	2.36	6
Bareground	44.17	5.34	6
Rock	8.00	3.16	6
COMPOSITION			
Trees/Shrubs	10.83	13.67	6
Forbs	85.83	19.25	6
Grasses	3.33	7.45	6

TABLE 28: Subplot 14 - Species cover and frequency summary for the C.V. Spur No. 1 Test Plot. The table shows the mean percent cover, standard deviation, sample size and relative frequency by species.

SPECIES	% MEAN COVER	STANDARD DEVIATION	SAMPLE SIZE	RELATIVE FREQUENCY
TREES & SHRUBS				
Atriplex canescens	5.33	6.87	6	50.00
FORBS				
Halogeton glomeratus	35.50	5.12	6	100.00
GRASSES				
Agropyron cristatum	1.67	3.73	6	16.67

TABLE 29: Subplot 15 - Total cover and composition summary for the C.V. Spur No. 1 Test Plot. The table shows the mean percent cover and composition with standard deviations and sample sizes.

TOTAL COVER	% MEAN COVER	STANDARD DEVIATION	SAMPLE SIZES
Total Living Cover	45.83	3.44	6
Litter	8.33	3.73	6
Bareground	31.67	7.99	6
Rock	14.17	3.44	6
COMPOSITION			
Trees/Shrubs	14.63	11.19	6
Forbs	82.41	13.22	6
Grasses	2.96	6.63	6

TABLE 30: Subplot 15 - Species cover and frequency summary for the C.V. Spur No. 1 Test Plot. The table shows the mean percent cover, standard deviation, sample size and relative frequency by species.

SPECIES	% MEAN COVER	STANDARD DEVIATION	SAMPLE SIZE	RELATIVE FREQUENCY
TREES & SHRUBS				
Ceratoides lanata	1.67	2.36	6	33.33
Atriplex canescens	5.33	5.06	6	66.67
FORBS				
Halogeton glomeratus	37.50	4.79	6	100.00
GRASSES				
Agropyron cristatum	1.33	2.98	6	16.67

TABLE 31: Subplot 16 - Total cover and composition summary for the C.V. Spur No. 1 Test Plot. The table shows the mean percent cover and composition with standard deviations and sample sizes.

TOTAL COVER	% MEAN COVER	STANDARD DEVIATION	SAMPLE SIZES
Total Living Cover	38.33	9.86	6
Litter	13.33	5.53	6
Bareground	24.17	11.70	6
Rock	24.17	8.37	6
COMPOSITION			
Trees/Shrubs	29.07	23.82	6
Forbs	68.33	21.22	6
Grasses	2.59	5.80	6

TABLE 32: Subplot 16 - Species cover and frequency summary for the C.V. Spur No. 1 Test Plot. The table shows the mean percent cover, standard deviation, sample size and relative frequency by species.

SPECIES	% MEAN COVER	STANDARD DEVIATION	SAMPLE SIZE	RELATIVE FREQUENCY
TREES & SHRUBS				
Ceratoides lanata	1.67	2.36	6	33.33
Atriplex canescens	8.33	6.87	6	66.67
FORBS				
Halogeton glomeratus	27.17	13.17	6	100.00
GRASSES				
Agropyron cristatum	0.83	1.86	6	16.67
Stipa hymenoides	0.33	0.75	6	16.67

FIG. 1: 1992 - Total Living Cover for the CV Spur No. 1

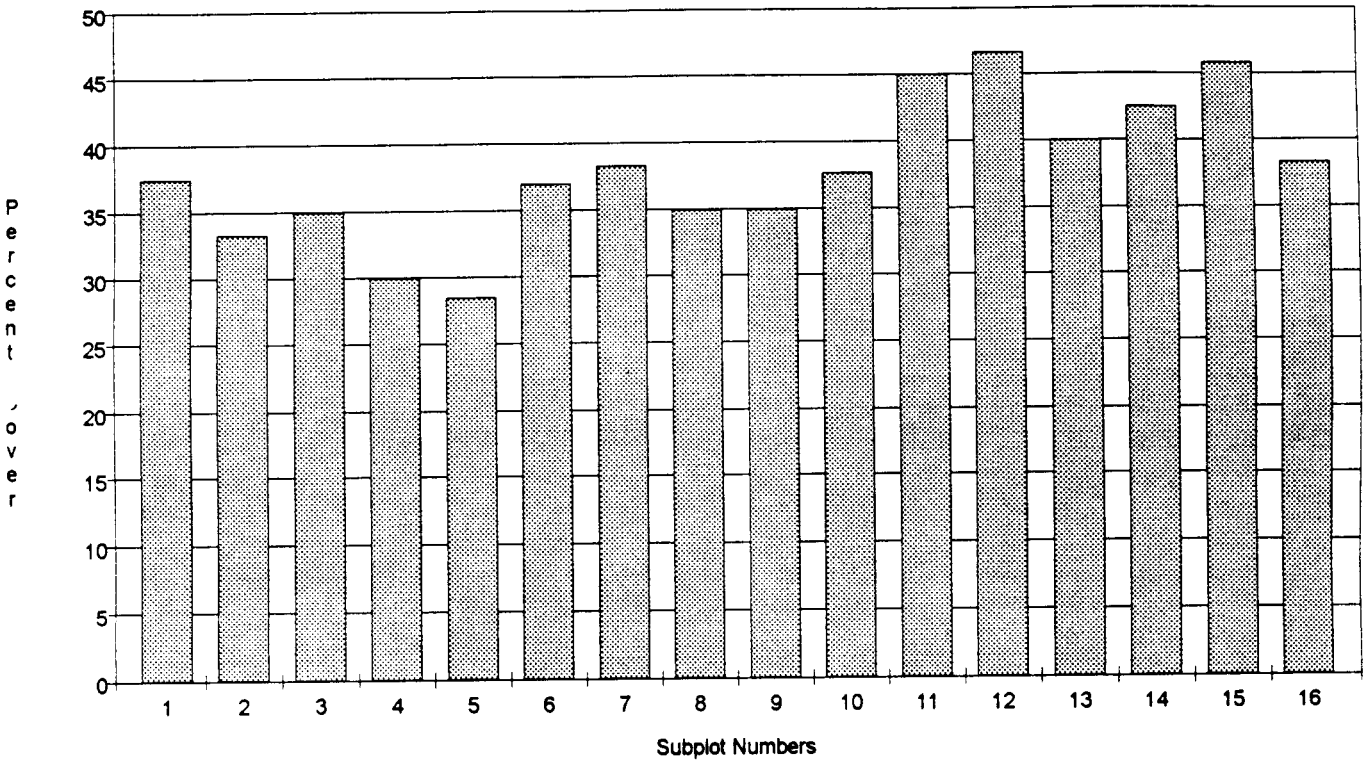


FIG. 2: 1992 - Composition of the Spur No. 1

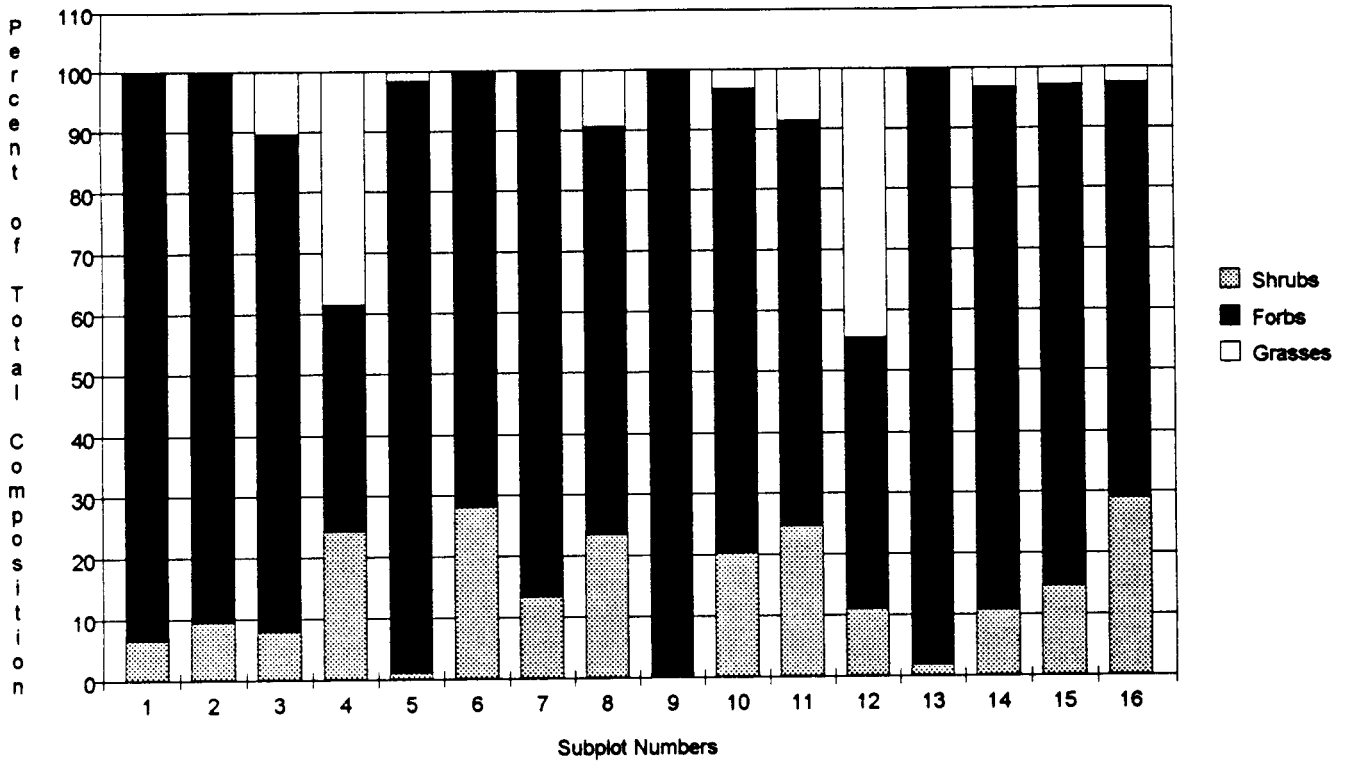


FIG. 3: 1992 - COVER BY SOIL DEPTHS (Wood Fiber) - 1992

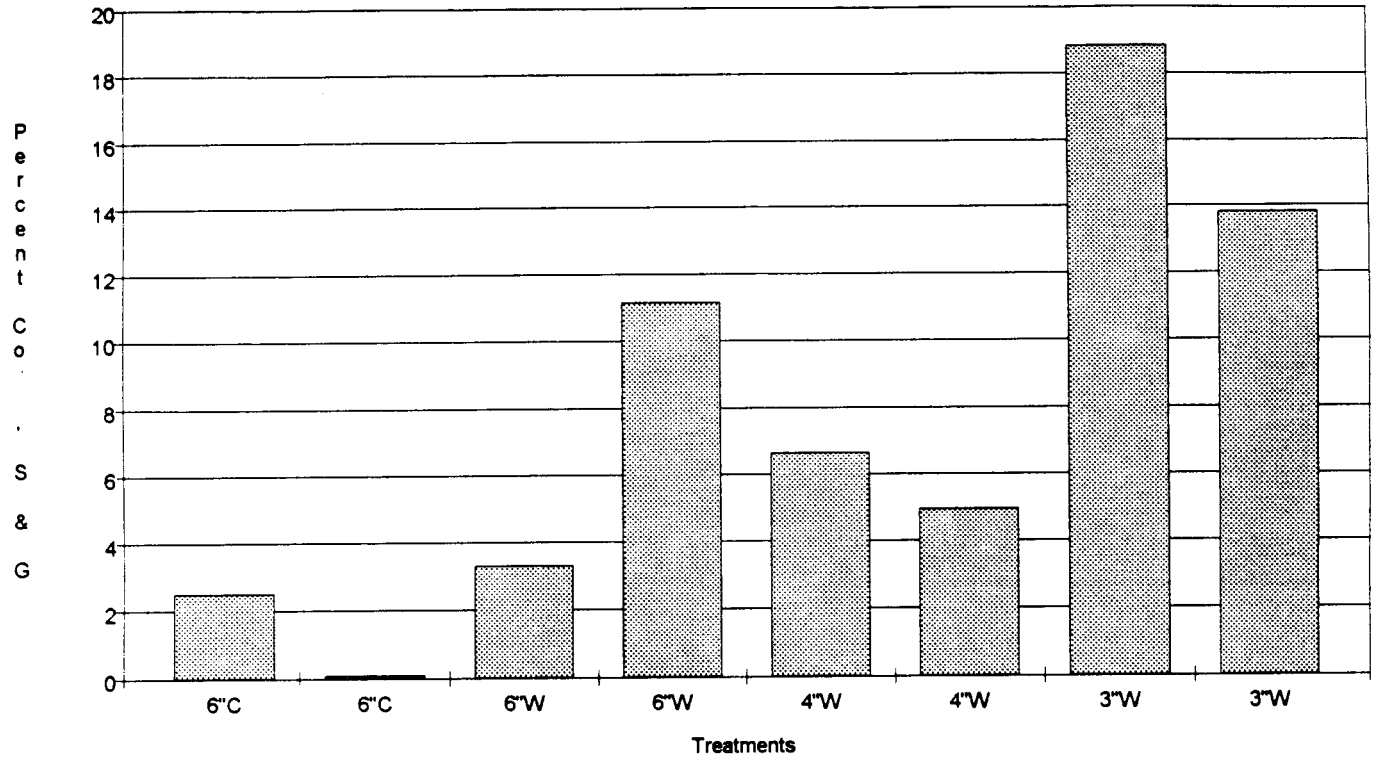


FIG. 4: 1992 - COVER BY SOIL DEPTHS (Hay Mulch) - 1992

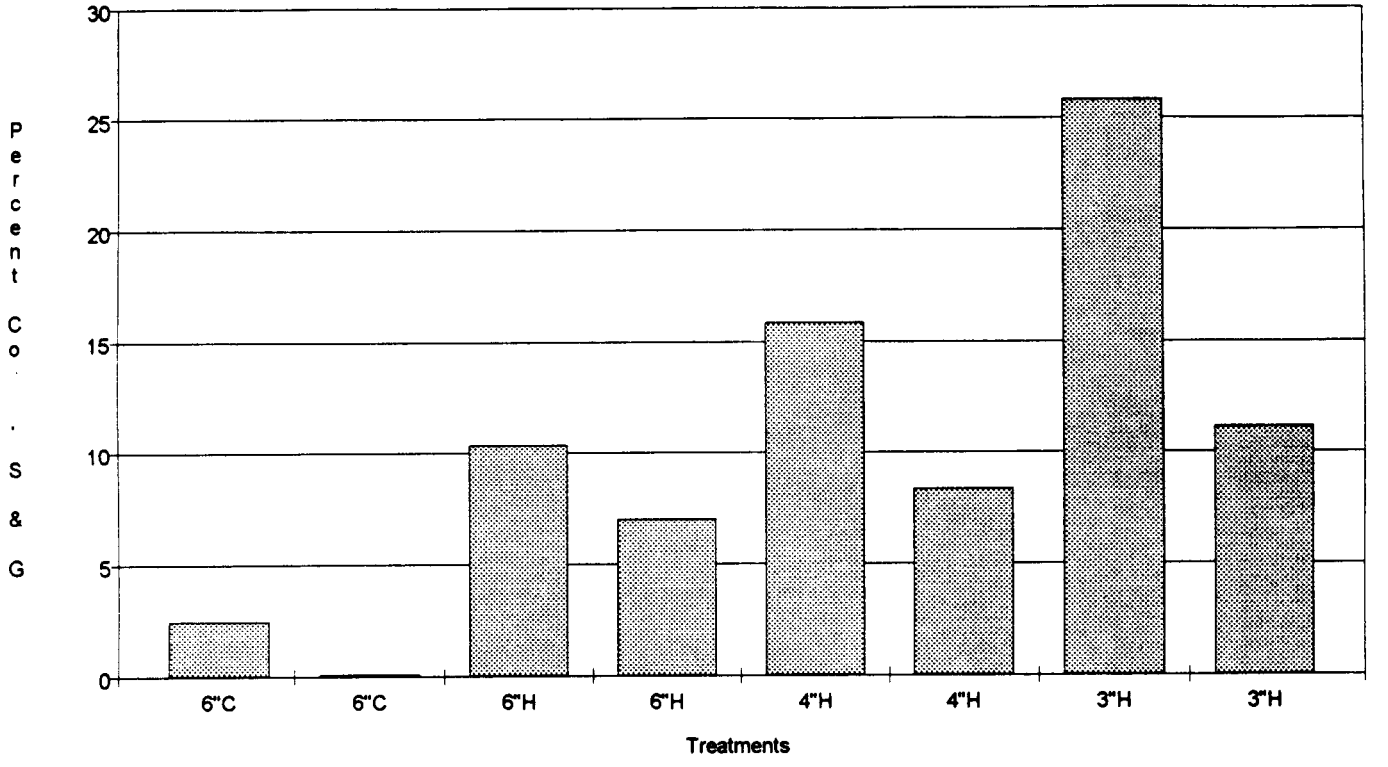


FIG. 5: 1992 - COVER BY MULCH TYPES (6" Soil Depth) - 1992

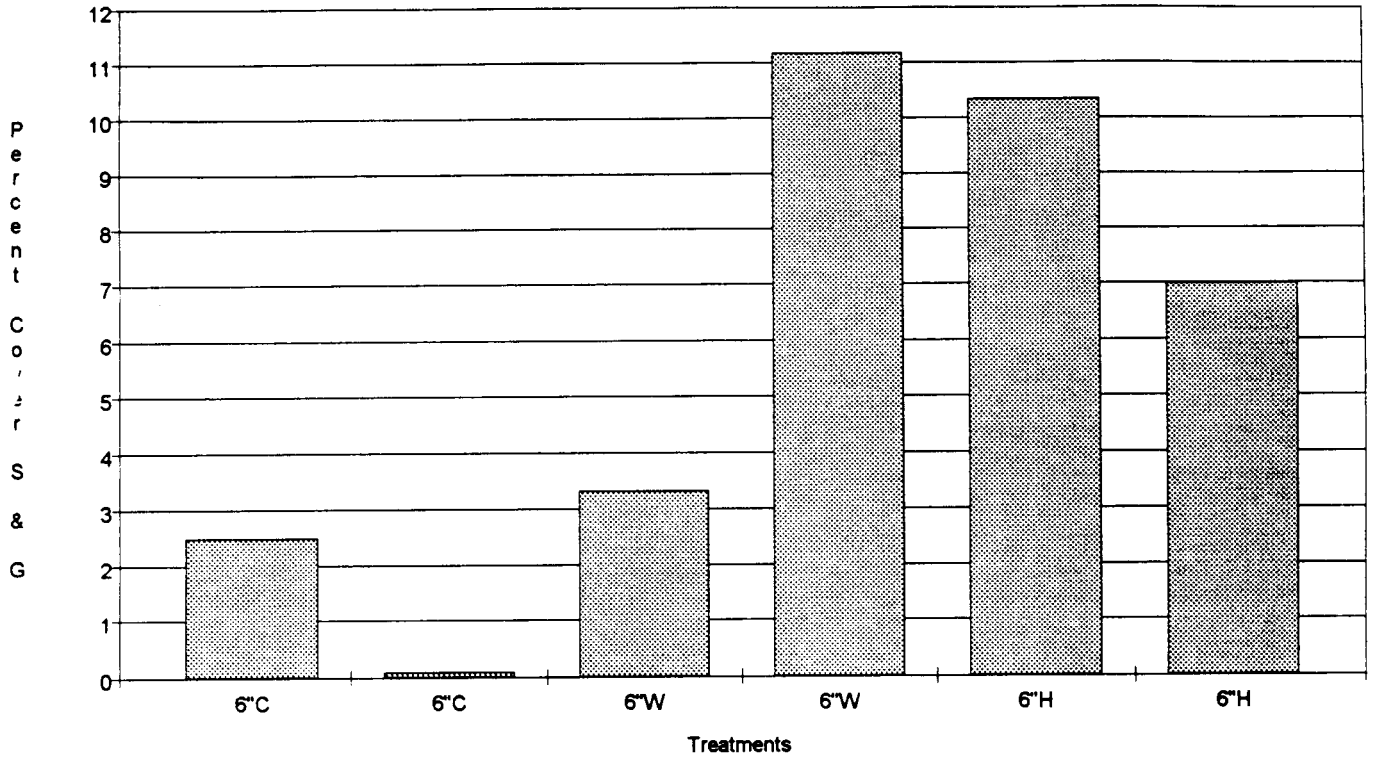


FIG. 6: 1992 - COVER BY MULCH TYPES (4" Soil Depth) - 1992

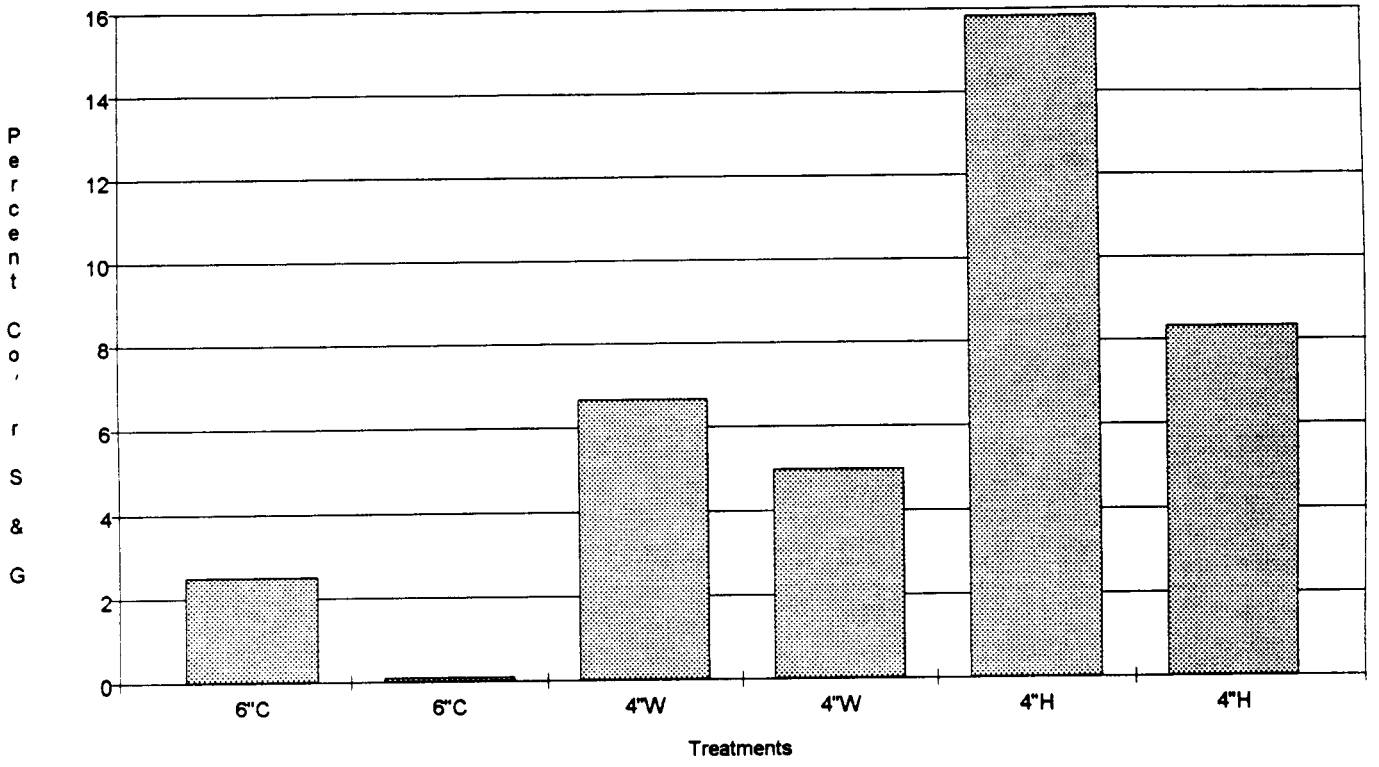
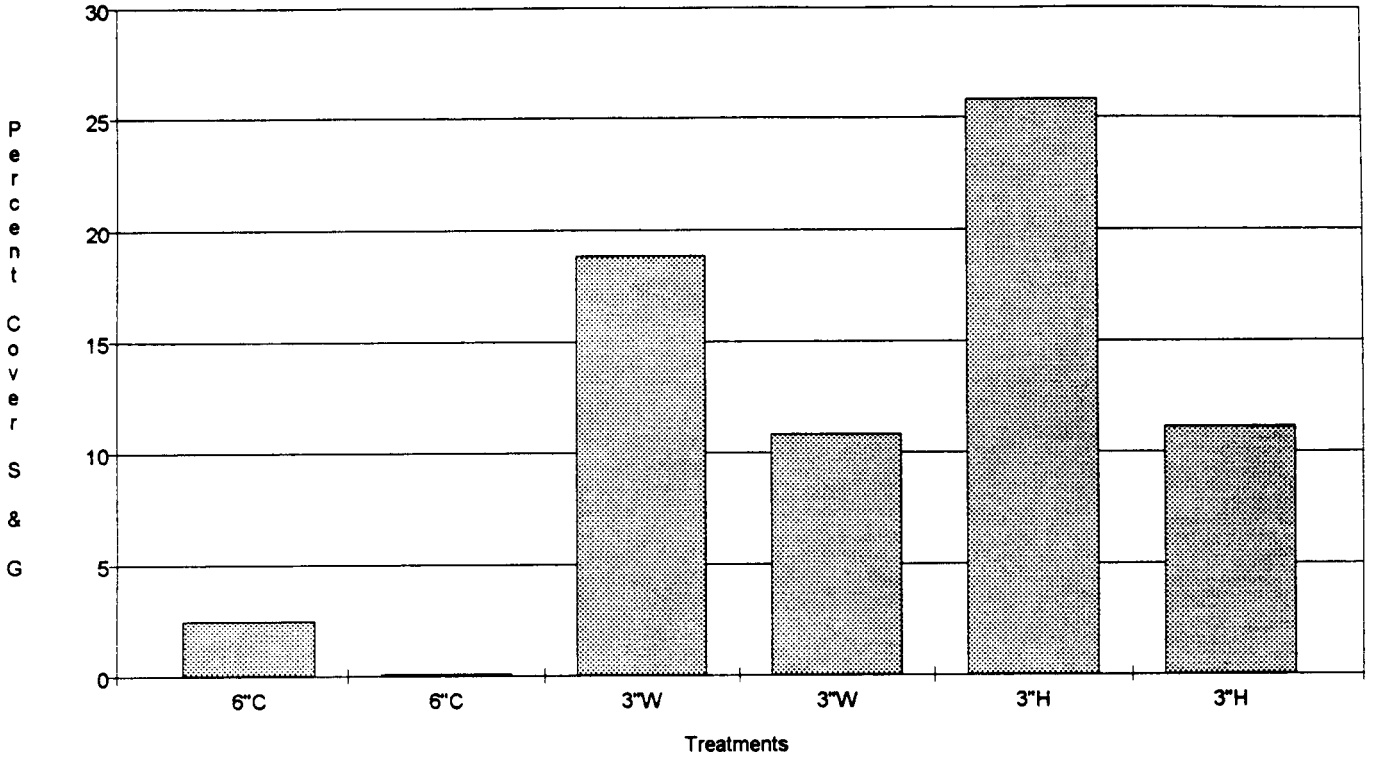
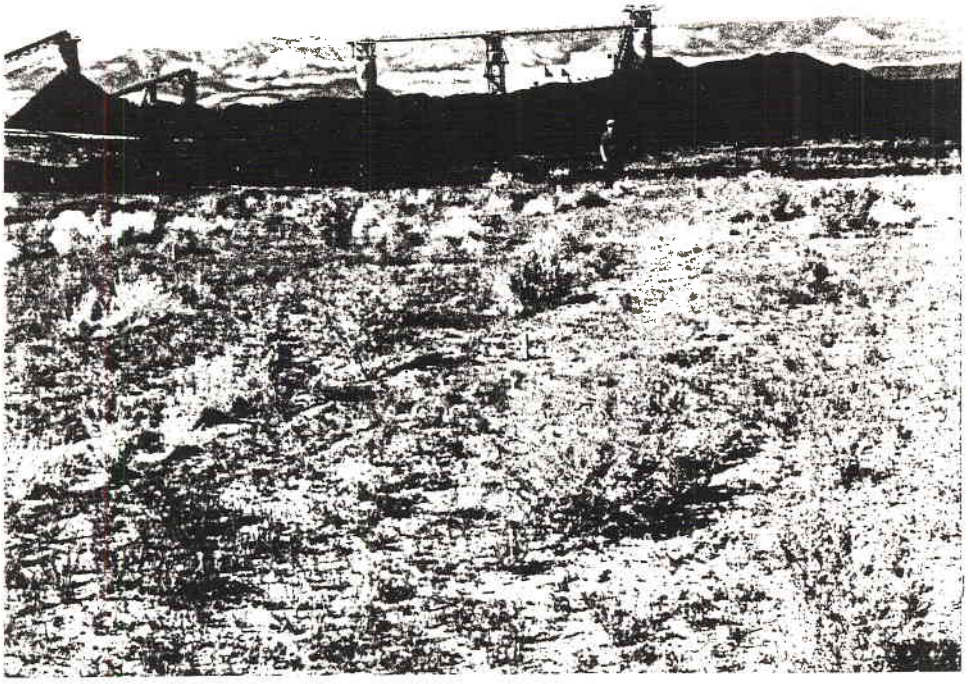


FIG. 7: 1992 - COVER BY MULCH TYPES (3" Soil Depth) - 1992



C.V. Spur No. 1 Test Plot (Sept. 2, 1992)



RAW DATA

CV SPUR TEST REVEG PLOTS
Date: 2 Sept 1992
Slope: 1 deg.
Exposure: north
Workers: P. & D. Collins

CELL 1:

Control, 6" soil, seed only	1.00	2.00	3.00	4.00	5.00	6.00	F	Mean	Std.Dev.
Ceratoides lanata	0.00	0.00	5.00	5.00	0.00	5.00	50.00	2.50	2.50
Halogeton glomeratus	30.00	30.00	35.00	25.00	30.00	30.00	100.00	30.00	2.89
Iva axillaris	10.00	5.00	0.00	5.00	5.00	5.00	83.33	5.00	2.89
Living Cover	40.00	35.00	40.00	35.00	35.00	40.00		37.50	2.50
Litter	10.00	5.00	10.00	15.00	12.00	5.00		9.50	3.59
Bareground	45.00	55.00	45.00	45.00	50.00	50.00		48.33	3.73
Rock	5.00	5.00	5.00	5.00	3.00	5.00		4.67	0.75
Trees/Shrubs	0.00	0.00	12.50	14.29	0.00	12.50		6.55	6.57
Forbs	100.00	100.00	87.50	85.71	100.00	87.50		93.45	6.57
Grasses	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00

CELL 2: 6" soil, seed & mulch
Wood fiber 2000#/ac

	1.00	2.00	3.00	4.00	5.00	6.00	F	Mean	Std.Dev.
Ceratoides lanata	0.00	0.00	5.00	0.00	0.00	0.00	16.67	0.83	1.86
Atriplex canescens	0.00	0.00	15.00	0.00	0.00	0.00	16.67	2.50	5.59
Halogeton glomeratus	40.00	30.00	15.00	30.00	30.00	30.00	100.00	29.17	7.31
Salsola iberica	0.00	0.00	0.00	5.00	0.00	0.00	16.67	0.83	1.86
Living Cover	40.00	30.00	35.00	35.00	30.00	30.00		33.33	3.73
Litter	5.00	5.00	10.00	5.00	5.00	5.00		5.83	1.86
Bareground	50.00	62.00	45.00	55.00	60.00	60.00		55.33	6.10
Rock	5.00	3.00	10.00	5.00	5.00	5.00		5.50	2.14
Trees/Shrubs	0.00	0.00	57.14	0.00	0.00	0.00		9.52	21.30
Forbs	100.00	100.00	42.86	100.00	100.00	100.00		90.48	21.30
Grasses	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00

CELL 3: 4" soil, 2" coal ref.

Seed&Mulch,Wood Fib.2000#/ac	1.00	2.00	3.00	4.00	5.00	6.00	F	Mean	Std.Dev.
Atriplex canescens	5.00	2.00	0.00	0.00	10.00	0.00	50.00	2.83	3.67
Halogeton glomeratus	15.00	35.00	35.00	25.00	25.00	35.00	100.00	28.33	7.45
Agropyron cristatum	5.00	3.00	0.00	0.00	0.00	0.00	33.33	1.33	1.97
yzopsis hymenoides	10.00	0.00	0.00	0.00	0.00	5.00	33.33	2.50	3.82
Living Cover	35.00	40.00	35.00	25.00	35.00	40.00		35.00	5.00
Litter	5.00	3.00	5.00	20.00	10.00	5.00		8.00	5.77
Bareground	50.00	55.00	55.00	50.00	50.00	40.00		50.00	5.00
Rock	10.00	2.00	5.00	5.00	5.00	15.00		7.00	4.28
Trees/Shrubs	14.29	5.00	0.00	0.00	28.57	0.00		7.98	10.52
Forbs	42.86	87.50	100.00	100.00	71.43	87.50		81.55	19.80
Grasses	42.86	7.50	0.00	0.00	0.00	12.50		10.48	15.22

CELL 4: 3"soil,3"coal ref., Seed&Mulch,WoodFiber,2000#/a	1.00	2.00	3.00	4.00	5.00	6.00	F.	Mean	Std.Dev.
Ceratoides lanata	0.00	0.00	3.00	5.00	5.00	0.00	50.00	2.17	2.27
Atriplex canescens	0.00	0.00	5.00	10.00	10.00	10.00	66.67	5.83	4.49
Halogeton glomeratus	15.00	0.00	10.00	2.00	10.00	30.00	83.33	11.17	9.84
Agropyron cristatum	5.00	10.00	15.00	15.00	0.00	0.00	66.67	7.50	6.29
Oryzopsis hymenoides	0.00	10.00	2.00	8.00	0.00	0.00	50.00	3.33	4.11
Living Cover	20.00	20.00	35.00	40.00	25.00	40.00		30.00	8.66
Litter	5.00	5.00	10.00	5.00	10.00	5.00		6.67	2.36
Bareground	40.00	35.00	20.00	25.00	25.00	15.00		26.67	8.50
Rock	35.00	40.00	35.00	30.00	40.00	40.00		36.67	3.73
Trees/Shrubs	0.00	0.00	22.86	37.50	60.00	25.00		24.23	20.95
Forbs	75.00	0.00	28.57	5.00	40.00	75.00		37.26	29.89
Grasses	25.00	100.00	48.57	57.50	0.00	0.00		38.51	35.10

CELL 5: Planted in strips

	1.00	2.00	3.00	4.00	5.00	6.00	F	Mean	Std.Dev.
Atriplex canescens	0.00	2.00	0.00	0.00	0.00	0.00	16.67	0.33	0.75
Halogeton glomeratus	35.00	25.00	30.00	1.00	35.00	38.00	100.00	27.33	12.50
Kochia scoparia	0.00	0.00	0.00	0.00	0.00	2.00	16.67	0.33	0.75
Oryzopsis hymenoides	0.00	3.00	0.00	0.00	0.00	0.00	16.67	0.50	1.12
Living Cover	35.00	30.00	30.00	1.00	35.00	40.00		28.50	12.76
Litter	5.00	5.00	5.00	2.00	2.00	3.00		3.67	1.37
Bareground	55.00	60.00	60.00	94.00	60.00	50.00		63.17	14.26
Rock	5.00	5.00	5.00	3.00	3.00	7.00		4.67	1.37
Trees/Shrubs	0.00	6.67	0.00	0.00	0.00	0.00		1.11	2.48
Forbs	100.00	83.33	100.00	100.00	100.00	100.00		97.22	6.21
Grasses	0.00	10.00	0.00	0.00	0.00	0.00		1.67	3.73

CELL 6: 6" soil, seed & mulch
Wood fiber 2000#/ac

	1.00	2.00	3.00	4.00	5.00	6.00	F	Mean	Std.Dev.
Ceratoides lanata	5.00	5.00	5.00	5.00	5.00	0.00	83.33	4.17	1.86
Atriplex canescens	10.00	10.00	0.00	15.00	5.00	2.00	83.33	7.00	5.16
Halogeton glomeratus	25.00	30.00	30.00	20.00	30.00	20.00	100.00	25.83	4.49
Living Cover	40.00	45.00	35.00	40.00	40.00	22.00		37.00	7.30
Litter	5.00	5.00	5.00	5.00	10.00	13.00		7.17	3.18
Bareground	50.00	45.00	55.00	50.00	45.00	60.00		50.83	5.34
Rock	5.00	5.00	5.00	5.00	5.00	5.00		5.00	0.00
Trees/Shrubs	37.50	33.33	14.29	50.00	25.00	9.09		28.20	13.89
Forbs	62.50	66.67	85.71	50.00	75.00	90.91		71.80	13.89
Grasses	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00

CELL 7: 4" soil, 2" coal ref.

Seed&Mulch,Wood Fib.2000#/ac	1.00	2.00	3.00	4.00	5.00	6.00	F	Mean	Std.Dev.
Atriplex canescens	0.00	0.00	0.00	15.00	0.00	15.00	33.33	5.00	7.07
Halogeton glomeratus	40.00	35.00	40.00	25.00	40.00	20.00	100.00	33.33	7.99
Living Cover	40.00	35.00	40.00	40.00	40.00	35.00		38.33	2.36
Litter	10.00	2.00	5.00	5.00	5.00	5.00		5.33	2.36
Bareground	45.00	53.00	45.00	45.00	40.00	45.00		45.50	3.82
Rock	5.00	10.00	10.00	10.00	15.00	15.00		10.83	3.44
Trees/Shrubs	0.00	0.00	0.00	37.50	0.00	42.86		13.39	19.00
Forbs	100.00	100.00	100.00	62.50	100.00	57.14		86.61	19.00
Grasses	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00

CELL 8: 3"soil,3"coal ref., Seed&Mulch,WoodFiber,2000#/a	1.00	2.00	3.00	4.00	5.00	6.00	F.	Mean	Std.Dev.
Ceratoides lanata	0.00	2.00	0.00	0.00	0.00	0.00	16.67	0.33	0.75
Atriplex canescens	15.00	0.00	0.00	5.00	20.00	2.00	66.67	7.00	7.75
Halogeton glomeratus	15.00	30.00	40.00	25.00	10.00	25.00	100.00	24.17	9.75
Agropyron dasystachyum	0.00	0.00	0.00	10.00	0.00	0.00		1.67	3.73
Agropyron cristatum	0.00	0.00	0.00	0.00	0.00	5.00		0.83	1.86
Oryzopsis hymenoides	0.00	3.00	0.00	0.00	0.00	3.00		1.00	1.41
Living Cover	30.00	35.00	40.00	40.00	30.00	35.00		35.00	4.08
Litter	5.00	5.00	5.00	5.00	15.00	10.00		7.50	3.82
Bareground	20.00	40.00	20.00	30.00	20.00	25.00		25.83	7.31
Rock	45.00	20.00	35.00	25.00	35.00	30.00		31.67	7.99
Trees/Shrubs	50.00	5.71	0.00	12.50	66.67	5.71		23.43	25.40
Forbs	50.00	85.71	100.00	62.50	33.33	71.43		67.16	21.99
Grasses	0.00	8.57	0.00	25.00	0.00	22.86		9.40	10.73

CELL 9: Control, 6" Soil

Seed only	1.00	2.00	3.00	4.00	5.00	6.00	F.	Mean	Std.Dev.
Halogeton glomeratus	40.00	35.00	40.00	30.00	40.00	25.00	100.00	35.00	5.77
Living Cover	40.00	35.00	40.00	30.00	40.00	25.00		35.00	5.77
Litter	2.00	2.00	5.00	5.00	5.00	5.00		4.00	1.41
Bareground	55.00	58.00	50.00	60.00	50.00	65.00		56.33	5.37
Rock	3.00	5.00	5.00	5.00	5.00	5.00		4.67	0.75
Trees/Shrubs	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00
Forbs	100.00	100.00	100.00	100.00	100.00	100.00		100.00	0.00
Grasses	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00

CELL 10: 6" soil, Seed & hay mulch, 2000#/ac	1.00	2.00	3.00	4.00	5.00	6.00	F	Mean	Std.Dev.
Atriplex canescens	0.00	7.00	30.00	10.00	0.00	5.00	66.67	8.67	10.19
Halogeton glomeratus	30.00	28.00	10.00	30.00	35.00	25.00	100.00	26.33	7.89
Elymus lanceolatus Agropyron cristatum	0.00	0.00	10.00	0.00	0.00	0.00	16.67	1.67	3.73
Living Cover	30.00	35.00	50.00	40.00	35.00	30.00		36.67	6.87
Litter	2.00	5.00	5.00	5.00	5.00	5.00		4.50	1.12
Bareground	64.00	55.00	40.00	50.00	55.00	60.00		54.00	7.64
Rock	4.00	5.00	5.00	5.00	5.00	5.00		4.83	0.37
Trees/Shrubs	0.00	20.00	60.00	25.00	0.00	16.67		20.28	20.15
Forbs	100.00	80.00	20.00	75.00	100.00	83.33		76.39	26.95
Grasses	0.00	0.00	20.00	0.00	0.00	0.00		3.33	7.45

CELL 11: 4"soil,2"coal ref, seed & hay mulch, 2000#/ac	1.00	2.00	3.00	4.00	5.00	6.00	F	Mean	Std.Dev.
Ceratoides lanata	0.00	0.00	5.00	0.00	5.00	0.00	33.33	1.67	2.36
Atriplex canescens	20.00	7.00	15.00	0.00	20.00	0.00	66.67	10.33	8.50
Halogeton glomeratus	10.00	43.00	30.00	40.00	20.00	32.00	100.00	29.17	11.32
Oryzopsis hymenoides	15.00	0.00	0.00	0.00	5.00	3.00	50.00	3.83	5.34
Living Cover	45.00	50.00	50.00	40.00	50.00	35.00		45.00	5.77
Litter	10.00	5.00	10.00	5.00	10.00	5.00		7.50	2.50
Bareground	20.00	25.00	35.00	50.00	30.00	45.00		34.17	10.57
Rock	25.00	20.00	5.00	5.00	10.00	15.00		13.33	7.45
Trees/Shrubs	44.44	14.00	40.00	0.00	50.00	0.00		24.74	20.81
Forbs	22.22	86.00	60.00	100.00	40.00	91.43		66.61	28.37
Grasses	33.33	0.00	0.00	0.00	10.00	8.57		8.65	11.80

CELL 12: 3" soil,3"coal ref.

Seed & hay mulch, 2000#/ac	1.00	2.00	3.00	4.00	5.00	6.00	F	Mean	Std.Dev.
Ceratoides lanata	0.00	5.00	0.00	0.00	0.00	0.00	16.67	0.83	1.86
Atriplex canescens	0.00	15.00	0.00	0.00	13.00	0.00	3333	4.67	6.62
Halogeton glomeratus	25.00	25.00	20.00	35.00	20.00	0.00	83.33	20.83	10.57
Oryzopsis hymenoides	7.00	0.00	20.00	10.00	10.00	45.00	83.33	15.33	14.51
Agropyron cristatum	8.00	5.00	5.00	5.00	7.00	0.00	83.33	5.00	2.52
Living Cover	40.00	50.00	45.00	50.00	50.00	45.00		46.67	3.73
Litter	10.00	10.00	15.00	15.00	20.00	10.00		13.33	3.73
Bareground	25.00	5.00	15.00	20.00	15.00	20.00		16.67	6.24
Rock	25.00	35.00	25.00	15.00	15.00	25.00		23.33	6.87
Trees/Shrubs	0.00	40.00	0.00	0.00	26.00	0.00		11.00	16.07
Forbs	62.50	50.00	44.44	70.00	40.00	0.00		44.49	22.38
Grasses	37.50	10.00	55.56	30.00	34.00	100.00		44.51	28.17

CELL 13: Planted in strips

	1.00	2.00	3.00	4.00	5.00	6.00	F	Mean	Std.Dev.
Atriplex canescens	0.00	5.00	0.00	0.00	0.00	0.00	16.67	0.83	1.86
Halogeton glomeratus	35.00	40.00	45.00	40.00	35.00	40.00	150.00	39.17	3.44
Living Cover	35.00	45.00	45.00	40.00	35.00	40.00		40.00	4.08
Litter	5.00	5.00	2.00	5.00	5.00	5.00		4.50	1.12
Bareground	55.00	45.00	50.00	45.00	50.00	50.00		49.17	3.44
Rock	5.00	5.00	3.00	10.00	10.00	5.00		6.33	2.69
Trees/Shrubs	0.00	11.11	0.00	0.00	0.00	0.00		1.85	4.14
Forbs	100.00	88.89	100.00	100.00	100.00	100.00		98.15	4.14
Grasses	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00

CELL 14: 6" soil, Seed & hay mulch, 2000#/ac	1.00	2.00	3.00	4.00	5.00	6.00	F	Mean	Std.Dev.
Atriplex canescens	15.00	0.00	0.00	15.00	2.00	0.00	50.00	5.33	6.87
Halogeton glomeratus	25.00	40.00	40.00	35.00	38.00	35.00	100.00	35.50	5.12
Agropyron cristatum	10.00	0.00	0.00	0.00	0.00	0.00	16.67	1.67	3.73
Living Cover	50.00	40.00	40.00	50.00	40.00	35.00		42.50	5.59
Litter	10.00	5.00	5.00	5.00	5.00	2.00		5.33	2.36
Bareground	35.00	50.00	45.00	40.00	45.00	50.00		44.17	5.34
Rock	5.00	5.00	10.00	5.00	10.00	13.00		8.00	3.16
Trees/Shrubs	30.00	0.00	0.00	30.00	5.00	0.00		10.83	13.67
Forbs	50.00	100.00	100.00	70.00	95.00	100.00		85.83	19.24
Grasses	20.00	0.00	0.00	0.00	0.00	0.00		3.33	7.45

CELL 15: 4"soil,2"coal ref, seed & hay mulch, 2000#/ac	1.00	2.00	3.00	4.00	5.00	6.00	F	Mean	Std.Dev.
Ceratoides lanata	0.00	0.00	5.00	0.00	0.00	5.00	33.33	1.67	2.36
Atriplex canescens	0.00	7.00	5.00	0.00	15.00	5.00	66.67	5.33	5.06
Halogeton glomeratus	45.00	30.00	40.00	40.00	35.00	35.00	100.00	37.50	4.79
Agropyron cristatum	0.00	8.00	0.00	0.00	0.00	0.00	16.67	1.33	2.98
Living Cover	45.00	45.00	50.00	40.00	50.00	45.00		45.83	3.44
Litter	5.00	10.00	15.00	5.00	5.00	10.00		8.33	3.73
Bareground	35.00	35.00	20.00	45.00	30.00	25.00		31.67	7.99
Rock	15.00	10.00	15.00	10.00	15.00	20.00		14.17	3.44
Trees/Shrubs	0.00	15.56	20.00	0.00	30.00	22.22		14.63	11.19
Forbs	100.00	66.67	80.00	100.00	70.00	77.78		82.41	13.22
Grasses	0.00	17.78	0.00	0.00	0.00	0.00		2.96	6.63

CELL 16: 3" soil,3"coal ref.

Seed & hay mulch, 2000#/ac	1.00	2.00	3.00	4.00	5.00	6.00	F	Mean	Std.Dev.
Ceratoides lanata	0.00	0.00	0.00	5.00	0.00	5.00	33.33	1.67	2.36
Atriplex canescens	0.00	15.00	0.00	15.00	5.00	15.00	66.67	8.33	6.87
Halogeton glomeratus	38.00	10.00	50.00	25.00	20.00	20.00	100.00	27.17	13.17
Oryzopsis hymenoides	2.00	0.00	0.00	0.00	0.00	0.00	16.67	0.33	0.75
Agropyron cristatum	5.00	0.00	0.00	0.00	0.00	0.00	16.67	0.83	1.86
Living Cover	45.00	25.00	50.00	45.00	25.00	40.00		38.33	9.86
Litter	15.00	20.00	5.00	20.00	10.00	10.00		13.33	5.53
Bareground	20.00	20.00	20.00	20.00	50.00	15.00		24.17	11.70
Rock	20.00	35.00	25.00	15.00	15.00	35.00		24.17	8.37
Trees/Shrubs	0.00	60.00	0.00	44.44	20.00	50.00		29.07	23.82
Forbs	84.44	40.00	100.00	55.56	80.00	50.00		68.33	21.22
Grasses	15.56	0.00	0.00	0.00	0.00	0.00		2.59	5.80

VEGETATION MONITORING

OF THE

C.V. SPUR NO. 2 TEST PLOT: 1992

Prepared by

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(801) 489-6937

for

MOUNTAIN COAL COMPANY
Price, Utah 84501

Report: Patrick Collins, Ph.D.

Fieldwork: Patrick Collins
Dean Collins

Report Date: January 1992

VEGETATION MONITORING

OF THE

C.V. SPUR NO. 2 TEST PLOT: 1992

INTRODUCTION

In the fall of 1989, Beaver Creek Coal Company implemented a reclamation test plot on a disturbed area in the NE corner of the C.V. Spur Coal Processing and Loadout Facility property. *MT. NEBO SCIENTIFIC* was contracted to monitor this plot. Qualitative data were recorded in 1990, whereas, qualitative *and* quantitative data were compiled in the years' 1991 and 1992. This document reports the data from the 1992 sample year.

The test plot was divided into two larger sections for seeding mixtures, plus a middle section for single species. The plot was also fenced.

<u>Section 1 (west)</u>

This is a 50 ft. by 100 ft. area. Design included techniques proposed for final reclamation methodologies as

outlined in Chapter 3, Section 3.5 of the MRP. A species list is included in this report.

Section 2 (east)

This area is another 50 ft. by 100 ft. section utilizing the same methods as Section 1 with the addition of 1 ton of 3rd crop alfalfa hay tilled into the top 6 inches of the soil. A species list is included in this report.

Section 3 (middle)

This section was apparently seeded with single species with two controls that were not seeded.

METHODS

Quantitative and qualitative data were taken on the subplots of the C.V. Spur No. 2 Test Plot. Sampling was accomplished on September 2, 1992. Sampling methods were identical to 1991 to

make comparisons more appropriate.

Cover and Composition

Regular placement of sample points were predetermined to provide unbiased accuracy of the data compiled. This was accomplished by establishing transect lines at regular intervals on each end of the plots. These transect lines were placed over the entire study area to adequately represent the area as a whole. Regular points on the transect lines were then marked. From these marks, the sample points were determined by random distance numbers at right angles to the transect lines.

Cover estimates were made using ocular methods with meter square quadrats. Species composition and relative frequencies were also assessed from the quadrats. Additional information recorded on data sheets were: estimated precipitation, slope, exposure, grazing use, animal disturbance and other appropriate notes. Plant nomenclature follows Welsh et al. (1987) for nonplanted species. To avoid confusion, the same names were used as when they were planted for the species in the seed mixtures.

Woody Species Density

No woody species were observed in the plots this year, except for one large greasewood plant that was there prior to seeding in 1989.

Sample Adequacy

Sample adequacy was achieved employing formulas supplied by DOGM. These formulas are shown on the summary tables.

Photographs

A color photograph was taken of the plot and was included in this report.

Raw Data

Summarized raw data were included in this report to facilitate additional statistical analyses by the reviewer if desired.

RESULTS

Section 1 (west side)

Total living cover for this subplot was estimated at 27.22%. The cover was composed primarily of forbs (Table 1). As shown on Table 2, most of this cover was summer cypress (*Kochia scoparia*), a weedy annual. As reported in 1991, there were also some grasses beginning to establish. Woody species were not observed in the plot.

Section 2 (east side)

Total living cover for Section 2 was estimated as 36.11%, most of which were forbs, but had a fair representation of grasses (Table 3). As in 1991, the most common species represented in the quadrats were summer cypress and crested wheatgrass (*Agropyron cristatum*) with cover estimates of 25.56% and 10.28%, respectively. Again, woody species were not seen in the plot.

Section 3 (middle)

As reported last year, the single species that were planted still show little success to date. The only species observed this year were "weedy" species

TABLE 1: Summary of 1992 sampling for Mountain Coal Company. The table shows the total cover and composition for the C.V. Spur No. 2 Revegetation Test Plot (Sec.1/west side). The table includes the mean percent cover and composition with standard deviations and sample sizes.

TOTAL COVER	% MEAN COVER	STANDARD DEVIATION	SAMPLE SIZES
Living Cover	27.22*	10.44	18
Litter	4.78	1.84	18
Bareground	65.83	11.81	18
Rock	2.17	1.86	18
COMPOSITION			
Trees & Shrubs	0.00	0.00	18
Forbs	96.65	6.48	18
Grasses	3.35	6.48	18

* The following formula was used to check sample adequacy.

$$\left[\frac{1.28\ (s)}{x\ (.1)}\right]^2 = \text{nmin}$$

where:

x = sample mean
s = standard deviation
nmin = minimum number of samples.

TABLE 2: Summary of 1992 sampling for Mountain Coal Company. The table shows the cover and frequency by species for the C.V. Spur No. 2 Revegetation Test Plot (Sec.1/west side). The table includes the mean percent cover, standard deviation, sample size and relative frequency.

SPECIES	% MEAN COVER	STANDARD DEVIATION	SAMPLE SIZE	RELATIVE FREQUENCY
FORBS				
Kochia scoparia	18.89	10.74	18	100.00
Iva axillaris	7.22	6.50	18	72.22
GRASSES				
Agropyron cristatum	1.11	2.08	18	22.22

TABLE 3: Summary of 1992 sampling for Mountain Coal Company. The table shows the total cover and composition for the C.V. Spur No. 2 Revegetation Test Plot (Sec.2/east side). The table includes the mean percent cover and composition with standard deviations and sample sizes.

TOTAL COVER	% MEAN COVER	STANDARD DEVIATION	SAMPLE SIZES
Living Cover	36.11	6.14	18
Litter	6.89	4.76	18
Bareground	54.78	8.36	18
Rock	2.22	1.84	18
COMPOSITION			
Trees & Shrubs	0.00	0.00	18
Forbs	75.08	27.39	18
Grasses	24.93	27.39	18

* The following formula was used to check sample adequacy.

$$\left[\frac{1.28\ (s)}{x\ (.1)}\right]^2 = \text{nmin}$$

where:

x = sample mean
s = standard deviation
nmin = minimum number of samples.

TABLE 4: Summary of 1992 sampling for Mountain Coal Company. The table shows the cover and frequency by species for the C.V. Spur No. 2 Revegetation Test Plot (Sec.2/east side). The table includes the mean percent cover, standard deviation, sample size and relative frequency.

SPECIES	% MEAN COVER	STANDARD DEVIATION	SAMPLE SIZE	RELATIVE FREQUENCY
FORBS				
Kochia scoparia	25.56	8.80	18	100.00
Sisymbrium altissimum	0.28	1.15	18	5.56
GRASSES				
Agropyron cristatum	10.28	12.74	18	72.22

Table 5: Seed mixture used for the C.V. Spur No. 2 Test Plot.

Sections 1 and 2

#PLS/A	Rate
SHRUBS	
Atriplex confertifolia	2.0
Eurotia lanata	1.0
FORBS	
Sphraeralcea grossulariaefolia	.25
Helianthus annuus	3.0
Penstemon palmeri	.5
Melilotus officinalis	1.0
Kochia prostrata	1.0
GRASSES	
Agropyron dasystachyum	2.0
Agropron cristatum ephraim	2.0
Orysopsis hymenoides	4.0
Agropyron cristatum fairway	2.0
Elymus junceus	1.0
Sitanion hystrix	.5

Section 3

Single spp. planted in 10 ft. strips: clover, winterfat, globemallow, shadscale, sunflower, kochia, Russian wildrye, crested wheatgrass, squirreltail, thickspike, Palmer penstemon, Indian ricegrass.

C.V. Spur No. 2 Test Plot (Sept. 2, 1992)

RAW DATA

BEAVER CREEK
CV Spur - Reveg.Test Plot #2
Slope & Exp:
Section #1 (West Side)

Sample Date: 2 Sept 92	1.00	2.00	3.00	4.00	5.00	6.00	7.00	8.00	9.00	10.00
SHRUBS										
FORBS										
Kochia scoparia	25.00	35.00	15.00	50.00	20.00	30.00	5.00	10.00	15.00	20.00
Iva axillaris	0.00	0.00	0.00	0.00	0.00	10.00	5.00	5.00	15.00	15.00
GRASSES										
Agropyron cristatum	0.00	5.00	0.00	0.00	0.00	5.00	0.00	0.00	0.00	0.00
COVER										
Total Living Cover	25.00	40.00	15.00	50.00	20.00	45.00	10.00	15.00	30.00	35.00
Litter	4.00	4.00	4.00	8.00	2.00	8.00	3.00	4.00	8.00	4.00
Bareground	70.00	55.00	80.00	40.00	70.00	45.00	85.00	80.00	60.00	60.00
Rock	1.00	1.00	1.00	2.00	8.00	2.00	2.00	1.00	2.00	1.00
% COMPOSITION										
Shrubs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Forbs	100.00	87.50	100.00	100.00	100.00	88.89	100.00	100.00	100.00	100.00
Grasses	0.00	12.50	0.00	0.00	0.00	11.11	0.00	0.00	0.00	0.00

BEAVER CREEK
CV Sour - Reveg Plot #2
Slope & Exp:
Section #1 (West Side)
Sample Date: 2 Sept 92

11.00	12.00	13.00	14.00	15.00	16.00	17.00	18.00	Mean	SDev	Freq	
											SHRUBS
											FORBS
10.00	15.00	20.00	20.00	20.00	5.00	10.00	15.00	18.89	10.74		Kochia scoparia
5.00	5.00	5.00	10.00	10.00	25.00	10.00	10.00	7.22	6.50		Iva axillaris
											GRASSES
0.00	5.00	5.00	0.00	0.00	0.00	0.00	0.00	1.11	2.08		Agropyron cristatum
											COVER
15.00	25.00	30.00	30.00	30.00	30.00	20.00	25.00	27.22	10.44		Total Living Cover
4.00	4.00	5.00	5.00	8.00	4.00	3.00	4.00	4.78	1.84		Litter
80.00	70.00	60.00	60.00	60.00	65.00	75.00	70.00	65.83	11.81		Bareground
1.00	1.00	5.00	5.00	2.00	1.00	2.00	1.00	2.17	1.86		Rock
											% COMPOSITION
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		Shrubs
100.00	80.00	83.33	100.00	100.00	100.00	100.00	100.00	96.65	6.48		Forbs
0.00	20.00	16.67	0.00	0.00	0.00	0.00	0.00	3.35	6.48		Grasses

BEAVER CREEK
CV Sour - Test Plot #2
Slope & Exp:
Section #2 (East Side)
Sample Date: 2 Sept 92

	1.00	2.00	3.00	4.00	5.00	6.00	7.00	8.00	9.00	10.00
SHRUBS										
FORBS										
Kochia scoparia	10.00	10.00	25.00	5.00	35.00	30.00	30.00	25.00	40.00	25.00
Sisymbrium altissimum	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
GRASSES										
Agropyron cristatum	30.00	35.00	15.00	45.00	5.00	5.00	10.00	10.00	0.00	10.00
COVER										
Total Living Cover	40.00	45.00	40.00	50.00	40.00	35.00	40.00	35.00	40.00	35.00
Litter	5.00	8.00	5.00	5.00	10.00	3.00	8.00	4.00	8.00	4.00
Bareground	53.00	45.00	53.00	40.00	45.00	60.00	50.00	60.00	50.00	60.00
Rock	2.00	2.00	2.00	5.00	5.00	2.00	2.00	1.00	2.00	1.00
% COMPOSITION										
Shrubs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Forbs	25.00	22.22	62.50	10.00	87.50	85.71	75.00	71.43	100.00	71.43
Grasses	75.00	77.78	37.50	90.00	12.50	14.29	25.00	28.57	0.00	28.57

BEAVER CREEK
CV Sour - Test Plot #2
Slope & Exp:
Section #2 (East Side)
Sample Date: 2 Sept 92

11.00	12.00	13.00	14.00	15.00	16.00	17.00	18.00	Mean	SDev	Freq	
											SHRUBS
											FORBS
30.00	30.00	25.00	25.00	30.00	25.00	25.00	35.00	25.56	8.80		Kochia scoparia
0.00	0.00	5.00	0.00	0.00	0.00	0.00	0.00	0.28	1.15		Sisymbrium altissimum
											GRASSES
5.00	0.00	5.00	0.00	5.00	0.00	5.00	0.00	10.28	12.74		Agropyron cristatum
											COVER
35.00	30.00	35.00	25.00	35.00	25.00	30.00	35.00	36.11	6.14		Total Living Cover
19.00	4.00	19.00	4.00	4.00	8.00	2.00	4.00	6.89	4.76		Litter
45.00	65.00	45.00	70.00	60.00	65.00	60.00	60.00	54.78	8.36		Bareground
1.00	1.00	1.00	1.00	1.00	2.00	8.00	1.00	2.22	1.84		Rock
											% COMPOSITION
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		Shrubs
85.71	100.00	85.71	100.00	85.71	100.00	83.33	100.00	75.07	27.39		Forbs
14.29	0.00	14.29	0.00	14.29	0.00	16.67	0.00	24.93	27.39		Grasses

ANNUAL

IMPOUNDMENT

CERTIFICATIONS

MOUNTAIN COAL COMPANY

1992 ANNUAL POND INSPECTION REPORT

POND: SED. POND 1

LOCATION: C.V. SPUR

IMPOUNDMENTS

(1) Stability	Slopes Stable.
(2) Structural Weakness/Erosion	Incised Pond. None Noted.
(3) Potential Safety Hazards	None Noted.
(4) Depth of Impounded Water	12"
(5) Existing Storage Capacity	1.20 Ac. Ft.
(6) Monitoring Procedures	Quarterly Inspection.

SEDIMENT PONDS ONLY

(7) Sediment Accumulation (Elev.)	5486.5
(8) Sediment Cleanout Level (Elev.)	5487.2
(9) Principle Spillway (Elev.)	5491.8
(10) Emergency Spillway (Elev.)	5491.8
(11) Existing Sediment Capacity (To Cleanout)	0.28 Ac. Ft.

GENERAL

(12) Comments/Recommendations	Pond O.K. No Discharge.

STATEMENT

I hereby certify that; I am experienced in the construction of impoundments; I am qualified and authorized in the State of Utah to inspect and certify the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved design and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and, that inspections and inspection reports are made by myself and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability.

Dan W. Guy
(Signature)

10-27-92
(Date)

REGISTERED PROFESSIONAL ENGINEER
No 4548
DAN W. GUY
STATE OF UTAH

MOUNTAIN COAL COMPANY

1992 ANNUAL POND INSPECTION REPORT

POND: SED. POND 2 LOCATION: C.V. SPUR

IMPOUNDMENTS

(1) Stability	Slopes Stable. Incised Pond.
(2) Structural Weakness/Erosion	None Noted.
(3) Potential Safety Hazards	None Noted.
(4) Depth of Impounded Water	N/A - Dry
(5) Existing Storage Capacity	0.96 Ac. Ft.
(6) Monitoring Procedures	Quarterly Inspection.

SEDIMENT PONDS ONLY

(7) Sediment Accumulation (Elev.)	5484.3
(8) Sediment Cleanout Level (Elev.)	5485.5
(9) Principle Spillway (Elev.)	5492.3
(10) Emergency Spillway (Elev.)	5492.3
(11) Existing Sediment Capacity (To Cleanout)	0.24 Ac. Ft.

GENERAL

(12) Comments/Recommendations	Pond Dry. No Evidence of Inflow No Discharge.

STATEMENT

I hereby certify that; I am experienced in the construction of impoundments; I am qualified and authorized in the State of Utah to inspect and certify the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved design and meets or exceeds the minimum design requirements under all applicable federal, state and local requlations: and, that inspections and inspection reports are made by myself and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability.

Dan W. Guy
(Signature)

10-27-92
(Date)

REGISTERED PROFESSIONAL ENGINEER
No 4548
DAN W. GUY
STATE OF UTAH

MOUNTAIN COAL COMPANY

1992 ANNUAL POND INSPECTION REPORT

POND: SED. POND 3 LOCATION: C.V. SPUR

IMPOUNDMENTS

(1) Stability	Slopes Stable. Incised Pond.
(2) Structural Weakness/Erosion	None Noted.
(3) Potential Safety Hazards	None Noted.
(4) Depth of Impounded Water	N/A - Dry
(5) Existing Storage Capacity	0.94 Ac. Ft.
(6) Monitoring Procedures	Quarterly Inspection.

SEDIMENT PONDS ONLY

(7) Sediment Accumulation (Elev.)	5483.8
(8) Sediment Cleanout Level (Elev.)	5484.8
(9) Principle Spillway (Elev.)	5491.4
(10) Emergency Spillway (Elev.)	5491.4
(11) Existing Sediment Capacity (To Cleanout)	0.20 Ac. Ft.

GENERAL

(12) Comments/Recommendations	Pond Dry. No Evidence of Inflow No Discharge.

STATEMENT

I hereby certify that; I am experienced in the construction of impoundments; I am qualified and authorized in the State of Utah to inspect and certify the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved design and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and, that inspections and inspection reports are made by myself and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability.

Dan W. Guy
(Signature)

10-27-92
(Date)

REGISTERED PROFESSIONAL ENGINEER
No 4548
DAN W. GUY
STATE OF UTAH

MOUNTAIN COAL COMPANY
1992 ANNUAL POND INSPECTION REPORT

POND: PLANT OVERFLOW (#4) LOCATION: C.V. SPUR

IMPOUNDMENTS

(1) Stability	Slopes Stable. Incised Pond.
(2) Structural Weakness/Erosion	None Noted.
(3) Potential Safety Hazards	None Noted.
(4) Depth of Impounded Water	42"
(5) Existing Storage Capacity	0.28 Ac. Ft. (Not a Sed. Pond).
(6) Monitoring Procedures	Quarterly Inspection.

SEDIMENT PONDS ONLY

(7) Sediment Accumulation (Elev.)	N/A
(8) Sediment Cleanout Level (Elev.)	N/A
(9) Principle Spillway (Elev.)	N/A
(10) Emergency Spillway (Elev.)	N/A
(11) Existing Sediment Capacity (To Cleanout)	N/A

GENERAL

(12) Comments/Recommendations	Pond Operating O.K. Overflow to Sed. Pond 6 - then recirculated

STATEMENT

I hereby certify that; I am experienced in the construction of impoundments; I am qualified and authorized in the State of Utah to inspect and certify the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved design and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and, that inspections and inspection reports are made by myself and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability.

Dan W. Guy
(Signature)

10-27-92
(Date)

REGISTERED PROFESSIONAL ENGINEER
No 4848
DAN W. GUY
STATE OF UTAH

MOUNTAIN COAL COMPANY

1992 ANNUAL POND INSPECTION REPORT

POND: SED. POND 5 LOCATION: C.V. SPUR

IMPOUNDMENTS

(1) Stability	Slopes Stable. Incised Pond.
(2) Structural Weakness/Erosion	None Noted.
(3) Potential Safety Hazards	None Noted.
(4) Depth of Impounded Water	12"
(5) Existing Storage Capacity	3.89 Ac. Ft.
(6) Monitoring Procedures	Quarterly Inspection.

SEDIMENT PONDS ONLY

(7) Sediment Accumulation (Elev.)	5474.4
(8) Sediment Cleanout Level (Elev.)	5475.2
(9) Principle Spillway (Elev.)	5482.0
(10) Emergency Spillway (Elev.)	5482.0
(11) Existing Sediment Capacity (To Cleanout)	0.32 Ac. Ft.

GENERAL

(12) Comments/Recommendations	Spillway Rebuilt-1992 Pump Installed for Dewatering. No Disch.

STATEMENT

I hereby certify that; I am experienced in the construction of impoundments; I am qualified and authorized in the State of Utah to inspect and certify the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved design and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and, that inspections and inspection reports are made by myself and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability.

(Signature)

10-27-92
(Date)

REGISTERED PROFESSIONAL ENGINEER
No 4548
DAN W. GUY
STATE OF UTAH

MOUNTAIN COAL COMPANY
1992 ANNUAL POND INSPECTION REPORT

POND: SED. POND 6 LOCATION: C.V. SPUR

IMPOUNDMENTS

(1) Stability	Slopes Stable. Incised Pond.
(2) Structural Weakness/Erosion	None Noted.
(3) Potential Safety Hazards	None Noted.
(4) Depth of Impounded Water	24"
(5) Existing Storage Capacity	2.08 Ac. Ft.
(6) Monitoring Procedures	Quarterly Inspection. U.P.D.E.S. Discharge.

SEDIMENT PONDS ONLY

(7) Sediment Accumulation (Elev.)	5474.2
(8) Sediment Cleanout Level (Elev.)	5474.7
(9) Principle Spillway (Elev.)	5480.3
(10) Emergency Spillway (Elev.)	5480.3
(11) Existing Sediment Capacity (To Cleanout)	0.17 Ac. Ft.

GENERAL

(12) Comments/Recommendations	Open Channel Spillway added and Dikes Re-built-1992. No Disch.

STATEMENT

I hereby certify that; I am experienced in the construction of impoundments; I am qualified and authorized in the State of Utah to inspect and certify the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved design and meets or exceeds the minimum design requirements under all applicable federal, state and local regulations; and, that inspections and inspection reports are made by myself and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability.

(Signature)

10-27-92
(Date)

REGISTERED PROFESSIONAL ENGINEER
No 4548
DAN W. GUY
STATE OF UTAH

REFUSE

PILE

INSPECTIONS

REFUSE PILE INSPECTION REPORT

MSHA SITE #1211-UT-9-0034 **C.V. SPUR** **QUARTER** 4/92

ITEM	REMARKS
(1) Potential Safety Hazards	None Noted.
(2) Slope Stability	Stable - Berm intact. No erosion on side slopes.
(3) Removal of Topsoil and Organics	N/A - Test plot fence O.K.
(4) Construction and Maintenance Performance Standards	O.K. - Pile well graded & drained. Culvert open.
(5) Recommendations	Pile looks good. Slight snow cover.

I have performed the above inspection on this refuse pile and do hereby certify it to be a true and accurate representation of the pile at this time. The pile has been constructed and maintained as designed and in accordance with the approved plan and R645 Rules.

REGISTERED PROFESSIONAL ENGINEER No. 4548 DAN W. GUY STATE OF UTAH

Registered Professional Engineer

12/23/92
Date

Note: This pile contains no underdrains or protective filter systems.

REFUSE PILE INSPECTION REPORT

MSHA SITE #1211-UT-9-0034 C.V. SPUR QUARTER 3/92

ITEM	REMARKS
(1) Potential Safety Hazards	None Noted.
(2) Slope Stability	Stable - Berm intact. No erosion on side slopes.
(3) Removal of Topsoil and Organics	N/A - Checked test plot. Best growth on refuse/soil mix.
(4) Construction and Maintenance Performance Standards	O.K. - Minor amount of sub-standard to be graded. Drainage, compaction, ditches - O.K.
(5) Recommendations	Grade out recently dumped material. Continue maintenance.

I have performed the above inspection on this refuse pile and do hereby certify it to be a true and accurate representation of the pile at this time. The pile has been constructed and maintained as designed and in accordance with the approved plan and R-645 Rules.

REGISTERED PROFESSIONAL ENGINEER No 4548 ERIK W. GUY STATE OF UTAH

Registered Professional Engineer

9/17/92
Date

Note: This pile contains no underdrains or protective filter systems.

REFUSE PILE INSPECTION REPORT

MSHA SITE #1211-UT-9-0034 C.V. SPUR QUARTER 2/92

ITEM	REMARKS
(1) Potential Safety Hazards	None Noted.
(2) Slope Stability	Stable. Berm O.K. around top. Drainage good. Slopes O.K.
(3) Removal of Topsoil and Organics	N/A - Minor veg. on Test Plot.
(4) Construction and Maintenance Performance Standards	Good - Pile well graded & compacted. Outlet culvert covered.
(5) Recommendations	None - Pile in good shape.

I have performed the above inspection on this refuse pile and do hereby certify it to be a true and accurate representation of the pile at this time. The pile has been constructed and maintained as designed and in accordance with the approved plan and R-645 Rules.

REGISTERED PROFESSIONAL ENGINEER No. 4548 DAN W. GUY STATE OF UTAH

Registered Professional Engineer

6/5/92
Date

Note: This pile contains no underdrains or protective filter systems.

Mountain Coal Company **Internal Correspondence**

Date: March 25, 1992

Subject: **Refuse Pile Construction - C.V. Spur**

From/Location: D.W. Guy

To/Location: File

I, Dan W. Guy, Registered Professional Engineer, State of Utah No. 4548, hereby certify that I am experienced in the construction of similar earth and waste structures to the refuse pile at C.V. Spur, and that I designed the pile and have inspected the pile at regular intervals during construction checking both placement and compaction.

Inspections have been made quarterly throughout construction and at critical construction periods, including: the removal of organic material, topsoil and subsoil; installation of vegetation test plots; and regrading. The pile has no underdrains or protective filter systems; however, shallow water monitoring wells are placed at key locations around the pile, and are monitored at regular intervals.

A certified report is provided to the Division promptly after each inspection that the refuse pile has been constructed and maintained as designed and in accordance with the approved plan and R645 Rules. This report includes appearances of instability, structural weakness and other hazardous conditions. A copy of each inspection report is retained at the main office.

It should be noted that the construction of the refuse pile was started prior to the time the loadout was required to be permitted; however, topsoil and sub-soil were salvaged and the pile foundation was prepared in anticipation of permitting requirements.

REGISTERED PROFESSIONAL ENGINEER
No. 4548
DAN W. GUY
3/25/92
STATE OF UTAH

REFUSE PILE INSPECTION REPORT

MSHA SITE #1211-UT-9-0034 C.V. SPUR QUARTER 1/92

ITEM	REMARKS
(1) Potential Safety Hazards	None Noted.
(2) Slope Stability	Stable - Berm intact around top. No erosion on side slopes. Good drainage control.
(3) Removal of Topsoil and Organics	N/A - Some green vegetation showing up on test plots.
(4) Construction and Maintenance Performance Standards	Good - Pile well graded & compacted. Slope protected. Minor amount of spilled material in center.
(5) Recommendations	Pile looks good. Cover outlet culvert. Grade out spilled material.

I have performed the above inspection on this refuse pile and do hereby certify it to be a true and accurate representation of the pile at this time.

Registered Professional Engineer

3/30/92

Date

REGISTERED PROFESSIONAL ENGINEER No 4548 DAN W. GUY STATE OF UTAH

ROAD

CERTIFICATION

PRIMARY ROAD CERTIFICATION

Company: Mountain Coal Company

Location: Castle Valley Spur

Primary Road Location: 1-From Gate to Loadout.

2-Refuse Haul Road.

I hereby certify that the above listed Primary Roads at C.V. Spur have been constructed in accordance with the requirements of R645-301-534.200 and R645-301-742.420 and the approved permit design. As-Constructed plans for the roads are shown on Plate 3-4 of the approved Mining and Reclamation Permit.

REGISTERED PROFESSIONAL ENGINEER
No. 4548
DAN W. GUY
4/1/93
STATE OF UTAH

Note: All other roads at C.V. Spur are Ancillary Roads.

COAL / REFUSE

ANALYSES

COMMERCIAL TESTING & ENGINEERING CO.
GENERAL OFFICES: 1919 SOUTH HIGHLAND AVE., SUITE 210-B, LOMBARD, ILLINOIS 60148 • TEL: 708-953-9300 FAX: 708-953-9306

SINCE 1908

Member of the SGS Group (Société Générale de Surveillance)

PLEASE ADDRESS ALL CORRESPONDENCE TO:
P.O. BOX 1020, HUNTINGTON, UT 84528
TEL: (801) 653-2311
FAX: (801) 653-2436

March 25, 1993

MOUNTAIN COAL CO.
P.O. Box 1378
Price Utah 84501

Sample identification by
Mountain Coal Co.

Kind of sample reported to us Coal

Sample taken at CV SPUR

Sample taken by Mountain Coal

Date sampled March 9, 1993

Date received March 10, 1993

9 Mine
73.0 lbs.
Top Size 2"
1 Bag

Analysis report no. 59-157626

SOIL ANALYSIS

RESULTS ARE REPORTED AS INDICATED, ON AN AS RECEIVED BASIS.

pH	9.13 units
Sulfur %	0.39
Neutralization Potential	5.64 tons $CaCO_3$/ 1000 tons

Respectfully submitted,
COMMERCIAL TESTING & ENGINEERING CO.

Manager, Huntington Laboratory

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March 25, 1993

MOUNTAIN COAL CO.
P.O. Box 1378
Price Utah 84501

Sample identification by
Mountain Coal Co.

Kind of sample reported to us Coal

Sample taken at CV SPUR

Sample taken by Mountain Coal

Date sampled March 9, 1993

Date received March 10, 1993

Genwal
78.5 lbs.
Top Size 2"
1 Bag

Analysis report no. 59-157627

SOIL ANALYSIS

RESULTS ARE REPORTED AS INDICATED, ON AN AS RECEIVED BASIS.

pH	8.55 units
Sulfur %	0.28
Neutralization Potential	18.37 tons CaCO3/ 1000 tons

Respectfully submitted,
COMMERCIAL TESTING & ENGINEERING CO.

Manager, Huntington Laboratory

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FAX: (801) 653-2436

March 25, 1993

MOUNTAIN COAL CO.
P.O. Box 1378
Price Utah 84501

Sample identification by
Mountain Coal Co.

Kind of sample reported to us	Coal	
Sample taken at	CV SPUR	Co-op
Sample taken by	Mountain Coal	76.5 lbs. Top Size 2" 1 Bag
Date sampled	March 9, 1993	
Date received	March 10, 1993	

Analysis report no. 59-157628

SOIL ANALYSIS

RESULTS ARE REPORTED AS INDICATED, ON AN AS RECEIVED BASIS.

pH	8.34 units
Sulfur %	0.22
Neutralization Potential	19.65 tons $CaCO_3$/ 1000 tons

Respectfully submitted,
COMMERCIAL TESTING & ENGINEERING CO.

Manager, Huntington Laboratory

AMERICAN COUNCIL OF INDEPENDENT LABORATORIES

OVER 40 BRANCH LABORATORIES STRATEGICALLY LOCATED IN PRINCIPAL COAL MINING AREAS, TIDEWATER AND GREAT LAKES PORTS, AND RIVER LOADING FACILITIES

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COMMERCIAL TESTING & ENGINEERING CO.
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FAX: (801) 653-2436

March 25, 1993

MOUNTAIN COAL CO.
P.O. Box 1378
Price Utah 84501

Sample identification by
Mountain Coal Co.

Kind of sample reported to us Coal

Sample taken at CV SPUR

Sample taken by Mountain Coal

Date sampled March 9, 1993

Date received March 10, 1993

8 Mine
66.75 lbs.
Top Size 2"
1 Bag

Analysis report no. 59-157629

SOIL ANALYSIS

RESULTS ARE REPORTED AS INDICATED, ON AN AS RECEIVED BASIS.

pH	7.78 units
Sulfur %	0.35
Neutralization Potential	6.42 tons CaCO3/ 1000 tons

Respectfully submitted,
COMMERCIAL TESTING & ENGINEERING CO.

Manager, Huntington Laboratory

COMMERCIAL TESTING & ENGINEERING CO.
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March 25, 1993

MOUNTAIN COAL CO.
P.O. Box 1378
Price Utah 84501

Sample identification by
Mountain Coal Co.

Kind of sample reported to us	Coal	
Sample taken at	CV SPUR	Sunnyside
Sample taken by	Mountain Coal	78.5 lbs. Top Size 2" 1 Bag
Date sampled	March 9, 1993	
Date received	March 10, 1993	

Analysis report no. 59-157631

SOIL ANALYSIS

RESULTS ARE REPORTED AS INDICATED, ON AN AS RECEIVED BASIS.

pH	8.89 units
Sulfur %	0.29
Neutralization Potential	5.48 tons $CaCO_3$/ 1000 tons

Respectfully submitted,
COMMERCIAL TESTING & ENGINEERING CO.

Manager, Huntington Laboratory

AMERICAN COUNCIL OF INDEPENDENT LABORATORIES, INC.

OVER 40 BRANCH LABORATORIES STRATEGICALLY LOCATED IN PRINCIPAL COAL MINING AREAS, TIDEWATER AND GREAT LAKES PORTS, AND RIVER LOADING FACILITIES

TERMS AND CONDITIONS ON REVERSE

Original Watermarked For Your Protection

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FAX: (801) 653-2436

March 25, 1993

MOUNTAIN COAL CO.
P.O. Box 1378
Price Utah 84501

Sample identification by
Mountain Coal Co.

Kind of sample reported to us Coal

Sample taken at CV SPUR

Sample taken by Mountain Coal

Date sampled March 9, 1993

Date received March 10, 1993

7 Mine
64.5 lbs.
Top Size 2"
1 Bag

Analysis report no. 59-157632

SOIL ANALYSIS

RESULTS ARE REPORTED AS INDICATED, ON AN AS RECEIVED BASIS.

pH	7.92 units
Sulfur %	0.49
Neutralization Potential	21.92 tons CaCO3/ 1000 tons

Respectfully submitted,
COMMERCIAL TESTING & ENGINEERING CO.

Manager, Huntington Laboratory

COMMERCIAL TESTING & ENGINEERING CO.
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FAX: (801) 653-2436

March 25, 1993

MOUNTAIN COAL CO.
P.O. Box 1378
Price Utah 84501

Sample identification by
Mountain Coal Co.

Kind of sample reported to us Coal

Sample taken at CV SPUR

Sample taken by Mountain Coal

Date sampled March 9, 1993

Date received March 10, 1993

Sufco
74.75 lbs.
Top Size 2"
1 Bag

Analysis report no. 59-157633

SOIL ANALYSIS

RESULTS ARE REPORTED AS INDICATED, ON AN AS RECEIVED BASIS.

pH	8.45 units
Sulfur %	0.22
Neutralization Potential	18.99 tons CaCO3/ 1000 tons

Respectfully submitted,
COMMERCIAL TESTING & ENGINEERING CO.

Manager, Huntington Laboratory

COMMERCIAL TESTING & ENGINEERING CO.
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TEL: (801) 653-2311
FAX: (801) 653-2436

March 25, 1993

MOUNTAIN COAL CO.
P.O. Box 1378
Price Utah 84501

Sample identification by
Mountain Coal Co.

Kind of sample reported to us Coal

Sample taken at CV SPUR

Sample taken by Mountain Coal

Date sampled March 9, 1993

Date received March 10, 1993

Refuge
71.0 lbs.
Top Size 2"
1 Bag

Analysis report no. 59-157630

SOIL ANALYSIS

RESULTS ARE REPORTED AS INDICATED, ON AN AS RECEIVED BASIS

pH	6.38 units
Conductivity	3430 mmhos/cm
Water Extractable Selenium	1.5 ug/g
Water Extractable Boron	4.6 ug/g
Sodium Adsorption Ratio	0.139
Neutralization Potential	4.32 tons $CaCO_3$/ 1000 tons
Acid-Base Potential	-13.24 tons $CaCO_3$/ 1000 tons

Respectfully submitted,
COMMERCIAL TESTING & ENGINEERING CO.

Manager, Huntington Laboratory