MOUNTAIN COAL COMPANY

1993 ANNUAL REPORT

HUNTINGTON CANYON NO. 4 MINE

Mountain Coal Company
West Elk Mine
Post Office Box 591
Somerset, Colorado 81434
Telephone 303 929-5015

March 31, 1994

Mr. Lowell Braxton
Administrator
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
1993 Annual Report
Huntington Canyon No. 4 Mine
INA/015/004
Emery County, Utah

Dear Mr. Braxton:

Enclosed is the Annual Report for Coal Mining and Reclamation Operations for 1993 for the Huntington Canyon No. 4 Mine.

If you have any questions, or need any further information, please contact me or Kathleen Welt at Mountain Coal Company.

Respectfully,

Dan W. Guy

Dan W. Guy P.E.
for
Kathleen G. Welt

RECEIVED
APR 7 1994
DIV. OF OIL, GAS & MINING

cc: Kathleen Welt - Mountain Coal Company
File

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APR 4 1994
DIVISION OF OIL
GAS & MINING PRICE UTAH

COAL MINING AND RECLAMATION OPERATIONS FOR 1993

(Must be submitted to the Division by April 15, 1994)

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: HUNTINGTON CANYON NO. 4 MINE

Mailing Address: P.O. BOX 591, SOMERSET, COLO. 81434

Company Representative: KATHLEEN G. WELT

Resident Agent: THE CORP. TRUST CO., 1209 ORANGE ST., WILMINGTON, DELAWA 19801

Permit Number: INA/015/004

MSHA ID Number: N/A

Date of Initial Permanent Program Permit: 01/30/80

Date of Permit Renewal: 09/12/91 (EXPIRES 04/30/95)

Quantity of Coal Mined (tonnage) 1993: N/A

Attach Updated Mine Sequence Map(s) showing mine development through December 31, 1993. (Same as Lease Royalty Payment Map and/or MSHA Progress Map)

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

A. General

1. **Discuss anomalies, missing data and monitoring changes made throughout the year.**
2. **Summarize any corrective actions and the results that may have occurred during the year.**

B. Water Monitoring Data:
Groundwater Summary

1. **Mine Discharge**
   a. **Summarize the total annual discharge from mine water discharge points and breakdown on a monthly basis for each site.**
   b. **Discuss the past five years of data comparing changes in discharge. Elements such as mining rate, location of faults or large in-mine flows during the year should be discussed.**
   c. **Discuss trends and exceedence in water quality parameters. A correlation with flow could provide additional information.**

2. Springs
   a. Are there seasonal trends/or changes in water quality for each quarter. Stiff diagrams provide a good aid in this determination.
   b. Provide an analysis of changes in quantity of flow. Discuss any significant changes or trends. An accumulation of long-term data is necessary for this discussion.

3. Surface Water
   a. Include (discuss or tabulate) comparisons of upstream and downstream water quality and quantity for monitoring sites for each quarter. Include tributary quantity and quality information. Compare with mine water discharge where applicable.
   b. Discuss any subsidence occurring over tributaries and streams, and results from monitoring of subsided areas.

C. Summarized Water Monitoring Data

1. List of monitoring points and their locations, based on UTM coordinates, and respective frequencies of monitoring (monthly, quarterly, etc.) as approved in the PAP;
2. UPDES permit number, UPDES discharge points, and their locations based on UTM coordinates.
3. Summary of findings based on water monitoring during 1993; and
4. Submit water monitoring as DOS based files. Be specific about the format, submit data in one of the following formats only, i.e: Quattro Pro, Lotus, or ASCII.

D. Precipitation or Other Climatological Data (please submit as DOS based files: ASCII, Lotus, Quattro Pro, FoxPro, etc. -- Contact Ken Wyatt, if you have any questions).

E. Subsidence Monitoring Report:

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).
5. Discussion of any proposed mining sequence changes and how that may affect the area of monitoring for the following year.

F. 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.

G. 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

H. 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.

I. 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.

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

SUGGESTED FORMAT

ANNUAL MAINTENANCE INSPECTION CERTIFICATION

This certification shall be submitted to the Division as part of the "Annual Report".

1. I hereby certify, in accordance with R645-301-514.310 through R645-301-514.313 and others as applicable, that with respect to the following facility.

Name of Permittee_____ Permit No._____

Mine Name_____

which is a: (check one)

___ temporary water impoundment
___ permanent water impoundment
___ processing waste impoundment

2. I, or persons under my supervision, have conducted adequate inspections of the maintenance of the structure; and

3. The maintenance has been performed in accordance with the Utah State Coal Program; and

4. The attached report is certified in accordance with the rules of professional conduct promulgated by the Utah Board of Examiners for Engineers; and

5. The attached report addresses the following points:

   a. any appearances of instability, structural weaknesses or other hazardous conditions;

   b. depth and elevation of impoundment water;

   c. existing storage capacity;

   d. existing or required monitoring procedures and instrumentation; and

   e. any other aspects of the structure affecting stability.

6. COMMENTS

SUGGESTED FORMAT

CERTIFICATION REPORT

On _____, 1993, an inspection of _____ _____, Area No. _____'s sedimentation pond _____ revealed the following:

A. The pond has been constructed and maintained in accordance with the approved plan.

B. The pond's dam appeared sound with no signs of instability or hazardous conditions.

C. The water elevation was _____ feet. The water depth was _____ feet.

D. The existing storage capacity is _____ acre-feet which is greater than the _____ acre-feet required by the approved plan.

E. Ponds are inspected weekly for structural problems and pH levels. Bi-monthly sampling of discharge is performed with analysis results submitted monthly. U.P.D.E.S. and DOGM requirements are followed during sampling, analysis, and reporting.

Based on this field inspection, pond ___ has been certified as required by R645-301-514.310 through R645-301-514.313. A "Certification of Maintenance of Dams and Embankments" is attached.

Affix seal of engineer
making this certification.
All data in the seal
must be legible.

_____
Seal

PERMIT

FEDERAL

PERMIT
ACT/015/004

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/015/004, 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 Huntington #4 Mine. A Surety Bond is filed with the Division in the amount of $144,041, 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 Huntington #4 Mine, situated in the State of Utah, Emery County, and located:

Township 16 South, Range 7 East, SLBM

Section 8: SW1/4, S1/2 SE1/4
Section 9: S1/2 SW1/4, SW1/4 SE1/4
Section 16: All
Section 17: E1/2

This legal description is for the permit area of the Huntington #4 Mine. 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 April 30, 1995.

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 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: _____

Date: 9-12-91

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

_____

Authorized Representative of the Permittee

Date: 10/15/91

A:\PERMIT.H4

FEDERAL Permit Number ACT/015/004 April 30, 1990

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 (five-year renewal), ACT/015/004, 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 Huntington #4 Mine. A performance bond is filed with the DOGM in the amount of $144,041.00, 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 reclamation activities on the following described lands (as shown on the map appended as Attachment A) within the permit area at the Huntington #4 Mine, situated in the state of Utah, Emery County, and located:

This legal description is for the permit area (as shown on Attachment B) of the Huntington #4 Mine. The permittee is authorized to conduct underground coal mining activities connected with mining on the foregoing described property subject to the conditions of the leases, the approved mining plan, including all conditions and all other applicable conditions, laws and regulations.

Sec. 3 **PERMIT TERM** - This revised permit becomes effective on April 30, 1990, and expires on April 30, 1995.

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 reclamation activities only on those lands specifically designated as within the permit area on the maps submitted in the 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 solids, sludge, filter backwash or pollutants in the course of treatment or control of waters or emissions to the air in the manner required by the approved Utah State Program and the Federal Lands Program which prevents violation of any applicable state or federal law.

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

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

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

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

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

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

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

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

Sec. 15 **SPECIAL CONDITIONS** - There are no special conditions associated with this permitting action.

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: 4-30-90

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

Richard L. Nielson
Authorized Representative of the Permittee

Date: 5-24-90

APPROVED AS TO FORM:

By: Dayle L. Finlayson
Assistant Attorney General

Date: _____

AMENDMENTS

State of Utah
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

Michael O. Leavitt
Governor

Ted Stewart
Executive Director

James W. Carter
Division Director

355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203
801-538-5340
801-359-3940 (Fax)
801-538-5319 (TDD)

cc D. Guy

October 27, 1993

Ms. Kathleen G. Welt
Environmental Supervisor
Mountain Coal Company
P.O. Box 591
Somerset, Colorado 81434

Re: Plate 3-8, Mountain Coal Company, Huntington #4 Mine, ACT/015/004, Folder #3, Emery County, Utah

Dear Ms. Welt:

Plate 3-8 is approved and can be incorporated into the approved plan for the Huntington #4 Mine.

Sincerely,

Pamela Grubaugh-Littig
Permit Supervisor

Michael O. Leavitt
Governor
Ted Stewart
Executive Director
James W. Carter
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
801-359-3940 (Fax)
801-538-5319 (TDD)

August 4, 1993

Ms. Kathleen G. Welt
Environmental Supervisor
Mountain Coal Company
P.O. Box 591
Somerset, Colorado 81434

Dear Ms. Welt:

Re: Water Monitoring Amendment, Mountain Coal Company, Huntington #4 Mine, ACT/015/004-93B, Folder #3, Emery County, Utah

The above-noted amendment has been reviewed and is approved. Please submit two more copies of the amendment to submit to the Forest Service by August 27, 1993. Thank you.

Sincerely,

Pamela Grubaugh-Littig
Permit Supervisor

pgl

OTHER PERMITS

Permit No. UTG040000
Industrial

STATE OF UTAH
DIVISION OF WATER QUALITY
DEPARTMENT OF ENVIRONMENTAL QUALITY
SALT LAKE CITY, UTAH

AUTHORIZATION TO DISCHARGE UNDER THE

UTAH POLLUTANT DISCHARGE ELIMINATION SYSTEM
(UPDES)

GENERAL PERMIT FOR COAL MINING

In compliance with provisions of the Utah *Water Quality Act, Title 19, Chapter 5, Utah Code Annotated ("UCA") 1953, as amended* (the *"Act"*),

Mountain Coal Company Huntington Canyon No. 4 Mine located approximately 15 miles north west of Huntington, Utah as identified in the Notice of Intent, application UTG040015 is authorized to discharge at outfall located at latitude 39°25'27" and longitude 111°08'34"

to Mill Fork Canyon tributary to Huntington Creek

in accordance with discharge point(s), effluent limitations, monitoring requirements and other conditions set forth herein.

This permit shall become effective on August 1, 1993.

This general permit and the authorization to discharge shall expire at midnight, April 30, 1998.

Signed this 22th day of July, 1993.

Authorized Permitting Official
Executive Secretary
Utah Water Quality Board

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I. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

A. Definitions.

1. The "30-day (and monthly) average" is the arithmetic average of all samples collected during a consecutive 30-day period or calendar month, whichever is applicable. The calendar month shall be used for purposes of reporting self-monitoring data on discharge monitoring report forms.

2. The "7-day (and weekly) average" is the arithmetic average of all samples collected during a consecutive 7-day period or calendar week, whichever is applicable. The 7-day and weekly averages are applicable only to those effluent characteristics for which there are 7-day average effluent limitations. The calendar week which begins on Sunday and ends on Saturday, shall be used for purposes of reporting self- monitoring data on discharge monitoring report forms. Weekly averages shall be calculated for all calendar weeks with Saturdays in the month. If a calendar week overlaps two months (i.e., the Sunday is in one month and the Saturday in the following month), the weekly average calculated for that calendar week shall be included in the data for the month that contains the Saturday.

3. "Daily Maximum" ("Daily Max.") is the maximum value allowable in any single sample or instantaneous measurement.

4. "Composite samples" shall be flow proportioned. The composite sample shall, as a minimum, contain at least four (4) samples collected over the composite sample period. Unless otherwise specified, the time between the collection of the first sample and the last sample shall not be less than six (6) hours nor more than 24 hours. Acceptable methods for preparation of composite samples are as follows:

   a. Constant time interval between samples, sample volume proportional to flow rate at time of sampling;

   b. Constant time interval between samples, sample volume proportional to total flow (volume) since last sample. For the first sample, the flow rate at the time the sample was collected may be used;

   c. Constant sample volume, time interval between samples proportional to flow (i.e., sample taken every "X" gallons of flow); and,

   d. Continuous collection of sample, with sample collection rate proportional to flow rate.

5. A "grab" sample, for monitoring requirements, is defined as a single "dip and take" sample collected at a representative point in the discharge stream.

6. "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

7. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility.

8. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

9. "Executive Secretary" means Executive Secretary of the Utah Water Quality Board.

10. "EPA" means the United States Environmental Protection Agency.

11. "Act" means the "*Utah Water Quality Act*".

12. "Best Management Practices" ("*BMPs*") means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the State. *BMPs* also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

13. "*CWA*" means *Federal Water Pollution Control Act*, as amended, by *The Clean Water Act of 1987*.

14. "Point Source" means any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharges.

15. "Significant spills" includes, but is not limited to: releases of oil or hazardous substances in excess of reportable quantities under *Section 311* of the *Clean Water Act* (see *40 CFR 110.10* and *40 CFR 117.21*) or *Section 102* of *CERCLA* (see *40 CFR 302.4*).

16. "Storm water" means storm water runoff, snow melt runoff, and surface runoff and drainage.

17. "Waste pile" means any noncontainerized accumulation of solid, nonflowing waste that is used for treatment or storage.

18. "10-year, 24-hour precipitation event" means the maximum 24-hour precipitation event with a probable reoccurrence interval of once in 10 years. This information is available in *Weather Bureau Technical Paper No. 40*, May 1961 and *NOAA Atlas 2*, 1973 for the 11 Western States, and may be obtained from the National Climatic Center of the Environmental Data Service, National Oceanic and Atmospheric Administration, U.S. Department of Commerce.

19. The term "coal preparation plant" means a facility where coal is crushed, screened, sized, cleaned, dried, or otherwise prepared and loaded for transit to a consuming facility.

20. The term "coal preparation plant associated areas" means the coal preparation plant yards, immediate access roads, coal refuse piles, and coal storage piles and facilities.

21. "Alkaline mine drainage" means mine drainage which before any treatment has a pH equal to or greater than 6.0 and total iron concentration less than 10 mg/l.

22. The term "settleable solids" is that matter measured by the volumetric method specified below:

Fill an Imhoff cone to the one-liter mark with a thoroughly mixed sample. Allow to settle undisturbed for 45 minutes. Gently stir along the inside surface of the cone with a stirring rod. Allow to settle undisturbed for 15 minutes longer. Record the volume of settled material in the cone as milliliters per liter. Where a separation of settleable and floating material occurs, do not include the floating material in the reading.

B. Criteria for Inclusion in the General Permit for Coal Mining

This General permit shall apply only to the discharge of treated wastewater from:

Coal mining operations either new or existing in Utah which include or will include in part or in a whole alkaline mine water drainage, storm water runoff from coal preparation plant associated areas, active mining areas, and post mining areas until the performance bond is released. The total amount of total dissolved solids discharged from all mine water and decant operations is limited to one ton per day.

C. Notice of Intent for a General Permit for Coal Mining

Any facility which desires a general permit for coal mining and meets the requirements of Part I.B. can be issued a general permit by submitting a notice of intent (NOI) to the Division of Water Quality and EPA at the addresses listed on page 10 of this permit.

The NOI shall include:

a. A completed Environmental Protection Agency Application (EPA Form 3510-1) or equivalent information.

b. Location and identification number (such as 001, 002, etc.) of each existing discharge and/or proposed discharge point(s). This includes the latitude and longitude to the nearest 15 seconds and the name of the receiving water(s).

c. A description of the source of the wastewater for each discharge point.

d. A description of the treatment given or proposed for the wastewater at each discharge point and if necessary a justification of why no treatment is required.

e. Flow characteristics for each discharge point such as whether flow is or will be continuous or intermittent and indicate projected and/or actual average and maximum flows in gpd.

f. Data for each discharge point for the following parameters:

1) Biochemical oxygen demand (BOD_5)
2) Chemical oxygen demand (COD)
3) Total organic carbon (TOC)
4) Total suspended solids (TSS)
5) Flow
6) Ammonia (as N)
7) Oil and grease

8) Temperature
9) pH
10) Total dissolved solids (TDS)
11) Total iron and metals, cyanide, phenols located in Table III UAC R317-8-3.12
12) Date and time of sampling for each parameter
13) Date and time of analysis for each parameter
14) Utah certified laboratory which has completed the analysis for each parameter

If no data is available, indicate why the data is not available.
The Executive Secretary may waive the reporting requirements for any of these pollutants and parameters if the applicant submits a request for such a waiver before or with the NOI which demonstrates that information adequate to support issuance of the permit can be obtained through less stringent reporting requirements.

g. For each discharge point the presence or absence of any toxic and/or priority pollutants as listed by EPA in *40 CFR Part 403*.

h. Best management practice plan or sediment runoff control plan approved by the Division of Oil, Gas and Mining.

D Description of Discharge Point(s).

The authorization to discharge provided under this permit is limited to those outfalls specifically designated below as discharge locations. Discharges at any location not authorized under a UPDES permit is a violation of the *Act* and may be subject to penalties under the *Act*. Knowingly discharging from an unauthorized location or failing to report an unauthorized discharge may be subject to criminal penalties as provided under the *Act*.

Outfall Number	Location of Discharge Points
001	Sediment pond outfall to Mill Fork Canyon

E. Narrative Standard.

It shall be unlawful, and a violation of this permit, for the permittee to discharge or place any waste or other substance in such a way as will be or may become offensive such as unnatural deposits, floating debris, oil, scum or other nuisances such as color, odor or taste, or conditions which produce undesirable aquatic life or which produces objectionable tastes in edible aquatic organisms; or concentrations or combinations of substances which produce undesirable physiological responses in desirable resident fish, or other desirable aquatic life, or undesirable human health effects, as determined by bioassay or other tests performed in accordance with standard procedures.

F. Specific Limitations and Self-monitoring Requirements.

1. Effective immediately and lasting the duration of this permit, the permittee is authorized to discharge from Outfalls 001 and 002. Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristics	Discharge Limitations a/ Average 30-Day	Average 7-Day	Daily Maximum	Monitoring Requirements Measurement Frequency	Sample Type
Flow, gpd	NA	NA	NA	Monthly	Measured b/
Oil & Grease, mg/L	NA	NA	10	Monthly	Grab
Total Suspended Solids, mg/L	25	35	70	Monthly	Grab e/
Total Iron, mg/l	NA	NA	1.0 c/	Monthly	Grab e/
Total Dissolved Solids lbs/day	NA	NA	d/	Monthly	Grab e/

The pH shall not be less than 6.5 standard units nor greater than 9.0 standard units in any sample and shall be monitored monthly by a grab sample.

There shall be no visible sheen or floating solids or visible foam in other than trace amounts.

There shall be no discharge of sanitary wastes or any process water from coal preparation plants.

N.A. - Not Applicable.

a/ See Definitions, *Part I.A* for definition of terms.

b/ For intermittent discharge, the duration of the discharge shall be reported along with the flow.

c/ Values up to 2 mg/l may be approved where the permittee provides sufficient information that water quality standards will not be violated.

d/ The total amount of total dissolved solids (TDS) discharged from all mine water and decant operations is limited to one ton (2000 pounds) per day.

e/ These samples may also be a composite sample.

2. Samples taken in compliance with the monitoring requirements specified above shall be taken from the effluent before mixing with any receiving water.

3. Any overflow, increase in volume of a discharge or discharge from a bypass system caused by precipitation within any 24-hour period less than or equal to the 10-year, 24-hour precipitation event (or snowmelt of equivalent volume) at all surface runoff pond (outfalls) may comply with the following limitation instead of the total suspended solids limitations contained in Part I.F.1:

Effluent Characteristics	Daily Maximum
Settleable Solids	0.5 mL/L

In addition to the monitoring requirements specified under Part I.F.1, all effluent samples collected during storm water discharge events shall also be analyzed for settleable solids. Such analyses shall be conducted on either grab or composite samples.

4. Any overflow, increase in volume of a discharge or discharge from a bypass system caused by precipitation within any 24-hour period greater than the 10-year, 24-hour precipitation event (or snowmelt of equivalent volume) at all surface runoff pond outfalls may comply with the following limitations instead of the otherwise applicable limitations:

The pH shall not be less than 6.5 standard units nor greater than 9.0 standard units. However, as stated under Part I.F.3, all effluent samples collected at all surface runoff pond outfalls during storm water discharge events shall be analyzed for settleable solids and the parameters identified under Part I.F.1.

5. The operator shall have the burden of proof that the discharge or increase in discharge was caus by the applicable precipitation event described in Parts I.F.3. and F.4. The alternate limitation in Parts I.F.4. and F.5. shall not apply to treatment systems that treat underground mine water only.

6. Best Management Practices.

   a. The company shall implement and maintain best management practices for the control of road salt storage for areas discharging to waters of the State. This shall include enclosure or coverage to prevent exposure to precipitation, except exposure resulting from adding or removing materials from the pile. Dischargers shall demonstrate compliance with the enclosure provision as expeditiously as practicable, but in no event later than October 1, 1995.

   b. The facility must minimize the discharge of salt by using the largest practicable amount of saline water for process and dust control. After April 30, 1994 there shall be no use of gypsum for rock dusting unless the permittee provides sufficient information to the Executive Secretary such that approval is granted based upon the Colorado River Basin Salinity Control Forum Policies and the fact that it will not significantly increase total dissolved solids concentrations.

   c. Sediment and Erosion Control. Within six months of permit issuance, the permittee shall develop a stormwater pollution prevention plan which identifies areas which, due to topography, road construction with waste materials, other activities, or other factors, have a high potential for significant soil erosion, and identify structural, vegetative, and stabilization measures to limit erosion. (The general permit for storm water discharges associated with industrial activity contains information for developing a satisfactory plan).

d. Management of Runoff. The stormwater pollution prevention plan shall be implemented as soon as practical but no later than one year after permit issuance. Appropriate measures for small areas may include: silt fences, sediment traps, vegetative swales and practices, reuse of collected storm water (such as for a process or as an irrigation source), inlet controls (such as oil/water separators), snow management activities, infiltration deicers, and wet detention/retention devices.

e. Comprehensive Site Compliance Evaluation. Qualified personnel shall conduct site compliance evaluations at appropriate intervals specified in the stormwater pollution prevention plan, but in no case less than once a year. Such evaluations shall provide:

(1) Areas contributing to a storm water discharge associated with industrial activity shall be visually inspected for evidence of, or the potential for, pollutants entering the drainage system. Measures to reduce pollutant loadings shall be evaluated to determine whether they are adequate and properly implemented in accordance with the terms of the permit or whether additional control measures are needed.

(2) Based on the results of the inspection, the description of potential pollutant sources identified in the plan and pollution prevention measures and controls identified in the plan shall be revised as appropriate within two weeks of such inspection and shall provide for implementation of any changes to the plan in a timely manner, but in no case more than twelve weeks after the inspection.

(3) A report summarizing the scope of the inspection, personnel making the inspection, the date(s) of the inspection, major observations relating to the implementation of the storm water pollution prevention plan, and actions taken shall be made and retained as part of the storm water pollution prevention plan for at least one year after coverage under this permit terminates. The report shall identify any incidents of non-compliance. Where a report does not identify any incidents of non-compliance, the report shall contain a certification that the facility is in compliance with the storm water pollution prevention plan and this permit. The report shall be signed in accordance with *Part IV.G Signatory Requirements* of this permit.

(4) Where annual site inspections are shown in the plan to be impractical for inactive mining sites due to the remote location and inaccessibility of the site, site inspections required under this part shall be conducted at appropriate intervals specified in the plan, but, in no case less than once in three years.

f. Consistency with other plans. Plans may reflect requirements for *Spill Prevention Control and Countermeasure ("SPCC")* plans developed for the facility under *Section 311* of the *CWA* or *Best Management Practices ("BMP")* otherwise required by this permit for the facility as long as such requirement is incorporated into the plan.

II. MONITORING, RECORDING AND REPORTING REQUIREMENTS

A. Representative Sampling. Samples taken in compliance with the monitoring requirements established under *Part I* shall be collected from the effluent stream prior to discharge into the receiving waters. Samples and measurements shall be representative of the volume and nature of the monitored discharge. Sludge samples shall be collected at a location representative of the quality of sludge immediately prior to the use-disposal practice.

B. Monitoring Procedures. Monitoring must be conducted according to test procedures approved under *Utah Administrative Code ("UAC") R317-2-10*, unless other test procedures have been specified in this permit.

C. Penalties for Tampering. The *Act* provides that any person who falsifies, tampers with, or knowingly renders inaccurate, any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than six months per violation, or by both.

D. Reporting of Monitoring Results. Monitoring results obtained during the previous month shall be summarized and reported monthly on a Discharge Monitoring Report Form (EPA No. 3320-1), postmarked no later than the 28th day of the month following the completed reporting period. The first report is due on August 28, 1993. If no discharge occurs during the reporting period, "no discharge" shall be reported. Legible copies of these, and all other reports required herein, shall be signed and certified in accordance with the requirements of *Signatory Requirements (see Part IV.G)*, and submitted to the Director, Division of Water Quality and to EPA at the following addresses:

original to: Department of Environmental Quality
Division of Water Quality
288 North 1460 West
PO Box 144870
Salt Lake City, Utah 84114-4870

copy to: United States Environmental Protection Agency Region VIII
Denver Place
999 18th Street, Suite 500
Denver, Colorado 80202-2466
Attention: Water Management Division
Compliance Branch (8WM-C)

E. Compliance Schedules. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any Compliance Schedule of this permit shall be submitted no later than 14 days following each schedule date.

F. Additional Monitoring by the Permittee. If the permittee monitors any parameter more frequently than required by this permit, using test procedures approved under *UAC R317-2-10* or as otherwise specified in this permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR. Such increased frequency shall also be indicated. Only those parameters required by the permit need to be reported.

G. Records Contents. Records of monitoring information shall include:

1. The date, exact place, and time of sampling or measurements:
2. The individual(s) who performed the sampling or measurements;
3. The date(s) and time(s) analyses were performed;
4. The individual(s) who performed the analyses;
5. The analytical techniques or methods used; and,
6. The results of such analyses.

H. Retention of Records. The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least three years from the date of the sample, measurement, report or application. This period may be extended by request of the Executive Secretary at any time. A copy of this UPDES permit must be maintained on site during the duration of activity at the permitted location.

I. Twenty-four Hour Notice of Noncompliance Reporting.

1. The permittee shall (orally) report any noncompliance which may seriously endanger health or environment as soon as possible, but no later than twenty-four (24) hours from the time the permittee first became aware of circumstances. The report shall be made to the Division of Water Quality, (801) 538-6146, or 24 hour answering service (801) 536-4123.

2. The following occurrences of noncompliance shall be reported by telephone (801) 536-4123 as soon as possible but no later than 24 hours from the time the permittee becomes aware of the circumstances:

   a. Any noncompliance which may endanger health or the environment;

   b. Any unanticipated bypass which exceeds any effluent limitation in the permit (See *Part III.G, Bypass of Treatment Facilities.)*;

   c. Any upset which exceeds any effluent limitation in the permit (See *Part III.H, Upset Conditions.)*; or,

   d. Violation of a maximum daily discharge limitation for any of the pollutants listed in the permit.

3. A written submission shall also be provided within five days of the time that the permittee becomes aware of the circumstances. The written submission shall contain:

   a. A description of the noncompliance and its cause;

   b. The period of noncompliance, including exact dates and times;

   c. The estimated time noncompliance is expected to continue if it has not been corrected; and,

d. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

e. Steps taken, if any, to mitigate the adverse impacts on the environment and human health during the noncompliance period.

4. The Executive Secretary may waive the written report on a case-by-case basis if the oral report has been received within 24 hours by the Division of Water Quality, (801) 538-6146.

5. Reports shall be submitted to the addresses in *Part II.D, Reporting of Monitoring Results.*

J. Other Noncompliance Reporting. Instances of noncompliance not required to be reported within 24 hours shall be reported at the time that monitoring reports for *Part II.D* are submitted. The reports shall contain the information listed in *Part II.I.3.*

K. Inspection and Entry. The permittee shall allow the Executive Secretary, or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to:

1. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of the permit;

2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

3. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and,

4. Sample or monitor at reasonable times, for the purpose of assuring permit compliance or as otherwise authorized by the *Act*, any substances or parameters at any location.

III. COMPLIANCE RESPONSIBILITIES

A. Duty to Comply. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. The permittee shall give advance notice to the Executive Secretary of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

B. Penalties for Violations of Permit Conditions. The *Act* provides that any person who violates a permit condition implementing provisions of the *Act* is subject to a civil penalty not to exceed $10,000 per day of such violation. Any person who willfully or negligently violates permit conditions of the Act is subject to a fine not exceeding $25,000 per day of violation; Any person convicted under *UCA 19-5-115(2)* a second time shall be punished by a fine not exceeding $50,000 per day. Except as provided at *Part III.G, Bypass of Treatment Facilities* and *Part III.H, Upset Conditions*, nothing in this permit shall be construed to relieve the permittee of the civil or criminal penalties for noncompliance.

C. Need to Halt or Reduce Activity not a Defense. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

D. Duty to Mitigate. The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

E. Proper Operation and Maintenance. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.

F. Removed Substances. Collected screening, grit, solids, sludges, or other pollutants removed in the course of treatment shall be buried or disposed of in such a manner so as to prevent any pollutant from entering any waters of the state or creating a health hazard. Sludge/digester supernatant and filter backwash shall not directly enter either the final effluent or waters of the state by any other direct route.

G. Bypass of Treatment Facilities.

1. Bypass not exceeding limitations. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs 2 and 3 of this section. Return of removed substances, as described in *Part III.F*, to the discharge stream shall not be considered a bypass under the provisions of this paragraph.

2. Notice:

   a. Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten (10) days before the date of the bypass.

b. Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required under *Part II.I, Twenty-four Hour Reporting*.

3. Prohibition of bypass.

a. Bypass is prohibited and the Executive Secretary may take enforcement action against a permittee for a bypass, unless:

(1) The bypass was unavoidable to prevent loss of life, personal injury, or severe property damage ;

(2) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and,

(3) The permittee submitted notices as required under paragraph 2 of this section.

b. The Executive Secretary may approve an anticipated bypass, after considering its adverse effects, if the Executive Secretary determines that it will meet the three conditions listed above in paragraph 3.a of this section.

H. Upset Conditions.

1. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with technology based permit effluent limitations if the requirements of paragraph 2. of this section are met. Executive Secretary's administrative determination regarding a claim of upset cannot be judiciously challenged by the permittee until such time as an action is initiated for noncompliance.

2. Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

a. An upset occurred and that the permittee can identify the cause(s) of the upset;

b. The permitted facility was at the time being properly operated;

c. The permittee submitted notice of the upset as required under *Part II.I, Twenty-four Hour Notice of Noncompliance Reporting*; and,

d. The permittee complied with any remedial measures required under *Part III.D, Duty to Mitigate*.

3. Burden of proof. In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

I. Toxic Pollutants. The permittee shall comply with effluent standards or prohibitions established under Section 307(a) of *The Water Quality Act of 1987* for toxic pollutants within the time provided in the regulations that establish those standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

J. Changes in Discharge of Toxic Substances. Notification shall be provided to the Executive Secretary as soon as the permittee knows of, or has reason to believe:

1. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":

   a. One hundred micrograms per liter (100 ug/L);

   b. Two hundred micrograms per liter (200 ug/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 ug/L) for 2,4-dinitrophenol and for 2-methyl-4, 6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;

   c. Five (5) times the maximum concentration value reported for that pollutant in the permit application in accordance with *UAC R317-8-3.4(7)* or (10); or,

   d. The level established by the Executive Secretary in accordance with *UAC R317-8-4.2(6)*.

2. That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":

   a. Five hundred micrograms per liter (500 ug/L);

   b. One milligram per liter (1 mg/L) for antimony;

   c. Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with *UAC R317-8-3.4(9)*; or,

   d. The level established by the Executive Secretary in accordance with *UAC R317-8-4.2(6)*.

K. Industrial Pretreatment. Any wastewaters discharged to the sanitary sewer, either as a direct discharge or as a hauled waste, are subject to Federal, State and local pretreatment regulations. Pursuant to Section 307 of *The Water Quality Act of 1987*, the permittee shall comply with all applicable federal General Pretreatment Regulations promulgated at *40 CFR 403*, the State Pretreatment Requirements at *UAC R317-8-8*, and any specific local discharge limitations developed by the Publicly Owned Treatment Works (POTW) accepting the wastewaters.

In addition, in accordance with *40 CFR 403.12(p)(1)*, the permittee must notify the POTW, the EPA Regional Waste Management Director, and the State hazardous waste authorities, in writing, if they discharge any substance into a POTW which if otherwise disposed of would be considered a hazardous waste under *40 CFR 261*. This notification must include the name of the hazardous waste, the EPA hazardous waste number, and the type of discharge (continuous or batch).

IV. GENERAL REQUIREMENTS

A. Planned Changes. The permittee shall give notice to the Executive Secretary as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when the alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are not subject to effluent limitations in the permit. In addition, if there are any planned substantial changes to the permittee's existing sludge facilities or their manner of operation or to current sludge management practices of storage and disposal, the permittee shall give notice to the Executive Secretary of any planned changes at least 30 days prior to their implementation.

B. Anticipated Noncompliance. The permittee shall give advance notice to the Executive Secretary of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

C. Permit Actions. This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

D. Duty to Reapply. If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee shall apply for and obtain a new permit. The application shall be submitted at least 60 days before the expiration date of this permit. The application shall be submitted at least 180 days before the expiration date if an individual permit is necessary.

E. Duty to Provide Information. The permittee shall furnish to the Executive Secretary, within a reasona time, any information which the Executive Secretary may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Executive Secretary, upon request, copies of records required to be kept by this permit.

F. Other Information. When the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or any report to the Executive Secretary, it shall promptly submit such facts or information.

G. Signatory Requirements. All applications, reports or information submitted to the Executive Secretary shall be signed and certified.

1. All permit applications shall be signed by either a principal executive officer or ranking elected official.

2. All reports required by the permit and other information requested by the Executive Secretary shall be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:

   a. The authorization is made in writing by a person described above and submitted to the Executive Secretary, and,

   b. The authorization specifies either an individual or a position having responsibility for overall operation of the regulated facility, such as the position of plant manage

superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.)

3. Changes to authorization. If an authorization under paragraph *IV.G.2* is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph *IV.G.2* must be submitted to the Executive Secretary prior to or together with any reports, information, or applications to be signed by an authorized representative.

4. Certification. Any person signing a document under this section shall make the following certification:

> "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

H. Penalties for Falsification of Reports. The *Act* provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction be punished by a fine of not more than $10,000.00 per violation, or by imprisonment for not more than six months per violation, or by both.

I. Availability of Reports. Except for data determined to be confidential under *UAC R317-8-3.2*, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the office of Executive Secretary. As required by the *Act*, permit applications, permits and effluent data shall not be considered confidential.

J. Oil and Hazardous Substance Liability. Nothing in this permit shall be construed to preclude the permittee of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under the *Act*.

K. Property Rights. The issuance of this permit does not convey any property rights of any sort, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations.

L. Severability. The provisions of this permit are severable, and if any provisions of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

M. Transfers. This permit may be automatically transferred to a new permittee if:

1. The current permittee notifies the Executive Secretary at least 20 days in advance of the proposed transfer date;

2. The notice includes a written agreement between the existing and new permittees containing a specific date for transfer of permit responsibility, coverage, and liability between them; and,

3. The Executive Secretary does not notify the existing permittee and the proposed new permittee of his or her intent to modify, or revoke and reissue the permit. If this notice is not received, the transfer is effective on the date specified in the agreement mentioned in paragraph 2 above.

N. State Laws. Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable state law or regulation under authority preserved by *UCA 19-5-117*.

O. Water Quality-Reopener Provision. This permit may be reopened and modified (following proper administrative procedures) to include the appropriate effluent limitations and compliance schedule, if necessary, if one or more of the following events occurs:

1. Water Quality Standards for the receiving water(s) to which the permittee discharges are modified in such a manner as to require different effluent limits than contained in this permit.

2. A final wasteload allocation is developed and approved by the State and/or EPA for incorporat in this permit.

3. A revision to the current Water Quality Management Plan is approved and adopted which calls for different effluent limitations than contained in this permit.

P. Toxicity Limitation-Reopener Provision. This permit may be reopened and modified (following proper administrative procedures) to include whole effluent toxicity (WET) testing, a WET limitation, a compliance schedule, a compliance date, additional or modified numerical limitations, or any other conditions related to the control of toxicants if toxicity is detected during the life of this permit.

Q. Storm Water-Reopener Provision. At any time during the duration (life) of this permit, this permit may be reopened and modified (following proper administrative procedures) as per *UAC R317.8*, to include, any applicable storm water provisions and requirements, a storm water pollution prevention plan, a compliance schedule, a compliance date, monitoring and/or reporting requirements, or any other conditions related to the control of storm water discharges to "waters-of-State".

F:Gen-Coal.per

United States Department of Agriculture
Forest Service

SPECIAL USE PERMIT

Act of June 4, 1897
This permit is revocable and nontransferable
(Ref. FSM 2710)

Act of October 21, 1976 (P.L. 94-579)

a. Record no. (1-2)	b. Region (3-4)	c. Forest (5-6)
70	04	10
d. District (7-8)	e. User number (9-12)	f. Kind of use (13-15)
03	4087	912
g. State (16-17)	h. County (18-20)	k. Card no. (21)
49	015	1

Permission is hereby granted to Beaver Creek Coal Company

of P.O. Box A.U. - 1109 South Carbon Avenue, Price, Utah 84501, hereinafter called the permittee, to use subject to the conditions set out below, the following described lands or improvements:

NE¼, NW¼, Section 21, T16S., R7E., SLBM

This permit covers 0.225 acres and/or ---------- miles and is issued for the purpose of:

Maintenance of two (2) sediment ponds for the Swisher #4 mine. Ponds were constructed under permit to Swisher.

1. Construction or occupancy and use under this permit shall begin within 1 months, and construction, if any, shall be completed within - - - - - months, from the date of the permit. This use shall be actually exercised at least 300 days each year, unless otherwise authorized in writing.

2. In consideration for this use, the permittee shall pay to the Forest Service, U.S. Department of Agriculture, the sum of Twenty-Five Dollars ($ 25.00) for the period from January 1 1982, to December 31, 1982, and thereafter annually on January 1 Twenty-Five Dollars ($ 25.00): *Provided, however,* Charges for this use may be made or readjusted whenever necessary to place the charges on a basis commensurate with the value of use authorized by this permit.

3. This permit is accepted subject to the conditions set forth herein, and to conditions 18 to 36 attached hereto and made a part of this permit.

	NAME OF PERMITTEE	SIGNATURE OF AUTHORIZED OFFICER	DATE
PERMITTEE	Beaver Creek Coal Company	Thomas H Parker TITLE President & Gen. Manager	3 Sept. 82
ISSUING OFFICER	NAME AND SIGNATURE Ross E. Butler	TITLE Acting Forest Supervisor	DATE 9/8/82

2700-4 (7/71)

(CONTINUED ON REVERSE)

1982 fees paid under name of Swisher Coal Company.

4. Development plans: layout(ns; construction, reconstruction, or a[illegible] revision of layout or construction plans for this area must be approved in advance and in writing by the forest supervisor. Trees or shrubbery on the permitted area may be removed or destroyed only after the forest officer in charge has approved, and has marked or otherwise designated that which may be removed or destroyed. Timber cut or destroyed will be paid for by the permittee as follows: Merchantable timber at appraised value; young-growth timber below merchantable size at current damage appraisal value; *provided* that the Forest Service reserves the right to dispose of the merchantable timber to others than the permittee at no stumpage cost to the permittee. Trees, shrubs, and other plants may be planted in such manner and in such places about the premises as may be approved by the forest officer in charge.

5. The permittee shall maintain the improvements and premises to standards of repair, orderliness, neatness, sanitation, and safety acceptable to the forest officer in charge.

6. This permit is subject to all valid claims.

7. The permittee, in exercising the privileges granted by this permit, shall comply with the regulations of the Department of Agriculture and all Federal, State, county, and municipal laws, ordinances, or regulations which are applicable to the area or operations covered by this permit.

8. The permittee shall take all reasonable precautions to prevent and suppress forest fires. No material shall be disposed of by burning in open fires during the closed season established by law or regulation without a written permit from the forest officer in charge or his authorized agent.

9. The permittee shall exercise diligence in protecting from damage the land and property of the United States covered by and used in connection with this permit, and shall pay the United States for any damage resulting from negligence or from the violation of the terms of this permit or of any law or regulation applicable to the National Forests by the permittee, or by any agents or employees of the permittee acting within the scope of their agency or employment.

10. The permittee shall fully repair all damage, other than ordinary wear and tear, to national forest roads and trails caused by the permittee in the exercise of the privilege granted by this permit.

11. No Member of or Delegate to Congress or Resident Commissioner shall be admitted to any share or part of this agreement or to any benefit that may arise herefrom unless it is made with a corporation for its general benefit.

12. Upon abandonment, termination, revocation, or cancellation of this permit, the permittee shall remove within a reasonable time all structures and improvements except those owned by the United States, and shall restore the site, unless otherwise agreed upon in writing or in this permit. If the permittee fails to remove all such structures or improvements within a reasonable period, they shall become the property of the United States, but that will not relieve the permittee of liability for the cost of their removal and restoration of the site.

13. This permit is not transferable. If the permittee through voluntary sale or transfer, or through enforcement of contract, foreclosure, tax sale, or other valid legal proceeding shall cease to be the owner of the physical improvements other than those owned by the United States situated on the land described in this permit and is unable to furnish adequate proof of ability to redeem or otherwise reestablish title to said improvements, this permit shall be subject to cancellation. But if the person to whom title to said improvements shall have been transferred in either manner provided is qualified as a permittee and is willing that his future occupancy of the premises shall be subject to such new conditions and stipulations as existing or prospective circumstances may warrant, his continued occupancy of the premises may be authorized by permit to him if, in the opinion of the issuing officer or his successor, issuance of a permit is desirable and in the public interest.

14. In case of change of address, the permittee shall immediately notify the forest supervisor.

15. The temporary use and occupancy of the premises and improvements herein described may be sublet by the permittee to third parties only with the prior written approval of the forest supervisor but the permittee shall continue to be responsible for compliance with all conditions of this permit by persons to whom such premises may be sublet.

16. This permit may be terminated upon breach of any of the conditions herein or at the discretion of the regional forester or the Chief, Forest Service.

17. In the event of any conflict between any of the preceding printed clauses or any provisions thereof and any of the following clauses or any provisions thereof, the following clauses will control.

18. (A-13) - A late payment charge in addition to the regular fees shall be made for failure to meet the fee payment due date or any of the dates specified for submission of statements required for fee calculation. The late payment charge shall be $15, or an amount calculated by applying the current rate prescribed by Treasury Fiscal Requirements Manual Bulletins to the overdue amount for each 30-day period or fraction thereof that the payment is overdue, whichever is greater. If the due date falls on a non-workday, the late payment charge will not apply until the end of the next workday.

19. (B-2) - During the performance of this permit, the permittee agrees:

    a. In connection with the performance of work under this permit, including construction, maintenance, and operation of the facility, the permittee shall not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin.

    b. The permittee and his employees shall not discriminate by segregation or otherwise against any person on the basis of race, color, religion, sex, or national origin by curtailing or refusing to furnish accommodations, facilities, services, or use privileges offered to the public generally.

    c. The permittee shall include and require compliance with the above nondiscrimination provisions in any subcontract made with respect to the operations under this permit.

20. (B-8) - The permittee shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of National Forest lands under this permit.

21. (C-9) - No storage or transportation of water on the National Forest lands covered by this permit shall be made until the facilities have been constructed in accordance with the approved plans and specifications, the permittee has submitted certification thereof by a registered professional engineer, and the permittee has received written approval from the Forest Service.

22. (C-12) - The Environmental Assessment previously furnished is made a part of the permit.

23. (D-3) - The permittee shall protect the scenic esthetic values of the area under this permit, and the adjacent land, as far as possible with the authorized use, during construction, operation, and maintenance of the improvements.

24. (D-4) - The permittee shall take reasonable precautions to protect, in place, all public land survey monuments, private property corners, and Forest boundary markers. In the event that any such land markers or monuments are destroyed in the exercise of the privileges authorized by this permit, depending on the type of monument destroyed, the permittee shall see that they are reestablished or referenced in accordance with (1) the procedures outlined in the "Manual of Instructions for the Survey of the Public Land of the United States," (2) the specifications of the county surveyor, or (3) the specifications of the Forest Service.

Further, the permittee shall cause such official survey records as are affected to be amended as provided by law.

25. (D-7) - The permittee shall be responsible for the prevention and control of soil erosion and gullying on the area covered by this permit and lands adjacent thereto, and shall provide preventive measures as required by the Forest Service.

26. (E-4) - Unless sooner terminated or revoked by the Regional Forester, in accordance with the provisions of the permit, this permit shall expire and become void on December 31, 1999, but a new permit to occupy and use the same National Forest land may be granted provided the permittee will comply with the then existing laws and regulations governing the occupancy and use of National Forest lands and shall have notified the Forest Supervisor not less than six months prior to said date that such new permit is desired.

27. (X-4) - This permit is issued on the condition that the permittee has secured, or will secure, the consent of any person having valid claim to the land.

28. (X-5) - The land herein described is subject to certain rights reserved by or outstanding in parties other than the United States, and nothing herein shall abridge said rights or authorize prevention or obstruction of the reasonable exercise thereof.

29. (X-6) - This permit is subject to the rights and privileges granted in mineral, oil, or gas leases covering this land which have been issued by an authorized agency of the United States, and this permit does not authorize the prevention of obstruction of the reasonable exercise of the rights and privileges granted by said mineral, oil, or gas leases.

30. (X-17) - If, during excavation work, items of substantial archeological or paleontological value are discovered, or a known deposit of such items is disturbed, the permittee will cease excavation in the area so affected. He will then notify the Forest Service and will not resume excavation until written approval is given.

31. (X-19) - The permittee agrees to permit the free and unrestricted access to and upon the premises at all times for all lawful and proper purposes not inconsistent with the intent of the permit or with the reasonable exercise and enjoyment by the permittee of the privileges thereof.

32. (X-27) - This permit covers use of land only for flooding. It is specifically understood that the shoreline touching the National Forest land and the land above the shoreline and above the normal spillway-crest water level shall remain under the jurisdiction of the Forest Service. The Forest Service reserves the right to use and permit use of the land under permit: Provided, That such use does not interfere with the purpose for which this permit is granted.

33. (X-67) - The permittee further agrees that the Forest Service representative may inspect the structures at any time and if not satisfied with the then-existing protection to control soil erosion on the dams and in and below the spillways to streambed, upon written notice thereof, the permittee shall take action to provide protection to control soil erosion. If the Forest Service is not satisfied with any safety, operation, maintenance, or other feature or physical condition of the structures and appurtenances, upon written notice thereof, the permittee shall comply with a request to correct, adjust, or change same.

34. (X-68) - Rental equipment shall not be placed on National Forest land prior to actual use or be allowed to remain on National Forest land subsequent to actual use, but shall be stored at or removed to private land: Provided, That this will not preclude storage on National Forest land under permit for equipment storage.

35. (X-81) - This permit confers no right to the use of water by the permittee.

36. Approval is also subject to the list of conditions shown under item 7 of the application (copy of Swisher application attached).

United States Department of Agriculture
Forest Service

AMENDMENT FOR SPECIAL USE PERMIT
Ref: FSM 2714

a. Record no. (1-2) 70	b. Re[illegible] -4) 04	c. Forest (5-6) 10	
d. District (7-8) 03	e. User number (9-12) 4083	f. Kind of use (13-15) 612	
THIS AMENDMENT IS ATTACHED TO AND MADE A PART OF THE [X] TERM [ ] ANNUAL PERMIT	g. State (16-17) 49	h. County (18-20) 015	k. Card no. (21) 1

For Experimental - Demonstration (KIND OF PERMIT) issued to Arco Coal Company (NAME OF PERMITTEE), on 11/10/81 (DATE OF PERMIT)

which is hereby amended as follows: Clause No. 2.

Increases the minimum annual fee to $25.00.

This Amendment is accepted subject to the conditions set forth herein, and to conditions - - - to - - - attached hereto and made a part of this Amendment.

PERMITTEE	NAME OF PERMITTEE Arco Coal Company	SIGNATURE OF AUTHORIZED OFFICER TITLE	DATE
ISSUING OFFICER	NAME AND SIGNATURE Ross E. Butler	TITLE Acting Forest Supervisor	DATE 8/31/82

GPO 826-202

2700-23 (3/72)

United States Department of Agriculture
Forest Service

SPECIAL USE PERMIT

~~Act of June 4, 1897~~

This permit is revocable and nontransferable
(Ref. FSM 2710)

Act of October 21, 1976 (P.L. 94-579)

a. Record no. (1-2)	b. Region (3-4)	c. Forest (5-6)
70	04	10
d. District (7-8)	e. User number (9-12)	f. Kind of use (13-15)
03	4083	612
g. State (16-17)	h. County (18-20)	k. Card no. (21)
49	015	1

Permission is hereby granted to Arco Coal Company

of P.O. Box 5300 - Denver, Colorado 80217

hereinafter called the permittee, to use subject to the conditions set out below, (the following described lands or improvements:

Little Bear Canyon Site: NW¼SW¼, Section 9, T16S., R7E., Parshall flume with single stage sediment sampler to be located just downstream from Little Bear Spring stabilized with concrete riprap.

Upper Mill Fork Site: SE¼SE¼, Section 18, T16S., R7E., Parshall flume with single stage sediment sampler.

Lower Mill Fork Site: NW¼NW¼, Section 22, T16S., R7E., Sharp-crested V-notch weir with single stage sediment sampler.)

Location of above sites shown on attached map

This permit covers .7 acres and/or - - miles and is issued for the purpose of: Operation of a streamflow and water quality monitoring network in the area of the Beaver Creek Coal Company's Huntington Canyon No. 4 Mine. The network is designed to assess the effects of possible subsidence and surface disturbance resulting from mining operations.

1. Construction or occupancy and use under this permit shall begin within 1 months, and construction, if any, shall be completed within 2 months, from the date of the permit. This use shall be actually exercised at least 365 days each year, unless otherwise authorized in writing.

2. In consideration for this use, the permittee shall pay to the Forest Service, U.S. Department of Agriculture, the sum of Ten Dollars ($ 10.00) for the period from November 10 19 81, to December 31, 19 81, and thereafter annually on January 1, Ten Dollars ($ 10.00):
Provided, however, Charges for this use may be made or readjusted whenever necessary to place the charges on a basis commensurate with the value of use authorized by this permit.

3. This permit is accepted subject to the conditions set forth herein, and to conditions 18 to 25 attached hereto and made a part of this permit.

	NAME OF PERMITTEE	SIGNATURE OF AUTHORIZED OFFICER	DATE
PERMITTEE	ARCO COAL COMPANY	TITLE Eng. Mgr. B.C.C.C.	11/10/81
	NAME AND SIGNATURE	TITLE	DATE
ISSUING OFFICER	Lisa E. Ruth	Acting Forest Supervisor	11/10/81

(CONTINUED ON REVERSE)

2700-4 (7/71)

SC-CL-1678

revision of layout or construction plans for this area must be approved in advance and in writing by the forest supervisor. Trees or shrubbery on the permitted area may be removed or destroyed only after the forest officer in charge has approved, and has marked or otherwise designated that which may be removed or destroyed. Timber cut or destroyed will be paid for by the permittee as follows: Merchantable timber at appraised value; young-growth timber below merchantable size at current damage appraisal value; *provided* that the Forest Service reserves the right to dispose of the merchantable timber to others than the permittee at no stumpage cost to the permittee. Trees, shrubs, and other plants may be planted in such manner and in such places about the premises as may be approved by the forest officer in charge.

5. The permittee shall maintain the improvements and premises to standards of repair, orderliness, neatness, sanitation, and safety acceptable to the forest officer in charge.

6. This permit is subject to all valid claims.

7. The permittee, in exercising the privileges granted by this permit, shall comply with the regulations of the Department of Agriculture and all Federal, State, county, and municipal laws, ordinances, or regulations which are applicable to the area or operations covered by this permit.

8. The permittee shall take all reasonable precautions to prevent and suppress forest fires. No material shall be disposed of by burning in open fires during the closed season established by law or regulation without a written permit from the forest officer in charge or his authorized agent.

9. The permittee shall exercise diligence in protecting from damage the land and property of the United States covered by and used in connection with this permit, and shall pay the United States for any damage resulting from negligence or from the violation of the terms of this permit or of any law or regulation applicable to the National Forests by the permittee, or by any agents or employees of the permittee acting within the scope of their agency or employment.

10. The permittee shall fully repair all damage, other than ordinary wear and tear, to national forest roads and trails caused by the permittee in the exercise of the privilege granted by this permit.

11. No Member of or Delegate to Congress or Resident Commissioner shall be admitted to any share or part of this agreement or to any benefit that may arise herefrom unless it is made with a corporation for its general benefit.

12. Upon abandonment, termination, revocation, or cancellation of this permit, the permittee shall remove within a reasonable time all structures and improvements except those owned by the United States, and shall restore the site, unless otherwise agreed upon in writing or in this permit. If the permittee fails to remove all such structures or improvements within a reasonable period, they shall become the property of the United States, but that will not relieve the permittee of liability for the cost of their removal and restoration of the site.

13. This permit is not transferable. If the permittee through voluntary sale or transfer, or through enforcement of contract, foreclosure, tax sale, or other valid legal proceeding shall cease to be the owner of the physical improvements other than those owned by the United States situated on the land described in this permit and is unable to furnish adequate proof of ability to redeem or otherwise reestablish title to said improvements, this permit shall be subject to cancellation. But if the person to whom title to said improvements shall have been transferred in either manner provided is qualified as a permittee and is willing that his future occupancy of the premises shall be subject to such new conditions and stipulations as existing or prospective circumstances may warrant, his continued occupancy of the premises may be authorized by permit to him if, in the opinion of the issuing officer or his successor, issuance of a permit is desirable and in the public interest.

14. In case of change of address, the permittee shall immediately notify the forest supervisor.

15. The temporary use and occupancy of the premises and improvements herein described may be sublet by the permittee to third parties only with the prior written approval of the forest supervisor but the permittee shall continue to be responsible for compliance with all conditions of this permit by persons to whom such premises may be sublet.

16. This permit may be terminated upon breach of any of the conditions herein or at the discretion of the regional forester or the Chief, Forest Service.

17. In the event of any conflict between any of the preceding printed clauses or any provisions thereof and any of the following clauses or any provisions thereof, the following clauses will control.

18. (A-13) - A late payment charge in addition to the regular fees shall be made for failure to meet the fee payment due date or any of the dates specified for submission of statements required for fee calculation. The late payment charge shall be $15, or an amount calculated by applying the current rate prescribed by Treasury Fiscal Requirements Manual Bulletins to the overdue amount for each 30-day period or fraction thereof that the payment is overdue, whichever is greater. If the due date falls on a nonworkday, the late payment charge will not apply until the end of the next workday.

19. (B-8) - The permittee shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of National Forest lands under this permit.

20. (D-2) - No waste or byproducts shall be discharged if it contains any substances in concentrations which will result in substantial harm to fish and wildlife, or to human water supplies.

    Storage facilities for materials capable of causing water pollution, if accidentally discharged, shall be located so as to prevent any spillage into waters, or channels leading into water, that would result in substantial harm to fish and wildlife or to human water supplies.

21. (D-3) - The permittee shall protect the scenic esthetic values of the area under this permit, and the adjacent land, as far as possible with the authorized use, during construction, operation, and maintenance of the improvements.

22. (D-4) - The permittee shall take reasonable precautions to protect, in place, all public land survey monuments, private property corners, and Forest boundary markers. In the event that any such land markers or monuments are destroyed in the exercise of the privileges authorized by this permit, depending on the type of monument destroyed, the permittee shall see that they are reestablished or referenced in accordance with (1) the procedures outlined in the "Manual of Instructions for the Survey of the Public Land of the United States," (2) the specifications of the county surveyor, or (3) the specifications of the Forest Service.

23. (E-4) - Unless sooner terminated or revoked by the Regional Forester, in accordance with the provisions of the permit this permit shall expire and become void on December 31, 1996, but a new permit to occupy and use the same National Forest land may be granted provided the permittee will comply with the then existing laws and regulations governing the occupancy and use of National Forest lands and shall have notified the Forest Supervisor not less than six months prior to said date that such new permit is desired.

24. (X-5) - The land herein described is subject to certain rights reserved by or outstanding in parties other than the United States, and nothing herein shall abridge said rights or authorize prevention or obstruction of the reasonable exercise thereof.

United States
Department of
Agriculture

Forest
Service

Manti-LaSal
National Forest

599 West Price River Dr.
Price, Utah 84501

Reply to: 2820
7730

Date: MAY 22, 1987

Atlantic Richfield Company
Anaconda Building
555 17th Street
Denver, Colorado 80217

Gentlemen:

The Performance Bond 8087 85 55 in the amount of $8,500.00 for the Road Use Permit is no longer needed. Enclosed is a copy of this letter for your surety, Federal Insurance Company.

Sincerely,

A.J. Frandsen

A.J. FRANDSEN
Acting Forest Supervisor

Enclosure

cc: Dan Guy - Beaver Creek Coal Company

U.S. DEPARTMENT OF AGRICULTURE
Forest Service

RECLAMATION PERFORMANCE BOND

(Minerals Operating Plan and/or Exploration Permit, Including Geothermal)

(Reference FSM 6506) Bond 8087 85 55

INSTRUCTIONS: (1) This form is authorized for use whenever a Performance Bond is required in connection with National Forest Reclamation Activity. (2) The full legal name and business address of the Principal shall be inserted in the space designated 'Principal' on the face of this form. The bond shall be signed by an authorized person. Where such person is signing in a representative capacity (e.g., an attorney-in-fact), but is not a member of the firm, partnership, or joint venture, or an officer of the corporation involved, evidence of his authority must be furnished. (3) Corporations executing the bond as sureties must be among those appearing on the Treasury Department's list of approved sureties and must be acting within the limitations set forth therein. (4) Corporations executing the bond shall affix their corporate seals. Individuals shall execute the bond opposite the work 'Seal', and, if executed in Maine or New Hampshire, shall also affix an adhesive seal. (5) The name of each person signing this bond should be typed in the space provided.

Principal *(Legal name and business address)*

Atlantic Richfield Company
Anaconda Building
555 17th St
Denver, CO 80217

Date Bond Executed

July 2, 1981

Type of Organization *(X Appropriate Box)*

- [ ] Individual
- [ ] Partnership
- [ ] Joint Venture
- [X] Corporation

Surety(ies) *(Name(s) and business address(es))*

Federal Insurance Company
1385 S Colo. Blvd. #616
Denver, CO 80222

State of Incorporation

Pennsylvania

PENAL SUM OF BOND

Million(s) $	Thousand(s) $	Hundred(s) $
	8	500

KNOW ALL MEN BY THESE PRESENTS, That we, the Principal and Surety(ies) hereto, are firmly bound to the United States of America (hereinafter called the Government) in the above penal sum for the payment of which we bind ourselves, and each of our heirs, executors, administrators, and successors, jointly and severally: Provided, That, where the Sureties are corporations acting as co-sureties, we, the Sureties, bind ourselves in such sum 'jointly and severally' as well as 'severally' only for the purpose of allowing a joint action or actions against any or all of us, and for all other purposes each Surety binds itself, jointly and severally with the Principal, for the payment of such sum only as is set forth opposite the name of such Surety, but if no limit of liability is indicated, the limit of liability shall be the full amount of the penal sum.

SCHEDULE OF OPERATING PLANS - REGION _____

Name of National Forest	Operating Plan Number	Date	Amount Allocated to Operating Plan ($)	Amount of Allocated Restored ($)	Date Restored	Unallocated Balance ($)
Manti-La-Sal						

THE CONDITION OF THIS OBLIGATION IS SUCH, That whereas the Principal has an interest in the Operating Plans identified in the Schedule of Operating Plans above; and

WHEREAS, the Principal and Surety agree that, without notice of the surety, the coverage of this bond, in addition to the present operating plans of the Principal, shall extend to and include:

1. Any operating plan approved by the Forest Service and issued to the Principal in the Region or Forests named above, or later named in a rider, the coverage to become effective immediately upon approval by the Forest Service.

2. Any operating plan hereafter approved by the Forest Service in the Region or Forests named above, to become effective immediately upon approval by the Forest Service.

3. Any extension of the operating plan, such coverage to continue without interruption due to expiration of the operating plan.

4. Any modification of an operating plan, include obligations thereunder, whether made by agreement, suspension of operations, or otherwise; and

WHEREAS, the Principal and Surety hereby agree that notwithstanding the termination of any operating plan covered by this bond, the bond shall remain in full force and effect as to all remaining operating plans covered by this bond.

NOW, THEREFORE, if the Principal shall: Perform and fulfill all the reclamation provisions of all operating plans referred to in the Schedule of Operating Plans and shall also perform and fulfill all the reclamation provisions of any and all duly authorized modifications of said operating plans that may hereafter be made, then the above obligations are to be void; otherwise to remain in full force and effect.

IN WITNESS WHEREOF, the Principal and Surety(ies) have executed this reclamation bond and have affixed their seals on the date set forth above.

PRINCIPAL			
Signature(s)	1. (Seal)	2. (Seal)	Corporate Seal
Name(s) and Titles (Typed)	1.	2.	

SURETY(IES)				
Name and Address	Federal Insurance Company 1385 S Colo. Blvd. #616 Denver, CO 80222	State of Inc. N.J.	Liability Limit	Corporate Seal
Signature(s)	1. Marjory Davis	2.		
Name(s) and Titles) (Typed)	1. Marjory Davis Attorney-in-Fact	2.		

Bond Premium	Rate Per Thousand $ 3.75	Total $ 31.87

Remarks

Certified Copy of

POWER OF ATTORNEY

Know all Men by these Presents, That the FEDERAL INSURANCE COMPANY, 100 William Street, New York, New York, a New Jersey Corporation, has constituted and appointed, and does hereby constitute and appoint

Robert W. Whitman, Marjory Davis, Robert E. Duncan and Bruce Bonar of Denver, Colorado----------

each its true and lawful Attorney-in-Fact to execute under such designation in its name and to affix its corporate seal to and deliver for and on its behalf as surety thereon or otherwise, bonds or obligations given or executed in the course of its business, and any instruments amending or altering the same, and consents to the modification or alteration of any instruments referred to in said bonds or obligations.

In Witness Whereof, the said FEDERAL INSURANCE COMPANY has, pursuant to its By-Laws, caused these presents to be signed by its Assistant Vice-President and Assistant Secretary and its corporate seal to be hereto affixed this 16th day of December 19 80.

FEDERAL INSURANCE COMPANY
By

George McClellan
Assistant Vice-President

Richard D. O'Connor
Assistant Secretary

STATE OF NEW JERSEY
County of Essex } ss:

On this 16th day of December 19 80, before me personally came Richard D. O'Connor to me known and by me known to be Assistant Secretary of the FEDERAL INSURANCE COMPANY, the corporation described in and which executed the foregoing Power of Attorney, and the said Richard D. O'Connor being by me duly sworn, did depose and say that he is Assistant Secretary of the FEDERAL INSURANCE COMPANY and knows the corporate seal thereof; that the seal affixed to the foregoing Power of Attorney is such corporate seal and was thereto affixed by authority of the By-Laws of said Company, and that he signed said Power of Attorney as Assistant Secretary of said Company by like authority; and that he is acquainted with George McClellan and knows him to be the Assistant Vice-President of said Company, and that the signature of said George McClellan subscribed to said Power of Attorney is in the genuine handwriting of said George McClellan and was thereto subscribed by authority of said By-Laws and in deponent's presence.

Acknowledged and Sworn to before me on the date above written.

Notary Public

PATRICIA RYAN
NOTARY PUBLIC OF NEW JERSEY
My Commission Expires December 11, 19 83

Form 21-10-41 (Ed. 10-74) (NYSO)

CITY OF SHORT HILLS }
County of Essex } ss.

I, the undersigned, Assistant Secretary of the FEDERAL INSURANCE COMPANY, do hereby certify that the following is a true excerpt from the By-Laws of the said Company as adopted by its Board of Directors on March 11, 1953 and amended May 27, 1971 and that this By-Law is in full force and effect

"ARTICLE XVIII.

Section 2. All bonds, undertakings, contracts and other instruments other than as above for and on behalf of the Company which it is authorized by law or its charter to execute, may and shall be executed in the name and on behalf of the Company either by the Chairman or the Vice-Chairman or the President or a Vice-President, jointly with the Secretary or an Assistant Secretary, under their respective designations, except that any one or more officers or attorneys-in-fact designated in any resolution of the Board of Directors or the Executive Committee, or in any power of attorney executed as provided for in Section 3 below, may execute any such bond, undertaking or other obligation as provided in such resolution or power of attorney.

Section 3. All powers of attorney for and on behalf of the Company may and shall be executed in the name and on behalf of the Company, either by the Chairman or the Vice-Chairman or the President or a Vice-President or an Assistant Vice-President, jointly with the Secretary or an Assistant Secretary, under their respective designations."

And I further certify that I have compared the foregoing copy of the POWER OF ATTORNEY with the original thereof and the same is a correct and true copy of the whole of said original Power of Attorney and that said Power of Attorney has not been revoked.

And I further certify that said FEDERAL INSURANCE COMPANY is duly licensed to transact fidelity and surety business in each of the States of the United States of America, District of Columbia, Puerto Rico, and each of the Provinces of Canada with the exception of Prince Edward Island; and is also duly licensed to become sole surety on bonds, undertakings, etc., permitted or required by law.

Given under my hand and the seal of said Company at Short Hills, N.J., this 2nd day of July, 19 81.

Cecelia D. Hernandez
Assistant Secretary

BOND

Mountain Coal Company
West Elk Mine
Post Office Box 591
Somerset, Colorado 81434
Telephone 303 929-5015
Fax 303 929-5595

RECEIVED
DEC 13 1993
DIVISION OF
OIL, GAS & MINING

December 6, 1993

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

Re: Application for Partial Bond Release
Huntington Canyon No. 4 Mine
INA/015/004, UT-004
Emery County, Utah

Dear Mr. Braxton,

Mountain Coal Company has completed Phase II of the approved reclamation plan for the Huntington Canyon No. 4 Mine. This is based upon the establishment of revegetation and sediment control in accordance with the approved reclamation plan, as verified in the attached 1993 Vegetation Monitoring Report and Sediment Production Evaluation.

In accordance with the provisions of R645-301-880, Mountain Coal Company is hereby applying for partial release of the performance bond. The original bond posted for this property was $216,062.40, (60%) was released on November 10, 1986 upon approval of Phase I Bond Release. The present bond posted for this site is $144,041.60. Mountain Coal Company is hereby applying for release of an additional 30% of the original bond, or $108,031.20. This will leave an amount of $36,010.40 to be held until final bond release. The disturbed area for this site was 12.29 acres, with an affected area of approximately 37 acres. The remaining bond would provide for approximately $2,930.06/acre of disturbed area or $973.25/acre of affected area.

Copies of letters for notification to land owners, agencies, and water companies in the area are enclosed. A copy of the newspaper advertisement placed prior to submittal of this application is enclosed. This advertisement ran for four consecutive weeks in the local area papers. Proof of publication is also enclosed.

STATE #ACT/015/004

ORIGINAL

R I D E R

RIDER to be attached to and form a part of Bond Number U-630694

on behalf of BEAVER CREEK COAL COMPANY
(Name)

555 SEVENTEENTH STREET, DENVER, COLORADO 80202
(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 ONE HUNDRED FORTY-FOUR THOUSAND FORTY-ONE AND 60/100----------

Dollars ($ 144,041.60) effective JULY 8, 19 88.

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

STATE OF UTAH
NATURAL RESOURCES
Oil, Gas & Mining

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

355 W. North Temple • 3 Triad Center • Suite 350 • Salt Lake City, UT 84180-1203 • 801-538-5340

November 10, 1986

Ms. Mary Cristaudo
Bonding Representative
Grant Hatch & Associates, Inc.
P. O. Box 11809
Salt Lake City, Utah 84147

Dear Ms. Cristaudo:

Re: Phase I Bond Release, Beaver Creek Coal Company, Huntington #4 Mine, INA/015/004, Folder #5, Emery County, Utah

The Division hereby approves the Phase I bond release of $216,062.40, or 60 percent of the bond for the Huntington #4 Mine. This bond release is effective as of November 10, 1986.

Thank you for your cooperation.

Best regards,

Lowell P. Braxton
Administrator
Mineral Resource Development
and Reclamation Program

PGL/djh
cc: D. Guy, BCCC
P. Grubaugh-Littig
J. Whitehead
8808R/9

an equal opportunity employer

PRINCIPAL

Bond No. U-630694

Signed and executed this 14th day of June, 1988:

By: Charles B Smith

TITLE: Vice President

State of Colorado)
) SS.
County of Denver)

The foregoing instrument was acknowledged before me by Charles B. Smith, this 14th day of June, 1988.

Witness my hand and official seal.

Olivia [illegible]
(Notary Public or other authorized officer)

My Commission Expires: Aug 28 1991

SURETY

Signed and executed this 18TH day of MAY, 1988:

By: DANIEL ORTIZ

TITLE: ATTORNEY-IN-FACT

State of CALIFORNIA)
) SS.
County of LOS ANGELES)

The foregoing instrument was acknowledged before me by DANIEL ORTIZ, ATTORNEY-IN-FACT, this 18TH day of MAY, 1988.

Witness my hand and official seal.

OFFICIAL SEAL
CORA V. RODRIGUEZ
NOTARY PUBLIC - CALIFORNIA
PRINCIPAL OFFICE IN
LOS ANGELES COUNTY
My Commission Expires March 24, 1989

Cora V. Rodriguez
(Notary Public or other authorized officer)
CORA V. RODRIGUEZ

My Commission Expires: MARCH 24, 1989

RESIDENT AGENT FOR SERVICE

Resident Agent: _____ Date: _____
(Signature)

_____ Address: _____
(Printed Name)

Approved as to form and execution:

_____
Attorney General

By: _____ Date: _____
Assistant

APPROVED: _____ Date: _____
Coordinator of Mined Land Development

Permit No. _____

RECEIVED
JUN 17 1998
DIVISION OF
OIL, GAS & MINING

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

THE MINED LANDS RECLAMATION ACT BOND

****

BOND NO. U-630694

Know all men by these presents, that we the undersigned, BEAVER CREEK COAL COMPANY

(State name and form of business organization of the Permit Applicant)

duly authorized to do business in the State of Utah, AS PRINCIPAL, and UNITED PACIFIC INSURANCE COMPANY

a corporation organized and existing under the laws of the State of Washington and duly authorized to do business in the State of Utah, AS SURETY, are held and firmly bound unto the STATE OF UTAH, DIVISION OF OIL, GAS, AND MINING, in the sum of ONE HUNDRED FORTY FOUR THOUSAND FORTY-ONE DOLLARS AND 60/100 DOLLARS ($144,041.60), lawful money of the United States, to be paid to the State of Utah, Division of Oil, Gas, and Mining and the United States Department of the Interior, Office of Surface Mining, upon order of forfeiture by the State of Utah, Division of Oil, Gas, and Mining, for the payment of which sum, well and truly to be made, we hereby jointly and severally bind ourselves, our heirs, executors, administrators, successors, and assigns.

THE CONDITION OF THE ABOVE OBLIGATION IS SUCH that whereas the above named principal did on the 16th day of March, 1976, file with the Division of Oil, Gas, and Mining a "Notice of Intention to Commence Mining Operations" and a "Mining and Reclamation Plan", to secure authorization to engage in mining operations in the State of Utah, under the terms and provisions of the Mined Land Reclamation Act; that in said Notice the principal estimated that 1,320.46 acres of land wil be affected by mining. Said land is described as follows:

All of Section 16	T16S, R7E	640 acres more or less
E/2 Section 17	T16S, R7E	320 acres more or less
SW/4 Section 8	T16S, R7E	160 acres more or less
S/2SE/4 Section 8	T16S, R7E	80 acres more or less
S/2S/2 less SE/4SE/4 Section 9	T16S, R7E	120 acres more or less
Pumping facility beginning at a point 555 feet west and 85 feet south of the NE corner of the NE/4, Section 21, thence 100 feet south, thence 200 feet west, thence 100 feet north, thence 200 feet east to point of beginning.	T16S, R7E	0.46 acres more or less

All above lands in Emery County, Utah

Now, therefore, the conditions of the obligation are such that, this bond shall remain in full force and effect until either released or forfeited pursuant to the provisions of the Utah Mined Land Reclamation Act and the Surface Mining Control and Reclamation Act of 1977 PL(95-87) and any rules and regulations adopted pursuant to said Acts.

(THIS BOND REPLACES FEDERAL INSURANCE COMPANY BOND NUMBER 8082-89-88)

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

DANIEL ORTIZ 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, 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 1987

UNITED PACIFIC INSURANCE COMPANY

Charles B. Schmalz

Vice President

STATE OF Washington
COUNTY OF King } ss.

On this 23rd day of June, 1987 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, 1990

Pamela Young

Notary Public in and for State of Washington

Residing at Tacoma

I, Lawrence W. Carlstrom, 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 18TH day of MAY 1988

Assistant Secretary

Lawrence W. Carlstrom

SOU-1431 Ed. 4/89

LIABILITY INSURANCE

ERTIFICATE OF INSURANCE 01-18-93 ejl

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

CIGNA Property and Casualty Companies

Original in Filing File - Copy #4

CIGNA

ORIGINAL

ACT/015/004

COMPANY CODES Copy Pam

[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

[8] CIGNA INS. CO. OF OHIO

[ ] (OTHER, — SPECIFY)

FOLD

hi :o 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 84180-1203

Susan - FYI, ~~then return one~~.

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]			
Contractual, (Specific type as described 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 *) [ ] 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)
Huntington Canyon #4 Mine INA/015/004

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

#4

Mountain Coal Company
West Elk Mine
Post Office Box 591
Somerset, Colorado 81434
Telephone 303 929-5015
Fax 303 929-5595

January 25, 1994

Ms. Pamela Grubaugh-Littig
Permit Supervisor
Utah Division of Oil, Gas and Mining
355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203

Dear Ms. Littig:

Enclosed are the results of the Mountain Coal Company Water Monitoring for the Fourth Quarter of 1993.

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

Respectfully,

Dan W. Guy for
Kathy Welt, MCC

DWG/db

Enclosures

cc: Kathy Welt, MCC
File
WTRMON

E.I.S. Hydrology
Field Measurements Form

Date 10/23/93 Station # [illegible]

Company [illegible]

Time 12:00

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 [illegible]

When Sample or Measurements Not Taken:

Reason:

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

SYNTHESIZED LAB # 1023930

WATER MONITORING REPORT

Property: BCCC #4 Mine
Station: 4-3W
Location: Upper Mill Fork
Type: E. Stream
Frequency: Quarterly

Field Measurements	Date Sampled 03/04/93	06/10/93	08/03/93	10/23/93	Mean
Flow [gpm]	N/A	550.00	DRY	DRY	550.00
PH		8.50			8.50
Sp. Cond. [ohms]		300.00			300.00
Temp. [C]		4.50			4.50
Diss. O [ppm]		7.80			7.80
Lab. Meas. [mg/l]					
TDS		250.00			250.00
TSS		64.00			64.00
Al CaCO3		235.00			235.00
Hd CaCO3		228.00			228.00
HCO3		286.00			286.00
CO3		0.00			0.00
Cl		3.20			3.20
SO4		17.00			17.00
Ca		58.00			58.00
Mg		20.00			20.00
K		3.90			3.90
Na		6.40			6.40
Cat/An		2.19			2.19
Fe		0.22			0.22
Mn		<0.02			<0.02

E.I.S. Hydrology
Field Measurements Form

Date 10/23/93 Station # 4-6W

Company NN. Coal

Time 11:10

Flow/Depth D

pH

Specific Conductivity

Water Temperature

Air Temperature

Dissolved Oxygen

Type: Spring ___ Stream ___ Well ___ Discharge D 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 = Dry F = Frozen N/A = Not Accessable N/R = Not Required

SYN LAB # 1023931

E.I.S. Hydrology
Field Measurements Form

Date 11/8/93 Station # 4-6W

Company M.V. Coal

Time 9:10

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

When Sample or Measurements Not Taken:

Reason:

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

SYN LAB # 1108930

E.I.S. Hydrology
Field Measurements Form

Date 12/15/93 Station # 4-6W

Company Mt. Coal

Time 12:40

Flow/Depth D

pH N/A

Specific Conductivity

Water Temperature

Air Temperature 27°

Dissolved Oxygen

Type: Spring___ Stream___ Well___ Discharge ✓ NPDES___

Collection Point Inflow to Pond #4

Appearance of Water: Clear___ Milky___ Cloudy___ Opaque___

Quality Sample Taken: Yes___ No ✓

Pump Reading

Comments 6" to 8" Snow in channel.

Field Monitor [signature]

When Sample or Measurements Not Taken:

Reason: D

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

SYN LAB # 1215930

WATER MONITORING REPORT

Property: BCCC #4 Mine
Station: 4-6W
Location: Inflow to Sed. Pond
Type: Surface Runoff
Frequency: Monthly

Field Measurements	Date Sampled 01/07/93	02/08/93	03/04/93	04/14/93	05/20/93	06/01/93	07/24/93	08/03/93	09/22/93	10/23/93	11/08/93
Flow [gpm]	N/A	N/A	N/A	N/A	DRY	DRY	DRY	DRY	DRY	DRY	DRY
PH											
Sp.Con. [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											

12/15/93	Mean
DRY	DRY

E.I.S. Hydrology
Field Measurements Form

Date 10/23/93 Station # 4-7W

Company [illegible]

Time 11:10

Flow/Depth [illegible]

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 [illegible]

When Sample or Measurements Not Taken:

Reason:

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

SYN LAB # 1025930

E.I.S. Hydrology
Field Measurements Form

Date 11/8/93 Station # 4-7W

Company MH Coal

Time 9:10

Flow/Depth D

pH

Specific Conductivity

Water Temperature

Air Temperature

Dissolved Oxygen

Type: Spring___ Stream___ Well___ Discharge___ NPDES___

Collection Point Pond outflow

Appearance of Water: Clear___ Milky___ Cloudy___ Opaque___

Quality Sample Taken: Yes___ No ✓

Pump Reading

Comments

Field Monitor

When Sample or Measurements Not Taken:

Reason:

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

SYN LAB # 1108931

E.I.S. Hydrology
Field Measurements Form

Date 12/15/93 Station # 4-7W

Company Mt. Coal.

Time 12:40

Flow/Depth Ø

pH

Specific Conductivity

Water Temperature

Air Temperature 27

Dissolved Oxygen

Type: Spring___ Stream___ Well___ Discharge___ NPDES Ø

Collection Point Pond outflow

Appearance of Water: Clear___ Milky___ Cloudy___ Opaque___

Quality Sample Taken: Yes___ No Ø

Pump Reading

Comments Snow Covered - 6" Rip-Rap in evidence.

Field Monitor J.M.C. Loomis

When Sample or Measurements Not Taken:

Reason: Ø

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

SYN LAB # 1215931

WATER MONITORING REPORT

Property: BCCC #4 Mine
Station: 4-7W
Location: Sed. Pond Discharge
Type: NPDES
Frequency: Monthly

Field Measurements	Date Sampled 01/08/93	02/08/93	03/04/93	04/14/93	05/20/93	06/01/93	07/24/93	08/03/93	09/22/93	10/23/93	11/08/93
Flow [gpm]	N/A	N/A	N/A	N/A	DRY	DRY	DRY	DRY	DRY	DRY	DRY
PH											
Sp.Con. [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											

12/15/93	Mean
DRY	DRY

E.I.S. Hydrology
Field Measurements Form

Date 10/23/03 Station # [illegible]

Company Hunt Coal

Time Dry

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 [illegible]

When Sample or Measurements Not Taken:

Reason:

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

SynLab # 1023932

WATER MONITORING REPORT

Property: BCCC #4 Mine
Station: 4-8W
Location: Lower Mill Fork
Type: Int. Stream
Frequency: Quarterly

Field Measurements	Date Sampled 03/04/93	06/01/93	08/03/93	10/23/93	Mean
Flow [gpm]	N/A	570.00	DRY	DRY	570.00
PH		8.50			8.50
Sp. Cond. [ohms]		300.00			300.00
Temp. [C]		4.50			4.50
Diss. O [ppm]		7.80			7.80
Lab. Meas. [mg/l]					
TDS		274.00			274.00
TSS		152.00			152.00
Al CaCO3		243.00			243.00
Hd CaCO3		247.00			247.00
HCO3		297.00			297.00
CO3		0.00			0.00
Cl		4.00			4.00
SO4		27.00			27.00
Ca		62.00			62.00
Mg		23.00			23.00
K		4.70			4.70
Na		8.00			8.00
Cat/An		1.28			1.28
Fe		0.71			0.71
Mn		0.05			0.05
Oil & Grease		0.39			0.39

CASTLE VALLEY SPECIAL SERVICE DISTRICT

P.O. BOX 877
CASTLE DALE, UTAH 84513
TELEPHONE (801) 381-5333

FAX # (801) 381 2522

DORR W. HANSON
Chairman
DARREL V. LEAMASTER
Manager

FAX TRANSMITTAL

To: Dan Guy FAX # 637-2431

Agency/Firm

Phone Number

Number of Pages to Follow 4

Subject Information you requested on the Little Bear Spring

FROM

FORD ANALYTICAL LABORATORIES

CHEMICAL AND BACTERIOLOGICAL ANALYSIS

DATE: 01/20/93 CERTIFICATE OF ANALYSIS

CASTLE VALLEY SPEC.
SERVICES % LEAMASTER
P.O. BOX 877
CASTLE DALE,UT 84513

93-028522

SAMPLE: DRINKING WATER SAMPLE FROM LITTLE BEAR SPRING COLLECTED 11-24-92, 11:50 A.M. RECEIVED 11-25-92 FOR COMPLETE INORGANIC ANALYSIS STARTING AT 11:45 A.M.

	RESULTS	REPORTING LIMIT
Alkalinity,CaCO3 mgl EPA310.2	272	5.0
Aluminum Al mg/l EPA 200.7	BRL	.05
Ammonia, NH3-N mg/l EPA350.1	BRL	.05
Antimony Sb mg/l EPA 204.2	.065	.003
Arsenic As mg/l EPA 206.2	<.002	.001
Barium Ba mg/l EPA 200.7	.061	.002
Beryllium Be mg/l EPA 210.2	BRL	.004
Bicarbonate,HCO3 mg/l FLM201	331	.1
Boron B mg/l EPA 200.7	BRL	.01
Cadmium Cd mg/l EPA 213.1	BRL	.004
Calcium Ca mg/l EPA 200.7	48.2	.01
Carbonate as CO3 mg/l FLM201	.4	.10
Chloride, Cl mg/l EPA 300	4.52	.50
Chromium Cr mg/l EPA 218.1	BRL	.03
Chromium Cr.Hex mg/l EPA7196	BRL	.005
Cond. umhos/cm EPA 120.1	405	.1
Copper Cu mg/l EPA 220.1	BRL	.03

LITTLE BEAR SPRING H_2O LAB DATA

All reports are submitted as the confidential property of clients. Authorization for publication of our reports, conclusions, or, extracts from or regarding them, is reserved pending our written approval as a mutual protection to clients, the public and ourselves.

40 West Louise Avenue • Salt Lake City, Utah 84115 • PHONE (801) 466-8761 • FAX (801) 466-8763

FORD ANALYTICAL LABORATORIES

CHEMICAL AND BACTERIOLOGICAL ANALYSIS

CERTIFICATE OF ANALYSIS

93-028522

	RESULTS	REPORTING LIMIT
Cyanide Cn tot.mg/l EPA 335.2	BRL	.050
Fluoride, F mg/l EPA 340.2	BRL	.10
Hardness,CaC03 mg/l EPA 242	173	1.0
Hydroxide as OH mg/l FLM201	BRL	.10
Iron Fe Dis mg/l EPA 236.1	BRL	.03
Iron Fe mg/l EPA 236.1	.06	.03
Lead Pb mg/l EPA 239.2	BRL	.001
Magnesium Mg mg/l EPA 200.7	38.2	.030
Manganese Mn mg/l EPA 243.1	<.002	.001
Mercury, Hg mg/l EPA 245.1	BRL	.0005
Nickel Ni mg/l EPA 249.1	.04	.03
Nitrate NO3-N mg/l EPA 300	.34	.10
Nitrite NO2-N mg/l EPA 354	BRL	.01
Phosphate PO4-P mg/l EPA 300	BRL	.10
Potassium K mg/l EPA 200.7	1.86	.05
Selenium Se mg/l EPA 270.2	BRL	.002
Silica SiO2 mg/l EPA 200.7	5.96	.08
Silver Ag mg/l EPA 272.1	BRL	.01
Sodium Na mg/l EPA 200.7	7.25	.029

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FORD ANALYTICAL LABORATORIES

CHEMICAL AND BACTERIOLOGICAL ANALYSIS

 CERTIFICATE OF ANALYSIS

93-028522

	RESULTS	REPORTING LIMIT
Sulfate SO4 mg/l EPA 300	34.9	.5
Surfactants ppm EPA 425.1	<.4	.05
Thallium Tl mg/l EPA 279.1	.19	.03
Tot.Dis.Solids mg/l EPA 160.1	312	.1
Turbidity NTU EPA 180.1	BRL	.50
Zinc Zn mg/l EPA 289.1	.022	.005
pH Units EPA 150.1	7.4	

FORD ANALYTICAL LABORATORIES

* BRL - INDICATES BELOW REPORTING LIMIT *
** < - INDICATES THE SMALLEST QUANTITY DETECTABLE DUE TO REQUIRED DILUTION **

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FORD ANALYTICAL LABORATORIES

CHEMICAL AND BACTERIOLOGICAL ANALYSIS

CERTIFICATE OF ANALYSIS

DATE: 01/19/93

CASTLE VALLEY SPEC.
SERVICES % LEAMASTER
P.O. BOX 877
CASTLE DALE,UT 84513

93-292751

SAMPLE: WATER SAMPLE FROM HUNTINGTON PLANT RAW WATER COLLECTED 12-21-92, 3:15 P.M. RECEIVED 12-28-92 FOR ASBESTOS ANALYSIS.

	RESULTS	REPORTING LIMIT
Asbestos microns	BRL	10

FORD ANALYTICAL LABORATORIES

* BRL - INDICATES BELOW REPORTING LIMIT *
** < - INDICATES THE SMALLEST QUANTITY DETECTABLE DUE TO REQUIRED DILUTION **

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40 West Louise Avenue • Salt Lake City, Utah 84115 • PHONE (801) 466-8761 • FAX (801) 466-8763

U.P.D.E.S.

DISCHARGE DATA

Mountain Coal Company
West Elk Mine
Post Office Box 591
Somerset, Colorado 81434
Telephone 303 929-5015
Fax 303 929-5595

January 25, 1994

Mr. Donald A Hilden, PH.D., Chief
Permits and Compliance Section
Department of Environmental Quality
Division of Water Quality
288 North 1460 West
P.O. Box 144870
Salt Lake City, Utah 84114-4870

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 cover the Fourth Quarter of 1993.

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

Respectfully,

Dan W. Guy for
Kathy Welt, MCC

Enclosures

DWG/db

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

Mountain Coal Company
West Elk Mine
Post Office Box 591
Somerset, Colorado 81434
Telephone 303 929-5015
Fax 303 929-5595

January 25, 1994

Ms. Donna Franklin
U.S.E.P.A., Region VIII
999 18th Street
Denver Place - Suite 500 WM-C
Denver, Colorado 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 cover the Fourth Quarter of 1993.

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

Respectfully,

Dan W. Guy for
Kathy Welt, MCC

Enclosures

DWG/db

cc: Lowell Braxton, UDOGM
Donald Hilden, D.E.Q.
Kathy Welt, Mountain Coal Co.
File

Mountain Coal Company
West Elk Mine
Post Office Box 591
Somerset, Colorado 81434
Telephone 303 929-5015
Fax 303 929-5595

January 25, 1994

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

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 cover the Fourth Quarter of 1993.

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

Respectfully,

Dan W. Guy for
Kathy Welt, MCC

Enclosures

DWG/db

cc: Donna Franklin, E.P.A.
Donald Hilden, D.E.Q.
Kathy Welt, Mountain Coal Co.
File

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

NAME MOUNTAIN COAL COMPANY

ADDRESS P.O. BOX 591

SOMERSET CO 81434

FACILITY

LOCATION

ATTN: KATHLEEN WELT

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

(2-16) UTG040015 PERMIT NUMBER

(17-19) 001 A DISCHARGE NUMBER

MINOR

F - FINAL

WITHIN FOREST SVC BOUNDARY

Form Approved.
OMB No. 2040-0004
Approval expires 10-31-94

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	93	10	01	TO	93	12	31
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

*** NO DISCHARGE |X| ***

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			(07)	******	******	******				
00056 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	REPORT 30DA AVG	REPORT DAILY MX	GPD	******	******	******	**** ****			
PH	SAMPLE MEASUREMENT	******	******			******		(12)			
00400 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	******	******	**** ****	6.5 DAILY MN	******	9.0 DAILY MX	SU		TWICE MONTH	
SOLIDS, TOTAL SUSPENDED	SAMPLE MEASUREMENT	******	******		******			(19)			
00530 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	******	******	**** ****	******	25 30DA AVG	70 DAILY MX	MG/L		ONCE/QUAR MONTH	
SOLIDS, SETTLEABLE	SAMPLE MEASUREMENT	******	******		******	******		(25)			
00545 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	******	******	**** ****	******	******	0.5 DAILY MX	ML/L		ONCE/QUAR MONTH	
OIL AND GREASE FREON EXTR-GRAV METH	SAMPLE MEASUREMENT	******	******		******	******		(19)			
00556 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	******	******	**** ****	******	******	10 DAILY MX	MG/L		ONCE/QUAR MONTH	
IRON, TOTAL (AS FE)	SAMPLE MEASUREMENT	******	******		******	******		(19)			
01045 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	******	******	**** ****	******	******	2.0 DAILY MX	MG/L		ONCE/QUAR MONTH	
SOLIDS, TOTAL DISSOLVED	SAMPLE MEASUREMENT	******		(26)	******	******		(19)			
70295 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	******	2000 DAILY MX	LBS/DY	******	******	REPORT DAILY MX	MG/L		ONCE/QUAR MONTH	

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 OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE		DATE		
801	637-2422	94	01	25
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 APPROPRIATE ROW.

Mountain Coal Company
West Elk Mine
Post Office Box 591
Somerset, Colorado 81434
Telephone 303 929-5015
Fax 303 929-5595

July 30, 1993

Mr. Donald A Hilden, PH.D., Chief
Permits and Compliance Section
Department of Environmental Quality
Division of Water Quality
288 North 1460 West
P.O. Box 144870
Salt Lake City, Utah 84114-4870

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 cover the Second Quarter of 1993.

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

Respectfully,

Dan W. Guy

Dan W. Guy for
Kathy Welt, MCC

Enclosures

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

DWG/cr

Mountain Coal Company
West Elk Mine
Post Office Box 591
Somerset, Colorado 81434
Telephone 303 929-5015
Fax 303 929-5595

July 30, 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 cover the Second Quarter of 1993.

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

Respectfully,

Dan W. Guy for
Kathy Welt, MCC

Enclosures

cc: LowellBraxton, UDOGM
Donald Hilden, D.E.Q.
Kathy Welt, Mountain Coal Co.
File

DWG/cr

Mountain Coal Company
West Elk Mine
Post Office Box 591
Somerset, Colorado 81434
Telephone 303 929-5015
Fax 303 929-5595

July 30, 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 cover the Second Quarter of 1993.

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

Respectfully,

Dan W. Guy for
Kathy Welt, MCC

Enclosures

cc: Donna Franklin, E.P.A.
Donald Hilden, D.E.Q.
Kathy Welt, Mountain Coal Co.
File

DWG:cr

BLACKHAWK ENGINEERING, CO.

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

April 29, 1993

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

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 preprinted DMR's provided by the State of Utah, and cover the first quarter of 1993.

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

Sincerely,

Dan W. Guy

Dan W. Guy,
President

Enclosures

cc: Donna Franklin, E.P.A.
Donald Hilden, D.E.Q.
Kathy Welt, Mountain Coal Co.
File

PERMITTEE NAME / Facility Name/Location — RESS (Include erent)

NAME: BEAV CREEK COAL - #4 MINE

ADDRESS: P.O. BOX 1378

PRICE UT 84501

FACILITY

LOCATION

ATTN: DAN W. GUY, MANAGER

NATIONAL POLLUTAN HARGE ELIMINATION SYSTEM (NPDES)

DISCHARG NITORING REPORT (DMR)

(2-1((17-19)

UTG040015 — PERMIT NUMBER

001 A — DISCHARGE NUMBER

F - FINAL

SED PND OTFL-DRNG DTCH/PRC RVR

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	93	04	01	TO	93	06	30
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

2nd Quarter

MINOR

NOTE: Read instructions before completing this form.

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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	[illegible]	[illegible]	YES=1 NO=0	******	******	******	**** ****		ONCE/ MONTH	VISUAL

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.)

Dan W. Guy

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE		DATE		
801	637-2422	93	7	27
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
NAME BEAV CREEK COAL - #4 MINE
ADDRESS P.O. BOX 1378
PRICE UT 84501

FACILITY
LOCATION
ATTN: DAN H. SUY, MANAGER

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

(2-16) UTG040015 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	93	04	01	TO	93	06	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)
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										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

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.)

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE		DATE		
801	637-2422	93	7	27
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 / ADDRESS (Include Facility Name, Location if different)

NAME: MOUNTAIN COAL COMPANY

ADDRESS: P.O. BOX 591

SOMERSET CO 81434

FACILITY

LOCATION

ATTN: KATHLEEN WELT

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

(2-16) UTG040015 — PERMIT NUMBER

(17-19) 001 A — DISCHARGE NUMBER

MINOR

F - FINAL

WITHIN FOREST SVC BOUNDARY

Form Approved. OMB No. 2040-0004 Approval Expires 1-31-95

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	93	08	01	TO	93	09	30
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

*** NO DISCHARGE |X| ***

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			(07)	******	******	******				
00056 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	REPORT 30DA AVG	REPORT DAILY MX	GPD	******	******	******	**** ****		ONCE/MEASRL MONTH	
PH	SAMPLE MEASUREMENT	******	******			******		(12)			
00400 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	******	******	**** ****	6.5 DAILY MN	******	9.0 DAILY MX	SU		TWICE/GRAB MONTH	
SOLIDS, TOTAL SUSPENDED	SAMPLE MEASUREMENT	******	******		******			(19)			
00530 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	******	******	**** ****	******	25 30DA AVG	70 DAILY MX	MG/L		ONCE/ GRAB MONTH	
SOLIDS, SETTLEABLE	SAMPLE MEASUREMENT	******	******		******	******		(25)			
00545 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	******	******	**** ****	******	******	0.5 DAILY MX	ML/L		ONCE/ GRAB MONTH	
OIL AND GREASE FREON EXTR-GRAV METH	SAMPLE MEASUREMENT	******	******		******	******		(19)			
00556 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	******	******	**** ****	******	******	10 DAILY MX	MG/L		ONCE/ GRAB MONTH	
IRON, TOTAL (AS FE)	SAMPLE MEASUREMENT	******	******		** ****	******		(19)			
01045 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	******	******	**** ****	******	******	2.0 DAILY MX	MG/L		ONCE/ GRAB MONTH	
SOLIDS, TOTAL DISSOLVED	SAMPLE MEASUREMENT	******		(26)	******	******		(19)			
70295 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	******	2000 DAILY MX	LBS/DY	******	******	REPORT DAILY MX	MG/L		ONCE/ GRAB MONTH	

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 OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE		DATE		
AREA CODE	NUMBER	YEAR	MO	DAY
801	637-2422	93	10	28

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 APPROPRIATE ROW.

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

FACILITY Huntington Canyon No. 4
LOCATION
ATTN: DAN W. GUY

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

(2-16) UTG04001 — PERMIT NUMBER
(17-19) 001 A — DISCHARGE NUMBER

MINOR
Form Approved. OMB No. 2040-0004. Approval expires 6-30-91.
F - FINAL
WITHIN FOREST SVC BOUNDARY

MONITORING PERIOD

	YEAR	MO	DAY		YEAR	MO	DAY
FROM	93	01	01	TO	93	03	31
	(20-21)	(22-23)	(24-25)		(26-27)	(28-29)	(30-31)

*** NO DISCHARGE |X| ***

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		(07)	******	******	******	( )			
00056 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	REPORT 30 DA AV	REPORT DAILY MX	GPD	******	******	******	**** ****			
PH	SAMPLE MEASUREMENT	******	******	( )		******		(12)			
00400 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	******	******	**** ****	6.5 DAILY MN	******	9.0 DAILY MX	SU		ONCE/GRAB MONTH	
SOLIDS, TOTAL SUSPENDED	SAMPLE MEASUREMENT	******	******	( )	******			(19)			
00530 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	******	******	**** ****	******	25 30 DA AV	70 DAILY MX	MG/L		ONCE/GRAB MONTH	
SOLIDS, SETTLEABLE	SAMPLE MEASUREMENT	******	******	( )	******	******		(25)			
00545 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	******	******	**** ****	******	******	0.5 DAILY MX	ML/L		ONCE/GRAB MONTH	
OIL AND GREASE FREON EXTR-GRAV METH	SAMPLE MEASUREMENT	******	******	( )	******	******		(19)			
00556 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	******	******	**** ****	******	******	10 DAILY MX	MG/L		ONCE/GRAB MONTH	
IRON, TOTAL (AS FE)	SAMPLE MEASUREMENT	******	******	( )	******	******		(19)			
01045 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	******	******	**** ****	******	******	2.0 DAILY MX	MG/L		ONCE/GRAB MONTH	
SOLIDS, TOTAL DISSOLVED	SAMPLE MEASUREMENT	******		(26)	******	******		(19)			
70295 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	******	2000 DAILY MX	LBS/DY	******	******	REPORT DAILY MX	MG/L		ONCE/GRAB MONTH	

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: AREA CODE 801 NUMBER 637-2422

DATE: YEAR 93 MO 04 DAY 27

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 APPROPRIATE ROW.

BLACKHAWK ENGINEERING, CO.

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

April 29, 1993

Ms. Donna Franklin
U.S.E.P.A., Region VIII
999 18th Street
Denver Place - Suite 500 WM-C
Denver, Colorado 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 DMR's provided by the State of Utah, and cover the first quarter of 1993.

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

Sincerely,

Dan W. Guy

Dan W. Guy,
President

Enclosures

cc: Lowell Braxton, UDOGM
Donald Hilden, D.E.Q.
Kathy Welt, Mountain Coal Co.
File

POND INSPECTIONS

E.I.S Hydrology
Pond Inspection Report

POND: #4 LOCATION: Mill Fork

ITEM	REMARKS
(1) Potential Safety Hazards	None
(2) Slope Stability	Stable
(3) Erosion	Minimal on N inlet Upper Cell.
(4) Construction and Maintenance Performance Standards	Good - Pond Clean Lower Cell - Upper Cell 10' Wide - 2'6" Deep.
(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 8/23/93

E.I.S Hydrology
Pond Inspection Report

POND: #4 LOCATION: Mill Fork

ITEM	REMARKS
(1) Potential Safety Hazards	None.
(2) Slope Stability	Stable - Snow Covered
(3) Erosion	Ok - Snow Covered
(4) Construction and Maintenance Performance Standards	Good - Lower cell Clean & Dry - Upper Cell - Cold Too - Upper Clean
(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]
Inspector

12/15/93
Date

E.I.S Hydrology
Pond Inspection Report

POND: #4 LOCATION: Mill Trout

ITEM	REMARKS
(1) Potential Safety Hazards	Road Closed Pond inaccessable - 38" Snow of Bundy
(2) Slope Stability	
(3) Erosion	
(4) Construction and Maintenance Performance Standards	
(5) Recommendations/Comments	

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

2/10/93
Date

E.I.S Hydrology
Pond Inspection Report

POND: #4 LOCATION: Mill Fork

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

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

6/1/93
Date

SUBSIDENCE

SURVEY

VEGETATION MONITORING

VEGETATION SAMPLING: RECLAIMED AREAS OF THE HUNTINGTON NO. 4 MINE

1993

Prepared by

MT. NEBO SCIENTIFIC, INC.
330 East 400 South, Suite 6
P.O. Box 337
Springville, Utah 84663
(801) 489-6937

for

BLACKHAWK ENGINEERING
Route 1, Box 146-H5
Helper, Utah 84526

November 1993

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VEGETATION SAMPLING:

RECLAIMED AREAS OF THE HUNTINGTON NO. 4 MINE

1993

SCOPE

The following report has been prepared to assess the current condition of the vegetation of reclaimed areas at the Huntington No. 4 Mine. The reclaimed areas were compared with an undisturbed reference area that was used as a standard for revegetation success.

INTRODUCTION

General Site Description

The Huntington Canyon No. 4 Mine is located in Huntington Canyon, Emery County, Utah. The elevation of the area lies between 7,300 ft and 8,000 ft above sea level. Vegetation types adjacent to the mine area vary from pinyon-juniper and mountain brushland on the drier sites, to associated conifers and riparian areas in the more moist regions. The reclaimed areas of the mine

site are on the relatively drier sites with primarily south and southwestern exposures.

The reclaimed areas consisted principally of access roads, portal areas, pads and regraded slopes. The largest surface areas that were reclaimed were the access roads of the mine site.

Quantitative sampling was also conducted by *MT. NEBO SCIENTIFIC, INC.* in the area in 1989 and 1990. Qualitative information was assessed in 1991. No vegetation sampling was conducted in 1992.

METHODS

Methodologies used herein were performed in accordance with the guidelines supplied by the State of Utah, Division of Oil, Gas and Mining (DOGM).

Quantitative and qualitative data were taken on the vegetation of the reclaimed and reference areas. Sampling was conducted July 29-31, 1993. For the purpose of simplicity, the reclaimed areas were divided into two (2) major areas -- the *Lower Reclaimed Areas* and the *Upper Reclaimed Access Road Areas*. Each of those areas consisted of several disturbance types (i.e. roads, pads, portals, regraded slopes, etc.).

Transect and Quadrat Placement

Transect lines for sampling were placed randomly throughout the reclaimed areas resulting in several sample sites in the *Lower Reclaimed Areas* and the *Upper Reclaimed Access Road Areas* (see Sample Map).

Random/regular placement of sampling quadrats were designed to provide unbiased accuracy of the data compiled. Once the transect lines were placed, regular points were then marked on them. From these marks, a random number dictated the direction and distance to place the quadrats at right angles from the transect lines.

All reclaimed areas were seeded with the same seed mix on a variety of slopes, exposures, soil conditions and water relationships, etc. Data summaries are presented separately and combined in the *Lower Reclaimed Areas* due to heterogeneity of this area. Since all the *Upper Reclaimed Access Road Areas* were so similar in basic physiognomy, the data were combined for the summary tables. Reporting the data in this manner was an attempt to provide information of small, localized areas, yet also provide the average success of the entire mine site. The reference area was also sampled using the same methodologies, but simply reports combined data.

Cover and Composition

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 the raw data sheets were: estimated precipitation, slope, exposure, grazing use, animal disturbance and other appropriate notes. Plant nomenclature follows Welsh et al. (1987).

Woody Species Density

Density of woody plant species of the reclaimed areas were made using belt transects. These 5 ft by 50 ft belts were placed randomly throughout the study areas. Total number of individuals by species were counted in each of the belt transects. The average number was then calculated followed by the number of individuals per acre.

Density of woody plant species of the *Reference Area* were recorded using the point quarter distance method (Cottom and Curtis 1956). In this method, random points were placed on the sample sites and measured into four quarters. The distances to the nearest woody plant species were then recorded in each quarter. The average point-to-individual distance was equal to the square root of the mean area per individual.

Production

Total annual biomass production was estimated by clipping, drying and weighing current annual growth. "Double sampling" using four quadrats estimated around the clipped and weighed plot was implemented.

Sample Adequacy & Statistical Comparisons

Sampling adequacy for cover and woody species density was achieved using formulas from Snedocor and Cochran (1980), insuring that 80% of the samples were within 10% of the true mean for the shrub communities of the area. The formula used is given below.

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

where,

nmin = minimum adequate sample
s = standard deviation
x = sample mean
.1 = confidence interval

Student's t-tests were also employed to compare the reclaimed disturbance and reference areas of all sites for cover and productivity. All sample means, standard deviations, and sample sizes were included in this report to enable the reviewers to apply further statistical tests if desired.

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Photographs

Color photographs of the sample areas were taken at the time of sampling and have been submitted with this report (see Appendix A).

Raw Data

The raw data have been summarized on a spreadsheet and are included in this report.

RESULTS

The Lower Reclaimed Areas (Areas A-E, separately)

Vegetation sample areas A-E (see Sample Map) were first summarized separately. Tables 1-20 summarize the results of the sampling for these areas.

Each area showed nonsignificant differences for total living cover when compared to the *Reference Area*, with the exception of "Area E" (which was significantly greater). One should note that when using the *Reference Area's* cover estimate, the value used included both understory and overstory combined. The reclaimed areas, of course, had no appreciable overstory cover yet.

Density of woody plant species varied in each of the reclaimed areas ranging from 1,176 to 4,443 individuals per acre. All of these estimates (Areas A-E, separately), however, were greater than the *Reference Area* (Table 33).

Total annual production did not change much between *Reclaimed Areas* A-E. All were also significantly greater than the *Reference Area* (Table 33). The *Reference Area* data are shown on Tables 29-32.

<u>The Lower Reclaimed Areas</u> (Areas A-E, combined)

The data of *Lower Reclaimed Areas* A-E were also combined to show the overall values for each of the parameters and general success of the revegetated areas as a whole. The combined data summaries area shown on Tables 21-24. The *Reference Area* data for comparisons are shown on Tables 29-32. To review the results of statistical comparisons between the *Lower Reclaimed Areas* (A-E combined), refer to Table 33. In short, the reclaimed areas were not statistically different for cover. The reclaimed areas were, however, statistically different from the *Reference Area* for woody plant species density and productivity. The reclaimed areas were higher for both of these parameters (Table 33).

Upper Reclaimed Access Road Areas

Regular sample points were placed along the entire length of the *Upper Reclaimed Access Road Areas* (see Sample Map). At each regular point, a random number was used to place the quadrats and transects. For sample results refer to Tables 25-28.

All parameters including cover, density and productivity were significantly higher in the *Upper Reclaimed Access Road Areas* when compared to the *Reference Area* (Table 33).

TABLE 1: Total cover and composition summary for the reclaimed areas of the Huntington No. 4 Mine (Area "A", see Sample Map).

TOTAL COVER	% MEAN COVER	STANDARD DEVIATION	SAMPLE SIZE
Living Cover	35.00	7.75	20
Litter	15.50	9.07	20
Bareground	29.50	10.36	20
Rock	20.00	9.87	20
COMPOSITION			
Shrubs	7.13	12.77	20
Forbs	34.54	28.91	20
Grasses	58.34	29.41	20

TABLE 2: Species cover and frequency summary for the reclaimed areas of the Huntington No. 4 Mine (Area "A", see Sample Map).

SPECIES	% MEAN COVER	STANDARD DEVIATION	SAMPLE SIZE	RELATIVE FREQUENCY
TREES & SHRUBS				
Chrysothamnus nauseosus	1.75	3.96	20	20.00
Ceratoides lanata	0.35	1.53	20	5.00
Purshia tridentata	0.25	1.09	20	5.00
FORBS				
Penstemon palmeri	1.75	2.86	20	30.00
Astragalus cicer	9.75	9.86	20	60.00
Melilotus officinalis	0.40	1.74	20	5.00
Artemisia ludoviciana	0.25	1.09	20	5.00
Machaeranthera canescens	0.25	1.09	20	5.00
GRASSES				
Stipa hymenoides	1.00	1.00	20	20.00
Elymus spicatus	4.25	7.63	20	35.00
Agropyron cristatum	3.50	5.94	20	40.00
Bromus carinatus	4.00	3.39	20	65.00
Elymus lanceolatus	4.25	7.79	20	35.00
Dacytylis glomeratus	2.00	3.67	20	25.00
Elymus salinus	1.25	4.44	20	10.00

TABLE 3: Woody species densities of the reclaimed areas of the Huntington No. 4 Mine (Area "A", see Sample Map).

	NUMBER/ACRE
Brickelia microphylla	23.52
Ceratoides lanata	129.37
Chrysothamnus nauseosus	870.33
Pinus ponderosa	82.33
Purshia tridentata	70.57
TOTAL	1176.12

TABLE 4: Dry weight annual production for the reclaimed areas of the Huntington No. 4 Mine (Area "A", see Sample Map).

LIFEFORM	LBS/ ACRE	STANDARD DEVIATION	SAMPLE* SIZE
Herbaceous	529.88	268.25	10
Woody Spp.	9.74	23.18	10
TOTAL PRODUCTION	539.62	263.60	10

TABLE 5: Total cover and composition summary for the reclaimed areas of the Huntington No. 4 Mine (Area "B", see Sample Map).

TOTAL COVER	% MEAN COVER	STANDARD DEVIATION	SAMPLE SIZE
Living Cover	34.50	10.59	20.00
Litter	10.75	3.63	20.00
Bareground	37.25	13.46	20.00
Rock	17.50	8.87	20.00
COMPOSITION			
Shrubs	24.07	14.23	20.00
Forbs	33.50	23.32	20.00
Grasses	42.42	23.72	20.00

TABLE 6: Species cover and frequency summary for the reclaimed areas of the Huntington No. 4 Mine (Area "B", see Sample Map).

SPECIES	% MEAN COVER	STANDARD DEVIATION	SAMPLE SIZE	RELATIVE FREQUENCY
TREES & SHRUBS				
Chrysothamnus nauseosus	5.00	4.18	20	70.00
Eriogonum corymbosum	2.35	2.90	20	45.00
Gutierrezia sarothrae	0.50	1.50	20	10.00
Purshia tridentata	0.25	1.09	20	5.00
FORBS				
Penstemon palmeri	2.50	3.35	20	40.00
Astragalus cicer	8.10	10.95	20	70.00
Aster chilensis	0.25	1.09	20	5.00
Machaeranthera canescens	0.50	1.50	20	10.00
Salsola iberica	0.05	0.22	20	5.00
GRASSES				
Hordeum jubatum	0.25	1.09	20	5.00
Stipa hymenoides	2.25	3.34	20	35.00
Agropyron critatum	6.50	8.53	20	45.00
Elymus spicatus	4.25	6.57	20	40.00
Elymus lanceolatus	1.50	2.78	20	25.00
Bromus carinatus	0.25	1.09	20	5.00

TABLE 7: Woody species densities of the reclaimed areas of the Huntington No. 4 Mine (Area "B", see Sample Map).

	NUMBER/ACRE
Brickelia microphylla	3637.26
Chrysothamnus viscidiflorus	43.56
Eriogonum corymbosum	531.62
Gutierrezia sarothrae	87.12
Pinus ponderosa	43.56
TOTAL	4443.12

TABLE 8: Dry weight annual production for the reclaimed areas of the Huntington No. 4 Mine (Area "B", see Sample Map).

LIFEFORM	LBS/ ACRE	STANDARD DEVIATION	SAMPLE* SIZE
Herbaceous	411.39	333.48	5
Woody Spp.	157.35	134.53	5
TOTAL PRODUCTION	583.63	424.68	5

TABLE 9: Total cover and composition summary for the reclaimed areas of the Huntington No. 4 Mine (Area "C", see Sample Map).

TOTAL COVER	% MEAN COVER	STANDARD DEVIATION	SAMPLE SIZE
Living Cover	35.83	7.86	6
Litter	7.50	3.82	6
Bareground	33.33	16.24	6
Rock	23.33	12.13	6
COMPOSITION			
Shrubs	24.23	25.24	6
Forbs	41.94	30.73	6
Grasses	33.83	16.54	6

TABLE 10: Species cover and frequency summary for the reclaimed areas of the Huntington No. 4 Mine (Area "C", see Sample Map).

SPECIES	% MEAN COVER	STANDARD DEVIATION	SAMPLE SIZE	RELATIVE FREQUENCY
TREES & SHRUBS				
Chrysothamnus nauseosus	5.00	7.07	6	33.33
Eriogonum corymbosum	3.33	4.71	6	33.33
FORBS				
Erigonus sp.	4.17	9.32	6	16.67
Iva axillaris	0.83	1.86	6	16.67
Penstemon palmeri	0.83	1.86	6	16.67
Astragalus cicer	8.33	10.27	6	50.00
Melilotus officinalis	1.67	3.37	6	16.67
GRASSES				
Stipa hymenoides	5.00	5.77	6	50.00
Elymus spicatus	2.50	3.82	6	33.33
Agropyron cristatum	2.50	2.50	6	50.00
Bromus carinatus	0.83	1.86	6	16.67
Elymus lanceolatus	0.83	1.86	6	16.67

TABLE 11: Woody species densities of the reclaimed areas of the Huntington No. 4 Mine (Area "C", see Sample Map).

	NUMBER/ACRE
Ceratoides lanata	147.24
Chrysothamnus nauseosus	2178.00
Eriogonum corymbosum	261.36
Purshia tridentata	87.12
TOTAL	2700.72

TABLE 12: Dry weight annual production for the reclaimed areas of the Huntington No. 4 Mine (Area "C", see Sample Map).

LIFEFORM	LBS/ ACRE	STANDARD DEVIATION	SAMPLE* SIZE
Herbaceous	--	--	--
Woody Spp.	--	--	--
TOTAL PRODUCTION	*(no production taken here)*		

TABLE 13: Total cover and composition summary for the reclaimed areas of the Huntington No. 4 Mine (Area "D", see Sample Map).

TOTAL COVER	% MEAN COVER	STANDARD DEVIATION	SAMPLE SIZE
Living Cover	35.36	6.11	14
Litter	14.64	4.80	14
Bareground	24.29	11.00	14
Rock	25.71	11.63	14
COMPOSITION			
Shrubs	19.73	22.96	14
Forbs	24.48	15.92	14
Grasses	55.79	14.09	14

TABLE 14: Species cover and frequency summary for the reclaimed areas of the Huntington No. 4 Mine (Area "D", see Sample Map).

SPECIES	% MEAN COVER	STANDARD DEVIATION	SAMPLE SIZE	RELATIVE FREQUENCY
TREES & SHRUBS				
Chrysothamnus nauseosus	5.57	6.32	14	57.14
Ceratoides lanata	0.36	1.29	14	7.14
Rosa woodsii	0.71	2.58	14	7.14
FORBS				
Penstemon palmeri	1.07	2.05	14	21.43
Astragalus cicer	5.00	4.23	14	71.43
Melilotus officinalis	2.64	3.06	14	50.00
Haplopappus parryi	0.36	1.29	14	7.14
GRASSES				
Stipa hymenoides	4.64	7.19	14	42.86
Elymus spicatus	9.64	5.81	14	85.71
Agropyron cristatum	0.71	1.75	14	14.29
Bromus carinatus	1.43	5.15	14	7.14
Elymus lanceolatus	3.21	6.44	14	35.71

TABLE 15: Woody species densities of the reclaimed areas of the Huntington No. 4 Mine (Area "D", see Sample Map).

	NUMBER/ACRE
Ceratoides lanata	116.16
Chrysothamnus nauseosus	3049.20
Eriogonum corymbosum	29.04
Pinus ponderosa	29.04
Rosa woodsii	58.08
TOTAL	3281.52

TABLE 16: Dry weight annual production for the reclaimed areas of the Huntington No. 4 Mine (Area "D", see Sample Map).

LIFEFORM	LBS/ ACRE	STANDARD DEVIATION	SAMPLE* SIZE
Herbaceous	510.35	313.93	2
Woody Spp.	106.00	149.90	2
TOTAL PRODUCTION	616.34	463.83	2

TABLE 17: Total cover and composition summary for the reclaimed areas of the Huntington No. 4 Mine (Area "E", see Sample Map).

TOTAL COVER	% MEAN COVER	STANDARD DEVIATION	SAMPLE SIZE
Living Cover	47.00	4.40	15
Litter	15.67	4.78	15
Bareground	22.00	8.72	15
Rock	15.33	7.63	15
COMPOSITION			
Shrubs	6.67	17.38	15
Forbs	15.38	15.33	15
Grasses	77.95	24.47	15

TABLE 18: Species cover and frequency summary for the reclaimed areas of the Huntington No. 4 Mine (Area "E", see Sample Map).

SPECIES	% MEAN COVER	STANDARD DEVIATION	SAMPLE SIZE	RELATIVE FREQUENCY
TREES & SHRUBS				
Chrysothamnus nauseosus	3.33	8.69	15	13.33
FORBS				
Penstemon palmeri	0.67	2.49	15	6.67
Astragalus cicer	3.00	5.72	15	26.67
Melilotus officinalis	0.67	1.70	15	13.33
Artemisia ludoviciana	0.33	1.25	15	6.67
Iva axillaris	2.00	3.56	15	26.67
Haplopappua palmeri	0.33	1.25	15	6.67
GRASSES				
Elymus spicatus	6.67	10.11	15	53.33
Agropyron cristatum	11.33	13.35	15	60.00
Bromus carinatus	15.67	16.21	15	73.33
Elymus lanceolatus	0.67	2.49	15	6.67
Dactylis glomeratus	0.67	2.49	15	6.67
Poa secunda	1.67	5.06	15	13.33

TABLE 19: Woody species densities of the reclaimed areas of the Huntington No. 4 Mine (Area "E", see Sample Map).

	NUMBER/ACRE
Ceratoides lanata	145.20
Chrysothamnus nauseosus	1277.76
Rosa woodsii	29.04
TOTAL	1452.00

TABLE 20: Dry weight annual production for the reclaimed areas of the Huntington No. 4 Mine (Area "E", see Sample Map).

LIFEFORM	LBS/ ACRE	STANDARD DEVIATION	SAMPLE* SIZE
Herbaceous	359.03	--	1
Woody Spp.	0.00	--	1
TOTAL PRODUCTION	359.03	--	1

TABLE 21: Total cover and composition summary for the combined reclaimed areas of the Huntington No. 4 Mine (Areas A-E, see Sample Map).

TOTAL COVER	% MEAN COVER	STANDARD DEVIATION	SAMPLE SIZE
Living Cover	37.40	9.21	75
Litter	13.47	6.53	75
Bareground	29.40	13.01	75
Rock	19.73	10.42	75
COMPOSITION			
Shrubs	15.27	19.25	75
Forbs	29.15	24.61	75
Grasses	55.58	37.30	75

TABLE 22: Species cover and frequency summary for the combined reclaimed areas of the Huntington No. 4 Mine (Areas A-E, see Sample Map).

SPECIES	% MEAN COVER	STANDARD DEVIATION	SAMPLE SIZE	RELATIVE FREQUENCY
TREES & SHRUBS				
Chrysothamnus nauseosus	3.91	6.14	75	38.67
Ceratoides lanata	0.16	0.98	75	2.67
Purshia tridentata	0.13	0.81	75	2.67
Eriogonum corymbosum	0.89	2.36	75	14.67
Gutierrezia sarothrae	0.13	0.81	75	2.67
Rosa woodsii	0.13	0.81	75	2.67
FORBS				
Penstemon palmeri	1.53	2.83	75	25.33
Astragalus cicer	6.96	9.04	75	56.00
Melilotus officinalis	0.87	2.27	75	14.67
Artemisia ludoviciana	0.13	0.81	75	2.67
Machaeranthera canescens	0.20	0.98	75	4.00
Aster chilensis	0.07	0.57	75	2.67
Salsola iberica	0.01	0.11	75	2.67
Eriogonum sp.	0.33	2.87	75	2.67
Iva axillaris	0.47	1.86	75	6.67
Haplopappus parryi	0.70	0.57	75	2.67
GRASSES				
Stipa hymenoides	2.13	4.41	75	26.67
Elymus spicatus	5.60	7.74	75	48.00
Agropyron cristatum	5.27	8.87	75	41.33
Bromus carinatus	4.60	9.69	75	36.00
Elymus lanceolatus	2.33	5.44	75	25.33
Dactylis glomeratus	0.67	2.36	75	8.00
Elymus salinus	0.33	2.36	75	2.67
Hordeum jubatum	0.07	0.57	75	2.67
Poa secunda	0.33	2.36	75	2.67

TABLE 23: Woody species densities of the combined reclaimed areas of the Huntington No. 4 Mine (Areas A-E, see Sample Map).

	NUMBER/ACRE
Brickelia microphylla	5.81
Ceratoides lanata	98.74
Chrysothamnus nauseosus	2212.85
Chrysothamnus viscidiflorus	11.62
Eriogonum corymbosum	191.66
Gutierrezia sarothrae	23.23
Pinus ponderosa	40.66
Purshia tridentata	23.23
Rosa woodsii	17.42
TOTAL	2625.22

TABLE 24: Dry weight annual production for the combined reclaimed areas of the Huntington No. 4 Mine (Areas A-E, see Sample Map).

LIFEFORM	LBS/ ACRE	STANDARD DEVIATION	SAMPLE* SIZE
Herbaceous	488.55	274.23	18
Woody Spp.	59.96	103.36	18
TOTAL PRODUCTION	550.06	308.09	18

TABLE 25: Total cover and composition summary for the reclaimed areas of the Huntington No. 4 Mine (Revegetated Road Areas, see Sample Map).

TOTAL COVER	% MEAN COVER	STANDARD DEVIATION	SAMPLE SIZE
Living Cover	44.71	14.09	34
Litter	11.03	7.55	34
Bareground	15.88	12.28	34
Rock	28.38	16.75	34
COMPOSITION			
Shrubs	20.50	22.66	34
Forbs	45.50	30.17	34
Grasses	34.00	27.14	34

TABLE 26: Species cover and frequency summary for the reclaimed areas of the Huntington No. 4 Mine (Revegetated Road Areas, see Sample Map).

SPECIES	% MEAN COVER	STANDARD DEVIATION	SAMPLE SIZE	RELATIVE FREQUENCY
TREES & SHRUBS				
Chrysothamnus nauseosus	9.03	11.54	34	58.82
Ceratoides lanata	0.50	2.03	34	5.88
FORBS				
Penstemon palmeri	3.12	3.63	34	47.06
Astragalus cicer	17.21	15.59	34	73.53
GRASSES				
Stipa hymenoides	1.47	4.29	34	14.71
Elymus spicatus	5.15	7.72	34	41.18
Agropyron cristatum	4.56	7.01	34	44.12
Bromus carinatus	1.03	4.16	34	5.88
Elymus lanceolatus	2.35	5.03	34	29.41
Elymus salinus	0.29	1.69	34	2.94

TABLE 27: Woody species densities of the reclaimed areas of the Huntington No. 4 Mine (Revegetated Road Areas, see Sample Map).

	NUMBER/ACRE
Amalanchier utahensis	3.11
Ceratoides lanata	127.57
Chrysothamnus nauseosus	2430.03
Chrysothamnus viscidiflorus	6.22
Gutierrezia sarothrae	9.33
Purshia tridentata	24.89
Symphoricarpos oreophilus	3.11
TOTAL	2604.27

TABLE 28: Dry weight annual production for the reclaimed areas of the Huntington No. 4 Mine (Revegetated Road Areas, see Sample Map).

LIFEFORM	LBS/ ACRE	STANDARD DEVIATION	SAMPLE* SIZE
Herbaceous	442.24	50.58	10
Woody Spp.	50.48	69.19	10
TOTAL PRODUCTION	495.56	260.91	10

TABLE 29: Total cover and composition summary for the Reference Area of Huntington No. 4 Mine (see Sample Map).

TOTAL COVER	% MEAN COVER	STANDARD DEVIATION	SAMPLE SIZE
Living Cover	34.67	14.54	30
Litter	21.83	16.46	30
Bareground	18.87	19.73	30
Rock	24.63	20.85	30
COMPOSITION			
Shrubs	43.21	36.04	30
Forbs	0.00	0.00	30
Grasses	56.79	36.04	30

TABLE 30: Species cover and frequency summary for the Reference Area of Huntington No. 4 Mine (see Sample Map).

SPECIES	% MEAN COVER	STANDARD DEVIATION	SAMPLE SIZE	RELATIVE FREQUENCY
TREES & SHRUBS				
Pinus edulis	15.50	18.50	30	50.00
Ceratoides lanta	2.97	8.20	30	20.00
FORBS				
GRASSES				
Elymus salinus	16.20	9.42	30	87.67

TABLE 31: Woody species densities for the Reference Area of Huntington No. 4 Mine (see Sample Map).

	NUMBER/ACRE
Ceratoides lanata	130.56
Gutierrezia sarothrae	4.21
Juniperus osteosperma	46.33
Pinus edulis	223.21
TOTAL	404.30

TABLE 32: Dry weight annual production for the Reference Area of Huntington No. 4 Mine (see Sample Map).

LIFEFORM	LBS/ ACRE	STANDARD DEVIATION	SAMPLE* SIZE
Herbaceous	109.61	72.43	10
Woody Spp.	100.48	136.50	10
TOTAL PRODUCTION	210.19	144.57	10

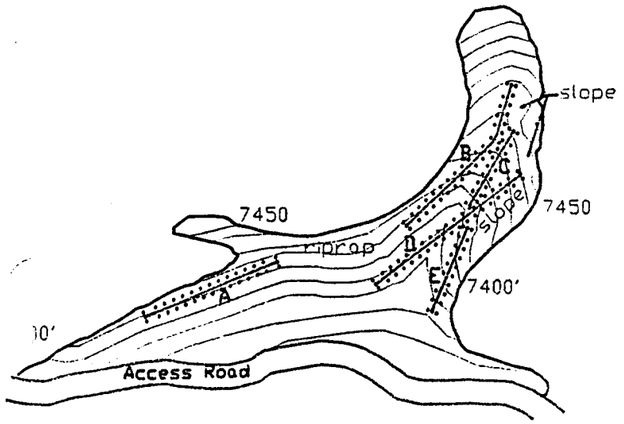
TABLE 33: Statistical summary sheet for the Reclaimed Areas and Reference Areas at the Huntington No. 4 Mine.

LOWER RECLAIMED AREAS (A-E Combined)			
Living Cover*	x=37.40	s=9.21	n=75
Density	x=2625.22	s= --	n=30
Production	x=550.06	s=308.09	n=18
REFERENCE AREA			
Living Cover*	x=34.67	s=14.54	n=30
Density	x=404.30	s= --	n=24
Production	x=109.61	s=72.43	n=10
STATISTICAL ANALYSES			
Living Cover	t=1.151	df=103	SL=NS
Density	t=**	df= --	SL= --
Production	t=4.419	df=26	SL=p<.001

UPPER RECLAIMED ACCESS ROAD AREAS			
Living Cover*	x=41.71	s=14.09	n=34
Density	x=2604.27	s= --	n=56
Production	x=495.56	s=260.91	n=10
REFERENCE AREA			
Living Cover*	x=34.67	s=14.54	n=30
Density	x=404.30	s= --	n=24
Production	x=109.61	s=72.43	n=10
STATISTICAL ANALYSES			
Living Cover	t=1.965	df=62	SL=p<.05
Density	t=**	df= --	SL= --
Production	t=4.507	df=18	SL=p<.001

x = sample mean, s = sample standard deviation,
n = sample size, NS = nonsignificant,
* represents understory and overstory cover combined.
** not calculated (differences obvious)

Lower Reclaimed Areas



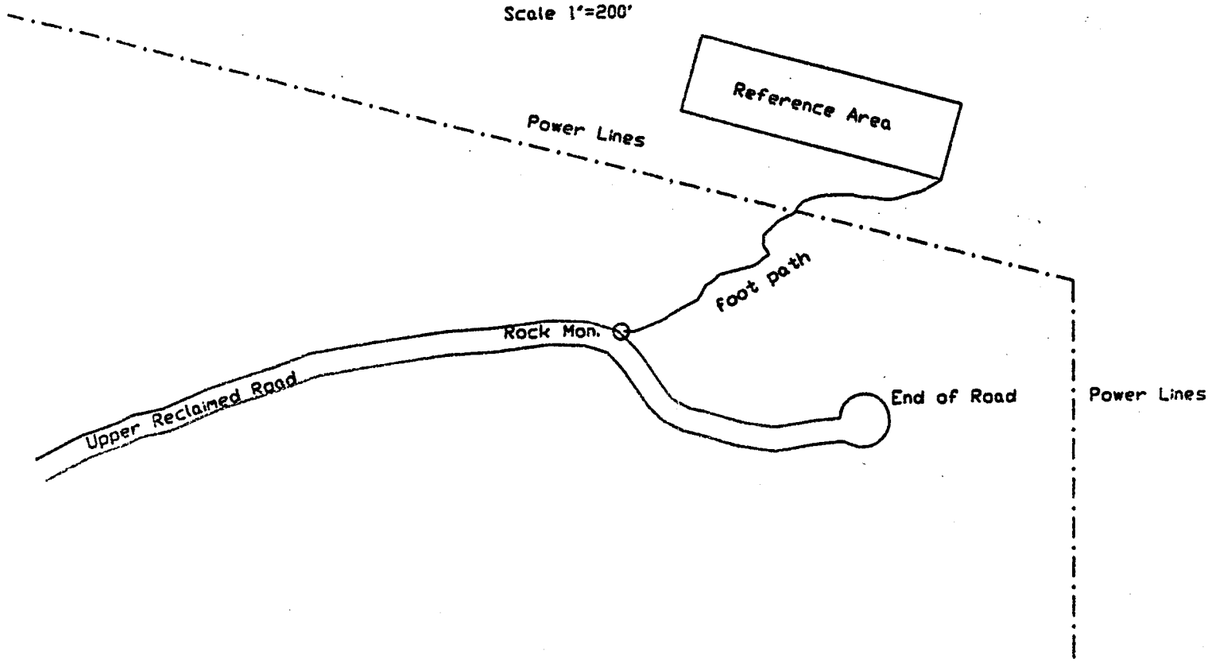
Scale 1"=200'

Sample Area	Parameter	Sample No.	Sample Size(n)
A	Cover	1-20	(20)
	Density	1-8	(8)
	Production	1-10	(10)
B	Cover	21-40	(20)
	Density	9-16	(8)
	Production	11-15	(5)
C	Cover	41-46	(6)
	Density	17-18	(2)
D	Cover	47-60	(14)
	Density	19-24	(6)
	Production	16-17	(2)
E	Cover	61-75	(15)
	Density	25-30	(6)
	Production	18	(1)

: Transect Lines

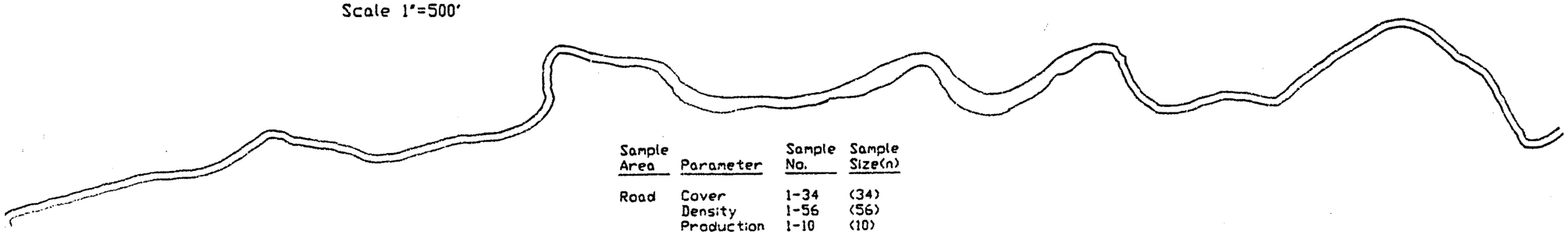
Reference Area Location Map

Scale 1"=200'



Upper Reclaimed Access Road Areas

Scale 1"=500'



Sample Area	Parameter	Sample No.	Sample Size(n)
Road	Cover	1-34	(34)
	Density	1-56	(56)
	Production	1-10	(10)

HUNTINGTON NO.4 MINE
SAMPLE LOCATION MAP
1993

MT. NEBO SCIENTIFIC, INC.
RESEARCH AND CONSULTING

DRAWN	JON MAGENO
CHECKED	P. COLLINS
DATE	11-19-93
SCALE	VARIES

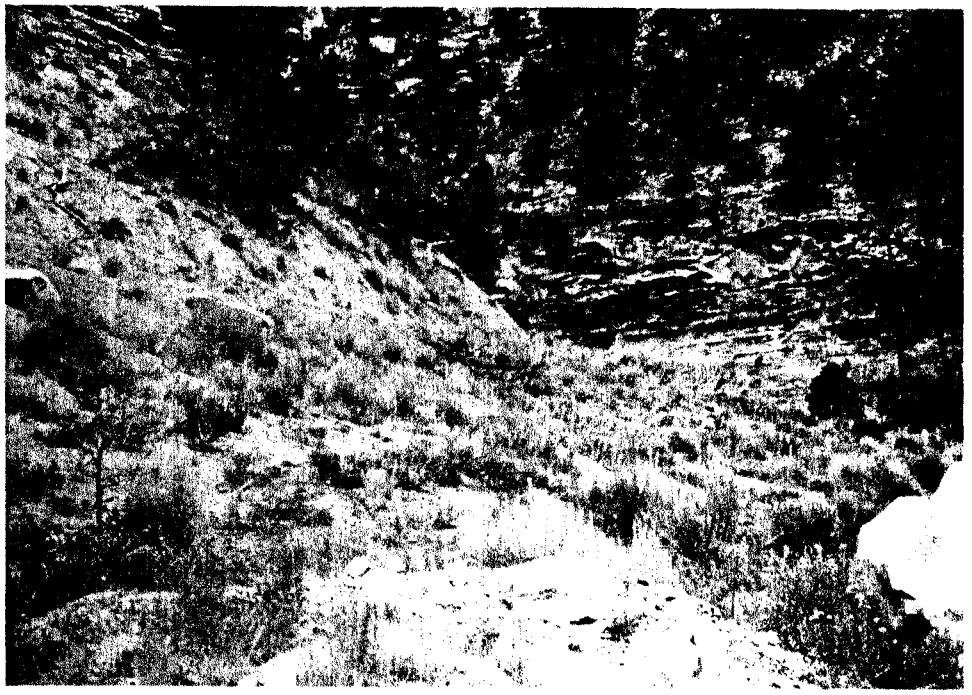
HUNT4.DWG

APPENDIX A:

COLOR PHOTOGRAPHS

HUNTINGTON NO. 4 MINE

Lower Reclaimed Area "A"



Lower Reclaimed Area "B"

Lower Reclaimed Area "E"

Upper Reclaimed Access Road Area

Upper Reclaimed Access Road Area

Reference Area

APPENDIX B:

RAW DATA

BEAVERCREEK/BLACKHAWK
Huntington #4
Reveg Lower Pads, Slopes etc.
A - Lower Area South
Exposure: Variable
Slope:

Sample Date: 29 July 1993	1.00	2.00	3.00	4.00	5.00	6.00	7.00	8.00	9.00	10.00	11.00
TREES & SHRUBS											
Chrysothamnus nauseosus	0.00	0.00	0.00	0.00	0.00	15.00	0.00	0.00	5.00	0.00	0.00
Ceratoides lanata	0.00	7.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Purshia tridentata	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FORBS											
Penstemon palmeri	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Astragalus cicer	0.00	0.00	0.00	0.00	5.00	0.00	0.00	0.00	0.00	25.00	25.00
Melilotus officinalis	0.00	8.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Artemisia ludoviciana	0.00	0.00	0.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Machaeranthera canescens	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
GRASSES											
Stipa hymenoides	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Elymus spicatus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.00	5.00
Agropyron cristatum	0.00	0.00	0.00	5.00	10.00	10.00	25.00	0.00	5.00	5.00	0.00
Bromus carinatus	10.00	5.00	10.00	5.00	5.00	5.00	5.00	5.00	10.00	5.00	5.00
Elymus lanceolatus	30.00	5.00	5.00	20.00	10.00	0.00	0.00	10.00	0.00	5.00	0.00
Dacytylis glomeratus	0.00	5.00	10.00	0.00	0.00	0.00	10.00	10.00	0.00	0.00	0.00
Elymus salinus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20.00	0.00	0.00
COVER											
Total Living Cover	40.00	30.00	25.00	35.00	30.00	30.00	40.00	25.00	40.00	45.00	35.00
Litter	5.00	10.00	15.00	20.00	35.00	10.00	30.00	10.00	40.00	10.00	15.00
Bareground	30.00	25.00	30.00	20.00	25.00	25.00	20.00	50.00	15.00	35.00	40.00
Rock	25.00	35.00	30.00	25.00	10.00	35.00	10.00	15.00	5.00	10.00	10.00
% COMPOSITION											
Shrubs	0.00	23.33	0.00	0.00	0.00	50.00	0.00	0.00	12.50	0.00	0.00
Forbs	0.00	26.67	0.00	14.29	16.67	0.00	0.00	0.00	0.00	55.56	71.43
Grasses	100.00	50.00	100.00	85.71	83.33	50.00	100.00	100.00	87.50	44.44	28.57

12.00	13.00	14.00	15.00	16.00	17.00	18.00	19.00	20.00	Mean	SDev	Freq
0.00	0.00	5.00	0.00	0.00	0.00	0.00	0.00	10.00	1.75	3.96	20.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35	1.53	5.00
0.00	0.00	0.00	0.00	0.00	5.00	0.00	0.00	0.00	0.25	1.09	5.00
5.00	0.00	5.00	0.00	5.00	5.00	0.00	10.00	5.00	1.75	2.86	30.00
10.00	15.00	5.00	15.00	20.00	10.00	20.00	20.00	25.00	9.75	9.68	60.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40	1.74	5.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	1.09	5.00
0.00	0.00	0.00	0.00	5.00	0.00	0.00	0.00	0.00	0.25	1.09	5.00
0.00	0.00	0.00	0.00	0.00	5.00	5.00	5.00	5.00	1.00	2.00	20.00
15.00	30.00	5.00	15.00	10.00	0.00	0.00	0.00	0.00	4.25	7.63	35.00
0.00	0.00	5.00	0.00	0.00	0.00	0.00	5.00	0.00	3.50	5.94	40.00
0.00	5.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00	4.00	3.39	65.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.25	7.79	35.00
5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	3.67	25.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.00	1.25	4.44	10.00
35.00	50.00	30.00	30.00	40.00	25.00	25.00	40.00	50.00	35.00	7.75	
15.00	20.00	10.00	10.00	10.00	10.00	10.00	15.00	10.00	15.50	9.07	
30.00	20.00	35.00	40.00	25.00	25.00	55.00	30.00	15.00	29.50	10.36	
20.00	10.00	25.00	20.00	25.00	40.00	10.00	15.00	25.00	20.00	9.87	
0.00	0.00	16.67	0.00	0.00	20.00	0.00	0.00	20.00	7.13	12.77	
42.86	30.00	33.33	50.00	75.00	60.00	80.00	75.00	60.00	34.54	28.91	
57.14	70.00	50.00	50.00	25.00	20.00	20.00	25.00	20.00	58.34	29.41	

BEAVERCREEK/BLACKHAWK
Huntington #4
Reveg Lower Pads, Slopes etc.
A - Lower Area South
Exposure: Variable
Slope:
Sample Date: 29 July 1993

TREES & SHRUBS
Chrysothamnus nauseosus
Ceratoides lanata
Purshia tridentata

FORBS
Penstemon palmeri
Astragalus cicer
Melilotus officinalis
Artemisia ludoviciana
Machaeranthera canescens

GRASSES
Stipa hymenoides
Elymus spicatus
Agropyron cristatum
Bromus carinatus
Elymus lanceolatus
Dacytylis glomeratus
Elymus salinus

COVER
Total Living Cover
Litter
Bareground
Rock

% COMPOSITION
Shrubs
Forbs
Grasses

BEAVERCREEK/BLACKHAWK
Huntington #4
Reveg Lower Pads, Slopes etc.
B - Lower Area North
Exposure: Variable
Slope:

Sample Date: 29 July 1993	1.00	2.00	3.00	4.00	5.00	6.00	7.00	8.00	9.00	10.00	11.00
TREES & SHRUBS											
Chrysothamus nauseosus	10.00	5.00	5.00	5.00	10.00	0.00	0.00	10.00	0.00	0.00	5.00
Eriogonum corymbosum	10.00	0.00	5.00	5.00	0.00	5.00	5.00	2.00	5.00	5.00	0.00
Gutierrezia sarothrae	0.00	0.00	0.00	0.00	5.00	0.00	0.00	5.00	0.00	0.00	0.00
Purshia tridentata	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FORBS											
Penstemon palmeri	0.00	5.00	0.00	5.00	0.00	5.00	5.00	0.00	10.00	0.00	0.00
Astragalus cicer	5.00	10.00	0.00	5.00	10.00	5.00	20.00	8.00	0.00	0.00	10.00
Aster chilensis	0.00	0.00	0.00	0.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00
Machaeranthera canescens	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.00	0.00	0.00	0.00
Salsola iberica	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
GRASSES											
Hordeum jubatum	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stipa hymenoides	0.00	10.00	5.00	0.00	0.00	5.00	0.00	0.00	0.00	0.00	5.00
Agropyron critatum	5.00	0.00	20.00	5.00	20.00	0.00	0.00	0.00	20.00	20.00	0.00
Elymus spicatus	15.00	0.00	0.00	0.00	0.00	10.00	5.00	5.00	0.00	10.00	0.00
Elymus lanceolatus	0.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00	5.00	0.00	0.00
Bromus carinatus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COVER											
Total Living Cover	45.00	35.00	35.00	25.00	50.00	30.00	35.00	35.00	40.00	35.00	20.00
Litter	15.00	10.00	10.00	10.00	10.00	10.00	5.00	10.00	5.00	20.00	10.00
Bareground	20.00	30.00	20.00	25.00	30.00	50.00	50.00	30.00	45.00	35.00	55.00
Rock	20.00	25.00	35.00	40.00	10.00	10.00	10.00	25.00	10.00	10.00	15.00
% COMPOSITION											
Shrubs	44.44	14.29	28.57	40.00	30.00	16.67	14.29	48.57	12.50	14.29	25.00
Forbs	11.11	42.86	0.00	40.00	30.00	33.33	71.43	37.14	25.00	0.00	50.00
Grasses	44.44	42.86	71.43	20.00	40.00	50.00	14.29	14.29	62.50	85.71	25.00

12.00	13.00	14.00	15.00	16.00	17.00	18.00	19.00	20.00	Mean	SDev	Freq
5.00	5.00	10.00	5.00	0.00	15.00	5.00	5.00	0.00	5.00	4.18	70.00
0.00	0.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00	2.35	2.90	45.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50	1.50	10.00
0.00	0.00	0.00	5.00	0.00	0.00	0.00	0.00	0.00	0.25	1.09	5.00
0.00	5.00	5.00	0.00	0.00	0.00	0.00	0.00	10.00	2.50	3.35	40.00
5.00	5.00	10.00	0.00	14.00	0.00	50.00	5.00	0.00	8.10	10.95	70.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	1.09	5.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.00	0.00	0.50	1.50	10.00
0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.05	0.22	5.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.00	0.00	0.25	1.09	5.00
5.00	0.00	0.00	0.00	0.00	5.00	0.00	0.00	10.00	2.25	3.34	35.00
0.00	0.00	0.00	0.00	15.00	5.00	0.00	20.00	0.00	6.50	8.53	45.00
0.00	0.00	5.00	25.00	0.00	0.00	0.00	0.00	10.00	4.25	6.57	40.00
0.00	0.00	5.00	0.00	0.00	10.00	5.00	0.00	0.00	1.50	2.78	25.00
0.00	0.00	0.00	5.00	0.00	0.00	0.00	0.00	0.00	0.25	1.09	5.00
15.00	15.00	40.00	40.00	30.00	35.00	60.00	40.00	30.00	34.50	10.59	
10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	20.00	10.75	3.63	
65.00	60.00	40.00	35.00	50.00	30.00	20.00	25.00	30.00	37.25	13.46	
10.00	15.00	10.00	15.00	10.00	25.00	10.00	25.00	20.00	17.50	8.87	
33.33	33.33	37.50	25.00	0.00	42.86	8.33	12.50	0.00	24.07	14.23	
33.33	66.67	37.50	0.00	50.00	0.00	83.33	25.00	33.33	33.50	23.32	
33.33	0.00	25.00	75.00	50.00	57.14	8.33	62.50	66.67	42.42	23.72	

BEAVERCREEK/BLACKHAWK
Huntington #4
Reveg Lower Pads, Slopes etc.
B - Lower Area North
Exposure: Variable
Slope:
Sample Date: 29 July 1993

TREES & SHRUBS
Chrysothamus nauseosus
Eriogonum corymbosum
Gutierrezia sarothrae
Purshia tridentata

FORBS
Penstemon palmeri
Astragalus cicer
Aster chilensis
Machaeranthera canescens
Salsola iberica

GRASSES
Hordeum jubatum
Stipa hymenoides
Agropyron critatum
Elymus spicatus
Elymus lanceolatus
Bromus carinatus

COVER
Total Living Cover
Litter
Bareground
Rock

% COMPOSITION
Shrubs
Forbs
Grasses

BEAVERCREEK/BLACKHAWK
Huntington #4
Reveg Lower Pads, Slopes etc.
C - Lower Area Slopes
Exposure: Variable
Slope:

Sample Date: 29 July 1993	1.00	2.00	3.00	4.00	5.00	6.00	Mean	SDev	Freq
TREES & SHRUBS									
Chrysothamnus nauseosus	0.00	15.00	15.00	0.00	0.00	0.00	5.00	7.07	33.33
Eriogonum corymbosum	10.00	0.00	10.00	0.00	0.00	0.00	3.33	4.71	33.33
FORBS									
Eriogonus sp.	0.00	0.00	0.00	25.00	0.00	0.00	4.17	9.32	16.67
Iva axillaris	0.00	0.00	0.00	5.00	0.00	0.00	0.83	1.86	16.67
Penstemon palmeri	0.00	0.00	0.00	0.00	5.00	0.00	0.83	1.86	16.67
Astragalus cicer	0.00	5.00	0.00	0.00	25.00	20.00	8.33	10.27	50.00
Melilotus officinalis	0.00	0.00	10.00	0.00	0.00	0.00	1.67	3.73	16.67
GRASSES									
Stipa hymenoides	10.00	15.00	0.00	0.00	0.00	5.00	5.00	5.77	50.00
Elymus spicatus	0.00	0.00	0.00	5.00	10.00	0.00	2.50	3.82	33.33
Agropyron cristatum	0.00	0.00	5.00	0.00	5.00	5.00	2.50	2.50	50.00
Bromus carinatus	0.00	0.00	0.00	0.00	5.00	0.00	0.83	1.86	16.67
Elymus lanceolatus	5.00	0.00	0.00	0.00	0.00	0.00	0.83	1.86	16.67
COVER									
Total Living Cover	25.00	35.00	40.00	35.00	50.00	30.00	35.83	7.86	
Litter	10.00	5.00	5.00	15.00	5.00	5.00	7.50	3.82	
Bareground	60.00	50.00	30.00	20.00	15.00	25.00	33.33	16.24	
Rock	5.00	10.00	25.00	30.00	30.00	40.00	23.33	12.13	
% COMPOSITION									
Shrubs	40.00	42.86	62.50	0.00	0.00	0.00	24.23	25.24	
Forbs	0.00	14.29	25.00	85.71	60.00	66.67	41.94	30.73	
Grasses	60.00	42.86	12.50	14.29	40.00	33.33	33.83	16.54	

BEAVERCREEK/BLACKHAWK
Huntington #4
Reveg Lower Pads, Slopes etc.
D - Below Slopes
Exposure: Variable
Slope:

Sample Date: 29 July 1993	1.00	2.00	3.00	4.00	5.00	6.00	7.00	8.00	9.00	10.00	11.00
TREES & SHRUBS											
Chrysothamnus nauseosus	15.00	13.00	5.00	10.00	5.00	0.00	0.00	0.00	0.00	0.00	5.00
Ceratoides lanata	0.00	0.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rosa woodsii	0.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FORBS											
Penstemon palmeri	0.00	5.00	0.00	0.00	0.00	0.00	0.00	5.00	0.00	5.00	0.00
Astragalus cicer	0.00	0.00	0.00	5.00	10.00	10.00	5.00	5.00	5.00	5.00	5.00
Melilotus officinalis	0.00	2.00	5.00	0.00	10.00	5.00	0.00	0.00	5.00	5.00	5.00
Haplopappus parryi	0.00	0.00	0.00	0.00	0.00	5.00	0.00	0.00	0.00	0.00	0.00
GRASSES											
Stipa hymenoides	0.00	0.00	0.00	0.00	5.00	0.00	5.00	25.00	10.00	5.00	0.00
Elymus spicatus	10.00	15.00	0.00	10.00	5.00	15.00	10.00	0.00	15.00	5.00	15.00
Agropyron cristatum	0.00	5.00	0.00	0.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00
Bromus carinatus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20.00	0.00
Elymus lanceolatus	0.00	0.00	25.00	5.00	5.00	0.00	5.00	0.00	0.00	0.00	5.00
COVER											
Total Living Cover	25.00	40.00	40.00	40.00	45.00	35.00	25.00	35.00	35.00	45.00	35.00
Litter	10.00	10.00	20.00	20.00	15.00	15.00	10.00	5.00	20.00	20.00	15.00
Bareground	25.00	20.00	20.00	20.00	10.00	40.00	15.00	55.00	15.00	25.00	20.00
Rock	40.00	30.00	20.00	20.00	30.00	10.00	50.00	5.00	30.00	10.00	30.00
% COMPOSITION											
Shrubs	60.00	32.50	25.00	50.00	11.11	0.00	0.00	0.00	0.00	0.00	14.29
Forbs	0.00	17.50	12.50	12.50	44.44	57.14	20.00	28.57	28.57	33.33	28.57
Grasses	40.00	50.00	62.50	37.50	44.44	42.86	80.00	71.43	71.43	66.67	57.14

BEAVERCREEK/BLACKHAWK
Huntington #4
Reveg Lower Pads, Slopes et
D - Below Slopes
Exposure: Variable
Slope:
Sample Date: 29 July 1993

12.00	13.00	14.00	Mean	SDev	Freq	
						TREES & SHRUBS
5.00	0.00	20.00	5.57	6.32	57.14	Chrysothamnus nauseosus
0.00	0.00	0.00	0.36	1.29	7.14	Ceratoides lanata
0.00	0.00	0.00	0.71	2.58	7.14	Rosa woodsii
						FORBS
0.00	0.00	0.00	1.07	2.05	21.43	Penstemon palmeri
5.00	15.00	0.00	5.00	4.23	71.43	Astragalus cicer
0.00	0.00	0.00	2.64	3.06	50.00	Melilotus officinalis
0.00	0.00	0.00	0.36	1.29	7.14	Haplopappus parryi
						GRASSES
15.00	0.00	0.00	4.64	7.19	42.86	Stipa hymenoides
5.00	20.00	10.00	9.64	5.81	85.71	Elymus spicatus
0.00	0.00	0.00	0.71	1.75	14.29	Agropyron cristatum
0.00	0.00	0.00	1.43	5.15	7.14	Bromus carinatus
0.00	0.00	0.00	3.21	6.44	35.71	Elymus lanceolatus
						COVER
30.00	35.00	30.00	35.36	6.11		Total Living Cover
10.00	20.00	15.00	14.64	4.80		Litter
30.00	20.00	25.00	24.29	11.00		Bareground
30.00	25.00	30.00	25.71	11.63		Rock
						% COMPOSITION
16.67	0.00	66.67	19.73	22.96		Shrubs
16.67	42.86	0.00	24.48	15.92		Forbs
66.67	57.14	33.33	55.79	14.09		Grasses

BEAVERCREEK/BLACKHAWK
Huntington #4
Reveg Lower Pads, Slopes etc.
E - Lowest Area
Exposure: Variable
Slope:

Sample Date: 29 July 1993	1.00	2.00	3.00	4.00	5.00	6.00	7.00	8.00	9.00	10.00	11.00
TREES & SHRUBS											
Chrysothamus nauseosus	0.00	0.00	0.00	0.00	0.00	0.00	30.00	20.00	0.00	0.00	0.00
FORBS											
Penstemon palmeri	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.00	0.00	0.00
Astragalus cicer	0.00	0.00	0.00	5.00	0.00	0.00	0.00	10.00	10.00	0.00	0.00
Melilotus officinalis	0.00	0.00	0.00	0.00	0.00	5.00	5.00	0.00	0.00	0.00	0.00
Artemisia ludoviciana	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Iva axillaris	0.00	10.00	0.00	0.00	10.00	5.00	5.00	0.00	0.00	0.00	0.00
Haplopappus palmeri	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
GRASSES											
Elymus spicatus	0.00	0.00	40.00	0.00	15.00	0.00	0.00	5.00	10.00	10.00	0.00
Agropyron cristatum	0.00	30.00	0.00	25.00	0.00	0.00	10.00	0.00	5.00	20.00	30.00
Bromus carinatus	45.00	0.00	10.00	0.00	20.00	35.00	0.00	5.00	5.00	10.00	10.00
Elymus lanceolatus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00
Dactylis glomeratus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.00
Poa secunda	0.00	0.00	0.00	20.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00
COVER											
Total Living Cover	45.00	40.00	50.00	50.00	50.00	45.00	50.00	50.00	40.00	40.00	50.00
Litter	20.00	10.00	20.00	20.00	20.00	20.00	20.00	15.00	15.00	20.00	15.00
Bareground	20.00	20.00	10.00	10.00	15.00	25.00	25.00	10.00	25.00	25.00	25.00
Rock	15.00	30.00	20.00	20.00	15.00	10.00	5.00	25.00	20.00	15.00	10.00
% COMPOSITION											
Shrubs	0.00	0.00	0.00	0.00	0.00	0.00	60.00	40.00	0.00	0.00	0.00
Forbs	0.00	25.00	0.00	10.00	20.00	22.22	20.00	20.00	50.00	0.00	0.00
Grasses	100.00	75.00	100.00	90.00	80.00	77.78	20.00	40.00	50.00	100.00	100.00

BEAVERCREEK/BLACKHAWK
Huntington #4
Reveg Lower Pads, Slopes etc.
E - Lowest Area
Exposure: Variable
Slope:
Sample Date: 29 July 1993

12.00	13.00	14.00	15.00	Mean	SDev	Freq	
							TREES & SHRUBS
0.00	0.00	0.00	0.00	3.33	8.69	13.33	Chrysothamus nauseosus
							FORBS
0.00	0.00	0.00	0.00	0.67	2.49	6.67	Penstemon palmeri
20.00	0.00	0.00	0.00	3.00	5.72	26.67	Astragalus cicer
0.00	0.00	0.00	0.00	0.67	1.70	13.33	Melilotus officinalis
0.00	0.00	5.00	0.00	0.33	1.25	6.67	Artemisia ludoviciana
0.00	0.00	0.00	0.00	2.00	3.56	26.67	Iva axillaris
0.00	0.00	0.00	5.00	0.33	1.25	6.67	Haplopappus palmeri
							GRASSES
5.00	10.00	0.00	5.00	6.67	10.11	53.33	Elymus spicatus
5.00	5.00	0.00	40.00	11.33	13.35	60.00	Agropyron cristatum
15.00	30.00	50.00	0.00	15.67	16.21	73.33	Bromus carinatus
0.00	0.00	0.00	0.00	0.67	2.49	6.67	Elymus lanceolatus
0.00	0.00	0.00	0.00	0.67	2.49	6.67	Dactylis glomeratus
0.00	0.00	0.00	0.00	1.67	5.06	13.33	Poa secunda
							COVER
45.00	45.00	55.00	50.00	47.00	4.40		Total Living Cover
15.00	10.00	10.00	5.00	15.67	4.78		Litter
15.00	35.00	30.00	40.00	22.00	8.72		Bareground
25.00	10.00	5.00	5.00	15.33	7.63		Rock
							% COMPOSITION
0.00	0.00	0.00	0.00	6.67	17.38		Shrubs
44.44	0.00	9.09	10.00	15.38	15.33		Forbs
55.56	100.00	90.91	90.00	77.95	24.47		Grasses

BEAVERCREEK/BLACKHAWK
Huntington #4
Sites A thru E Combined
Exposure: Variable
Slope:

Site A = 1 thru 20

Sample Date: 29 July 1993	1.00	2.00	3.00	4.00	5.00	6.00	7.00	8.00	9.00	10.00	11.00
TREES & SHRUBS											
Chrysothamnus nauseosus	0.00	0.00	0.00	0.00	0.00	15.00	0.00	0.00	5.00	0.00	0.00
Ceratoides lanata	0.00	7.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Purshia tridentata	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Eriogonum corymbosum	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gutierrezia sarothrae	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rosa woodsii	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FORBS											
Penstemon palmeri	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Astragalus cicer	0.00	0.00	0.00	0.00	5.00	0.00	0.00	0.00	0.00	25.00	25.00
Melilotus officinalis	0.00	8.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Artemisia ludoviciana	0.00	0.00	0.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Machaeranthera canescens	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Aster chilensis	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Salsola iberica	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Eriogonus sp.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Iva axillaris	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Haplopappus parryi	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Haplopappus palmeri	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
GRASSES											
Stipa hymenoides	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Elymus spicatus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.00	5.00
Agropyron cristatum	0.00	0.00	0.00	5.00	10.00	10.00	25.00	0.00	5.00	5.00	0.00
Bromus carinatus	10.00	5.00	10.00	5.00	5.00	5.00	5.00	5.00	10.00	5.00	5.00
Elymus lanceolatus	30.00	5.00	5.00	20.00	10.00	0.00	0.00	10.00	0.00	5.00	0.00
Dacytylis glomeratus	0.00	5.00	10.00	0.00	0.00	0.00	10.00	10.00	0.00	0.00	0.00
Elymus salinus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20.00	0.00	0.00
Hordeum jubatum	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Poa secunda	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COVER											
Total Living Cover	40.00	30.00	25.00	35.00	30.00	30.00	40.00	25.00	40.00	45.00	35.00
Litter	5.00	10.00	15.00	20.00	35.00	10.00	30.00	10.00	40.00	10.00	15.00
Bareground	30.00	25.00	30.00	20.00	25.00	25.00	20.00	50.00	15.00	35.00	40.00
Rock	25.00	35.00	30.00	25.00	10.00	35.00	10.00	15.00	5.00	10.00	10.00
% COMPOSITION											
Shrubs	0.00	23.33	0.00	0.00	0.00	50.00	0.00	0.00	12.50	0.00	0.00
Forbs	0.00	26.67	0.00	14.29	16.67	0.00	0.00	0.00	0.00	55.56	71.43
Grasses	100.00	50.00	100.00	85.71	83.33	50.00	100.00	100.00	87.50	44.44	28.57

12.00	13.00	14.00	15.00	16.00	17.00	18.00	19.00	20.00	21.00	22.00	23.00	24.00
0.00	0.00	5.00	0.00	0.00	0.00	0.00	0.00	10.00	10.00	5.00	5.00	5.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.00	0.00	5.00	5.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5.00	0.00	5.00	0.00	5.00	5.00	0.00	10.00	5.00	0.00	5.00	0.00	5.00
10.00	15.00	5.00	15.00	20.00	10.00	20.00	20.00	25.00	5.00	10.00	0.00	5.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	5.00	5.00	5.00	5.00	0.00	10.00	5.00	0.00
15.00	30.00	5.00	15.00	10.00	0.00	0.00	0.00	0.00	15.00	0.00	0.00	0.00
0.00	0.00	5.00	0.00	0.00	0.00	0.00	5.00	0.00	5.00	0.00	20.00	5.00
0.00	5.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.00	0.00	0.00
5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
35.00	50.00	30.00	30.00	40.00	25.00	25.00	40.00	50.00	45.00	35.00	35.00	25.00
15.00	20.00	10.00	10.00	10.00	10.00	10.00	15.00	10.00	15.00	10.00	10.00	10.00
30.00	20.00	35.00	40.00	25.00	25.00	55.00	30.00	15.00	20.00	30.00	20.00	25.00
20.00	10.00	25.00	20.00	25.00	40.00	10.00	15.00	25.00	20.00	25.00	35.00	40.00
0.00	0.00	16.67	0.00	0.00	20.00	0.00	0.00	20.00	44.44	14.29	28.57	40.00
42.86	30.00	33.33	50.00	75.00	60.00	80.00	75.00	60.00	11.11	42.86	0.00	40.00
57.14	70.00	50.00	50.00	25.00	20.00	20.00	25.00	20.00	44.44	42.86	71.43	20.00

Site B = 21 thru 40

25.00	26.00	27.00	28.00	29.00	30.00	31.00	32.00	33.00	34.00	35.00	36.00	37.00
10.00	0.00	0.00	10.00	0.00	0.00	5.00	5.00	5.00	10.00	5.00	0.00	15.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.00	0.00	0.00
0.00	5.00	5.00	2.00	5.00	5.00	0.00	0.00	0.00	5.00	0.00	0.00	0.00
5.00	0.00	0.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	5.00	5.00	0.00	10.00	0.00	0.00	0.00	5.00	5.00	0.00	0.00	0.00
10.00	5.00	20.00	8.00	0.00	0.00	10.00	5.00	5.00	10.00	0.00	14.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	5.00	0.00	0.00	0.00	0.00	5.00	5.00	0.00	0.00	0.00	0.00	5.00
0.00	10.00	5.00	5.00	0.00	10.00	0.00	0.00	0.00	5.00	25.00	0.00	0.00
20.00	0.00	0.00	0.00	20.00	20.00	0.00	0.00	0.00	0.00	0.00	15.00	5.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.00	0.00	0.00
0.00	0.00	0.00	0.00	5.00	0.00	0.00	0.00	0.00	5.00	0.00	0.00	10.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
50.00	30.00	35.00	35.00	40.00	35.00	20.00	15.00	15.00	40.00	40.00	30.00	35.00
10.00	10.00	5.00	10.00	5.00	20.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
30.00	50.00	50.00	30.00	45.00	35.00	55.00	65.00	60.00	40.00	35.00	50.00	30.00
10.00	10.00	10.00	25.00	10.00	10.00	15.00	10.00	15.00	10.00	15.00	10.00	25.00
30.00	16.67	14.29	48.57	12.50	14.29	25.00	33.33	33.33	37.50	25.00	0.00	42.86
30.00	33.33	71.43	37.14	25.00	0.00	50.00	33.33	66.67	37.50	0.00	50.00	0.00
40.00	50.00	14.29	14.29	62.50	85.71	25.00	33.33	0.00	25.00	75.00	50.00	57.14

Site C = 41 thru 46

38.00	39.00	40.00	41.00	42.00	43.00	44.00	45.00	46.00	47.00	48.00	49.00	50.00
5.00	5.00	0.00	0.00	15.00	15.00	0.00	0.00	0.00	15.00	13.00	5.00	10.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	10.00	0.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.00
0.00	0.00	10.00	0.00	0.00	0.00	0.00	5.00	0.00	0.00	5.00	0.00	0.00
50.00	5.00	0.00	0.00	5.00	0.00	0.00	25.00	20.00	0.00	0.00	0.00	5.00
0.00	0.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	2.00	5.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	25.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	10.00	10.00	15.00	0.00	0.00	0.00	5.00	0.00	0.00	0.00	0.00
0.00	0.00	10.00	0.00	0.00	0.00	5.00	10.00	0.00	10.00	15.00	0.00	10.00
0.00	20.00	0.00	0.00	0.00	5.00	0.00	5.00	5.00	0.00	5.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.00	0.00	0.00	0.00	0.00	0.00
5.00	0.00	0.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.00	5.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
60.00	40.00	30.00	25.00	35.00	40.00	35.00	50.00	30.00	25.00	40.00	40.00	40.00
10.00	10.00	20.00	10.00	5.00	5.00	15.00	5.00	5.00	10.00	10.00	20.00	20.00
20.00	25.00	30.00	60.00	50.00	30.00	20.00	15.00	25.00	25.00	20.00	20.00	20.00
10.00	25.00	20.00	5.00	10.00	25.00	30.00	30.00	40.00	40.00	30.00	20.00	20.00
8.33	12.50	0.00	40.00	42.86	62.50	0.00	0.00	0.00	60.00	32.50	25.00	50.00
83.33	25.00	33.33	0.00	14.29	25.00	85.71	60.00	66.67	0.00	17.50	12.50	12.50
8.33	62.50	66.67	60.00	42.86	12.50	14.29	40.00	33.33	40.00	50.00	62.50	37.50

Site D = 47 thru 60

51.00	52.00	53.00	54.00	55.00	56.00	57.00	58.00	59.00	60.00	61.00	62.00	63.00
5.00	0.00	0.00	0.00	0.00	0.00	5.00	5.00	0.00	20.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	5.00	0.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10.00	10.00	5.00	5.00	5.00	5.00	5.00	5.00	15.00	0.00	0.00	0.00	0.00
10.00	5.00	0.00	0.00	5.00	5.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.00	0.00
0.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5.00	0.00	5.00	25.00	10.00	5.00	0.00	15.00	0.00	0.00	0.00	0.00	0.00
5.00	15.00	10.00	0.00	15.00	5.00	15.00	5.00	20.00	10.00	0.00	0.00	40.00
5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	30.00	0.00
0.00	0.00	0.00	0.00	0.00	20.00	0.00	0.00	0.00	0.00	45.00	0.00	10.00
5.00	0.00	5.00	0.00	0.00	0.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
45.00	35.00	25.00	35.00	35.00	45.00	35.00	30.00	35.00	30.00	45.00	40.00	50.00
15.00	15.00	10.00	5.00	20.00	20.00	15.00	10.00	20.00	15.00	20.00	10.00	20.00
10.00	40.00	15.00	55.00	15.00	25.00	20.00	30.00	20.00	25.00	20.00	20.00	10.00
30.00	10.00	50.00	5.00	30.00	10.00	30.00	30.00	25.00	30.00	15.00	30.00	20.00
11.11	0.00	0.00	0.00	0.00	0.00	14.29	16.67	0.00	66.67	0.00	0.00	0.00
44.44	57.14	20.00	28.57	28.57	33.33	28.57	16.67	42.86	0.00	0.00	25.00	0.00
44.44	42.86	80.00	71.43	71.43	66.67	57.14	66.67	57.14	33.33	100.00	75.00	100.00

Site E = 60 thru 75

64.00	65.00	66.00	67.00	68.00	69.00	70.00	71.00	72.00	73.00	74.00	75.00
0.00	0.00	0.00	30.00	20.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00
5.00	0.00	0.00	0.00	10.00	10.00	0.00	0.00	20.00	0.00	0.00	0.00
0.00	0.00	5.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	10.00	5.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	15.00	0.00	0.00	5.00	10.00	10.00	0.00	5.00	10.00	0.00	5.00
25.00	0.00	0.00	10.00	0.00	5.00	20.00	30.00	5.00	5.00	0.00	40.00
0.00	20.00	35.00	0.00	5.00	5.00	10.00	10.00	15.00	30.00	50.00	0.00
0.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
50.00	50.00	45.00	50.00	50.00	40.00	40.00	50.00	45.00	45.00	55.00	50.00
20.00	20.00	20.00	20.00	15.00	15.00	20.00	15.00	15.00	10.00	10.00	5.00
10.00	15.00	25.00	25.00	10.00	25.00	25.00	25.00	15.00	35.00	30.00	40.00
20.00	15.00	10.00	5.00	25.00	20.00	15.00	10.00	25.00	10.00	5.00	5.00
0.00	0.00	0.00	60.00	40.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10.00	20.00	22.22	20.00	20.00	50.00	0.00	0.00	44.44	0.00	9.09	10.00
90.00	80.00	77.78	20.00	40.00	50.00	100.00	100.00	55.56	100.00	90.91	90.00

BEAVERCREEK/BLACKHAWK
Huntington #4
A thru E Combined
Exposure: Variable
Slope:
Sample Date: 29 July 1993

Mean	SDev	Freq	
			TREES & SHRUBS
3.91	6.14	38.67	Chrysothamnus nauseosus
0.16	0.98	2.67	Ceratoides lanata
0.13	0.81	2.67	Purshia tridentata
0.89	2.36	14.67	Eriogonum corymbosum
0.13	0.81	2.67	Gutierrezia sarothrae
0.13	1.15	1.33	Rosa woodsii
			FORBS
1.53	2.83	25.33	Penstemon palmeri
6.96	9.04	56.00	Astragalus cicer
0.87	2.27	14.67	Melilotus officinalis
0.13	0.81	2.67	Artemisia ludoviciana
0.20	0.98	4.00	Machaeranthera canescens
0.07	0.57	2.67	Aster chilensis
0.01	0.11	2.67	Salsola iberica
0.33	2.87	2.67	Eriogonus sp.
0.47	1.86	6.67	Iva axillaris
0.07	0.57	2.67	Haplopappus parryi
0.07	0.57	2.67	Haplopapous palmeri
			GRASSES
2.13	4.41	26.67	Stipa hymenoides
5.60	7.74	48.00	Elymus spicatus
5.27	8.87	41.33	Agropyron cristatum
4.60	9.69	36.00	Bromus carinatus
2.33	5.44	25.33	Elymus lanceolatus
0.67	2.36	8.00	Dacytylis glomeratus
0.33	2.36	2.67	Elymus salinus
0.07	0.57	2.67	Hordeum jubatum
0.33	2.36	2.67	Poa secunda

		COVER
37.40	9.21	Total Living Cover
13.47	6.53	Litter
29.40	13.01	Bareground
19.73	10.42	Rock
		% COMPOSITION
15.27	19.25	Shrubs
29.15	24.61	Forbs
55.58	27.30	Grasses

BEAVERCREEK/BLACKHAWK
Huntington #4
Revegetated Road
Exposure: Variable
Slope: Variable

Sample Date: 30 July 1993	1.00	2.00	3.00	4.00	5.00	6.00	7.00	8.00	9.00	10.00
TREES & SHRUBS										
Chrysothamnus nauseosus	0.00	0.00	5.00	0.00	25.00	10.00	7.00	10.00	0.00	0.00
Ceratoides lanata	0.00	0.00	7.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00
FORBS										
Penstemon palmeri	0.00	10.00	8.00	5.00	0.00	0.00	8.00	0.00	5.00	10.00
Astragalus cicer	0.00	5.00	0.00	5.00	0.00	0.00	0.00	15.00	40.00	25.00
GRASSES										
Stipa hymenoides	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Elymus spicatus	0.00	10.00	0.00	0.00	0.00	25.00	0.00	0.00	0.00	0.00
Agropyron cristatum	20.00	0.00	0.00	0.00	25.00	0.00	25.00	5.00	5.00	5.00
Bromus carinatus	0.00	0.00	0.00	15.00	0.00	0.00	0.00	0.00	0.00	0.00
Elymus lanceolatus	25.00	0.00	0.00	0.00	10.00	0.00	10.00	5.00	0.00	0.00
Elymus salinus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COVER										
Total Living Cover	45.00	25.00	20.00	35.00	60.00	35.00	50.00	35.00	50.00	40.00
Litter	25.00	5.00	5.00	10.00	25.00	25.00	25.00	20.00	5.00	5.00
Bareground	15.00	10.00	25.00	15.00	10.00	25.00	10.00	20.00	10.00	15.00
Rock	15.00	60.00	50.00	40.00	5.00	15.00	15.00	25.00	35.00	40.00
% COMPOSITION										
Shrubs	0.00	0.00	60.00	28.57	41.67	28.57	14.00	28.57	0.00	0.00
Forbs	0.00	60.00	40.00	28.57	0.00	0.00	16.00	42.86	90.00	87.50
Grasses	100.00	40.00	0.00	42.86	58.33	71.43	70.00	28.57	10.00	12.50

11.00	12.00	13.00	14.00	15.00	16.00	17.00	18.00	19.00	20.00	21.00	22.00	23.00
0.00	0.00	20.00	20.00	45.00	25.00	0.00	0.00	0.00	20.00	5.00	5.00	10.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	10.00	0.00	0.00	5.00	0.00	0.00	0.00	0.00	5.00	5.00	0.00	5.00
0.00	10.00	30.00	35.00	10.00	0.00	15.00	50.00	20.00	0.00	0.00	40.00	15.00
0.00	0.00	0.00	5.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30.00	5.00	0.00	0.00	0.00	0.00	5.00	15.00	0.00	15.00	15.00	15.00	0.00
10.00	0.00	5.00	5.00	5.00	10.00	5.00	0.00	15.00	0.00	10.00	0.00	5.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5.00	0.00	0.00	5.00	0.00	0.00	0.00	5.00	0.00	0.00	0.00	0.00	5.00
0.00	0.00	0.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00
45.00	25.00	55.00	70.00	70.00	35.00	35.00	70.00	35.00	40.00	35.00	60.00	40.00
5.00	10.00	15.00	10.00	15.00	15.00	10.00	10.00	5.00	10.00	20.00	5.00	10.00
5.00	35.00	25.00	15.00	5.00	5.00	5.00	5.00	10.00	25.00	5.00	15.00	5.00
45.00	30.00	5.00	5.00	10.00	45.00	50.00	15.00	50.00	25.00	40.00	20.00	45.00
0.00	0.00	36.36	28.57	64.29	71.43	0.00	0.00	0.00	50.00	14.29	8.33	25.00
0.00	80.00	54.55	50.00	21.43	0.00	42.86	71.43	57.14	12.50	14.29	66.67	50.00
100.00	20.00	9.09	21.43	14.29	28.57	57.14	28.57	42.86	37.50	71.43	25.00	25.00

24.00	25.00	26.00	27.00	28.00	29.00	30.00	31.00	32.00	33.00	34.00	Mean	SDev	Freq
40.00	10.00	20.00	0.00	15.00	0.00	5.00	5.00	0.00	5.00	0.00	9.03	11.54	58.82
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50	2.03	5.88
0.00	5.00	0.00	5.00	0.00	5.00	10.00	0.00	5.00	0.00	0.00	3.12	3.63	47.06
10.00	15.00	30.00	30.00	50.00	25.00	15.00	5.00	45.00	25.00	20.00	17.21	15.59	73.53
0.00	0.00	0.00	0.00	0.00	5.00	0.00	20.00	0.00	15.00	0.00	1.47	4.29	14.71
0.00	5.00	0.00	5.00	10.00	0.00	0.00	10.00	0.00	0.00	10.00	5.15	7.72	41.18
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.56	7.01	44.12
0.00	0.00	20.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.03	4.16	5.88
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.00	2.35	5.03	29.41
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29	1.69	2.94
50.00	35.00	70.00	40.00	75.00	35.00	30.00	40.00	50.00	45.00	40.00	44.71	14.09	
5.00	5.00	10.00	5.00	5.00	5.00	5.00	30.00	5.00	5.00	5.00	11.03	7.55	
35.00	55.00	15.00	30.00	5.00	45.00	10.00	5.00	5.00	10.00	10.00	15.88	12.28	
10.00	5.00	5.00	25.00	15.00	15.00	55.00	25.00	40.00	40.00	45.00	28.38	16.75	
80.00	28.57	28.57	0.00	20.00	0.00	16.67	12.50	0.00	11.11	0.00	20.50	22.66	
20.00	57.14	42.86	87.50	66.67	85.71	83.33	12.50	100.00	55.56	50.00	45.50	30.17	
0.00	14.29	28.57	12.50	13.33	14.29	0.00	75.00	0.00	33.33	50.00	34.00	27.14	

BEAVERCREEK/BLACKHAWK
Huntington #4
Revegetated Road
Exposure: Variable
Slope: Variable
Sample Date: 30 July 1993

TREES & SHRUBS
Chrysothamnus nauseosus
Ceratoides lanata

FORBS
Penstemon palmeri
Astragalus cicer

GRASSES
Stipa hymenoides
Elymus spicatus
Agropyron cristatum
Bromus carinatus
Elymus lanceolatus
Elymus salinus

COVER
Total Living Cover
Litter
Bareground
Rock

% COMPOSITION
Shrubs
Forbs
Grasses

BEAVERCREEK/BLACKHAWK
Huntington #4
Reference Area
Exposure: SSW
Slope: 34 deg.

Sample Date: 30 July 1993	1.00	2.00	3.00	4.00	5.00	6.00	7.00	8.00	9.00	10.00
TREES & SHRUBS										
Pinus edulis	0.00	40.00	30.00	25.00	15.00	0.00	40.00	70.00	0.00	0.00
Ceratoides lanata	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	35.00	0.00
FORBS										
GRASSES										
Elymus salinus	35.00	0.00	20.00	25.00	15.00	20.00	5.00	0.00	0.00	15.00
COVER										
Total Living Cover	35.00	40.00	50.00	50.00	30.00	20.00	45.00	70.00	35.00	15.00
Litter	5.00	45.00	20.00	45.00	35.00	20.00	5.00	15.00	25.00	5.00
Bareground	45.00	10.00	5.00	3.00	5.00	45.00	5.00	5.00	35.00	60.00
Rock	15.00	5.00	25.00	2.00	30.00	15.00	45.00	10.00	5.00	20.00
% COMPOSITION										
Shrubs	0.00	100.00	60.00	50.00	50.00	0.00	88.89	100.00	100.00	0.00
Forbs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grasses	100.00	0.00	40.00	50.00	50.00	100.00	11.11	0.00	0.00	100.00

11.00	12.00	13.00	14.00	15.00	16.00	17.00	18.00	19.00	20.00	21.00	22.00	23.00
0.00	0.00	0.00	25.00	0.00	10.00	0.00	50.00	0.00	45.00	10.00	25.00	20.00
0.00	2.00	0.00	0.00	0.00	25.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20.00	18.00	25.00	25.00	25.00	20.00	30.00	0.00	15.00	15.00	25.00	25.00	15.00
20.00	20.00	25.00	50.00	25.00	55.00	30.00	50.00	15.00	60.00	35.00	50.00	35.00
10.00	10.00	5.00	45.00	10.00	40.00	60.00	25.00	20.00	30.00	25.00	40.00	55.00
45.00	45.00	5.00	3.00	55.00	3.00	2.00	10.00	5.00	5.00	15.00	5.00	5.00
25.00	25.00	65.00	2.00	10.00	2.00	8.00	15.00	60.00	5.00	25.00	5.00	5.00
0.00	10.00	0.00	50.00	0.00	63.64	0.00	100.00	0.00	75.00	28.57	50.00	57.14
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	90.00	100.00	50.00	100.00	36.36	100.00	0.00	100.00	25.00	71.43	50.00	42.86

BEAVERCREEK/BLACKHAWK
Huntington #4
Reference Area
Exposure: SSW
Slope: 34 deg.
Sample Date: 30 July 1993

24.00	25.00	26.00	27.00	28.00	29.00	30.00	Mean	SDev	Freq	
										TREES & SHRUBS
0.00	0.00	30.00	10.00	5.00	15.00	0.00	15.50	18.50	50.00	Pinus edulis
0.00	5.00	0.00	0.00	2.00	0.00	20.00	2.97	8.20	20.00	Ceratoides lanata
										FORBS
										GRASSES
15.00	20.00	5.00	25.00	8.00	5.00	15.00	16.20	9.42	86.67	Elymus salinus
										COVER
15.00	25.00	35.00	35.00	15.00	20.00	35.00	34.67	14.54		Total Living Cover
20.00	5.00	5.00	10.00	5.00	10.00	5.00	21.83	16.46		Litter
40.00	15.00	5.00	5.00	15.00	60.00	5.00	18.87	19.73		Bareground
25.00	55.00	55.00	50.00	65.00	10.00	55.00	24.63	20.85		Rock
										% COMPOSITION
0.00	20.00	85.71	28.57	46.67	75.00	57.14	43.21	36.04		Shrubs
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		Forbs
100.00	80.00	14.29	71.43	53.33	25.00	42.86	56.79	36.04		Grasses

ANNUAL

IMPOUNDMENT

CERTIFICATIONS

MOUNTAIN COAL COMPANY
1993 ANNUAL POND INSPECTION REPORT

POND: SED. POND

LOCATION: HUNT. CYN. NO. 4

IMPOUNDMENTS

(1) Stability	Slopes Stable. Vegetated.
(2) Structural Weakness/Erosion	None Noted.
(3) Potential Safety Hazards	None Noted.
(4) Depth of Impounded Water	N/A - Dry.
(5) Existing Storage Capacity	1.011 Ac. Ft.
(6) Monitoring Procedures	Quarterly Inspection. U.P.D.E.S. Discharge.

SEDIMENT PONDS ONLY

(7) Sediment Accumulation (Elev.)	88.5 (U)	77.0 (L)
(8) Sediment Cleanout Level (Elev.)	92.2 (U)	81.6 (L)
(9) Principle Spillway (Elev.)	93.2 (U)	84.6 (L)
(10) Emergency Spillway (Elev.)	98.0 (U)	84.6 (L)
(11) Existing Sediment Capacity (To Cleanout)	0.162 (U)	0.360 (L)

GENERAL

(12) Comments/Recommendations	Pond Cleaned 11/92. Re-Surveyed 5/93. No Discharge/Dry.

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)

11-04-93
(Date)

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