

PACIFIC POWER • UTAH POWER

324 South State
P.O. Box 26128
Salt Lake City, Utah 84126-0128



December 31, 1990

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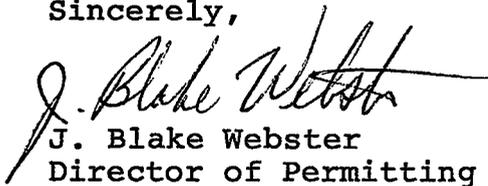
DIVISION OF
OIL, GAS & MINING

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

Dear Ms. Grubaugh-Littig:

Enclosed are the 1990 Annual Engineering Reports for the Sedimentation Structures at the Deer Creek, Cottonwood and Des Bee Dove mines and the Cottonwood Exploration Site.

Sincerely,

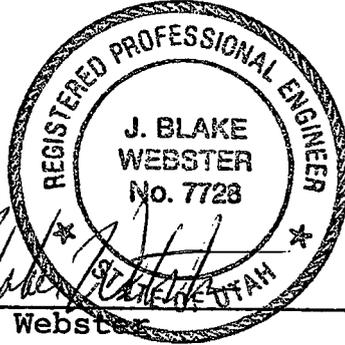

J. Blake Webster
Director of Permitting

/do
Enclosure

Copy to Jesse
then file in
U.P.L files as
needed.

ENGINEERS STATEMENT:

I do hereby certify that the 1990 Annual Engineering Reports for the Sedimentation Structures for the Deer Creek, Cottonwood/Wilberg, Des Bee Dove Mines, and the Cottonwood Exploration site are true and correct to the best of my knowledge and belief.



J. Blake Webster

J. Blake Webster
PE #7728

Jan. 8, 1991

Date

ANNUAL ENGINEERING REPORT

DEER CREEK SEDIMENT POND

1990

This report is submitted as required by Federal and State regulations:

R614-301-514.300
30 CFR 77.216-4
30 CFR 817.49

Design Data:

Top of Dam Elevation	7235.00
Toe of Dam Elevation	7210.50
Spillway Crest Elevation	7230.50
Total Storage Capacity	12.09 Ac.Ft.
Sediment Storage Capacity	2.19 Ac.Ft.
Control Points	1 - 7235.54 2 - 7235.50 3 - 7235.64 4 - 7235.98

Operational Data:

	<u>Accumulated Sediment</u>	<u>Water Elevation</u>	<u>Control Point Elevation</u>
1st Quarter 3-28-90	Frozen	7223.43	4 - 7235.98
2nd Quarter 6-21-90	0.46	7219.58	4 - 7235.98
3rd Quarter 9-26-90	0.47	7220.93	1 - 7235.54 2 - 7235.50 3 - 7235.64 4 - 7235.98
4th Quarter 12-20-90	Frozen	7221.28	4 - 7235.98

INSPECTION:

Visual inspections were made during each quarter, no stability problems or other concerns were found.

Dam control points #1, #2 and #3 were reestablished during the 3rd Quarter.

ANNUAL ENGINEERING REPORT

COTTONWOOD SEDIMENT PONDS

1990

This report is submitted as required by Federal and State regulations:

R614-301-514.300
30 CFR 77.216-4
30 CFR 817.49

NORTH POND (#1)

Design Data:

Top of Dam Elevation	7367.00
Toe of Dam Elevation	7345.20
Spillway Crest Elevation	7365.00
Total Storage Capacity	2.15 Ac.Ft.
Sediment Storage Capacity	0.90 Ac.Ft.
Control Points	N-1 7367.36 N-2 7367.63 N-3 7367.09

Operational Data:

	<u>Accumulated Sediment</u>	<u>Water Elevation</u>	<u>Control Point Elevation</u>
1st Quarter 3-28-90	0.57	7356.39	
2nd Quarter 6-21-90	0.007	7354.89	
3rd Quarter 9-26-90	0.454	7355.60	N-1 7367.36 N-2 7367.63 N-3 7367.09
4th Quarter 12-20-90	Frozen	7361.29	

SOUTH POND (#2)

Design Data:

Top of Dam Elevation	7337.00
Toe of Dam Elevation	7317.00
Spillway Crest Elevation	7335.00
Total Storage Capacity	1.88 Ac.Ft.
Sediment Storage Capacity	0.30 Ac.Ft.
Control Points	S-1 7338.52
	S-2 7336.42
	S-4 7339.45

Operational Data:

	<u>Accumulated Sediment</u>	<u>Water Elevation</u>	<u>Control Point Elevation</u>
1st Quarter 3-28-90	0.03	7330.00	
2nd Quarter 6-21-90	0.00	7330.00	
3rd Quarter 9-26-90	0.00	7330.00	S-1 7338.52 S-2 7336.42 S-4 7339.45
4th Quarter 12-20-90	Frozen	7330.35	

INSPECTION:

Visual inspections were made during each quarter, no stability problems or other concerns were found.

Dam control points were reestablished during the 3rd Quarter.

ANNUAL ENGINEERING REPORT

COTTONWOOD EXPLORATION SITE SEDIMENT PONDS

1990

This report is submitted as required by Federal and State regulations:

R614-301-514.300
30 CFR 77.216-4
30 CFR 817.49

Design Data:

	<u>Sediment Capacity</u>	<u>Total Capacity</u>
North Basin	.047 Ac. Ft.	.107 Ac. Ft.
Center Basin	.115 Ac. Ft.	.511 Ac. Ft.
Total	.245 Ac. Ft.	.696 Ac. Ft.

Operational Data:

Accumulated Sediment (Ac. Ft.)

	<u>North #1</u>	<u>South #2</u>
1st Quarter	.001	.051
2nd Quarter	.001	.05
3rd Quarter	.001	.05
4th Quarter	.001	.05

Water Elevation

	<u>North #1</u>	<u>South #2</u>
1st Quarter		
2nd Quarter	Dry	Dry
3rd Quarter	Bottom Covered With Water	Bottom Covered With Water
4th Quarter	No Water	No Water

INSPECTION:

Visual inspections were made during each quarter, no stability problems or other concerns were found.

ANNUAL ENGINEERING REPORT

DES BEE DOVE SEDIMENT POND

1990

This report is submitted as required by Federal and State regulations:

R614-301-514.300
30 CFR 77.216-4
30 CFR 817.49

Design Data:

Top of Dam Elevation	6775.00
Toe of Dam Elevation	6756.00
Spillway Crest Elevation	6771.80
Total Storage Capacity	19.8 Ac.Ft.
Sediment Storage Capacity	2.0 Ac.Ft.
Control Points	0+00 - 6775.20
	0+85 - 6775.00
	1+25 - 6775.20
	1+65 - 6775.40

Operational Data:

	<u>Accumulated Sediment</u>	<u>Water Elevation</u>	<u>Control Point Elevation</u>
1st Quarter 3-28-90	0.09	6761.50	No Change
2nd Quarter 6-21-90	0.09	6760.57	No Change
3rd Quarter 9-26-90	0.10	6760.02	No Change
4th Quarter 12-20-90	Frozen	6760.17	No Change

INSPECTION:

Visual inspections were made during each quarter, no stability problems or other concerns were found.

PACIFIC POWER • UTAH POWER

324 South State
P.O. Box 26128
Salt Lake City, Utah 84126-0128

PACIFICORP
ELECTRIC OPERATIONS GROUP

RECEIVED
OCT 11 1990

October 8, 1990

DIVISION OF
OIL, GAS & MINING

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

Dear Ms. Grubaugh-Littig:

Enclosed for submittal are the 3rd Quarter 1990 Engineering Reports for Deer Creek, Cottonwood/Wilberg and Des Bee Dove Waste Rock Sites. Please find also, the 3rd Quarter 1990 Report of the Deer Creek Elk Canyon Storage Pad submittal.

Sincerely,

Guy Davis

Guy Davis
Environmental Engineer

GD/do
Enclosure

cc: Bart Hyita
File

COTTONWOOD/WILBERG/DES BEE DOVE
ACT/015/019 AND ACT/015/017
WASTE ROCK DISPOSAL SITE
3RD QUARTER 1990

File #6
(Copy to
Des-Bee Dove
Folder #6)

INTRODUCTION

The original Waste Rock Disposal Site is located on a 16 acre right-of-way from the BLM located approximately two miles from the Cottonwood/Wilberg mine site along the east side of State Road 57. This facility was filled to capacity during this quarter. Closure of this site will begin soon.

A new disposal site was constructed during the spring and summer of 1990 on an approved right-of-way from the BLM located west of State Road 57 and 1.75 miles south of the Cottonwood/Wilberg mine site. This facility is designed for 784,000 cubic yards of material and will last for the life of the mines which it serves.

OPERATION

During the quarter, approximately 2380 cubic yards of material from the Cottonwood operation was dumped in the original disposal site. The waste material was leveled and compacted several times during the quarter. Trash and extraneous material were removed during this time also.

Also during this quarter approximately 1,800 cubic yards of waste material was dumped in the new facility west of State Road 57.

INSPECTION

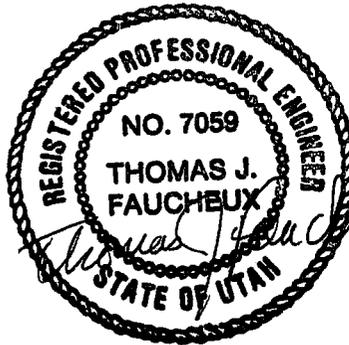
Both waste storage sites were inspected on September 29, 1990 for structural stability. Inspection of the operation of these facilities is conducted on a continual basis.

Tension cracks found in the perimeter berm of the original site, Cell #7, are still present but present no problems since the site has been filled with waste material. The cracks are on the inside slope and the backfill with the waste rock has stabilized the slope. No other signs of instability or weakness were found.

No signs of instability or weakness were found at the new storage facility.

CERTIFICATION

I do hereby certify that the Cottonwood/Wilberg Waste Rock Site is being constructed according to sound engineering practice, the regulations governing its construction and the approved MRP and I do also certify that there was no evidence of instability, structural weakness or other hazardous conditions at the time of this inspection except as noted herein.



THOMAS J. FAUCHEUX
P.E. 7059

Folder # 6

DEER CREEK
ELK CANYON STORAGE PAD
ACT/015/018
3RD QUARTER 1990

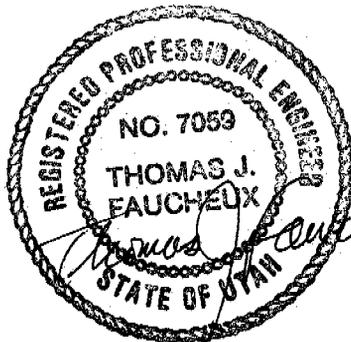
SLOPE STABILITY INSPECTION

The Elk Canyon Storage Pad was modified in 1988 to provide additional storage space for run of mine coal. The fill structure was constructed of underground development waste and coal processing waste. An estimated 24,000 cubic yards of material was used to construct the fill pad.

No additional material was added to the storage pad during the quarter. ROM coal was occasionally stored on the pad for short periods of time.

The inspection of the storage pad for structural stability was done on September 29, 1990.

I do hereby certify that the Elk Canyon Storage Pad is constructed and maintained as designed and in accordance with the approved plan. I also certify that the facility shows no signs of instability, structural weakness or other hazardous conditions.



THOMAS J. FAUCHEUX
P.E. 7059

#6

DEER CREEK
ACT/015/018
WASTE ROCK DISPOSAL SITE
3RD QUARTER 1990

INTRODUCTION

The original site is located on the northeast end of the material storage yard and now serves as an area for material storage. Its storage capacity was approximately 90,000 cubic yards.

The current area for waste rock storage is located approximately 2.5 miles from the mine site in Huntington Canyon, more specifically in Sections 5 and 6, T. 17 S., R. 8 E. SLM. When completed this site will contain approximately 1.3 million cubic yards of waste rock.

OPERATION

During the quarter approximately 11,980 cubic yards of waste rock material were dumped at the Deer Creek Waste Rock Storage Facility in Huntington Canyon. Once during the quarter the site was leveled and the trash and extraneous material were sorted and removed from the site.

INSPECTION

This inspection covered the inactive original storage facility as well as the current facility including the construction of the waste pile, the perimeter berms, and the underdrain. No signs of instability were found in any of the waste piles. Some minor tension cracks reported previously were not evident at this inspection.

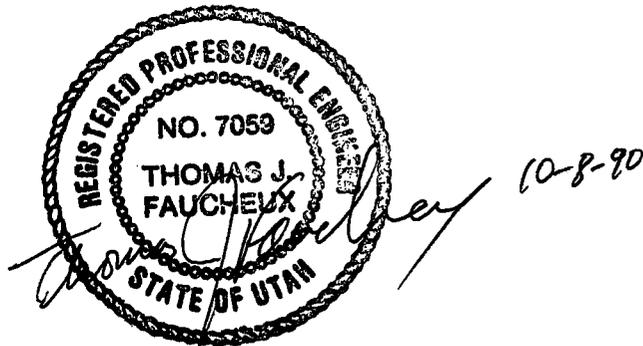
The underdrain was not discharging at the time of the inspection. A wet seep mentioned in previous inspections was not present at this time either.

The detention basin and spillway were also inspected for any signs of weakness or instability. The basin was dry at the time of this inspection but some water still remains in a secondary basin used to store the water removed from the Deer Creek Mine Sediment Pond in 1989. No signs of instability or weakness were observed in or around the basin or spillway.

Inspection of the facility for structural stability was performed September 29, 1990. Inspection of the operation of the facility was done on a continual basis.

CERTIFICATION

I do hereby certify that the waste rock sites for the Deer Creek Mine are constructed and maintained as designed and in accordance with the approved plan and Utah Coal Mining Rules. I do also certify that there is no evidence of instability, structural weakness, or other hazardous condition except as noted herein.



THOMAS J. FAUCHEUX
P.E. 7059



State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

Norman H. Bangarter
Governor

Dee C. Hansen
Executive Director

Dianne R. Nielson, Ph.D.
Division Director

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

July 17, 1990

TO: Pamela Grubaugh-Littig, Permit Supervisor

FROM: Jess Kelley, Reclamation Engineer *JK*

RE: Subsidence Section of Annual Report, Utah Power and Light Company, Deer Creek Mine, ACT/015/018; Des-Bee-Dove Mine, ACT/015/017; and Cottonwood/Wilberg Mine, ACT/015/019, Folder #6, Emery County, Utah

Synopsis

In May, 1990, the Division received from Utah Power and Light Company (UP&L) the 1989 Annual Report for the Deer Creek, Des-Bee-Dove, and Cottonwood/Wilberg Mines. This memorandum constitutes this writer's review of the subsidence section of the Annual Report and his findings concerning it.

Analysis

The subsidence survey for the Deer Creek, Des-Bee-Dove and Cottonwood/Wilberg Mines is conducted yearly by UP&L. The survey consists of photogrammetric data from 15 designated areas and of observations made during helicopter reconnaissance flights over the surrounding areas. The areas from which subsidence data are gathered are shown in Figure 2 of the annual report.

The results of the subsidence survey are compiled individually for each area. For each area, a verbal account summarizes the photogrammetric data, the aerial observations, surface effects, hydrologic effects, and angle-of-draw calculations. A map then shows the underground workings in some detail. The photogrammetric data are then compiled in the form of a subsidence contour map which is of the same scale as the map of the underground workings so that each can be superimposed upon the other. Two vertical cross sections of the area, transverse to each other, then finish out the report for that area.



State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

Norman H. Bangarter
Governor

Dee C. Hansen
Executive Director

Dianne R. Nielson, Ph.D.
Division Director

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

July 6, 1990

TO: Pamela Grubaugh-Littig, Permit Supervisor

FROM: Susan White, Reclamation Biologist *SW*

RE: 1989 Annual Vegetation Report, Utah Power and Light Company, Cottonwood/Wilberg Mine, ACT/015/019, Folder #2, Emery County, Utah

6

Analysis

Qualitative interim revegetation monitoring was conducted in 1989. The 4th East Road and Fan Portal subsoil and topsoil storage area were all rated as having excellent vegetative establishment.

A test plot was established in November 1989 to test the final seed mixture with various moisture conditions and mulch treatments.

The Cottonwood Fan Portal Area was permanently reclaimed in 1980. First year bond release sampling was done in 1989. In 1990, the owner may request bond release. Preliminary vegetation data indicate that the owner should receive bond release based on vegetation.

The Cottonwood/Wilberg Des-Bee-Dove Waste Rock Site has had contemporaneous revegetation since 1983. Quantitative vegetation monitoring was done in August 1989 on the areas revegetated from 1983 to 1986. A decrease in vegetative cover was found from areas seeded in 1983 to 1986; however, this can be attributed to the decrease in weedy species.

Recommendation

The PAP commits to a quantitative measurement of vegetation on the 9th East Road, the 4th East Road, and the Old Fan Road. The operator should measure these areas in 1990 and report the results in the 1990 annual report.

djh
AT63/25

PACIFIC POWER • UTAH POWER

324 South State
P.O. Box 26128
Salt Lake City, Utah 84126-0128



May 29, 1990

*File in
Annual
Report
to files of
each unit. vtl*

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

Re: **UTAH POWER & LIGHT COMPANY, HYDROLOGIC AND
SUBSIDENCE MONITORING REPORT FOR 1989 -
DEER CREEK ACT/015/018, COTTONWOOD/WILBERG
ACT/015/019, DES-BEE-DOVE ACT/015/017**

~~#7~~
#6

Dear Ms. Grubaugh-Littig:

Transmitted herewith for your reference and distribution are seven (7) copies each of Utah Power & Light Company's Hydrologic and Subsidence Monitoring Reports for 1989.

Should you have any questions please call me at 220-4612.

Sincerely,

Scott M. Child
Senior Compliance and
Land Status Analyst
Fuel Resources

SMC:bb:6451
Enclosure

cc: D. W. Jense
V. Payne
G. Davis

**utah
power**
& LIGHT COMPANY
MINING DIVISION
P.O. Box 310
Huntington, Utah 84528

ACT/015/019
#6

RECEIVED
JAN 16 1990

DIVISION OF
OIL, GAS & MINING

January 11, 1990

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. Grubaugh-Littig:

Enclosed are the 1989 Quarterly Engineering Reports for the Sedimentation Structures at the Deer Creek, Wilberg and Des Bee Dove mines and the Cottonwood Exploration Site.

Sincerely,

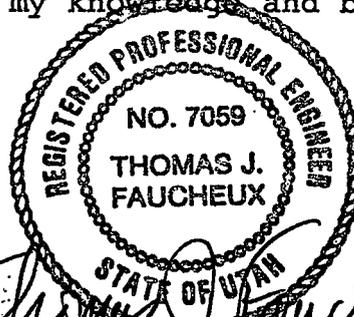


David Smaldone
Director of Permitting,
Compliance and Services

:do
Enclosure

Engineers Statement:

I do hereby certify that these 1989 Quarterly Engineering Reports for the Sedimentation Structures for the Deer Creek, Des-Bee and Wilberg Mines and the Cottonwood Exploration Site are true and correct to the best of my knowledge and belief.



Thomas J. Faucheux 1-9-90

Thomas J. Faucheux Date
P.E. # 7059

QUARTERLY ENGINEERING REPORT

COTTONWOOD/WILBERG MINE

1989

This report is submitted as required by Federal and State regulations:

UMC 817.46(t)
 UMC 817.49 (h)
 30 CFR 77.216-4
 30 CFR 817.49

NORTH POND (#1)

Design Data:	Top of Dam Elevation	7367.00
	Toe of Dam Elevation	7345.20
	Spillway Crest Elevation	7365.00
	Total Storage Capacity	2.15 AC.Ft.
	Sediment Storage Capacity	0.90 AC.Ft.
	Control Points	N-2 7367.23
		N-3 7366.88
		N-4 7366.39

Operational Data:

	<u>Accumulated Sediment</u>	<u>Water Elevation</u>	<u>Control Point Elevation</u>
1st Quarter 3-24-89	0	7355.88	N-2 - 7367.23 N-3 - 7366.88 N-4 - 7366.39
2nd Quarter 6-30-89	0.33	7355.38	Control Points Damaged
3rd Quarter 9-29-89	0.34	7355.40	
4th Quarter 12-20-89	FROZEN	7356.80	

SOUTH POND (#2)

Design Data:	Top of Dam Elevation	7337.00
	Toe of Dam Elevation	7317.00
	Spillway Crest Elevation	7335.00
	Total Storage Capacity	1.88
	Sediment Storage Capacity	0.30
	Control Points	
	S-2	7338.34
	S-3	7338.40
	S-4	7339.65

Operation Data:

	<u>Accumulated Sediment</u>	<u>Water Elevation</u>	<u>Control Point Elevation</u>
1st Quarter	0	7330.25	S-2 - 7338.34 S-3 - 7338.40 S-4 - 7399.65
2nd Quarter 6-30-89	0	7330.30	NO CHANGE
3rd Quarter 9-29-89	0	7330.30	NO CHANGE
4th Quarter 12-20-89	FROZEN	7330.35	S-2 - 7338.34 Other Control Points Damaged

Inspection:

Inspections were conducted during each quarter. No structural or other physical defects were found.

The north pond was cleaned during the first quarter. Sediments were hauled to the waste rock storage facility.

The control points on the north pond have been damaged during cleaning operations and will be reinstalled during 1990. Only one control point remains on the south pond. The other two points will be reinstalled in 1990.

QUARTERLY ENGINEERING REPORT

COTTONWOOD CANYON

FAN PORTAL AREA

SEDIMENT BASINS

1989

This report is submitted as required by Federal and State Regulations:

UMC 817.46 (t)
UMC 817.49 (h)
30 CFR 77.216-4
30 CFR 817.49

Design Data:

	<u>Sediment Capacity</u>	<u>Total Capacity</u>
North Basin	.047 AC.Ft.	.107 AC.Ft.
Center Basin	.115 AC.Ft.	.511 AC.Ft.
Total	.245 AC.Ft.	0.696 AC.Ft.

Operational Data:

Accumulated Sediment (AC. FT.)

	<u>North (#1)</u>	<u>South (#2)</u>
1st Quarter	.001	.051
2nd Quarter	.001	.051
3rd Quarter	.001	.051
4th Quarter	.001	.051

Water Elevation

	<u>North (#1)</u>	<u>South (#2)</u>
1st Quarter	Dry	Dry
2nd Quarter	Dry	Dry
3rd Quarter	Dry	Dry
4th Quarter	Dry	Dry

Inspection:

Visual inspections were made during each quarter to check for structural stability. No problems were found.

**utah
power**
& LIGHT COMPANY
MINING DIVISION
P.O. Box 310
Huntington, Utah 84528

ACT/015/019
#6

RECEIVED
JAN 16 1990

DEPARTMENT OF
OIL, GAS & MINING

January 10, 1990

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. Grubaugh-Littig:

Enclosed for submittal are the 4th Quarter 1989 Engineering Reports for Deer Creek, Cottonwood/Wilberg and Des-Bee-Dove Waste Rock Disposal Sites. Please find also, the 4th Quarter 1989 Report of the Deer Creek Elk Canyon Storage Pad submittal.

Sincerely,



David Smaldone
Director of Permitting,
Compliance and Services

GD/do
Enclosure

cc: File

COTTONWOOD/WILBERG/DES-BEE-DOVE
ACT/015/019 AND ACT/015/017
WASTE ROCK DISPOSAL SITE
4TH QUARTER 1989

INTRODUCTION

The disposal area is located on an approved 16 acre right-of-way from the BLM located approximately two miles from the Cottonwood/Wilberg Mine site. This site serves both the Cottonwood/Wilberg and the Des-Bee-Dove Mines.

OPERATION

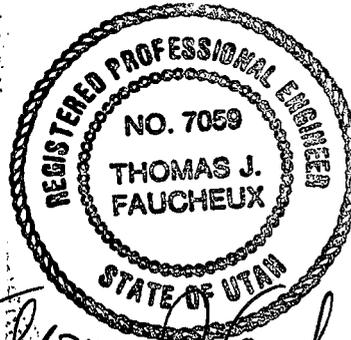
During the quarter, approximately 5200 cubic yards of material from the Cottonwood operation was dumped in the facility.

Leveling and compacting of the material placed at the site took place once during the quarter. Trash and extraneous material was removed during this operation.

Inspection of the facility for structural stability was done on December 28, 1989. Inspection of the operation of the facility was done on a continual basis.

CERTIFICATION

I do hereby certify that the Cottonwood/Wilberg waste rock site is being constructed according to sound engineering practice, the regulations governing its construction and the approved MRP and I do also certify that there was no evidence of instability, structural weakness or other hazardous conditions at the time of this inspection.



Thomas J. Faucheux 1-9-90

THOMAS J. FAUCHEUX
P.E. 7059