

Route to ~~Des~~, ~~Des~~, Henry
Then
Copy ACT 1015/017 #6
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December 31, 1991

RECEIVED

JAN 13 1992

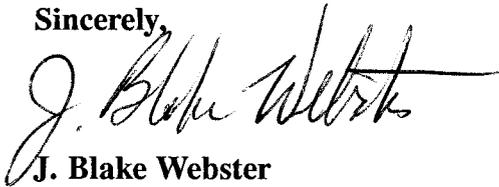
DIVISION OF
OIL GAS & MINING

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 1991 Annual Engineering Reports for the Sedimentation structures at the Deer Creek, Cottonwood and Des Bee Dove mines and the Cottonwood Exploration Site.

Sincerely,

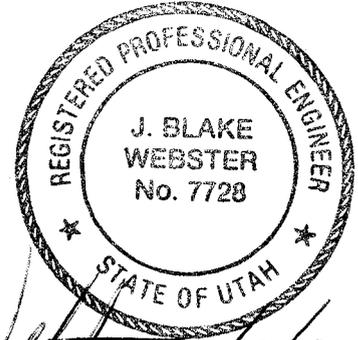


J. Blake Webster
Permitting Administrator

/dw
Enclosure

ENGINEERS STATEMENT:

I do hereby certify that the 1991 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 1/9/92
J. Blake Webster Date
PE #7728

**ANNUAL ENGINEERING REPORT
DEER CREEK SEDIMENT POND
1991**

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	7217.14
Spillway Crest Elevation	7232.03
Total Storage Capacity	12.51 AC. FT.
Sediment Storage Capacity	3.11 AC. FT.
Control Points	1 - 7235.54
	2 - 7235.50
	3 - 7235.64
	4 - 7235.98

Operational data:

	<u>ACCUMULATED WATER SEDIMENT</u>	<u>ELEVATION</u>	<u>CONTROL POINT ELEVATION</u>
1st Quarter 3-19-91	Frozen	7223.63	No Change
2nd Quarter 6-26-91	2.22	7219.74	No Change
3rd Quarter 9-20-91	2.22	Being Cleaned	No Change
4th Quarter 12-19-91	Frozen	7223.13	No Change

INSPECTION:

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

Pond was cleaned of sediment during latter part of 3rd Quarter and beginning of 4th Quarter.

**ANNUAL ENGINEERING REPORT
COTTONWOOD SEDIMENT PONDS
1991**

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 WATER SEDIMENT</u>	<u>ELEVATION</u>	<u>CONTROL POINT ELEVATION</u>
1st Quarter 3-19-91	0.00 Cleaned	7356.00	No Change
2nd Quarter 6-26-91	0.48	7356.03	No Change
3rd Quarter 9-20-91	0.00	Being Cleaned	No Change
4th Quarter 12-19-91	Frozen	7356.80	No Change

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 3-19-91	0.00	7330.00	No Change
2nd Quarter 6-26-91	0.37	7330.13	No Change
3rd Quarter 9-20-91	0.00 Being Cleaned	7330.00	No Change
4th Quarter 12-19-91	Frozen	7330.30	No Change

INSPECTION:

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

North Pond was cleaned of sediment during 1st and 3rd Quarter.

South Pond was cleaned of sediment during 3rd Quarter.

**ANNUAL ENGINEERING REPORT
COTTONWOOD EXPLORATION SITE SEDIMENT PONDS
1991**

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 3-19-91	.001	.050
2nd Quarter 6-26-91	.001	.050
3rd Quarter 9-20-91	.001	.050
4th Quarter 12-19-91	.001	.050

WATER ELEVATION

	<u>NORTH #1</u>	<u>SOUTH #2</u>
1st Quarter	3.0' Deep	Dry
2nd Quarter	Dry	Dry
3rd Quarter	Dry	1.0" Deep
4th Quarter	Dry	Dry

INSPECTION:

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

**ANNUAL ENGINEERING REPORT
DES BEE DOVE SEDIMENT POND
1991**

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 WATER SEDIMENT</u>	<u>ELEVATION</u>	<u>CONTROL POINT ELEVATION</u>
1st Quarter 3-19-91	0.10	6760.07	No Change
2nd Quarter 6-26-91	3.03	6759.21	No Change
3rd Quarter 9-20-91	3.03	Damp	No Change
4th Quarter 12-19-91	0.00 Cleaned	Dry	No Change

INSPECTION:

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

Pond was cleaned of sediment during 4th Quarter.

*R to Jo Henry
then file ACT/015/019 #6
Copy ACT/015/017 #6*

**COTTONWOOD/WILBERG/DES BEE DOVE
ACT/015/019 AND ACT/015/017
4TH QUARTER 1991**

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.

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 16,221 cubic yards of material from the Cottonwood operation was dumped in the new facility west of State Road 57. A majority of this material is from the recent sediment pond cleanings at Cottonwood and Des Bee Dove Mines.

No refuse was hauled to the original disposal site during the quarter.

INSPECTION

Both waste storage sites were inspected on December 20, 1991 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. Fractures are healing. No other signs of instability or weakness were found.

No signs of instability or weakness were found at the new storage facility. Refuse berm out slopes have been seeded and mulched with curlex blanket. Encouraging vegetative growth on the subsoil and topsoil piles.

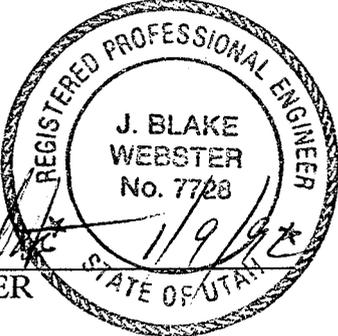
The sediment pond and dam at the new site were inspected. No signs of instability or weakness were found. The discharge structure and emergency spillway were intact and operational according to design. The pond was frozen and approximately 10% full with minor sediment accumulation.

Some water is filtering through the interior berm. Water is clean and slope appears stable.

CERTIFICATION

I do hereby certify that the Cottonwood/Wilberg Waste Rock Sites are constructed according to sound engineering practices, and I do also certify that there was no evidence of instability, structural weakness, or other hazardous conditions at the time of this inspection.

J. Blake Webster
J. BLAKE WEBSTER
P.E. 7728



REGISTERED PROFESSIONAL ENGINEER
J. BLAKE WEBSTER
No. 7728
1/9/92
STATE OF UTAH

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(all) ACT/015/019 #6
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file.

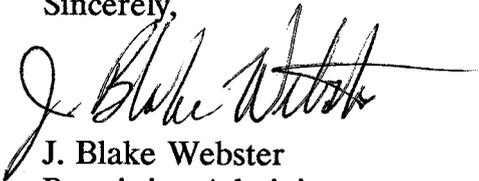
September 23, 1991

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 81480-1203

Dear Ms. Grubaugh-Littig:

I am enclosing for submittal the 3rd Quarter 1991 Engineering Reports for Deer Creek, Cottonwood/Wilberg and Des Bee Dove Waste Rock Sites. Please find also, the 3rd Quarter 1991 Report of the Deer Creek Elk Canyon Storage Pad submittal.

Sincerely,



J. Blake Webster
Permitting Administrator

/do
Enclosure

cc: Bart Hyita
File

RECEIVED

OCT 11 1991

DIVISION OF
OIL GAS & MINING

**COTTONWOOD/WILBERG/DES BEE DOVE
ACT/015/019 AND ACT/015/017
3RD QUARTER 1991**

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.

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 13,737 cubic yards of material from the Cottonwood operation was dumped in the new facility west of State Road 57. The refuse piles were leveled and compacted during the quarter. Trash and extraneous material were removed during this time also.

No refuse was hauled to the original disposal site during the quarter.

INSPECTION

Both waste storage sites were inspected on September 19, 1991 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. Fractures are healing. No other signs of instability or weakness were found. Good vegetation on Cell #7 outslope due to wet summer.

No signs of instability or weakness were found at the new storage facility. Subsoil and topsoil storage piles have been regraded and mulched at the removal locations. Excellent vegetative growth on the subsoil and topsoil piles.

The sediment pond and dam at the new site was inspected. No signs of instability or weakness were found. The discharge structure and emergency spillway were intact and operational according to design. The pond was approximately 16% full with minor sediment accumulation.

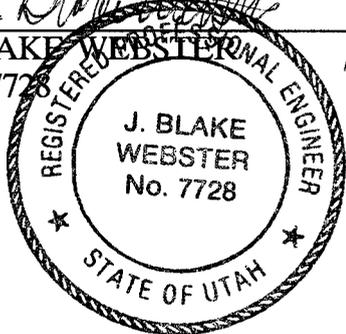
Interior berms are acting as a filter for recently placed sediment pond sludge.
Some water is filtering through.

CERTIFICATION

I do hereby certify that the Cottonwood/Wilberg Waste Rock Sites are constructed according to sound engineering practices, and I do also certify that there was no evidence of instability, structural weakness, or other hazardous conditions at the time of this inspection.

J. Blake Webster 9/26/91

J. BLAKE WEBSTER
P.E. 7728



The seal is circular with a double-line border. The outer ring contains the text "REGISTERED PROFESSIONAL ENGINEER" at the top and "STATE OF UTAH" at the bottom, separated by two stars. The inner circle contains the text "J. BLAKE WEBSTER" and "No. 7728".

File #ACT/015/017 #6
015/018 #6
015/019 #6

July 9, 1991

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JUL 11 1991

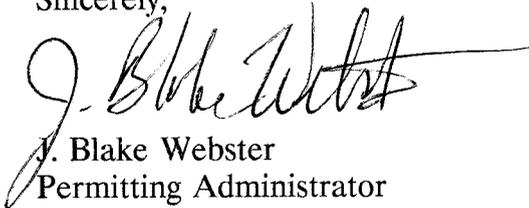
**DIVISION OF
OIL GAS & MINING**

Pamela Grubaugh-Littig, Permit Supervisor
Division of Oil, Gas and- Mining
3 Triad Center, Suite 350
Salt Lake City, UT 84180-1203

Dear Ms. Littig:

Enclosed for submittal is a copy of the second quarter 1991 engineering reports for Deer Creek, Cottonwood/Wilberg and Des Bee Dove waste rock sites. Also enclosed is the second quarter 1991 report of the Deer Creek Elk Canyon storage pad submittal.

Sincerely,


J. Blake Webster
Permitting Administrator

Enclosure

cc: Bart Hyita

ACT/015/017 #6
ACT/015/019 #6

~~COTTONWOOD/WILBERG/DES BEE DOVE~~
ACT/015/019 AND ACT/015/017
2ND QUARTER 1991

Make a copy for other file

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.

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 11,304 cubic yards of material from the Cottonwood operation was dumped in the new facility west of State Road 57. The refuse piles were leveled and compacted during the quarter. Trash and extraneous material were removed during this time also.

No refuse was hauled to the original disposal site during the quarter.

INSPECTION

Both waste storage sites were inspected on June 21, 1991 for structural stability. Inspection of the operation of these facilities is conducted on a continual basis.

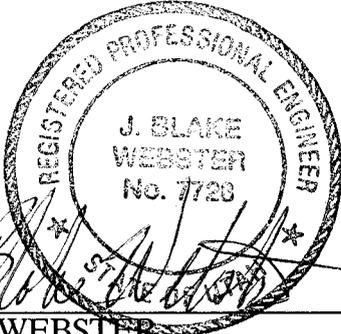
Tension cracks found in the perimeter berm of the original site, Cell #7, are still present but present no problems since the site has been filled with waste material. The cracks are on the inside slope and the backfill with the waste rock has stabilized the slope. No other signs of instability or weakness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

No signs of instability or weakness were found at the new storage facility. Some Subsoil and topsoil have been removed from the storage piles and placed on the 1st refuse berm outslope. Regrading and mulching are required at the removal locations. Excellent vegetative growth on the subsoil and topsoil piles.

The sediment pond and dam at the new site was inspected. No signs of instability or weakness were found. The discharge structure and emergency spillway were intact and operational according to design. The pond was dry with no sediment accumulation.

CERTIFICATION

I do hereby certify that the Cottonwood/Wilberg Waste Rock Sites are constructed according to sound engineering practices, and I do also certify that there was no evidence of instability, structural weakness, or other hazardous conditions at the time of this inspection.



J. BLAKE WEBSTER
P.E. 7728

PACIFIC POWER • UTAH POWER

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



*File ACT/015/017 #6
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Copy PAM, Bill*

May 15, 1991

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MAY 15 1991

**DIVISION OF
OIL GAS & MINING**

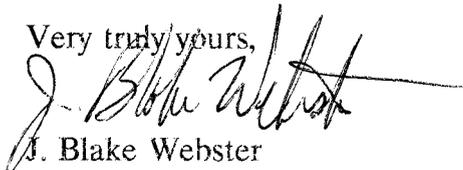
Ms. Pamela Grubaugh-Littig
Permit Supervisor
Utah Division of Oil, Gas and Mining
355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203

Re: PacifiCorp Electric Operations, 1990 Annual Reports,
Des-Bee-Dove Mine ACT 015/017, Deer Creek Mine
ACT 015/018, Cottonwood/Wilberg Mine ACT 015/019,
Emery County, Utah

Dear Ms. Littig:

Transmitted herewith are 1990 Annual Reports and Information Sheets for the above-referenced operations. Reports included are Vegetation Monitoring (2 vols., 1 copy), Subsidence Monitoring (1 vol., 2 copies), Hydrologic Monitoring (1 vol., 2 copies) and Eagle Monitoring (1 vol., 1 copy). If additional copies are required, we will be happy to provide them at your request.

Very truly yours,


J. Blake Webster
Permitting Administrator

cc: Bart Hyita
Roger Fry
Val Payne
Chuck Semborski
Kurt Snyder

COAL MINING AND RECLAMATION OPERATIONS FOR 1990

(Must be submitted to the Division by March 31, 1991)

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: PacifiCorp Electric Operations

Mine Name: Des-Bee-Dove

Mailing Address: P. O. Box 310, Huntington, Utah 84528

Company Representative: J. Blake Webster

Resident Agent: J. Blake Webster

Permit Number: ACT/015/017 #6

Date of Initial Permanent Program Permit August 29, 1985

Date of Permit Renewal: January 30, 1989 (mid-term)

Quantity of Coal Mined (tonnage) 1990: 0

Attach Updated Mine Sequence Map.

All monitoring activities during the report period must be submitted with this report (including, but not limited to) **MAY 15 1991**

- A. Summarized Water Monitoring Data
- B. Precipitation or Other Climatological Data
- C. Subsidence Monitoring Report
- D. Vegetation Data (test plots) or Revegetation Success Monitoring (includes interim and final)
- E. Annual Impoundment Inspection
- F. Permit Stipulation Status, if applicable. Status of Division Orders, if applicable.

PACIFIC POWER • UTAH POWER

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

PACIFICORP
ELECTRIC OPERATIONS GROUP

January 9, 1991

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 81480-1203

Dear Ms. Grubaugh-Littig:

I am enclosing for submittal the 4th Quarter 1990 Engineering Reports for Deer Creek, Cottonwood/Wilberg and Des Bee Dove Waste Rock Sites. Please find also, the 4th Quarter 1990 Report of the Deer Creek Elk Canyon Storage Pad submittal.

Sincerely,

Guy Davis Sr

J. Blake Webster
Permitting Administrator

/do
Enclosure

cc: Bart Hyita
File

COTTONWOOD/WILBERG/DES BEE DOVE
ACT/015/019 AND ACT/015/017
4TH QUARTER 1990

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.

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 468 cubic yards of material from the Cottonwood operation was dumped in the original disposal site.

Also during this quarter approximately 1,224 cubic yards of waste material was dumped in the new facility west of State Road 57. A refuse berm was constructed and sampled according to the permit. The refuse piles were leveled and compacted during the quarter. Trash and extraneous material were removed during this time also.

INSPECTION

Both waste storage sites were inspected on December 20, 1990 for structural stability. Inspection of the operation of these facilities is conducted on a continual basis.

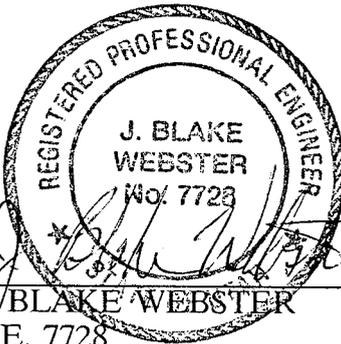
Tension cracks found in the perimeter berm of the original site, Cell #7, are still present but present no problems since the site has been filled with waste material. The cracks are on the inside slope and the backfill with the waste rock has stabilized the slope. No other signs of instability or weakness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

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

The sediment pond and dam at the new site was inspected. No signs of instability or weakness were found. The discharge structure and emergency spillway were intact and operational according to design. The pond was dry.

CERTIFICATION

I do hereby certify that the Cottonwood/Wilberg Waste Rock Sites are constructed according to sound engineering practices, and I do also certify that there was no evidence of instability, structural weakness, or other hazardous conditions at the time of this inspection.


* *J. Blake Webster* 1/8/91

J. BLAKE WEBSTER
P.E. 7728

DEER CREEK
ACT/015/018
ELK CANYON STORAGE PAD
4TH QUARTER 1990

INTRODUCTION

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 were used to construct the fill pad.

OPERATION

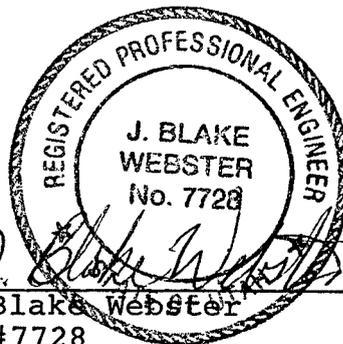
No additional material was added to the storage pad during the quarter. ROM coal was occasionally stored on the pad for short periods of time.

INSPECTION

During an inspection of the site on December 27, 1990, no tension fractures or other evidence of failure were observed. No evidence of structural weakness or other hazardous conditions were noticed.

CERTIFICATION

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.



J. Blake Webster
PE #7728

1/8/91

DEER CREEK
ACT/015/018
ORIGINAL WASTE ROCK DISPOSAL SITE
4TH QUARTER 1990

INTRODUCTION

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

OPERATION

This site is at it's capacity. No new waste rock material was added.

INSPECTION

During the inspection of the site on December 27, 1990, no evidence of fractures or instability were observed. The outsoles of the site were snow covered. The top berm was intact and functional.

DEER CREEK
ACT/015/018
WASTE ROCK DISPOSAL SITE
4TH QUARTER

INTRODUCTION

This 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, T17S, R8E, SLM. When complete the site will contain approximately 1.3 million cubic yards of waste rock.

OPERATION

During the quarter 7,546 cubic yards of waste rock material were dumped in this facility. The site was being leveled, with trash and extraneous material being sorted and removed from the site, during the date of inspection.

INSPECTION

Inspection of the facility for structural stability was performed December 27, 1990. Inspection of the operation of the facility was done on a continual basis.

The underdrain was not discharging at the time of the inspection.

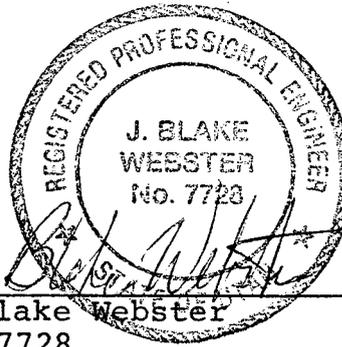
The perimeter berm appears to be stable. Minor erosion was observed down the slopes in a few locations. This minor observance does not appear to effect the structural integrity of the berm.

The detention basin and spillway were also inspected for any signs of weakness or instability. The basin was dry at the time of inspection. No signs of instability or weakness were observed in or around the basin or spillway.

No signs of instability were found in any of the waste piles. The piles were being leveled and compacted according to the permit during the inspection.

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 within the sites.



1-8-91

J. Blake Webster
PE #7728



State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

Norman H. Bangerter
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

January 9, 1991

Mr. Blake Webster
Permitting Administrator
PACIFICORP Electric Operations
Fuel Resources
324 South State Street
P.O. Box 26128
Salt Lake City, Utah 84126-0218

Dear Mr. Webster:

Re: Granting Time Extension to Respond to Technical Deficiency Document, Utah Power and Light Company (Pacifcorp Electric Operations), Des-Bee-Dove Mine, ACT/015/017, Folder #3, Emery County, Utah

Your request for an extension of time to respond to the technical deficiency document for the Des-Bee-Dove Mine in a complete and thorough manner is hereby extended to February 8, 1991.

Sincerely,

A handwritten signature in cursive script that reads "Lowell P. Braxton".

Lowell P. Braxton
Associate Director, Mining

jbe
cc: P. Grubaugh-Littig
J. Helfrich
AT015017.2

PACIFIC POWER • UTAH POWER

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

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



December 31, 1990

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JAN 14 1991

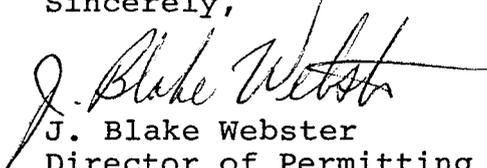
DIVISION OF
OIL, GAS & MINING

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.

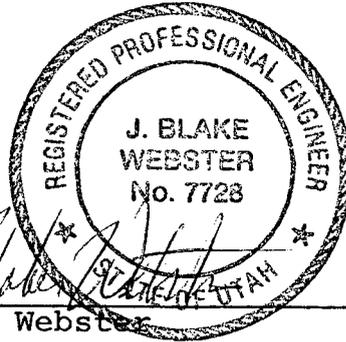
Sincerely,


J. Blake Webster
Director of Permitting

/do
Enclosure

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.