ENERGY WEST MINING COMPANY

Department of Oil, Gas & Mining
1996 Annual Report

- *DEER CREEK MINE ACT/015/018*
- *DES-BEE-DOVE MINES ACT/015/017*
- *COTTONWOOD/WILBERG MINES ACT/015/019*
- *TRAIL MOUNTAIN MINE ACT/015/009*

1996 Annual Report

- *Appendix A: Certified Reports*
- *Appendix B: Technical Data*
  Separate Volumes: Hydrology Report
  Subsidence Report
  Vegetation Report
- *Appendix C: Legal, Financial, Compliance & Related Information*
- *Appendix D: Mine Maps*
- *Appendix E: Other Information*

PACIFICORP

ENERGY WEST Mining Co.

RECEIVED
MAY 01 1997
DIV. OF OIL, GAS & MINING

GENERAL INFORMATION

DEER CREEK MINE

GENERAL INFORMATION

GENERAL INFORMATION

1. Permit Number	ACT/015/018
2. Mine Name	DEER CREEK
3. Permittee Name	PACIFICORP
4. Operator Name (if other than Permittee)	ENERGY WEST MINING COMPANY
5. Permit Expiration Date	2-5-2001
6. Company Representative, Title	CHARLES A. SEMBORSKI GEOLOGY/ENVIRONMENTAL SUPERV.
7. Phone Number	(801) 687-4720
8. Fax Number	687-2695
9. Mailing Address	ENERGY WEST MINING CO.
	P.O. BOX 310
	HUNTINGTON, UTAH 84528
10.Resident Agent, Title	CHARLES A. SEMBORSKI GEOLOLGY/ENVIRONMENTAL SUPERV.
Mailing Address	ENERGY WEST MINING CO.
	P.O. BOX 310
	HUNTINGTON, UTAH 84528

IDENTIFICATION OF OTHER PERMITS

Identify other permits which are required in conjunction with mining and reclamation activities.

Permit Type	ID Number	Description	Expires on
1. MSHA Mine ID(s)	42-0012	1 DEER CREEK MINE	N/A
2. MSHA Impoundment(s)		NONE	
3. NPDES/UPDES Permit(s) (water)	UT-0023	604 MINOR INDUSTRIAL	11-30-97
4. PSD (Air) Permit(s)	DAQE 92	6-91 ISSUED 12-5-91 WRS	
5.	DAQE 92	6-96 ISSUED 10-4-96 PREP. PLANT	

6.			

CERTIFIED REPORTS

List the certified inspection reports as required by the rules and under the approved plan which must be periodically submitted to the Division. Specify whether the information is included as APPENDIX A to this Annual Report or currently ON FILE with the Division.

Certified Reports:	Reports Required?		INCLUDED or ON FILE w/DOGM?			Comments
	YES	NO	YES	NO	ON FILE	
1. Excess Spoil Piles		X		X		
2. Refuse Piles	X		X		X	QUARTERLY REPORT
3. Impoundments	X		X			SED. POND/WRS SED. POND
4.						
5.						

REPORTING OF OTHER TECHNICAL DATA

List other technical data and information as required under the approved plan which must be periodically submitted to the Division. Specify whether the information is included as APPENDIX B to this Annual Report or currently ON FILE with the Division.

Technical Data:	Reports Required?		INCLUDED or ON FILE w/DOGM?			Comments
	YES	NO	YES	NO	ON FILE	
1. Climatological Data		X	X		X	
2. Subsidence Monitoring Data	X		X			
3. Vegetation Monitoring Data	X		X			
4. Soils Monitoring Data	X		X			
5. Water Monitoring Data	X		X			
First Quarter Report	X		X			
Second Quarter Report	X		X			
Third Quarter Report	X		X			
Fourth Quarter Report	X		X			
6. Geological/Geophysical Data		X		X		
7. Engineering Data		X		X		
8. Other Data						

LEGAL, FINANCIAL, COMPLIANCE AND RELATED INFORMATION

Changes in administration or corporate structure can often bring about necessary changes to information found in the mining and reclamation plan. The Division is requesting that each permittee review and update the legal, financial, compliance and related information in the plan as part of the Annual Report. Provide the Department of Commerce, Annual Report of Officers, or other equivalent information as necessary to ensure that the information provided in the plan is current. Provide any other changes as necessary regarding land ownership, lease acquisitions, legal results from appeals of violations, or other changes as necessary to update information required in the mining and reclamation plan. Include any certified financial statements, audits or worksheets which may be required to meet bonding requirements. Specify whether the information is currently ON FILE with the Division or included as APPENDIX C to this Annual Report.

Legal/Financial Data:	Report Required?		INCLUDED or ON FILE w/DOGM?			Comments
	YES	NO	YES	NO	ON FILE	
1. Department of Commerce, Annual Report of Officers		X	X			
2. Other						
UNAUDITED QUARTERLY REPORT						ST.PAUL FIRE, 400JN6140
CHANGE IN CORPORATE OFFICER	X		X			NEW LIST FOR 1996

MINE MAPS

Copies of mine maps, current and up-to-date through at least December 31, 1996, are to be provided to the Division as APPENDIX D to this Annual Report in accordance with the requirements of R645-301-525.270. These map copies shall be made in accordance with 30 CFR 75.1200, as required by MSHA. Upon request, mine maps shall be kept confidential by the Division.

Map Number(s)	Map Title / Description	Confidential?
	DEER CREEK MINE 1996 PRODUCTION MAP	YES

OTHER INFORMATION

Please provide any comments or further information to be included as part of the Annual Report. Any other attachments are to be provided as APPENDIX E to this Annual Report.

Additional attachments to this report? ☐ No ☒ Yes

DES-BEE-DOVE MINES

GENERAL INFORMATION

GENERAL INFORMATION

1. Permit Number	ACT/015/017
2. Mine Name	DES-BEE-DOVE
3. Permittee Name	PACIFICORP
4. Operator Name (if other than Permittee)	ENERGY WEST MINING COMPANY
5. Permit Expiration Date	9-6-2000
6. Company Representative, Title	CHARLES A. SEMBORSKI GEOLOGY/ENVIRONMENT SUPERV.
7. Phone Number	(801) 687-4720
8. Fax Number	687-2695
9. Mailing Address	ENERGY WEST MINING CO.
	P.O. BOX 310
	HUNTINGTON, UTAH 84528
10. Resident Agent, Title	CHARLES A. SEMBORSKI GEOLOGY/ENVIRONMENT SUPERV.
Mailing Address	ENERGY WEST MINING CO.
	P.O. BOX 310
	HUNTINGTON, UTAH 84528

IDENTIFICATION OF OTHER PERMITS

Identify other permits which are required in conjunction with mining and reclamation activities.

Permit Type	ID Number	Description	Expires on
1. MSHA Mine ID(s)	42-0098	8 DESERET, 42-00082 BEEHIVE	N/A
	42-0139	3 LITTLE DOVE	
2. MSHA Impoundment(s)		NONE	
3. NPDES/UPDES Permit(s) (water)	UT-0023	591 MINOR INDUSTRIAL	10-31-97
4. PSD (Air) Permit(s)		N/A MINE IS IN CESSATION	
5.			

6.			

CERTIFIED REPORTS

List the certified inspection reports as required by the rules and under the approved plan which must be periodically submitted to the Division. Specify whether the information is included as APPENDIX A to this Annual Report or currently ON FILE with the Division.

Certified Reports:	Reports Required?		INCLUDED or ON FILE w/DOGM?			Comments
	YES	NO	YES	NO	ON FILE	
1. Excess Spoil Piles		X		X		
2. Refuse Piles	X		X		X	
3. Impoundments	X		X		X	SED. POND
4.						
5.						

REPORTING OF OTHER TECHNICAL DATA

List other technical data and information as required under the approved plan which must be periodically submitted to the Division. Specify whether the information is included as APPENDIX B to this Annual Report or currently ON FILE with the Division.

Technical Data:	Reports Required?		INCLUDED or ON FILE w/DOGM?			Comments
	YES	NO	YES	NO	ON FILE	
1. Climatological Data		X	X		X	
2. Subsidence Monitoring Data	X		X			
3. Vegetation Monitoring Data	X		X			
4. Soils Monitoring Data	X		X			
5. Water Monitoring Data	X		X			
First Quarter Report	X		X		X	
Second Quarter Report	X		X		X	
Third Quarter Report	X		X		X	
Fourth Quarter Report	X		X		X	
6. Geological/Geophysical Data		X		X		
7. Engineering Data		X		X		
8. Other Data						

LEGAL, FINANCIAL, COMPLIANCE AND RELATED INFORMATION

Changes in administration or corporate structure can often bring about necessary changes to information found in the mining and reclamation plan. The Division is requesting that each permittee review and update the legal, financial, compliance and related information in the plan as part of the Annual Report. Provide the Department of Commerce, Annual Report of Officers, or other equivalent information as necessary to ensure that the information provided in the plan is current. Provide any other changes as necessary regarding land ownership, lease acquisitions, legal results from appeals of violations, or other changes as necessary to update information required in the mining and reclamation plan. Include any certified financial statements, audits or worksheets which may be required to meet bonding requirements. Specify whether the information is currently ON FILE with the Division or included as APPENDIX C to this Annual Report.

Legal/Financial Data:	Report Required?		INCLUDED or ON FILE w/DOGM?			Comments
	YES	NO	YES	NO	ON FILE	
1. Department of Commerce, Annual Report of Officers	X		X			
2. Other						
UNAUDITED QUARTERLY REPORT		X		X		St.Paul Fire-400JN6139
CHANGE IN CORPORATE OFFICER	X		X		X	

MINE MAPS

Copies of mine maps, current and up-to-date through at least December 31, 1996, are to be provided to the Division as APPENDIX D to this Annual Report in accordance with the requirements of R645-301-525.270. These map copies shall be made in accordance with 30 CFR 75.1200, as required by MSHA. Upon request, mine maps shall be kept confidential by the Division.

Map Number(s)	Map Title / Description	Confidential?
CU-229-E	DESERET MINE WORKINGS	X
CU-230-E	BEEHIVE AND LITTLE DOVE WORKINGS	X

OTHER INFORMATION

Please provide any comments or further information to be included as part of the Annual Report. Any other attachments are to be provided as APPENDIX E to this Annual Report.

Additional attachments to this report? ☐ No ☒ Yes

COTTONWOOD MINE

GENERAL INFORMATION

GENERAL INFORMATION

1. Permit Number	ACT/015/019
2. Mine Name	COTTONWOOD/WILBERG MINE
3. Permittee Name	PACIFICORP
4. Operator Name (if other than Permittee)	ENERGY WEST MINING COMPANY
5. Permit Expiration Date	JULY 5, 1999
6. Company Representative, Title	CHARLES A. SEMBORSKI
7. Phone Number	(801) 687-4720
8. Fax Number	687-2695
9. Mailing Address	ENERGY WEST MINING CO.
	P. O. BOX 310
	HUNTINGTON UTAH 84528
10. Resident Agent, Title	CHARLES A. SEMBORSKI GEOLOGY/ENVIRONMENTAL SUPERV.
Mailing Address	ENERGY WEST MINING CO.
	P.O. BOX 310
	HUNTINGTON, UTAH 84528

IDENTIFICATION OF OTHER PERMITS

Identify other permits which are required in conjunction with mining and reclamation activities.

Permit Type	ID Number	Description	Expires on
1. MSHA Mine ID(s)	42-01944	COTTONWOOD/WILBERG	N/A
2. MSHA Impoundment(s)	1211-UT-	09-01944-01 NORTH POND	N/A
	1211-UT-	09-01944-02 SOUTH POND	N/A
3. NPDES/UPDES Permit(s) (water)	UT002289	6 MAJOR INDUSTRIAL	10-31-97
4. PSD (Air) Permit(s)	DAQE 694	-95 ISSUED 8-9-95, INCLUDES TRAIL	

5.	314-90	MTN. PREP. PLANT,	
6.	835-91	WASTE ROCK SITE	

CERTIFIED REPORTS

List the certified inspection reports as required by the rules and under the approved plan which must be periodically submitted to the Division. Specify whether the information is included as APPENDIX A to this Annual Report or currently ON FILE with the Division.

Certified Reports:	Reports Required?		INCLUDED or ON FILE w/DOGM?			Comments
	YES	NO	YES	NO	ON FILE	
1. Excess Spoil Piles		X		X		
2. Refuse Piles	X		X		X	COTTONWOOD WASTE ROCK SITE NEW
3. Impoundments	X		X			NO. & SO. SED. PONDS, SED. PONDS
4.						CTW. CANYON, WRS POND
5.						

REPORTING OF OTHER TECHNICAL DATA

List other technical data and information as required under the approved plan which must be periodically submitted to the Division. Specify whether the information is included as APPENDIX B to this Annual Report or currently ON FILE with the Division.

Technical Data:	Reports Required?		INCLUDED or ON FILE w/DOGM?			Comments
	YES	NO	YES	NO	ON FILE	
1. Climatological Data		X	X		X	
2. Subsidence Monitoring Data	X		X			
3. Vegetation Monitoring Data	X		X			
4. Soils Monitoring Data		X		X		
5. Water Monitoring Data	X		X		X	
First Quarter Report	X		X		X	
Second Quarter Report	X		X		X	
Third Quarter Report	X		X		X	
Fourth Quarter Report	X		X		X	
6. Geological/Geophysical Data		X		X		
7. Engineering Data		X		X		
8. Other Data						

LEGAL, FINANCIAL, COMPLIANCE AND RELATED INFORMATION

Changes in administration or corporate structure can often bring about necessary changes to information found in the mining and reclamation plan. The Division is requesting that each permittee review and update the legal, financial, compliance and related information in the plan as part of the Annual Report. Provide the Department of Commerce, Annual Report of Officers, or other equivalent information as necessary to ensure that the information provided in the plan is current. Provide any other changes as necessary regarding land ownership, lease acquisitions, legal results from appeals of violations, or other changes as necessary to update information required in the mining and reclamation plan. Include any certified financial statements, audits or worksheets which may be required to meet bonding requirements. Specify whether the information is currently ON FILE with the Division or included as APPENDIX C to this Annual Report.

Legal/Financial Data:	Report Required?		INCLUDED or ON FILE w/DOGM?			Comments
	YES	NO	YES	NO	ON FILE	
1. Department of Commerce, Annual Report of Officers		X	X			
2. Other						
CHANGE OF CORP. OFFICERS	X		X		X	NEW LIST OF '96 OFFICERS
UNAUDITED QUARTERLY REPORTS						St. Paul Fire,400JN6138

MINE MAPS

Copies of mine maps, current and up-to-date through at least December 31, 1996, are to be provided to the Division as APPENDIX D to this Annual Report in accordance with the requirements of R645-301-525.270. These map copies shall be made in accordance with 30 CFR 75.1200, as required by MSHA. Upon request, mine maps shall be kept confidential by the Division.

Map Number(s)	Map Title / Description	Confidential?
	COTTONWOOD MINE 1996 PRODUCTION MAP	YES

OTHER INFORMATION

Please provide any comments or further information to be included as part of the Annual Report. Any other attachments are to be provided as APPENDIX E to this Annual Report.

Additional attachments to this report? ☐ No ☒ Yes

TRAIL MOUNTAIN MINE

GENERAL INFORMATION

GENERAL INFORMATION

1. Permit Number	ACT/015/009
2. Mine Name	TRAIL MOUNTAIN
3. Permittee Name	PACIFICORP
4. Operator Name (if other than Permittee)	ENERGY WEST MINING CO.
5. Permit Expiration Date	2-20-2000
6. Company Representative, Title	CHARLES A. SEMBORSKI GEOLOGY/ENVIRONMENTAL SUPERV.
7. Phone Number	(801) 687-4720
8. Fax Number	687-2695
9. Mailing Address	ENERGY WEST MINING COMPANY
	P.O. BOX 310
	HUNTINGTON, UTAH 84528
10. Resident Agent, Title	CHARLES A. SEMBORSKI GEOLOGY/ENVIRONMENTAL SUPERV.
Mailing Address	ENERGY WEST MINING CO.
	P.O. BOX 310
	HUNTINGTON, UTAH 84528

IDENTIFICATION OF OTHER PERMITS

Identify other permits which are required in conjunction with mining and reclamation activities.

Permit Type	ID Number	Description	Expires on
1. MSHA Mine ID(s)	42-01211	TRAIL MTN. MINE	N/A
2. MSHA Impoundment(s)		NONE	
3. NPDES/UPDES Permit(s) (water)	UTG-0400	03 MINOR INDUSTRIAL	4-30-98
4. PSD (Air) Permit(s)	694-95	ISSUED 8-9-95	

5.			
6.			

CERTIFIED REPORTS

List the certified inspection reports as required by the rules and under the approved plan which must be periodically submitted to the Division. Specify whether the information is included as APPENDIX A to this Annual Report or currently ON FILE with the Division.

Certified Reports:	Reports Required?		INCLUDED or ON FILE w/DOGM?			Comments
	YES	NO	YES	NO	ON FILE	
1. Excess Spoil Piles		X		X		
2. Refuse Piles	X		X		X	
3. Impoundments	X		X			SED. POND
4.						
5.						

REPORTING OF OTHER TECHNICAL DATA

List other technical data and information as required under the approved plan which must be periodically submitted to the Division. Specify whether the information is included as APPENDIX B to this Annual Report or currently ON FILE with the Division.

Technical Data:	Reports Required?		INCLUDED or ON FILE w/DOGM?			Comments
	YES	NO	YES	NO	ON FILE	
1. Climatological Data		X	X		X	
2. Subsidence Monitoring Data	X		X			
3. Vegetation Monitoring Data	X		X			
4. Soils Monitoring Data		X		X		
5. Water Monitoring Data	X		X			
First Quarter Report	X		X			
Second Quarter Report	X		X			
Third Quarter Report	X		X			
Fourth Quarter Report	X		X			
6. Geological/Geophysical Data		X		X		
7. Engineering Data		X		X		
8. Other Data						

LEGAL, FINANCIAL, COMPLIANCE AND RELATED INFORMATION

Changes in administration or corporate structure can often bring about necessary changes to information found in the mining and reclamation plan. The Division is requesting that each permittee review and update the legal, financial, compliance and related information in the plan as part of the Annual Report. Provide the Department of Commerce, Annual Report of Officers, or other equivalent information as necessary to ensure that the information provided in the plan is current. Provide any other changes as necessary regarding land ownership, lease acquisitions, legal results from appeals of violations, or other changes as necessary to update information required in the mining and reclamation plan. Include any certified financial statements, audits or worksheets which may be required to meet bonding requirements. Specify whether the information is currently ON FILE with the Division or included as APPENDIX C to this Annual Report.

Legal/Financial Data:	Report Required?		INCLUDED or ON FILE w/DOGM?			Comments
	YES	NO	YES	NO	ON FILE	
1. Department of Commerce, Annual Report of Officers	X		X			
2. Other						
UNAUDITED QUARTERLY REPORT						St. Paul Fire, 400JV3170
CHANGE CORPORATE OFFICERS	X		X		X	

MINE MAPS

Copies of mine maps, current and up-to-date through at least December 31, 1996, are to be provided to the Division as APPENDIX D to this Annual Report in accordance with the requirements of R645-301-525.270. These map copies shall be made in accordance with 30 CFR 75.1200, as required by MSHA. Upon request, mine maps shall be kept confidential by the Division.

Map Number(s)	Map Title / Description	Confidential?
	TRAIL MTN. MINE 1996 PRODUCTION MAP	YES

OTHER INFORMATION

Please provide any comments or further information to be included as part of the Annual Report. Any other attachments are to be provided as APPENDIX E to this Annual Report.

Additional attachments to this report? ☐ No ☒ Yes

APPENDIX A

Certified Reports

Excess Spoil Piles
Refuse Piles
Impoundments

as required under R645-301-514

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DEER CREEK WASTE ROCK SITE INCLUDES ELK CANYON REPORTS
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2ND QUARTER
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1ST QUARTER
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4TH QUARTER

ANNUAL SEDIMENT POND REPORTS
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DEER CREEK WRS DETENTION
COTTONWOOD MINE NO.& SO.
COTTONWOOD CANYON BASINS NO. & SO.
COTTONWOOD WRS DETENTION
DES-BEE-DOVE MINE
TRAIL MTN. MINE

DEER CREEK WASTE ROCK INFORMATION

DEER CREEK
ACT/015/018
WASTE ROCK DISPOSAL SITE
lst QUARTER 1996

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

Refuse piles are leveled in lifts according to plan with trash and extraneous material sorted according to the permitted plan.

INSPECTION

Inspection of the facility for structural stability was performed March 26, 1996. Inspection of the operation of the facility is done on a continual basis.

The underdrain had a minimal amount of movement at the time of the inspection. Small water seeps were present at the base of the south berm west of the under drain.

The perimeter berm appears to be stable. Minor erosion down the slopes in a few locations. Minor settlement fractures on outslope of west berm, also inslope at southwest corner berm.

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

The active lift was at three-fourths capacity at the time of 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 conditions within the sites.

John Christensen 4/3/96

John Christensen
PE #165651

LICENSED PROFESSIONAL ENGINEER
JOHN CHRISTENSEN
No. 165651

DEER CREEK
ACT/015/018
ORIGINAL WASTE ROCK DISPOSAL SITE
1st QUARTER 1996

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 is approximately 90,000 cubic yards.

OPERATION

This site is at its capacity. No new waste rock material was added.

INSPECTION

During the inspection of the site on March 26, 1996, no evidence of fractures, slumps or instability were observed. The top berm was intact and functional. No rills or gullies were observed. The seepage area at the base of the site was dry.

DEER CREEK
ACT/015/018
ELK CANYON STORAGE PAD
1st QUARTER 1996

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. During the 4th quarter of 1995 an estimated 3,500 cubic yards of material was placed on the south end of the coal storage pad. This material was excavated from the south side of the coal surge bin.

OPERATION

ROM coal was occasionally stored on the pad for short periods of time. At the time of the inspection no coal was stored on the pad. The retaining wall and coal bin expansion project is complete.

INSPECTION

During an inspection of the site on March 26, 1996, no tension fractures or other evidence of failure were observed. No evidence of structural weakness or other hazardous conditions were noticed. The slopes of the new stored material appear to be stable.

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.

John Christensen
PE #165651

LICENSED PROFESSIONAL ENGINEER
JOHN CHRISTENSEN
No. 165651
STATE OF UTAH

DEER CREEK
ACT/015/018
ELK CANYON STORAGE PAD
2nd QUARTER 1996

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. During the 4th quarter of 1995 an estimated 3,500 cubic yards of material was placed on the south end of the coal storage pad. This material was excavated from the south side of the coal surge bin.

OPERATION

ROM coal was occasionally stored on the pad for short periods of time. At the time of the inspection no coal was stored on the pad.

INSPECTION

During an inspection of the site on June 28, 1996 no tension fractures or other evidence of failure were observed. No evidence of structural weakness or other hazardous conditions were noticed. The slopes of the new stored material appear to be stable.

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.

John Christensen
PE #165651

LICENSED PROFESSIONAL ENGINEER
JOHN CHRISTENSEN
7/8/96
No. 165651
STATE OF UTAH

DEER CREEK
ACT/015/018
ORIGINAL WASTE ROCK DISPOSAL SITE
2ND QUARTER 1996

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 is approximately 90,000 cubic yards.

OPERATION

This site is at its capacity. No new waste rock material was added.

INSPECTION

During the inspection of the site on June 28, 1996, no evidence of fractures, slumps or instability were observed. The top berm was intact and functional. No rills or gullies were observed. The seepage area at the base of the site was damp.

DEER CREEK
ACT/015/018
WASTE ROCK DISPOSAL SITE
2nd QUARTER 1996

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. The current cell had been leveled during the second quarter. Also, the permited drainage modifications were completed. The access road had been regraded, treated and compacted.

OPERATION

Refuse piles are leveled in lifts according to plan with trash and extraneous material sorted according to the permitted plan.

INSPECTION

Inspection of the facility for structural stability was performed June 28, 1996. Inspection of the operation of the facility is done on a continual basis.

The underdrain had a minimal amount of movement at the time of the inspection. Small water seeps were present at the base of the south berm west of the under drain.

The perimeter berm appears to be stable. Minor erosion down the slopes in a few locations. Minor settlement fractures on outslope of west berm, also inslope at southwest corner berm.

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

The active lift was at 20% capacity at the time of 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 conditions within the sites.

John Christensen 7/8/96

John Christensen

LICENSED PROFESSIONAL ENGINEER
JOHN CHRISTENSEN
No. 165861
STATE OF UTAH

DEER CREEK
ACT/015/018
WASTE ROCK DISPOSAL SITE
3rd QUARTER 1996

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

Refuse piles are leveled in lifts according to plan with trash and extraneous material sorted according to the permitted plan.

INSPECTION

Inspection of the facility for structural stability was performed September 26, 1996. Inspection of the operation of the facility is done on a continual basis.

The underdrain had a minimal amount of movement at the time of the inspection. Small water seeps were present at the base of the south berm west of the under drain.

The perimeter berm appears to be stable. Minor erosion down the slopes in a few locations. Minor settlement fractures on outslope of west berm, also inslope at southwest corner berm.

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

The active lift was at 35% capacity at the time of 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 conditions within the sites.

John Christensen 10/1/96

John Christensen
PE #165651

LICENSED PROFESSIONAL ENGINEER
JOHN CHRISTENSEN
No. 165651
STATE OF UTAH

DEER CREEK
ACT/015/018
ORIGINAL WASTE ROCK DISPOSAL SITE
3rd QUARTER 1996

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 is approximately 90,000 cubic yards.

OPERATION

This site is at its capacity. No new waste rock material was added.

INSPECTION

During the inspection of the site on September 26, 1996 no evidence of fractures, slumps or instability were observed. The top berm was intact and functional. No rills or gullies were observed. The seepage area at the base of the site was damp.

DEER CREEK
ACT/015/018
ELK CANYON STORAGE PAD
3rd QUARTER 1996

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

ROM coal was occasionally stored on the pad for short periods of time. At the time of the inspection no coal was stored on the pad.

INSPECTION

During an inspection of the site on September 26, 1996 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.

LICENSED PROFESSIONAL ENGINEER
JOHN CHRISTENSEN
No. 165651

John Christensen 10/1/96
John Christensen
PE #165651

DEER CREEK
ACT/015/018
WASTE ROCK DISPOSAL SITE
4th QUARTER 1996

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

Refuse piles are leveled in lifts according to plan with trash and extraneous material sorted according to the permitted plan.

INSPECTION

Inspection of the facility for structural stability was performed December 17, 1996. Inspection of the operation of the facility is done on a continual basis.

The underdrain had a minimal amount of movement at the time of the inspection. A small water seep was present at the base of the south berm west of the under drain.

The perimeter berm appears to be stable. Minor erosion down the slopes in a few locations. Minor settlement fractures on outslope of west berm, also inslope at southwest corner berm.

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

The active lift was at 75% capacity at the time of 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 conditions within the sites.

John Christensen
PE #165651

LICENSED PROFESSIONAL ENGINEER
JOHN CHRISTENSEN
1/2/97
No. 165651

DEER CREEK
ACT/015/018
ORIGINAL WASTE ROCK DISPOSAL SITE
4th QUARTER 1996

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 is approximately 90,000 cubic yards.

OPERATION

This site is at its capacity. No new waste rock material was added.

INSPECTION

During the inspection of the site on December 17, 1996 snow covered the outslopes. No evidence of fractures, slumps or instability were observed on the areas not covered by snow. The top berm was intact and functional. No rills or gullies were observed. The seepage area at the base of the site could not be observed.

DEER CREEK
ACT/015/018
ELK CANYON STORAGE PAD
4th QUARTER 1996

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

ROM coal was occasionally stored on the pad for short periods of time. At the time of the inspection no coal was stored on the pad.

INSPECTION

During an inspection of the site on December 17, 1996, snow covered the area. No tension fractures or other evidence of failure were observed on the observable areas.

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.

John Christensen
PE #165651

LICENSED PROFESSIONAL ENGINEER
JOHN CHRISTENSEN
1/2/97
No. 165651
STATE OF UTAH

COTTONWOOD WASTE ROCK INFORMATION

COTTONWOOD/WILBERG/DES BEE DOVE
ACT/015/019 AND ACT/015/017
1st QUARTER 1996

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.

Top-soil and sub-soil had been placed on the north end of the original site.

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 is planned to last for the life of the mines which it serves.

OPERATION

Refuse piles are leveled in lifts according to plan with trash and extraneous material sorted according to the permitted plan. A new berm had been established and seeded during the first quarter.

INSPECTION

The new waste storage site was inspected on March 28, 1996 for structural stability. Inspection of the operation of this facility is conducted on a continual basis. At the time of inspection, refuse covered approximately 20% of the active site.

This area does not show any signs of instability or weakness. The small seep at the sediment pond area still could not be observed due to water elevation of the pond. Water seepage was occurring in the ditch leading to the pond.

No new rills or sluffing were observed during this inspection.

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.

CERTIFICATION

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

John Christensen 4/3/96

John Christensen P.E. #165651

LICENSED PROFESSIONAL ENGINEER
JOHN CHRISTENSEN
No. 165651
STATE OF UTAH

COTTONWOOD/WILBERG/DES BEE DOVE
ACT/015/019 AND ACT/015/017
2ndQUARTER 1996

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.

The top-soil and sub-soil that had been placed on the north end of the original site was seeded during the second quarter.

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 is planned to last for the life of the mines which it serves.

OPERATION

Refuse piles are leveled in lifts according to plan with trash and extraneous material sorted according to the permitted plan. Rip Rap was placed in the northwest inlet ditch during the second quarter.

INSPECTION

The new waste storage site was inspected on June 27, 1996 for structural stability. Inspection of the operation of this facility is conducted on a continual basis. At the time of inspection, refuse covered approximately 50% of the active site.

This area does not show any signs of instability or weakness. The small seep at the inlet to the sediment pond had a minimal amount of water flowing. Water seepage was occurring in the ditch leading to the pond.

No new rills or sluffing were observed during this inspection.

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.

CERTIFICATION

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

John Christensen P.E. #165651

LICENSED PROFESSIONAL ENGINEER
JOHN CHRISTENSEN
7/8/96
No. 165651
STATE OF UTAH

COTTONWOOD/WILBERG/DES BEE DOVE
ACT/015/019 AND ACT/015/017
3rd QUARTER 1996

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 is planned to last for the life of the mines which it serves.

OPERATION

Refuse piles are leveled in lifts according to plan with trash and extraneous material sorted according to the permitted plan.

INSPECTION

The new waste storage site was inspected on September 13, 1996 for structural stability. Inspection of the operation of this facility is conducted on a continual basis. At the time of inspection, refuse covered approximately 60% of the active site.

This area does not show any signs of instability or weakness. The small seep at the inlet to the sediment pond had a minimal amount of water flowing. Water seepage was occurring in the ditch leading to the pond.

A few rills were observed on the south slope of the recently established lift berm. These were the reults of heavey rain fall the previous day. Also, the west inlet rip rap ditch to the pond had sections that were affected from the runoff.

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.

CERTIFICATION

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

John Christensen 10/1/96

John Christensen P.E. #165651

LICENSED PROFESSIONAL ENGINEER
JOHN CHRISTENSEN
No. 165651
STATE OF UTAH

COTTONWOOD/WILBERG/DES BEE DOVE
ACT/015/019 AND ACT/015/017
4th QUARTER 1996

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 is planned to last for the life of the mines which it serves.

OPERATION

Refuse piles are leveled in lifts according to plan with trash and extraneous material sorted according to the permitted plan.

INSPECTION

The new waste storage site was inspected on December 18, 1996 for structural stability. Inspection of the operation of this facility is conducted on a continual basis. At the time of inspection, refuse covered approximately 70% of the active site. The current lift was being cleaned of trash and extraneous material at the time of inspection.

This area does not show any signs of instability or weakness. The small seep at the inlet to the sediment pond had a minimal amount of water flowing. Water seepage was occurring in the ditch leading to the pond.

Some of the rills on the south slope were repaired during the fourth quarter Also, the west inlet rip rap ditch was repaired back to original design.

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.

CERTIFICATION

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

John Christensen P.E. #165651

LICENSED PROFESSIONAL ENGINEER
JOHN CHRISTENSEN
No. 165651
STATE OF UTAH

DEER CREEK MINE SEDIMENT POND INFORMATION

ANNUAL ENGINEERING REPORT
DEER CREEK SEDIMENT POND
1996

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

R645-301-514.300
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:

	ACCUMULATED SEDIMENT	WATER ELEVATION	CONTROL POINT ELEVATION
1st Quarter 3-1-96	Frozen	7224.66	No Change
2nd Quarter 6-14-96	1.34	7224.00	No Change
3rd Quarter 9-26-96	1.34	7221.80	No Change
4th Quarter 12-13-96	Frozen	7218.88	No Change

INSPECTION:
Visual inspections were made during each quarter, no stability problems or other concerns were found. The sediment retention box was cleaned three times during the year.

ANNUAL ENGINEERING REPORT
DEER CREEK WASTE ROCK DETENTION POND
1996

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

R645-301-514.300
30 CFR 77.216-4
30 CFR 817.49

Design data:

Top of Dam Elevation	**6319.00**
Toe of Dam Elevation	**6311.20**
Spillway Crest Elevation	**6317.30**
Total Storage Capacity	**4.64 ac.ft.**
Sediment Storage Capacity	**0.98 ac.ft.**
Control Points	**1. 6313.70**
	2. 6326.10
	3. 6326.80

Operational data:

	ACCUMULATED SEDIMENT	WATER ELEVATION	CONTROL POINT ELEVATION
1st Quarter 3-1-96	0.0	Dry	No Change
2nd Quarter 6-14-96	0.0	Dry	No Change
3rd Quarter 9-26-96	0.0	Dry	No Change
4th Quarter 12-13-96	0.0	Dry	No Change

COTTONWOOD MINE SEDIMENT POND INFORMATION

ANNUAL ENGINEERING REPORT
COTTONWOOD SEDIMENT POND
1996

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

R645-301-514.300
30 CFR 77.216-4
30 CFR 817.49

NORTH POND (#1)

Design data:

Top of Dam Elevation	7368.30
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	1-7367.81 B.M.

Operational data: North Pond cleaned during 4th Quarter.

	ACCUMULATED SEDIMENT	WATER ELEVATION	CONTROL POINT ELEVATION
1st Quarter 3-7-96	0.0	7354.51	No Change
2nd Quarter 6-27-95	0.24	7354.61	No Change
3rd Quarter 9-23-96	0.24	7354.48	No Change
4th Quarter 12-13-96	0.0 Cleaned	7354.56	No Change

SOUTH POND (#2)

Design data:

Top of Dam Elevation	7339.92
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	7336.56 B.M.

	ACCUMULATED SEDIMENT	WATER ELEVATION	CONTROL POINT ELEVATION
1st Quarter 3-7-96	0.00	7328.57	No Change
2nd Quarter 6-27-96	0.12	7329.13	No Change
3rd Quarter 9-23-96	0.12	7329.09	No Change
4th Quarter 12-13-96	Frozen	7329.67	No Change

INSPECTION:

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

ANNUAL ENGINEERING REPORT
COTTONWOOD EXPLORATION SITE SEDIMENT PONDS
1996

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

R645-301-514.300
30 CFR 77.216-4
30 CFR 817.49

Design data:

	SEDIMENT CAPACITY	TOTAL CAPACITY
North Basin	.047 ac.ft.	.107 ac.ft.
South Basin	.115 ac.ft.	.511 ac.ft.
TOTAL	.245 ac.ft.	.696 ac.ft.

Operational data:

ACCUMULATED SEDIMENT (AC.FT.)

	NORTH BASIN	SOUTH BASIN
1st Quarter 3-7-96	0.0	0.0
2nd Quarter 6-13-96	0.0	.050
3rd Quarter 9-23-96	0.0	.050
4th Quarter 12-13-96	0.0	.050

WATER ELEVATION

	NORTH BASIN	SOUTH BASIN
1st Quarter	Dry	Dry
2nd Quarter	Dry	Dry
3rd Quarter	Dry	Dry
4th Quarter	Dry	Dry

Inspection:

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

ANNUAL ENGINEERING REPORT
COTTONWOOD WASTE ROCK DETENTION POND
1996

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

R645-301-514.300
30 CFR 77.216-4
30 CFR 817.49

Design data:

Top of Dam Elevation	**6772.00**
Toe of Dam Elevation	**6755.00**
Spillway Crest Elevation	**6770.00**
Total Storage Capacity	**4.58 ac.ft.**
Sediment Storage Capacity	**2.41 ac.ft.**
Control Points	**0+00 6770.0**
	0+30 6772.0
	0+67 6772.0
	1+05 6772.0

Operational data:

	ACCUMULATED SEDIMENT	WATER ELEVATION	CONTROL POINT ELEVATION
1st Quarter 3-7-96	0.0	6755.79	No Change
2nd Quarter 6-27-96	0.0	6755.15	No Change
3rd Quarter 9-23-96	0.0	6761.82	No Change
4th Quarter 12-13-96	Frozen	6760.03	No Change

Inspection: Visual inspections were made during each quarter, no stability problems or other concerns were found. Repairs were completed on the inlet rip-rap ditch. This was done to correct damage from high runoff during a late third quarter storm event.

DES-BEE-DOVE MINES SEDIMENT POND INFORMATION

ANNUAL ENGINEERING REPORT
DES BEE DOVE SEDIMENT POND
1996

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

R645-301-514.300
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	19.80 ac.ft.
Sediment Storage Capacity	2.00 ac.ft.
Control Points	0+00 - 6775.20
	0+85 - 6775.00
	1+25 - 6775.20
	1+65 - 6775.40

Operational data:

	ACCUMULATED SEDIMENT	WATER ELEVATION	CONTROL POINT ELEVATION
1st Quarter 3-7-96	0.0	6756.24	No Change
2nd Quarter 6-13-96	0.0	6755.20	No Change
3rd Quarter 9-23-96	0.0	6760.65	No Change
4th Quarter 12-13-96	Frozen	6759.03	No Change

INSPECTION:

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

TRAIL MOUNTAIN SEDIMENT POND INFORMATION

ANNUAL ENGINEERING REPORT
TRAIL MOUNTAIN SEDIMENT POND
1996

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

R645-301-514.300
30 CFR 77.216-4
30 CFR 817.49

Design data:

Total Storage Capacity	**2.12 ac.ft.**
Sediment Storage Capacity	**0.47 ac.ft.**

Operational data: Pond cleaning started during 4th Quarter 1995, completed into lst Quarter, 1996.

	ACCUMULATED SEDIMENT	WATER ELEVATION	CONTROL POINT ELEVATION
1st Quarter 3-7-96	0.00 Cleaned	7184.50	No Change
2nd Quarter 6-13-96	0.09	7184.60	No Change
3rd Quarter 9-23-96	0.09	7186.55	No Change
4th Quarter 12-13-96	Frozen	7190.85	No Change

Inspection: Visual inspections were made, no stability problems or other concern were found. A small erosional cut at the inlet to the pond has been monitored since the lst Quarter. This area is where the access road was built to clean the pond. Fourth Quarter inspection reveals a small change in the cut. As weather permits, it will be repaired.

Inspection:

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

ENGINEERS STATEMENT:

I do hereby certify that the 1996 Annual Engineering Reports for the Sedimentation Structures for the Deer Creek, Cottonwood/Wilberg, Des Bee Dove Mines, Cottonwood Exploration Site and the Trail Mountain Mine are true and correct to the best of my knowledge and belief.

John Christensen
PE # 165651

Date 1/13/97

LICENSED PROFESSIONAL ENGINEER
JOHN CHRISTENSEN
No. 165651
STATE OF UTAH

APPENDIX B

Reporting of Technical Data

including monitoring data, reports, maps, and other information
as required under the approved plan
or as required by the Division

in accordance with the requirements of R645-301-130 and R645-301-140.

CONTENTS

VEGETATION MONITORING 1996

VEGETATION DATA OR REVEGETATION SUCCESS MONITORING,INCLUDES MAPS

SEE VEGETATION MONITORING SECTION

SEE HYDROLOGY AND WATER MONITORING SECTION

SEE SUBSIDENCE MONITORING SECTION

SECTION B: VEGETATION DATA OR REVEGETATION SUCCESS MONITORING

1. See enclosed report (Mt. Nebo Scientific)

2. See enclosed report (Mt. Nebo Scientific)

3. See enclosed report (Mt. Nebo Scientific)

4. During the Spring of 1996 and Fall of 1996 the following areas were seeded:

COTTONWOOD MINE

A. Cottonwood Portal Tubing slope, seeded and covered with curlex blanket Spring of year 1996.(Belt Portal.) Above the intake portal, seeded and blanket. (Interim revegetation).

B. Cottonwood Waste Rock Site, refuse berm outslope seeded and curlex blanket. (Final Reclamation) 95/96

C. Cottonwood Waste Rock (Old), soil piles, located in rock garden, seeded in '96. (interim)

DEER CREEK MINE

A. Rilda Canyon, seeded and curlex blanket on the slopes above the portals. Seeded and curlex blanket of remaining slopes along the roadway to pad. (Interim Reveg.)
late summer and late fall of 96.

B. Coal exploration fall of '96 (6) locations, Rilda, East Mtn. (Final)

TRAIL MOUNTAIN MINE

A. Seeded and curlex blanket at the parking lot extension and pipe culvert area. Late Fall Of '96 (Interim Revegetation)

J:\Misc\96Vegeta.rpt

1996 VEGETATION MONITORING

	Qualitative	Quantitative			
		Cov	Freq	Dens	Prod
COTTONWOOD MINE					
Old Fan Road '84.(Final)	x	x	x	x	x
Reference Area	x	x	x	x	x
4th East Road '86	x	x	x	x	x
1988 Interim Revegetation					
Storage Yard Slope	x	x			
Parking Lot Slope	x	x			
Road/Silo Pad Slope	x	x			
Tipple Area Slopes	x	x			
Sediment Pond Banks	x	x			
Ninth East Breakout '91	x	x	x	x	
Test Plots '88	x	x			
Waste Rock Site (Old)					
Cell/Berm 1 '83	x	x	x	x	x
Cells/Berms 2,3,4 '84, '85, '86	2,3,4	2,3,4	2,3,4	2,3,4	2,3,4
Cells 5,6 '89 (Reseeded) '93	x	x	x	x	
Cell 7 '92 Partial cell #7 '93	x	x	x	x	
CTW Reference Area	x	x	x	x	x
CTW Soil Piles (A,B,C) '94	x	x	x	x	
Waste Rock Site (New) 1990					
Road Slopes	x				
Topsoil Stockpiles	x				
Subsoil Stockpile	x				
Sediment Pond Banks	x				
Waste Rock Site 1991					
Refuse Berm '91 (Final)	x	x	x	x	
Refuse Berm '94 (Final)	x	x	x	x	
Refuse Berm '96 (Final)seeded					
COTTONWOOD CANYON					
Fan Portal Area '81					
Reclaimed Slope	x	x	x	x	x
Soil Piles	x	x	x	x	x
Reference Area	x	x	x	x	x
Tube Conveyor slope'96 seeded					
Portal (Diesel) '96 "					

DES BEE DOVE					
1988 Revegetation Areas					
Beehive Yard Slope	x	x			
Beehive Road Berm	x	x			
Deseret Road Berm	x	x			
Portal Road Berm	x	x			
Bathhouse Road Berm	x	x			
Tipple Slope	x	x			
Sediment Storage Slope	x	x			
Sediment Pond Banks	x	x			
1986 Revegetation Areas					
Haul Road Bench	x	x	x	x	x
Beehive Substation Slope	x	x	x	x	x
1985 Revegetation Areas					
Sediment Pond Area	x	x	x	x	x
1984 Revegetation Areas					
Bathhouse Slope	x	x			
Material Yard Slope	x	x			
Test Plot '89	x	x			
Test Plot '92	x	x			
DEER CREEK MINE					
C2 Conveyor (IU 132-190) '93					
1991 Revegetation Areas					
Riparian Areas	x	x	x	x	x
Sediment Pond Dam	x	x	x	x	x
Temp. Sediment Basin	x	x	x	x	x
1990 Revegetation Areas					
Roadside Areas	x	x			
Gate Areas Slope	x	x			
1989 Revegetation Areas					
Fan Road Slope	x	x			
1988 Revegetation Areas					
Refuse Pile and Berm	x	x			
Rockslide and Berm	x	x			
Water Plant Slope	x	x			
1986 Revegetation Areas					
Pipe Line	x	x	x	x	x
Deer Canyon	x	x	x	x	x
Waste Rock Site					
Interim Revegetation '89					
Access Road Slopes	x	x			
Phase 1 Berm	x	x			
Final Revegetation					
Phase 1 Diversion '89	x	x			

Rilda Canyon

Pad Area slopes '96
Roadway slopes '96
Top-Soil Pile '95
and some roadway slope

TRAIL MOUNTAIN MINE

Trail Sed. Pond Outslope '93	x	x
Trail Mtn. Parking Ext. '96		

DGD\MISC\1995\95VEGANL.REP

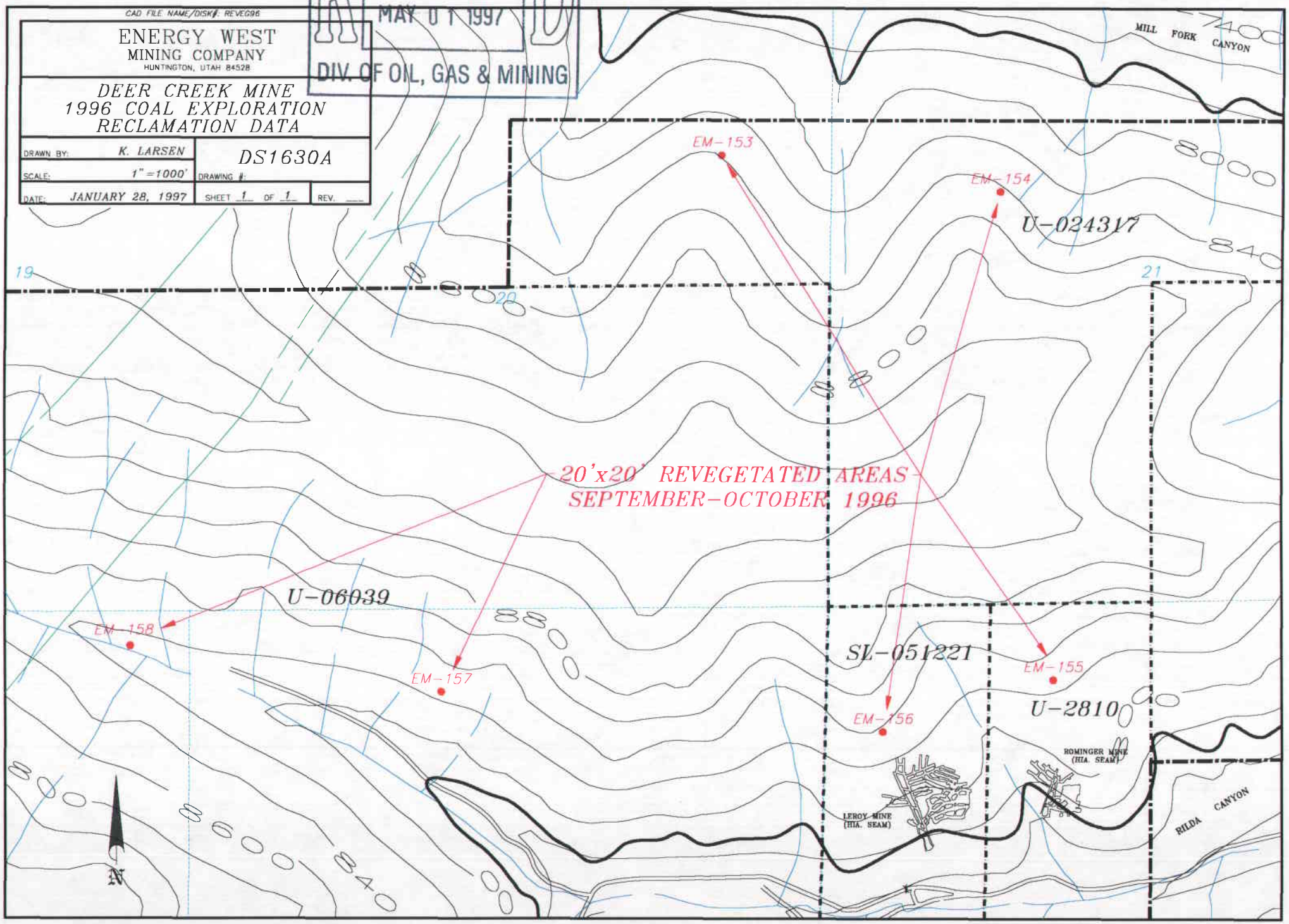
RECEIVED
MAY 01 1997
DIV. OF OIL, GAS & MINING

CAD FILE NAME/DISK#: REVEG96

ENERGY WEST
MINING COMPANY
HUNTINGTON, UTAH 84528

DEER CREEK MINE
1996 COAL EXPLORATION
RECLAMATION DATA

DRAWN BY: K. LARSEN	DS1630A
SCALE: 1" = 1000'	DRAWING #:
DATE: JANUARY 28, 1997	SHEET 1 OF 1 REV. ___



APPENDIX C

Legal, Financial, Compliance and Related Information

Annual Report of Officers
as submitted to the Utah Department of Commerce

and other changes in ownership and control information
as required under R645-301-110.

CONTENTS

Annual Report of Officers

Relinquishment of State Lease ML-22603-Coal

Coal Lease Modification-UTU-64375, 133.2 Acres

INTERWEST MINING COMPANY A Subsidiary of PacifiCorp

Internal Correspondence

To: Chuck Semborski
Energy West Mining Company

From: Scott M. Child
OUC 2000

Date: January 29, 1997

Subject: ***Annual Reports - Legal / Financial Data, Listing of PacifiCorp Officers***

Per the faxed (SAMPLE FORM) entitled 1996 Annual Report sent to me from Dick Northrup, I have contacted PacifiCorp's corporate secretary's office to inquiry of any officer listing disclosures submitted to the Department of Commerce. Lenore Martin tells me, she knows of no submittal by PacifiCorp. Therefore, to assist us, she has prepared the enclosed listing of PacifiCorp's principal officers and board of directors together with a certificate signed and sealed by her for verification. This can be used with your submission of the Annual Reports for the Deer Creek, Cottonwood, Des-Bee-Dove and Trail Mountain Mines. I recently supplied this same information to Bridger and Glenrock, when they submitted their annual reports.

In discussing the SAMPLE FORM with Pam Littig, the financial data (certified statements, unaudited quarterly reports) are only required if we are self bonded. We are not self bonded, so these reports are not required. However, under the comments section, she suggested listing the name of the surety and the reclamation performance bond number.

Should you need any other information, please call me at 801-220-4612.

Enclosures

SMC13\EWEST97.001

cc: IMC w/copy encl. - D.W. Jense, B. Webster
EWMC w/copy encl. - D. Lauriski, C. Pollastro

PacifiCorp

Certificate of Assistant Secretary

I, Lenore M. Martin, a duly elected and acting Assistant Secretary of PacifiCorp, an Oregon corporation (the "Company"), HEREBY CERTIFY:

(1) That PacifiCorp is an Oregon corporation, duly organized on August 11, 1987 and existing under the Oregon Revised Statutes and currently in good standing with the Corporation Division;

(2) That attached hereto as Exhibit A is a list of the currently serving principal officers of the Company; and

(3) That attached hereto as Exhibit B is a list of the currently serving directors of the Company.

WITNESS my hand and the seal of said Company this 27th day of January, 1997.

Lenore M. Martin
Assistant Secretary

004\aseccert.lmm

EXHIBIT A

PacifiCorp Officers
1997

Name	Position	Address
Frederick W. Buckman	President and CEO	700 NE Multnomah, Suite 1600 Portland, OR 97232-4116
John A. Bohling	Senior Vice President	700 NE Multnomah, Suite 1600 Portland, OR 97232-4116
William C. Brauer	Senior Vice President	201 South Main, Suite 2300 Salt Lake City, UT 84140
Richard T. O'Brien	Senior Vice President & Chief Financial Officer	700 NE Multnomah, Suite 1600 Portland, OR 97232-4116
Verl R. Topham	Senior Vice President & General Counsel	201 South Main, Suite 2300 Salt Lake City, UT 84140
Shelley R. Faigle	Senior Vice President	920 SW Sixth Avenue, Suite 1500 Portland, OR 97204
Paul G. Lorenzini	Senior Vice President	920 SW Sixth Avenue, Suite 1500 Portland, OR 97204
John E. Mooney	Senior Vice President	201 South Main, Suite 2300 Salt Lake City, UT 84140
Daniel L. Spalding	Senior Vice President	Level 3, 77 Southbank Blvd Southbank, Victoria 3006 Australia
Dennis P. Steinberg	Senior Vice President	700 NE Multnomah, Suite 1600 Portland, OR 97232-4116
Sally A. Nofziger	Vice President and Corporate Secretary	700 NE Multnomah, Suite 1600 Portland, OR 97232-4116
Thomas W. Forsgren	Vice President	201 South Main, Suite 2300 Salt Lake City, UT 84140
J. Brett Harvey	Vice President	201 South Main, Suite 2300 Salt Lake City, UT 84140
Michael C. Henderson	Vice President	825 NE Multnomah, Suite 775 Portland, OR 97232

David P. Hoffman	Vice President	700 NE Multnomah, Suite 1600 Portland, OR 97232-4116
Thomas J. Imeson	Vice President	700 NE Multnomah, Suite 1600 Portland, OR 97232-4116
Thomas A. Lockhart	Vice President	PO Box 720 Casper, WY 82602
Edwin J. O'Mara	Vice President	920 SW Sixth, Suite 1500 Portland, OR 97204
Paul N. Pechersky	Vice President	920 SW Sixth, Suite 1500 Portland, OR 97204
William E. Peressini	Vice President and Treasurer	700 NE Multnomah, Suite 1600 Portland, OR 97232-4116
Michael J. Pittman	Vice President	920 SW Sixth, Suite 1100 Portland, OR 97204
Ernest E. Wessman	Vice President	201 South Main, Suite 2300 Salt Lake City, UT 84140
Richard D. Westerberg	Vice President	2484 Washington Blvd., Suite 400 Ogden, UT 84401
Donald A. Bloodworth	Controller	700 NE Multnomah, Suite 1600 Portland, OR 97232-4116

EXHIBIT B

PacifiCorp Directors
1997

Name	Position	Address
W. Charles Armstrong	Director	14019 SE 35th Loop Vancouver, WA 98683
Kathryn A. Braun	Director	8105 Irvine Center Drive Irvine, CA 92718
Frederick W. Buckman	Director	700 NE Multnomah, Suite 1600 Portland, OR 97232-4116
C. Todd Conover	Director	753 Berry Avenue Los Altos, CA 94024
Nolan E. Karras	Director	4695 South 1900 West #3 Roy, UT 84067
Keith R. McKennon	Director and Chairman	700 NE Multnomah, Suite 1600 Portland, OR 97232-4116
Robert G. Miller	Director	3800 SE 22nd Avenue Portland, OR 97202
Alan K. Simpson	Director	c/o Laurie Rosen 5000 Battery Lane #105 Bethseda, MD 20814
Verl R. Topham	Director	201 South Main, Suite 2300 Salt Lake City, UT 84140
Don M. Wheeler	Director	4901 West 2100 South Salt Lake City, UT 84120
Nancy Wilgenbusch	Director	Marylhurst College Marylhurst, OR 97036
Peter I. Wold	Director	139 West Second Street Casper, WY 82602

004\d&olis.exh
1/27/97

State of Utah
School and Institutional
TRUST LANDS ADMINISTRATION

Michael O. Leavitt, Governor
David T. Terry, Director

355 West North Temple
3 Triad Center, Suite 400
Salt Lake City, Utah 84180-1204
801-538-5508
801-355-0922 (Fax)

February 7, 1996

Interwest Mining Company
Scott M. Child
One Utah Center, Suite 2000
Salt Lake City, UT 84140-0020

FEB 1996
Received
Interwest Mining Company

Dear Mr. Child:

RE: ML 22603--Coal

Please be advised that the Director on January 31, 1996, approved and accepted your request for relinquishment of the above-numbered lease.

I trust this information will be sufficient for your needs.

Sincerely,

JOHN T. BLAKE
MINERAL RESOURCES SPECIALIST

tdw

cc: D. BAKER
D. JENSEN
D. LAURISKI
S. KOCHEVAR
C. POLLASTRO
V. PAYNE

One Utah Center, Suite 2000
Salt Lake City, Utah 84140-0020
(801) 220 4616 • FAX (801) 220-4725

INTERWEST MINING COMPANY

A Subsidiary of PacifiCorp

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

January 19, 1996

Mr. John T. Blake
Minerals Resources Specialist
State of Utah
School and Institutional Trust Lands Administ
355 West North Temple
3 Triad Center, Suite 400
Salt Lake City, Utah 84180-1204

Post-it® Fax Note 7671	Date 3-4-97	# of pages ▶ 2
To CHUCK SEMBORSKI	From SCOTT CHILD	
Co./Dept.	Co.	
Phone #	Phone #	
Fax #	Fax #	

RE: State Coal Lease ML-22603 - Trail Mountain Mine, Emery County, Utah

Dear John:

We're in receipt of your letter dated December 27, 1995, together with the lease readjustment originals of ML-22603. After our review of the readjusted lease terms and the overall disposition of this lease, Interwest Mining Company on the behalf of PacifiCorp, hereby declines the lease readjustment as there is no further interest in continuing the lease.

Therefore, this written notice is given in response to your letter of December 27, 1995, and in accordance with the provisions of Articles II and XI of the existing lease, wherein PacifiCorp, (1) does not accept the terms and conditions of the readjusted lease, and (2) hereby relinquishes state lease ML-22603 in its entirety effective as of December 31, 1995.

We have appreciated the opportunity to work with the School and Institutional Trust Lands Administration in connection with this lease and look forward to having the opportunity to work with you again in the future. Returned with this letter are the original lease readjustments. Should you have questions or concerns, please contact me at 801-220-4612.

Sincerely,

Scott M. Child
Property Management Administrator

Enclosures

SMC12\UTI ANI\08.002

cc: IMC w/o copy encl. - D.W. Jense, S. Kochevar, G. Takenaka
EWEST w/o copy encl. - L. LaFrentz, D. Lauriski, V. Payne, C. Pollastro

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Utah State Office
P.O. Box 45155
Salt Lake City, UT 84145-0155

In Reply Refer To
3432
UTU-64375
(UT-932)

JAN 23 1997

JAN 1997
Received
Interwest Mining Company

DECISION

PacifiCorp c/o Interwest Mining Company One Utah Center, Suite 2000 201 South Main Street Salt Lake City, Utah 84140-0020	:	Coal Lease UTU-64375

Bond Rider Accepted
Coal Lease UTU-64375 Modified

Coal lease UTU-64375 is hereby modified effective February 8, 1997. All terms and conditions of the original lease are hereby made consistent with the laws, regulations, and lease terms applicable at the time of this modification.

A rider to coal lease bond 400 JV 3712 (BLM Bond No. UT0989) accepting coverage for the additional acreage was filed in this office on January 13, 1997. The rider was examined, found to be satisfactory, and accepted as of the date of filing.

Additional rental of $268 to cover the estimated additional rental for the current rental year was submitted January 13, 1997. Rental in the amount of $3.00 per acre, or a total of $8,295 is due on October 1, 1997.

Within 30 days after the effective date of this lease modification, the lessee shall amend its modification to the Trail Mountain Logical Mining Unit, filed March 31, 1994, to include the 133.2 acres added to coal lease UTU-64375 by this modification. The modified land shall be segregated into another Federal coal lease should the lessee fail to file such amendment.

Group Leader,
Minerals Adjudication Group

Enclosures
Copy of Lease Modification
Copy of Rider

cc: D.W. JENSE
B. MORGAN
M. THALMAN
D. LAURISKI
C. POLLASTRO
C. SEMBORSKI

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Serial No. UTU-64375

MODIFIED COAL LEASE

Date of Lease: October 1, 1990

PART I.

THIS MODIFIED COAL LEASE is entered into effective **February 8, 1997**, by and between the UNITED STATES OF AMERICA, hereinafter called the Lessor, through the Bureau of Land Management, and

PacifiCorp
One Utah Center, Suite 2000
201 South Main Street
Salt Lake City, Utah 84140-0020

hereinafter called Lessee.

This modified lease shall retain the effective date of October 1, 1990, of the original COAL LEASE UTU-64375, and is effective for a period of 20 years therefrom, and for so long thereafter as coal is produced in commercial quantities from the leased lands, subject to readjustment of lease terms at the end of the 20th lease year (**October 1, 2010**), and each 10-year period thereafter.

Sec. 1. This lease is issued pursuant and subject to the terms and provisions of the: (NOTE: Check the appropriate Act or Acts.)

XX Mineral Lands Leasing Act of 1920, as amended, 41 Stat. 437, 30 U.S.C. 181-287, hereinafter referred to as the Act;
_ Mineral Leasing Act for Acquired Lands of 1947, 61 Stat. 913, 30 U.S.C. 351-359;

and to the regulations and formal orders of the Secretary of the Interior which are now or hereafter in force, when not inconsistent with the express and specific provisions herein.

Sec. 2. Lessee as the holder of Coal Lease UTU-64375, issued effective October 1, 1990, was granted the exclusive right and privilege to drill for, mine, extract, remove or otherwise process and dispose of the coal deposits in, upon, or under the lands described below as Tract 1.

The Lessor in consideration of fair market value, rents and royalties to be paid, and the conditions and covenants to be observed as herein set forth, hereby grants and leases to Lessee the exclusive right and privilege to drill for, mine, extract, remove, or otherwise process and dispose of the coal deposits in, upon, or under the lands described below as Tract 2.

Tract 1: T. 17 S., R. 6 E., SLM, Utah
Sec. 26, S2SW, W2SWSE;
Sec. 27, S2S2;
Sec. 34, all;
Sec. 35, lots 3, 4, W2SWNE, S2NW, SW, W2W2SE.

2,630.81 Acres

T. 18 S., R. 6 E., SLM, Utah
Sec. 1, lots 1-8, S2N2, E2NESW, E2NWNESW, N2NWNESE, N2NWSE;
Sec. 2, lots 1-8, S2N2, N2NESW, N2SWNESW, SENESW, NWNESE, N2SWNESE, N2NWSE, N2S2NWSE;
Sec. 3, lots 1,2,8, NESENE.
T. 18 S., R. 7 E., SLM, Utah
Sec. 6, lots 4-7, W2SENW, W2E2SW.

Tract 2: T. 18 S., R. 6 E., SLM, Utah
Sec. 3, lot 3, E2 of lot 6, lot 7,
NESWNE, NWSENE, S2SENE.
133.2 Acres

TOTAL ACRES: **2,764.01**

containing 2,764.01 acres, more or less, together with the right to construct such works, buildings, plants, structures, equipment and appliances and the right to use such on-lease rights-of-way which may be necessary and convenient in the exercise of the rights and privileges granted, subject to the conditions herein provided.

Part II. TERMS AND CONDITIONS

Sec. 1.**(a)** **RENTAL RATE** - Lessee shall pay Lessor rental annually and in advance for each acre or fraction thereof during the continuance of the lease at the rate of $3.00 per acre for each lease year.

(b) **RENTAL CREDITS** - Rental shall not be credited against either production or advance royalties for any year.

Sec. 2.**(a)** **PRODUCTION ROYALTIES** - The royalty shall be 8 percent of the value of the coal as set forth in the regulations. Royalties are due to Lessor the final day of the month succeeding the calendar month in which the royalty obligation accrues.

(b) **ADVANCE ROYALTIES** - Upon request by the Lessee, the authorized officer may accept, for a total of not more than 10 years, the payment of advance royalties in lieu of continued operation, consistent with the regulations. The advance royalty shall be based on a percent of the value of a minimum number of tons determined in the manner established by the advance royalty regulations in effect at the time the Lessee requests approval to pay advance royalties in lieu of continued operation.

Sec. 3. **BONDS** - Lessee shall maintain in the proper office a lease bond in the amount of $1,946,000. The authorized officer may require an increase in this amount when additional coverage is determined appropriate.

Sec. 4. **DILIGENCE** - This lease achieved diligent development November 30, 1991, and is subject to the conditions of continued operation. Continued operation may be excused when operations under the lease are interrupted by strikes, the elements, or casualties not attributable to the Lessee. The Lessor, in the public interest, may suspend the condition of continued operation upon payment of advance royalties in accordance with the regulations in existence at the time of the suspension.

The Lessor reserves the power to assent to or order the suspension of the terms and conditions of this lease in accordance with, inter alia, Section 39 of the Mineral Leasing Act, 30 U.S.C. 209.

Sec. 5. **LOGICAL MINING UNIT (LMU)** - The lands contained in the original lease have been submitted as a modification to the LMU Trail Mountain UTU-73339, March 31, 1994. Within 30 days after the effective date of this lease modification, the Lessee shall amend its modification of the Trail Mountain Logical Mining Unit to include the 133.2 acres added to coal lease UTU-64375 by this modification. The modified land shall be segregated into another Federal coal lease should the Lessee fail to file such an amendment.

The stipulations established in an LMU approval in effect at the time of LMU approval or modification will supersede the relevant inconsistent terms of this lease so long as the lease remains committed to the LMU. If the LMU of which this lease is a part is dissolved, the lease shall then be subject to the lease terms which would have been applied if the lease had not been included in the LMU.

Sec. 6. DOCUMENTS, EVIDENCE AND INSPECTION - At such times and in such form as Lessor may prescribe, Lessee shall furnish detailed statements showing the amounts and quality of all products removed and sold from the lease, the proceeds therefrom, and the amount used for production purposes or unavoidably lost.

Lessee shall keep open at all reasonable times for the inspection of any duly authorized officer of Lessor, the leased premises and all surface and underground improvements, works, machinery, ore stockpiles, equipment, and all books, accounts,

maps, and records relative to operations, surveys, or investigations on or under the leased lands.

Lessee shall allow Lessor access to and copying of documents reasonably necessary to verify Lessee compliance with terms and conditions of the lease.

While this lease remains in effect, information obtained under this section shall be closed to inspection by the public in accordance with the Freedom of Information Action (5 U.S.C. 552).

Sec. 7. **DAMAGES TO PROPERTY AND CONDUCT OF OPERATIONS** - Lessee shall comply at its own expense with all reasonable orders of the Secretary, respecting diligent operations, prevention of waste, and protection of other resources.

Lessee shall not conduct exploration operations, other than casual use, without an approved exploration plan. All exploration plans prior to the commencement of mining operations within an approved mining permit area shall be submitted to the authorized officer.

Lessee shall carry on all operations in accordance with approved methods and practices as provided in the operating regulations, having due regard for the prevention of injury to life, health, or property, and prevention of waste, damage or degradation any land, air, water, cultural, biological, visual, and other resources, including mineral deposits and formations of mineral deposits not leased hereunder, and to other land uses or users. Lessee shall take measures deemed necessary by Lessor to accomplish the intent of this lease term. Such measures may include, but not limited to, modification to proposed siting or design of facilities, timing of operations, and specifications of interim and final reclamation procedures. Lessor reserves to itself the right to lease, sell, or otherwise dispose of the surface or other mineral deposits in the lands and the right to continue existing uses and to authorize future uses upon or in the leased lands, including issuing leases for mineral deposits not covered hereunder and approving easements or rights-of-way. Lessor shall condition such uses to prevent unnecessary or unreasonable interference with rights of Lessee as may be consistent with concepts of multiple use and multiple mineral development.

Sec. 8 **PROTECTION OF DIVERSE INTERESTS, AND EQUAL OPPORTUNITY** - Lessee shall: pay when due all taxes legally assessed and levied under the laws of the State or the United States; accord all employees complete freedom of purchase; pay all wages at least twice each month in lawful money of the United States; maintain a safe working environment in accordance with standard industry practices; restrict the workday to not more than 8 hours in any one day for underground workers, except in emergences; and take measures necessary to protect the health and safety of the public. No person under the age of 16 years shall be employed in any mine below the surface. To the extent that laws of the State in which the lands are situated are more restrictive than the provisions in this paragraph, then the State laws apply.

Lessee will comply with all provisions of Executive Order No. 11246 of September 24, 1965, as amended, and the rules, regulations, and relevant orders of the Secretary of Labor. Neither Lessee nor Lessee's subcontractors shall maintain segregated facilities.

Sec. 9.(a) **TRANSFERS**

X This lease may be transferred in whole or in part to any person, association or corporation qualified to hold such lease interest.

___ This lease may be transferred in whole or in part to another public body, or to a person who will mine the coal on behalf of, and for the use of, the public body or to a person who for the limited purpose of creating a security interest in favor of a lender agrees to be obligated to mine the coal on behalf of the public body.

___ This lease may only be transferred in whole or in part to another small business qualified under 13 CFR 121.

Transfers of record title, working or royalty interest must be approved in accordance with the regulations.

(b) **RELINQUISHMENTS** - The Lessee may relinquish in writing at any time all rights under this lease or any portion thereof as provided in the regulations. Upon Lessor's acceptance of the relinquishment, Lessee shall be relieved of all future obligations under the lease or the relinquished portion thereof, whichever is applicable.

Sec. 10. **DELIVERY OF PREMISES, REMOVAL OF MACHINERY, EQUIPMENT, ETC.** - At such times as all portions of this lease are returned to Lessor, Lessee shall deliver up to Lessor the land leased, underground timbering, and such other supports and structures necessary for the preservation of the mine workings on the leased premises or deposits and place all workings in condition for suspension or abandonment. Within 180 days thereof, Lessee shall remove from the premises all other structures, machinery, equipment, tools, and materials that it elects to or as required by the authorized officer. Any such structures, machinery, equipment, tools, and materials remaining on the leased lands beyond 180 days, or approved extension thereof, shall become the property of the Lessor, but Lessee shall either remove any or all such property or shall continue to be liable for the cost of removal and disposal in the amount actually incurred by the Lessor. If the surface is owned by third parties, Lessor shall waive the requirement for removal, provided the third parties do not object to such waiver. Lessee shall, prior to the termination of bond liability or at any other time when required and in accordance with all applicable laws and regulations, reclaim all lands the surface of which has been disturbed, dispose of all debris or solid waste, repair the offsite and onsite damage caused by Lessee's activity or activities incidental thereto, and reclaim access roads or trails.

Sec. 11. **PROCEEDINGS IN CASE OF DEFAULT** - If Lessee fails to comply with applicable laws, existing regulations, or the terms, conditions and stipulations of this lease, and the noncompliance continues for 30 days after written notice thereof, this lease shall be subject to cancellation by the Lessor only by judicial proceedings. This provision shall not be construed to prevent the exercise by Lessor of any other legal and equitable remedy, including waiver of the default. Any such remedy or waiver shall not prevent later cancellation for the same default occurring at any other time.

Sec. 12. **HEIRS AND SUCCESSORS - IN-INTEREST** - Each obligation of this lease shall extend to and be binding upon, and every benefit hereof shall insure to, the heirs, executors, administrators, successors, or assigns of the respective parties hereto.

Sec. 13. **INDEMNIFICATION** - Lessee shall indemnify and hold harmless the United States from any and all claims arising out of the Lessee's activities and operations under this lease.

Sec. 14. **SPECIAL STATUTES** - This lease is subject to the Federal Water Pollution Control Act (33 U.S.C. 1151 - 1175); the Clean Air Act (42 U.S.C. 1857 et seq.), and to all other applicable laws pertaining to exploration activities, mining operations and reclamation, including the Surface Mining Control and Reclamation Act of 1977 (30 U.S.C. 1201 et seq.)

Sec. 15. **SPECIAL STIPULATIONS** -

See Attached Stipulations

1. The Regulatory Authority shall mean the State Regulatory Authority pursuant to a cooperative agreement approved under 30 CFR Part 745 or in the absence of a cooperative agreement, Office of Surface Mining. The authorized officer shall mean the State Director, Bureau of Land Management. The authorized officer of the Surface Management Agency shall mean the Forest Supervisor, Forest Service. Surface Management Agency for private surface is the Bureau of Land Management. For adjoining private lands with Federal minerals and which primarily involve National Forest Service issues, the Forest Service will have the lead for environmental analysis and, when necessary, documentation in an environmental assessment or environmental impact statement.

2. The authorized officers, of the Bureau of Land Management, Office of Surface Mining (Regulatory Authority), and the Surface Management Agency (Forest Service) respectively, shall coordinate, as practical, regulation of mining operations and associated activities on the lease area.

3. In accordance with Sec. 523(b) of the "Surface Mining Control and Reclamation Act of 1977," surface mining and reclamation operations conducted on this lease are to conform with the requirements of this Act and are subject to compliance with Office of Surface Mining Regulations, or as applicable, a Utah program equivalent approved under cooperative agreement in accordance with Sec. 523(c). The United States Government does not warrant that the entire tract will be susceptible to mining.

4. Federal Regulations 43 CFR 3400 pertaining to Coal Management make provisions for the Surface Management Agency, the surface of which is under the jurisdiction of any Federal agency other than the Department of Interior, to consent to leasing and to prescribe conditions to insure the use and protection of the lands. All or part of this lease contain lands the surface of which are managed by the United States Department of Agriculture, Forest Service Manti-LaSal National Forest.

The following stipulations pertain to the lessee responsibility for mining operations on the lease area and on adjacent areas as may be specifically designated on National Forest System lands.

5. Before undertaking activities that may disturb the surface of previously undisturbed leased lands, the lessee may be required to conduct a cultural resource inventory and a paleontological appraisal of the areas to be disturbed. These studies shall be conducted by qualified professional cultural resource specialists or qualified paleontologists, as appropriate, and a report prepared itemizing the findings. A plan will then be submitted making recommendations for the protection of, or measures to be taken to mitigate impacts for identified cultural or paleontological resources.

If cultural resources or paleontological remains (fossils) of significant scientific interest are discovered during operations under this lease, the lessee prior to disturbance shall, immediately bring them to the attention of the appropriate authorities. Paleontological

remains of significant scientific interest do not include leaves, ferns, or dinosaur tracks commonly encountered during underground mining operations.

The cost of conducting the inventory, preparing reports, and carrying out mitiga- ting measures shall be borne by the lessee.

6. If there is reason to believe that threatened or endangered (T&E) species of plants or animals, or migratory bird species of high Federal interest occur in the area the lessee shall be required to conduct an intensive field inventory of the area to be disturbed and/or impacted. The inventory shall be conducted by a qualified specialist and a report of findings will be prepared. A plan will be prepared making recommendations for the protection of these species or action necessary to mitigate the disturbance.

The cost of conducting the inventory, preparing reports, and carrying out mitigating measures shall be borne by the lessee.

7. The lessee shall be required to perform a study to secure adequate baseline data to quantify the existing surface resources on and adjacent to the lease area. Existing data may be used if such data is adequate for the intended purposes. The study shall be adequate to locate, quantify, and demonstrate the inter-relationship of the geology, topography, surface hydrology, vegetation, and wildlife. Baseline data will be established so that future programs of observation can be incorporated at regular intervals for comparison.

8. Powerlines used in conjunction with the mining of coal from this lease shall be constructed so as to provide adequate protection for raptors and other large birds. When feasible, powerlines will be located at least 100 yards from public roads.

9. The limited area available for mine facilities at the coal outcrop, steep topography, adverse winter weather, and physical limitations on the size and design of the access road, are factors which will determine the ultimate size of the surface area utilized for the mine. A site specific environmental analysis will be prepared for each new mine site development and for major modifications to existing developments to examine alternatives and mitigate conflicts.

10. Consideration will be given to site selection to reduce adverse visual impacts. Where alternative sites are available, and each alternative is technically feasible, the alternative involving the least damage to the scenery and other resources shall be selected. Permanent structures and facilities will be designed, and screening techniques employed, to reduce visual impacts, and where possible achieve a final landscape compatible with the natural surroundings. The creation of unusual, objectionable, or unnatural land forms and vegetative landscape features will be avoided.

11. The lessee shall be required to establish a monitoring system to locate, measure, and quantify the progressive and final effects of underground mining activities on the topographic surface, underground and surface hydrology and vegetation. The monitoring

system shall utilize techniques which will provide a continuing record of change over time and an analytical method for location and measurement of a number of points over the lease area. The monitoring shall incorporate and be an extension of the baseline data.

12. The lessee shall provide for the suppression and control of fugitive dust on haul roads and at coal handling and storage facilities. On Forest Development Roads (FDR), lessees may perform their share of road maintenance by a commensurate share agreement if a significant degree of traffic is generated that is not related to their activities.

13. Except at specifically approved locations, underground mining operations shall be conducted in such a manner so as to prevent surface subsidence that would: (1) cause the creation of hazardous conditions such as potential escarpment failure and landslides, (2) cause damage to existing surface structures, or (3) damage or alter the flow of perennial streams. The lessee shall provide specific measures for the protection of escarpments, and determine corrective measures to assure that hazardous conditions are not created.

14. In order to avoid surface disturbance on steep canyon slopes and to preclude the need for surface access, all surface breakouts for ventilation tunnels shall be constructed from inside the mine, except at specifically approved locations.

15. If removal of timber is required for clearing of construction sites, etc., such timber shall be removed in accordance with the regulations of the surface management agency.

16. The coal contained within, and authorized for mining under this lease, shall be extracted only by underground mining methods.

17. Existing Forest Service owned or permitted surface improvements will need to be protected, restored, or replaced to provide for the continuance of current land uses.

18. In order to protect big game wintering areas, elk calving and deer fawning areas, sagegrouse strutting areas, and other critical wildlife habitat and/or activities, specific surface uses outside the mine development area may be curtailed during specific periods of the year.

19. Support facilities, structures, equipment, and similar developments will be removed from the lease area within 2 years after the final termination of use of such facilities. This provision shall apply unless the requirement of Section 10 of the lease form is applicable. Disturbed areas and those areas previously occupied by such facilities will be stabilized and rehabilitated, drainages reestablished, and the areas returned to a premining land use.

20. The lessee at the conclusion of the mining operations, or at other times as surface disturbance related to mining may occur, will replace all damaged, disturbed, or displaced corner monuments (section corners, quarter corners, etc.) their accessories and

appendages (witness trees, bearing trees, etc.), or restore them to their original condition and location, or at other locations that meet the requirements of the rectangular surveying system. This work shall be conducted at the expense of the lessee, by a professional land surveyor registered in the State of Utah and to the standards and guidelines found in the manual of surveying instruction, U.S. Department of Interior.

21. The lessee at his expense will be responsible to replace any surface water identified for protection, that may be lost or adversely affected by mining operations, with water from an alternative source in sufficient quantity and quality to maintain existing riparian habitat, fishery habitat, livestock and wildlife use, or other land uses.

22. The lessee must comply with all the rules and regulations of the Secretary of Agriculture set forth at Title 36, Chapter II, of the Code of Federal Regulations governing the use and management of the National Forest System (NFS) when not inconsistent with the rights granted by the Secretary of the Interior in the lease. The Secretary of Agriculture's rules and regulations must be complied with for (1) all use and occupancy of the NFS prior to approval of a permit/operation plan by the Secretary of Interior, (2) uses of all existing improvements, such as Forest Development Roads, within and outside the area licensed, permitted or leased by the Secretary of Interior, and (3) use and occupancy of the NFS not authorized by a permit/operation plan approved by the Secretary of the Interior.

All matters related to this stipulation are to be addressed to:

Forest Supervisor
Manti-LaSal National Forest
599 West Price River Drive
Price, Utah 84501

Telephone No.: 801-637-2817

who is the authorized representative of the Secretary of Agriculture.

23. Notwithstanding the approval of a resource recovery and protection plan by the BLM, lessor reserves the right to seek damages against the operator/lessee in the event (I) the operator/lessee fails to achieve maximum economic recovery [as defined at 43 CFR §3480.0-5(21)] of the recoverable coal reserves or (ii) the operator/lessee is determined to have caused a wasting of recoverable coal reserves. Damages shall be measured on the basis of the royalty that would have been payable on the wasted or unrecovered coal.

The parties recognize that under an approved R2P2, conditions may require a modification by the operator/lessee of that plan. In the event a coal bed or portion thereof is not to be mined or is rendered unminable by the operation, the operator shall submit appropriate justification to obtain approval by the AO to leave such reserves unmined. Upon approval by the AO, such coal beds or portions thereof shall not be subject to

damages as described above. Further, nothing in this section shall prevent the operator/lessee from exercising its right to relinquish all or a portion of the lease as authorized by statute and regulation.

In the event the AO determines that the R2P2 as approved will not attain MER as the result of changed conditions, the AO will give proper notice to the operator/lessee as required under applicable regulations. The AO will order a modification if necessary, identifying additional reserves to be mined in order to attain MER. Upon a final administrative or judicial ruling upholding such an ordered modification, any reserves left unmined (wasted) under that plan will be subject to damages as described in the first paragraph under this section.

Subject to the right to appeal hereinafter set forth, payment of the value of the royalty on such unmined recoverable coal reserves shall become due and payable upon determination by the AO that the coal reserves have been rendered unminable or at such time that the lessee has demonstrated an unwillingness to extract the coal.

The BLM may enforce this provision either by issuing a written decision requiring payment of the MMS demand for such royalties, or by issuing a notice of non-compliance. A decision or notice of non-compliance issued by the lessor that payment is due under this stipulation is appealable as allowed by law.

24. Due to the uncertainty of the amount of recoverable coal tons in this modification, the lessee will pay the fair market value (FMV) for the coal resources mined in the area of Federal coal lease modification (UTU-64375) at the rate of $0.25 per ton for the actual tonnage mined. Payment of FMV at the specified rate and tonnage mined will be on the schedule required for payment of production royalties to the Minerals Management Service (MMS). The lessee will clearly indicate which portion of the payment is for royalty and what is for lease bonus payment.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

MODIFIED COAL LEASE

Serial No. **UTU-64375**

Date of Lease: October 1, 1990

The United States of America

PACIFICORP
Company or Lessee Name

(Signature of Lessee)
J. Brett Harvey

Vice President
(Title)

January 16, 1997
(Date)

By

(Signing Officer)
Group Leader
Minerals Adjudication Group

(Title)

JAN 23 1997
(Date)

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

BOND NUMBER: 400 JV 3712
UNDER LEASE FOR MINING COAL DEPOSITS
SERIAL NO. UTU-64375

RIDER

To be attached to Bond No. 400 JV 3712 issued by

ST. PAUL FIRE AND MARINE INSURANCE COMPANY,

(As Surety) in the amount of ONE MILLION NINE HUNDRED FORTY-SIX THOUSAND AND NO/100 ($ 1,946,000.00)

Dollars, effective the 1st day of July, 19 94.

ON BEHALF OF PACIFICORP

IN FAVOR OF UNITED STATES OF AMERICA (U.S.D.I. BUREAU OF LAND MANAGEMENT)

In consideration of the premium charged for the attached bond, it is mutually understood and agreed by the Principal and the Surety that: Coal Lease UTU-64375 shall be modified to include the following described lands in Emery County, Utah:

T. 18 S. R. 6E., SLM, UT
Sec. 3, lot 3, E2 of lot 6, lot 7,
NESWNE, NWSENE, S2SENE.

Containing 133.2 acres

All other items, limitations and conditions of said bond except as herein expressly modified shall remain unchanged.

This rider shall be effective as of the 11th day of December, 19 96.

Signed, sealed and dated this the 8th day of January, 19 97.

PACIFICORP
Principal

BY: J. Brett Harvey
J. Brett Harvey Vice President

ST. PAUL FIRE AND MARINE INSURANCE COMPANY
Surety

BY: Muriel M. van Veen
Muriel M. van Veen Attorney-in-Fact

U.S.D.I. BUREAU OF LAND MANAGEMENT, Obligee

Date JAN 13 1997

Accepted:

Group Leader
Minerals Adjudication Group

Bond 22a
B-SUR-752
SG-2013/EP 8/90

EXECUTED IN 3 COUNTERPARTS

PRINTED IN U.S.A.

APPENDIX D

Mine Maps

as required under R645-301-525.270.

CONTENTS

1996 Cottonwood Mine Production Map

1996 Deer Creek Mine Production Map

1996 Trail Mountain Mine Production Map

1996 Beehive and Littledove Mines (No Production)

1996 Deseret Mine (No Production)

RECEIVED
MAY 01 1997
DIV. OF OIL, GAS & MINING

APPENDIX E

Other Information

In accordance with the requirements of R645-301 and R645-302.

CONTENTS

Coal Mining 1996

All Mines UPDES Expiration Dates

Refuse, Roof, Floor and Mid-Seam Data (All Mines)

Cottonwood Mine WRS Rock/Coal Ratio Analysis Reports

Cottonwood WRS Analysis Reports

Cottonwood Sediment Pond Analysis Reports

Deer Creek WRS Analysis Reports

Trail Mountain Sediment Pond Analysis Report

Des-Bee-Dove Test Plot Analysis (Soil)

COAL MINING AND RECLAMATION OPERATIONS FOR 1996

(Must be submitted to the Division by April 30, 1997)

State of Utah
Department of Natural Resources
Division of Oil, Gas and Mining
1594 West North Temple, Suite 1210
Box 145801
Salt Lake City, Utah 84114-5801
(801) 538-5289

Permittee:	**PacifiCorp**
Mine Name:	**Trail Mountain**
Mailing Address:	**Box 310, Huntington, Utah 84528**
Company Representative:	**Charles A. Semborski**
Resident Agent:	**Charles A. Semborski**
Permit Number:	**ACT/015/009**
MSHA ID Number:	**42-01211**
Date of Initial Permanent Program Permit:	**May 11, 1978**
Date of Permit Renewal:	**February 21, 1995**
Quantity of Coal Mined (Tonnage) 1996:	**3,825,646.88**

COAL MINING AND RECLAMATION OPERATIONS FOR 1996

(Must be submitted to the Division by April 30, 1997)

State of Utah
Department of Natural Resources
Division of Oil, Gas and Mining
1594 West North Temple, Suite 1210
Box 145801
Salt Lake City, Utah 84114-5801

Permittee:	**PacifiCorp**
Mine Name:	**Deer Creek**
Mailing Address:	**Box 310, Huntington, Utah 84528**
Company Representative:	**Charles A. Semborski**
Resident Agent:	**Charles A. Semborski**
Permit Number:	**ACT/015/018**
MSHA ID Number:	**42-00121**
Date of Initial Permanent Program Permit:	**February 7, 1986**
Date of Permit Renewal:	**February 6, 1996**
Quantity of Coal Mined (Tonnage) 1996:	**4,337,999.0**

COAL MINING AND RECLAMATION OPERATIONS FOR 1996

(Must be Submitted to the Division by April 30, 1997)

State of Utah
Department of Natural Resources
Division of Oil, Gas and Mining
1594 West North Temple, Suite 1210
Box 145801
Salt Lake City, Utah 84114-5801
(801) 538-5289

Permittee:	**PacifiCorp**
Mine Name:	**Des-Bee-Dove**
Mailing Address:	**Box 310, Huntington, Utah 84528**
Company Representative:	**Charles A. Semborski**
Resident Agent:	**Charles A. Semborski**
Permit Number:	**ACT/015/017**
MSHA ID Number:	**Deseret 42-00988, Beehive 42-00082, Little Dove 42-01393**
Date of Initial Permanent Program Permit:	**August 29, 1985**
Date of Permit Renewal:	**September 7, 1995**
Quantity of Coal Mined (Tonnage) 1996:	**0.00**

COAL MINING AND RECLAMATION OPERATIONS FOR 1996

(Must be submitted to the Division by April 30, 1997)

State of Utah
Department of Natural Resources
Division of Oil, Gas and Mining
1594 West North Temple, Suite 1210
Box 145801
Salt Lake City, Utah 84114-5801
(801) 538-5289

Permittee:	**PacifiCorp**
Mine Name:	**Cottonwood/Wilberg Mine**
Mailing Address:	**Box 310, Huntington, Utah 84528**
Company Representative:	**Charles A. Semborski**
Resident Agent:	**Charles A. Semborski**
Permit Number:	**ACT/015/019**
MSHA ID Number:	**Wilberg 42-00080 Cottonwood 42-01944**
Date of Initial Permanent Program Permit:	**July 6, 1984**
Date of Permit Renewal:	**July 6, 1994**
Quantity of Coal Mined (tonnage) 1996:	**0.00**

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"*),

PacifiCorp-Trail Mountain Mine located approximately 8 miles northwest of Orangeville, Utah as identified in the Notice of Intent, application UTG040003 is authorized to discharge at outfalls located at latitude 39°18'32" and longitude 111°10'57",

to Cottonwood Creek

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

This permit shall become effective on July 1, 1993.

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

Signed this 25th day of June, 1993.

Authorized Permitting Official
Executive Secretary
Utah Water Quality Board

Val Payne

State of Utah
DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF WATER QUALITY

Norman H. Bangerter
Governor
Kenneth L. Alkema
Executive Director
Don A. Ostler, P.E.
Director

(801) 538-6146
(801) 538-6016 Fax

Reply to: Department of Environmental Quality
Division of Water Quality
288 North 1460 West
P.O. Box 144870
Salt Lake City, Utah 84114-4870

November 10, 1992

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Rodger Fry
Utah Power & Light
One Utah Center
Salt Lake City, Utah 84140-0020

RE: Permit UT0023591

Dear Mr. Fry:

Enclosed is UPDES permit No. UT0023591 for your facility. Copies of EPA form 3320-1, Discharge Monitoring Report forms, for reporting and self-monitoring requirements as specified in the permit, will be sent as soon as printed. This permit will become effective on the date specified on page 1 of the permit, subject to the right of appeal in accordance with the provisions of *Utah Administrative Code*, Sections R317-8-6.11 and R317-8-6.13.

A fee schedule was included in the Utah Department of Environmental Quality Budget appropriation request at the direction of the Legislature and in accordance with *Utah Coded Annotated* 19-1-201. The fee schedule, as approved by the legislature, includes a prescribed fee for specific Industrial Categories. The prescribed fee for a Minor Coal Mining category, Utah Pollutant Discharge Elimination System permit is $ 3,600.00. Please remit $ 3,600.00 to:

Dept. of Environmental Quality
Division of Water Quality
288 North 1460 West
P.O. Box 144870
Salt Lake City, UT 84114-4870

If you have any questions with regard to this matter, please contact Steve McNeal at (801) 538-6146.

Sincerely,

Donald A. Hilden

Donald A. Hilden, Ph.D., Manager
Permits and Compliance Section
Division of Water Quality

KC/kc
Enclosures
cc: Southeastern Utah District Health Dept. w/encl.
Dave Ariotti, District Engineer w/encl.

RDUTE
☑ GUY DAVIS
☐ VAL PAYNE
☐ JERRY TOLLOCK
☐ DEBRA WARRINGTON
☐ Karl Houskeeper

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Permit No. UT0023591
Minor 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)

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

PACIFICORP DES-BEE-DOVE COAL MINE

is hereby authorized to discharge from its facility located seven (7) miles northeast of Castle Dale, Utah, with the outfall located at latitude 39° 17′ 20″ and longitude 111° 07′ 03″ to receiving waters named

GRIMES WASH

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

This permit shall become effective on November 10, 1992.

This permit and the authorization to discharge shall expire at midnight,October 31, 1997.

Signed this 10th day of November, 1992.

Authorized Permitting Official
Executive Secretary
Utah Water Quality Board

Norman H. Bangerter
Governor
Kenneth L. Alkema
Executive Director
Don A. Ostler, P.E.
Director

State of Utah
DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF WATER QUALITY

(801) 538-6146
(801) 538-6016 Fax

Reply to: Department of Environmental Quality
Division of Water Quality
288 North 1460 West
P.O. Box 144870
Salt Lake City, Utah 84114-4870

November 24, 1992

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Rodger Fry
Utah Power & Light Company
One Utah Center
Salt Lake City, Utah 84140-0020

RE: Permit UT0023604, Pacificorp Deer Creek Coal Mine

Dear Mr. Fry:

Enclosed is UPDES permit No. UT0023604 for your facility. Copies of EPA form 3320-1, Discharge Monitoring Report forms, for reporting and self-monitoring requirements as specified in the permit, will be sent as soon as printed. This permit will become effective on December 1, 1992, subject to the right of appeal in accordance with the provisions of *Utah Administrative Code*, Sections R317-8-6.11 and R317-8-6.13.

A fee schedule was included in the Utah Department of Environmental Quality Budget appropriation request at the direction of the Legislature and in accordance with *Utah Coded Annotated* 19-1-201. The fee schedule, as approved by the legislature, includes a prescribed fee for specific Industrial Categories. The prescribed fee for a Minor Coal Mining and Preparation category, Utah Pollutant Discharge Elimination System permit is $ 3,600.00. Please remit $ 3,600.00 to:

Dept. of Environmental Quality
Division of Water Quality
288 North 1460 West
P.O. Box 144870
Salt Lake City, UT 84114-4870

If you have any questions with regard to this matter, please contact Steve McNeal at (801) 538-6146.

Sincerely,

Donald A. Hilden

Donald A. Hilden, Ph.D., Manager
Permits and Compliance Section

KC/kc
Enclosures
cc: Claron D. Bjork, Southeastern Utah District Health Dept.
Dave Ariotti, District Engineer

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Permit No. UT0023604
Minor 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)

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

PACIFICORP DEER CREEK COAL MINE

is hereby authorized to discharge from its facility located eight (8) miles west of Huntington, Utah, with the outfall located at latitude 39° 21′ 36″ and longitude 111° 06′ 35″, to receiving waters named

DEER CREEK

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

This permit shall become effective on

December 1, 1992.

This permit and the authorization to discharge shall expire at midnight,

November 30, 1997

Signed this 24th day of November, 1992

Authorized Permitting Official
Executive Secretary
Utah Water Quality Board

Val Payne

State of Utah
DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF WATER QUALITY

Norman H. Bangerter
Governor
Kenneth L. Alkema
Executive Director
Don A. Ostler, P.E.
Director

(801) 538-6146
(801) 538-6016 Fax

Reply to: Department of Environmental Quality
Division of Water Quality
288 North 1460 West
P.O. Box 144870
Salt Lake City, Utah 84114-4870

November 12, 1992

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Rodger Fry
Utah Power and Light Company
One Utah Center
Salt Lake City, Utah 84140-0020

RE: Permit UT0022896 - Wilberg Mine

Dear Mr. Fry:

Enclosed is UPDES permit No. UT0022896 for your facility. Copies of EPA form 3320-1, Discharge Monitoring Report forms, for reporting and self-monitoring requirements as specified in the permit, will be sent as soon as printed. This permit will become effective on the date specified on page 1 of the permit, subject to the right of appeal in accordance with the provisions of *Utah Administrative Code*, Sections R317-8-6.11 and R317-8-6.13.

A fee schedule was included in the Utah Department of Environmental Quality Budget appropriation request at the direction of the Legislature and in accordance with *Utah Coded Annotated* 19-1-201. The fee schedule, as approved by the legislature, includes a prescribed fee for specific Industrial Categories. The prescribed fee for a Major Coal Mining and Preparation category, Utah Pollutant Discharge Elimination System permit is $ 5,400.00. Please remit $ 5,400.00 to:

Dept. of Environmental Quality
Division of Water Quality
288 North 1460 West
P.O. Box 144870
Salt Lake City, UT 84114-4870

If you have any questions with regard to this matter, please contact Steve McNeal at (801) 538-6146.

Sincerely,

Donald A. Hilden

Donald A. Hilden, Ph.D., Manager
Permits and Compliance Section

KC/kc
Enclosures

cc: Claron D. Bjork, Southeastern Utah District Health Dept. w/encl.
Dave Ariotti, District Engineer w/encl.

ROUTE
☒ GARY DAVIS
☒ VAL PAYNE
☐ JERRY POLLOCK
☐ DEBRA WARRINGTON
☐ Karl Houskeeper

Printed on recycled paper

Permit No. UT0022896
Major 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)

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

PacifiCorp-Wilberg Mine

is hereby authorized to discharge from its facility located approximately 8 miles north west of Orangville in Emery County, Utah. The outfalls are located at

001	39°19'4"	111°7'20"
002	39°18'56"	111°11'15"
003	39°19'7"	111°7'13"
004	39°18'43"	111°10'35"
005	39°17'43"	111°7'18"

to receiving waters named

Grimes Wash and Cottonwood Creek

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

This permit shall become effective on November 12, 1992.

This permit and the authorization to discharge shall expire at midnight, October 31, 1997.

Signed this 12th day of November, 1992.

Authorized Permitting Official
Executive Secretary
Utah Water Quality Board

SECTION F: REFUSE, ROOF, FLOOR AND MID-SEAM DATA

1. Samples were collected at the Cottonwood/Wilberg/Des-Bee-Dove, Trail Mtn. Waste Rock Storage Facility, Cottonwood Mine, Deer Creek Waste Rock Storage Facility, Deer Creek Mine.

2. Samples were collected in accordance with procedures outlined in the Cottonwood/Wilberg Waste Rock Storage Facility Volume, Chapter II, pages 2-12.1 through 2-12.2 and the Deer Creek Waste Rock Storage Facility Volume, Chapter VII, pages 7-4 through 7-5.

   Waste rock soil samples were collected in accordance with the Cottonwood Permit, Appendix VII, page 13.

   Coal:Rock ratio samples were collected in accordance with procedures outlined in the Cottonwood/Wilberg Waste Rock Storage Facility Volume, Chapter II, pages 2-13 and 2-14.

3. Please refer to the attached laboratory analyses. All parameters were analyzed according to the Division's **"GUIDELINES FOR MANAGEMENT OF TOPSOIL AND OVERBURDEN"** (Refuse, Roof, Floor, and Mid-Seam) or the **"TITLE V COAL PROGRAM POLICY FOR DISPOSAL OF SEDIMENT POND WASTE"**.

4. All analyzed parameters fall in the "acceptable" range of the Division's guidelines with the exception of the following:

LAB NO.	LOCATION	UNACCEPTABLE PARAMETER
	COTTONWOOD MINE	
**131801	CTW0596	Tot.Or Car.
* 31502	CTW0196	SAR, Total Selen.
* 138973	CTW0696	Tot.Or.Car.
139184	CTW0796	EC mmhos/cm @ 25%zC
139185	CTW0896	SAR
	TRAIL MOUNTAIN MINE	
* 31503	CTW0296	Tot.Or.Car. Tot.Selen.
	DEER CREEK MINE	
**31506	DCO496	TOT. ORGANIC CARBON

132654	DC0796	Ec/mmhos/cm@25C, SAR
132655	DC0896	" " " , SAR
** 139304	DC0597	Selenium ppm
** 139307	DC0897	Tot. Or.Car.

DEER CREEK MINE CONT.

The refuse/sediment pond material will be covered by 4' of suitable material for the vegetative root zone.

* Sediment pond samples
** In-mine sample

F\MISC\1995\95REFUSE.RPT

TO: Val Payne

August 30, 1996

FROM: Tom Lloyd

SUBJECT: **Annual Waste Rock Sampling, 1996**

Annual sampling of the Cottonwood Mine, Waste Rock Site is complete for the 1996. Sample results indicate the percent coal by weight is 37.9 percent, and rock is 62.1 percent (see Table).

Samples were collected from randomly located trenches that were dug about 4.0 feet deep. Materials were classified as coal, rock and fines and segregated into barrels for further testing. These samples were taken to the CT&E where they were weighed, and ash analyses were done on the coal and fines (see analyses)

cc: S. Semborski
R. Northrup

Waste Rock Site
Cottonwood Mine

08/28/96
Annual Sampling
Sampled by Tom Lloyd

	Ash	Weight (lbs)	Weighted Ash % Rock
Fines	51.8	222.0	15.0
Coal	11.5	208.0	3.1
Rock	100.0	337.0	43.9
Total		767.0	62.1

Total Coal	37.9
Total Rock	62.1

COMMERCIAL TESTING & ENGINEERING CO.
GENERAL OFFICES: 1919 SOUTH HIGHLAND AVE., SUITE 210-B, LOMBARD, ILLINOIS 60148 • TEL: 708-953-9300 FAX: 708-953-9309
SINCE 1909
SGS Member of the SGS Group (Société Générale de Surveillance)
PLEASE ADDRESS ALL CORRESPONDENCE TO:
P.O. BOX 1020, HUNTINGTON, UT 84528
TEL: (801) 653-2311
FAX: (801) 653-2436

August 30, 1996

PACIFICORP FIELD OFFICE
P.O. Box 1005
Huntington UT 84528

Sample identification by

Kind of sample reported to us

Sample taken at

Sample taken by UP&L

Date sampled August 28, 1996

Date received August 28, 1996

COTTONWOOD
WASTE ROCK SITE
1 BARREL CHUNK
Weight of fines 222.0 LBS.
(FINES)

Analysis report no. 59-195019

ASH ANALYSIS

DRY BASIS

%Ash 51.83

Post-it™ brand fax transmittal memo 7671 | # of pages ▸ 3

To Don Lloyd	From
Co.	Co.
Dept.	Phone #
Fax #	Fax #

Respectfully submitted,
COMMERCIAL TESTING & ENGINEERING CO.

Larry Stout

Huntington Laboratory

OVER 40 BRANCH LABORATORIES STRATEGICALLY LOCATED IN PRINCIPAL COAL MINING AREAS, TIDEWATER AND GREAT LAKES PORTS, AND RIVER LOADING FACILITIES
Original Watermarked For Your Protection
TERMS AND CONDITIONS ON REVERSE

COMMERCIAL TESTING & ENGINEERING CO.
GENERAL OFFICES: 1918 SOUTH HIGHLAND AVE., SUITE 210-B, LOMBARD, ILLINOIS 60148 • TEL: 708-953-9300 FAX: 708-953-9308
SINCE 1908
Member of the SGS Group (Société Générale de Surveillance)

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

August 29, 1996

PACIFICORP FIELD OFFICE
P.O. Box 1005
Huntington UT 84528

Sample identification by

Kind of sample reported to us

Sample taken at

Sample taken by UP&L

Date sampled August 28, 1996

Date received August 28, 1996

COTTONWOOD
WASTE ROCK SITE
1 BARREL CHUNK
WEIGHT OF ROCK 337.0 LBS.
(ROCK)

Analysis report no. 59-195021

AUG 30 1996

Respectfully submitted,
COMMERCIAL TESTING & ENGINEERING CO.

Huntington Laboratory

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

-466
Original Watermarked For Your Protection

TERMS AND CONDITIONS ON REVERSE

COMMERCIAL TESTING & ENGINEERING CO.
GENERAL OFFICES: 1919 SOUTH HIGHLAND AVE., SUITE 210-B, LOMBARD, ILLINOIS 60148 • TEL: 708-953-9300 FAX: 708-953-9306
SINCE 1908
Member of the SGS Group (Société Générale de Surveillance)

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

August 30, 1996

PACIFICORP FIELD OFFICE
P.O. Box 1005
Huntington UT 84528

Sample identification by

Kind of sample reported to us

Sample taken at

Sample taken by UP&L

Date sampled August 28, 1996

Date received August 28, 1996

COTTONWOOD
WASTE ROCK SITE
1 BARREL CHUNK
Weight of coal 208.0 LBS.
(COAL)

Analysis report no. 59-195020

ASH ANALYSIS

DRY BASIS

%Ash	11.51

Respectfully submitted,
COMMERCIAL TESTING & ENGINEERING CO.

Larry Stout

Huntington Laboratory

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

465
Original Watermarked For Your Protection

TERMS AND CONDITIONS ON REVERSE

Inter-Mountain Laboratories, Inc.
1633 Terra Avenue
Sheridan, Wyoming 82801
Tel. (307) 672-8945

ENERGY WEST MINING COMPANY
HUNTINGTON, UTAH
MINE: COTTONWOOD
SITE: COTTONWOOD WASTE ROCK SI

January 22, 1997

Lab No.	Location	Depths	pH	EC mmhos/cm @ 25°C	Calcium meq/l	Magnesium meq/l	Sodium meq/l	SAR	Sand %	Silt %	Clay %	Texture	Boron ppm	Selenium ppm
139184	CTW 0796		7.5	8.41	25.0	23.9	61.5	12.4	72.8	16.2	11.0	SANDY LOAM	2.00	0.04
139185	CTW 0896		7.8	5.16	8.13	5.63	43.1	16.4	78.8	13.2	8.0	LOAMY SAND	1.96	0.02
139186	CTW 0996		7.8	5.95	19.5	10.2	41.9	10.9	59.2	26.8	14.0	SANDY LOAM	1.55	0.02
139187	CTW 1096		8.2	6.89	25.6	10.3	48.3	11.4	70.0	18.0	12.0	SANDY LOAM	1.68	0.02

Miscellaneous Abbreviations: SAR= Sodium Adsorption Ratio, CEC= Cation Exchange Capacity, ESP= Exchangeable Sodium Percentage, Exch= Exchangeable, Avail= Available

Inter·Mountain Laboratories, Inc.

1633 Terra Avenue
Sheridan, Wyoming 82801

Energy West
Munsell Color

Lab No.	Location	Color
139184	CTW 0796	10YR 4/1 DARK GRAY
139185	CTW 0896	5Y 3/1 VERY DARK GRAY
139186	CTW 0996	5Y 3/1 VERY DARK GRAY
139187	CTW 1096	2.5Y 3.5/1 DARK GRAY

Inter-Mountain Laboratories, Inc.
1633 Terra Avenue
Sheridan, Wyoming 82801
Tel. (307) 672-8945

ENERGY WEST MINING COMPANY
HUNTINGTON, UTAH
MINE: COTTONWOOD

DATE SAMPLED: 2-29-96
April 3, 1996

Lab No.	Location	Depths	pH	EC mmhos/cm @ 25°C	Calcium meq/l	Magnesium meq/l	Sodium meq/l	SAR	Sand %	Silt %	Clay %	Texture	Carbonate %
131799	CTW0396		7.8	0.72	2.75	2.95	1.78	1.05	87.0	11.0	2.0	SAND	17.4
131800	CTW0496		7.9	0.89	2.81	4.76	1.99	1.02	65.0	21.0	14.0	SANDY LOAM	35.7
131801	CTW0596		7.2	0.49	2.10	1.55	1.21	0.89	91.0	7.0	2.0	SAND	0.4

Miscellaneous Abbreviations: SAR= Sodium Adsorption Ratio, CEC= Cation Exchange Capacity, ESP= Exchangeable Sodium Percentage, Exch= Exchangeable, Avail= Available

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ENERGY WEST MINING COMPANY
HUNTINGTON, UTAH
MINE: COTTONWOOD

DATE SAMPLED: 2-29-96
April 3, 1996

Lab No.	Location	Depths	Total Organic Carbon %	Total Sulfur %	T.S. AB t/1000t	Neut. Pot. t/1000t	T.S. ABP t/1000t	Sulfate Sulfur %	Pyritic Sulfur %	Organic Sulfur %	PyrS AB t/1000t	PyrS ABP t/1000t	Boron ppm	Selenium ppm
131799	CTW0396		1.4	0.05	1.56	201.	200.						0.11	<0.02
131800	CTW0496		4.3	<0.01	0.00	359.	359.						0.35	0.02
131801	CTW0596		79.2	0.47	14.7	6.13	-8.55	<0.01	0.11	0.44	3.44	2.69	0.28	<0.02

Abbreviations used in acid base accounting: T.S.= Total Sulfur, AB= Acid Base, ABP= Acid Base Potential, PyrS= Pyritic Sulfur, Pyr+Org= Pyritic Sulfur + Organic Sulfur, Neut. Pot.= Neutralization Potential

Inter-Mountain Laboratories, Inc.

1633 Terra Avenue
Sheridan, Wyoming 82801

Energy West
Munsell Color

Lab No.	Location	Color
131799	CTW0396	Gley 2.5/1 Black
131800	CTW0496	10YR 5.5/1 Gray
131801	CTW0596	10YR 5/2 Grayish Brown

Inter-Mountain Laboratories, Inc.
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ENERGY WEST MINING COMPANY
HUNTINGTON, UTAH
MINE: COTTONWOOD
SITE: COTTONWOOD WASTE ROCK SI

January 22, 1997

Lab No.	Location	Depths	pH	EC mmhos/cm @ 25°C	Calcium meq/l	Magnesium meq/l	Sodium meq/l	SAR	Sand %	Silt %	Clay %	Texture	Boron ppm	Selenium ppm
139184	CTW 0796		7.5	8.41	25.0	23.9	61.5	12.4	72.8	16.2	11.0	SANDY LOAM	2.00	0.04
139185	CTW 0896		7.8	5.16	8.13	5.63	43.1	16.4	78.8	13.2	8.0	LOAMY SAND	1.96	0.02
139186	CTW 0996		7.8	5.95	19.5	10.2	41.9	10.9	59.2	26.8	14.0	SANDY LOAM	1.55	0.02
139187	CTW 1096		8.2	6.89	25.6	10.3	48.3	11.4	70.0	18.0	12.0	SANDY LOAM	1.68	0.02

Miscellaneous Abbreviations: SAR= Sodium Adsorption Ratio, CEC= Cation Exchange Capacity, ESP= Exchangeable Sodium Percentage, Exch= Exchangeable, Avail= Available

Inter-Mountain Laboratories, Inc.

1633 Terra Avenue
Sheridan, Wyoming 82801

Energy West
Munsell Color

Lab No.	Location	Color
139184	CTW 0796	10YR 4/1 DARK GRAY
139185	CTW 0896	5Y 3/1 VERY DARK GRAY
139186	CTW 0996	5Y 3/1 VERY DARK GRAY
139187	CTW 1096	2.5Y 3.5/1 DARK GRAY

Inter-Mountain Laboratories, Inc.
1633 Terra Avenue
Sheridan, Wyoming 82801
Tel. (307) 672-8945

ENERGY WEST MINING COMPANY
HUNTINGTON, UTAH
MINE: COTTONWOOD
SITE: NORTH POND SEDIMENT

DATE SAMPLED: 2-12-96
March 22, 1996

Lab No.	Location	Depths	pH	EC mmhos/cm @ 25°C	Saturation %	Calcium meq/l	Magnesium meq/l	Sodium meq/l	SAR	Sand %	Silt %	Clay %	Texture
131502	CTW0196		7.5	9.41	41.3	23.8	18.2	60.1	13.1	54.0	28.0	18.0	SANDY LOAM
– 131503	CTW0296		7.1	8.61	51.7	29.0	15.3	54.9	11.7	50.0	29.0	21.0	LOAM

– THIS IS TRAIL MTN. SED. POND SAMPLE
TAKEN FROM WRS DUMP LOCATION

Note: There [illegible]
Copy [illegible]

Miscellaneous Abbreviations: SAR= Sodium Adsorption Ratio, CEC= Cation Exchange Capacity, ESP= Exchangeable Sodium Percentage, Exch= Exchangeable, Avail= Available

Inter-Mountain Laboratories, Inc.
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ENERGY WEST MINING COMPANY
HUNTINGTON, UTAH
MINE: COTTONWOOD
SITE: NORTH POND SEDIMENT

DATE SAMPLED: 2-12-96
March 22, 1996

Lab No.	Location	Depths	Total Organic Carbon %	Total Sulfur %	T.S. AB t/1000t	Neut. Pot. t/1000t	T.S. ABP t/1000t	Sulfate Sulfur %	Pyritic Sulfur %	Organic Sulfur %	PyrS AB t/1000t	PyrS ABP t/1000t	P ppm	Boron ppm
131502	CTW0196		32.5	0.28	8.75	237.	228.						2.12	1.68
131503	CTW0296		52.2	0.57	17.8	135.	117.						2.05	2.69

Abbreviations used in acid base accounting: T.S.= Total Sulfur, AB= Acid Base, ABP= Acid Base Potential, PyrS= Pyritic Sulfur, Pyr+Org= Pyritic Sulfur + Organic Sulfur, Neut. Pot.= Neutralization Potential

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ENERGY WEST MINING COMPANY
HUNTINGTON, UTAH
MINE: COTTONWOOD
SITE: NORTH POND SEDIMENT

DATE SAMPLED: 2-12-96
March 22, 1996

Lab No.	Location	Depths	Total Potassium ppm	Total Sodium ppm	Avail Na meq/100g	Exch Na meq/100g	Chloride PR meq/l	Total Calcium ppm	Total Cadmium ppm	Total Copper ppm	Total Chromium ppm	Total Lead ppm	Total Molybdenum ppm	Total Nickel ppm	Total Cobalt ppm
131502	CTW0196		5000.	7050.0	4.10	1.62	25.5	73500.	<0.01	10.5	27.5	<0.01	0.50	12.0	3.00
131503	CTW0296		5200.	6100.0	3.96	1.12	27.5	36000.	<0.01	11.9	28.8	<0.01	2.49	13.4	3.50

Abbreviations for extractants: PR= Saturated Paste Extract, H2OSol= water soluble,AB-DTPA= Ammonium Bicarbonate-DTPA, AAO= Acid Ammonium Oxalate
Miscellaneous Abbreviations: SAR= Sodium Adsorption Ratio, CEC= Cation Exchange Capacity, ESP= Exchangeable Sodium Percentage, Exch= Exchangeable, Avail= Available

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ENERGY WEST MINING COMPANY
HUNTINGTON, UTAH
MINE: COTTONWOOD
SITE: NORTH POND SEDIMENT

DATE SAMPLED: 2-12-96
March 22, 1996

Lab No.	Location	Depths	Total Selenium ppm	Total Iron ppm	Total Manganese ppm	Total Zinc ppm	Total Kjeldahl Nitrogen %
131502	CTW0196		1.00	7900.	143.	31.5	0.40
131503	CTW0296		1.44	9150.	91.5	42.3	0.62

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ENERGY WEST MINING COMPANY
HUNTINGTON, UTAH
MINE: COTTONWOOD
SITE: COTTONWOOD SEDIMENT POND

DATE SAMPLED: 11-25-96
December 18, 1996

Lab No.	Location	Depths	pH	EC mmhos/cm @ 25°C	Saturation %	Calcium meq/l	Magnesium meq/l	Sodium meq/l	SAR	Sand %	Silt %	Clay %	Texture
138973	CTWD0696		7.3	4.81	36.0	23.3	10.0	32.8	8.04	83.6	9.4	7.0	LOAMY SAND

Miscellaneous Abbreviations: SAR= Sodium Adsorption Ratio, CEC= Cation Exchange Capacity, ESP= Exchangeable Sodium Percentage, Exch= Exchangeable, Avail= Available

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ENERGY WEST MINING COMPANY
HUNTINGTON, UTAH
MINE: COTTONWOOD
SITE: COTTONWOOD SEDIMENT POND

DATE SAMPLED: 11-25-96
December 18, 1996

Lab No.	Location	Depths	Total Organic Carbon %	Total Sulfur %	T.S. AB t/1000t	Neut. Pot. t/1000t	T.S. ABP t/1000t	Sulfate Sulfur %	Pyritic Sulfur %	Organic Sulfur %	PyrS AB t/1000t	PyrS ABP t/1000t	P ppm	Boron ppm	Total Calcium ppm
138973	CTWD0696		59.7	0.45	14.1	130.	116.						<0.01	0.86	41600.

Abbreviations used in acid base accounting: T.S.= Total Sulfur, AB= Acid Base, ABP= Acid Base Potential, PyrS= Pyritic Sulfur, Pyr+Org= Pyritic Sulfur + Organic Sulfur, Neut. Pot.= Neutralization Potential

Inter-Mountain Laboratories, Inc.
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ENERGY WEST MINING COMPANY
HUNTINGTON, UTAH
MINE: COTTONWOOD
SITE: COTTONWOOD SEDIMENT POND

DATE SAMPLED: 11-25-96
December 18, 1996

Lab No.	Location	Depths	Avail Na meq/100g	Exch Na meq/100g	Chloride PE meq/l	Total Sodium ppm	Total Potassium ppm	Total Cadmium ppm	Total Copper ppm	Total Chromium ppm	Total Lead ppm	Total Molybdenum ppm	Total Nickel ppm	Total Cobalt ppm	Total Selenium ppm
138973	CTWD0696		2.02	0.84	8.85	2750.	1940.	<0.01	9.97	15.5	<0.01	<1.00	6.98	1.50	<0.10

Abbreviations for extractants: PE= Saturated Paste Extract, H2OSol= water soluble,AB-DTPA= Ammonium Bicarbonate-DTPA, AAO= Acid Ammonium Oxalate
Miscellaneous Abbreviations: SAR= Sodium Adsorption Ratio, CEC= Cation Exchange Capacity, ESP= Exchangeable Sodium Percentage, Exch= Exchangeable, Avail= Available

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Sheridan, Wyoming 82801
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ENERGY WEST MINING COMPANY
HUNTINGTON, UTAH
MINE: COTTONWOOD
SITE: COTTONWOOD SEDIMENT POND

DATE SAMPLED: 11-25-96
December 18, 1996

Lab No.	Location	Depths	Total Iron ppm	Total Manganese ppm	Total Zinc ppm	Total Kjeldahl Nitrogen %
138973	CTWD0696		5140.	58.3	25.4	0.51

Inter·Mountain Laboratories, Inc.

1633 Terra Avenue
Sheridan, Wyoming 82801

TOXICITY CHARACTERISTIC LEACHING PROCEDURE
TRACE METAL CONCENTRATIONS
Quality Control/Blank Analysis

Client: **Energy West Mining Company**
Project ID: Cottonwood Mine
Sample ID: TCLP Blank 4/12/95
Matrix: Water

Date Reported: 12/30/96
Date Extracted: 12/17/96

Parameter:	Analytical Result	Units
Arsenic	<0.2	mg/L
Barium	<0.5	mg/L
Cadmium	<0.05	mg/L
Chromium	<0.05	mg/L
Lead	<0.2	mg/L
Mercury	<0.001	mg/L
Selenium	<0.2	mg/L
Silver	<0.1	mg/L

Method 6010A : Inductively Coupled Plasma-Atomic Emission Spectroscopy, SW-846, Nov. 1990.
Method 7470A : Mercury in Liquid Waste (Manual Cold Vapor Technique), SW-846, Nov. 1990.

Reviewed by: SS

Inter-Mountain Laboratories, Inc.

1701 Phillips Circle
Gillette, Wyoming 82718

Client: **IML - Sheridan Lab**
1633 Terra Avenue
Sheridan, WY 82801

Project: **Sheridan-Misc.**
Sample ID: CTWD 0696
Lab ID: 0296W04218
Matrix: Water
Condition: Intact

Report Date: 12/20/96
Date Received: 12/04/96
Time Received: 0800
Date Sampled: 12/02/96
Time Sampled: 1400

Parameter	Concentration	Units	MDL
Laboratory Data			
Benzene	<1	mg/Kg	1
Total Organic Halogens	30	mg/Kg	10

Reference: Test Methods for Evaluating Solid Waste, SW-846, U.S.E.P.A., Third Edition, Final Update II, 1994.

Reviewed By: _____

Inter-Mountain Laboratories, Inc.

1633 Terra Avenue
Sheridan, Wyoming 82801

TOXICITY CHARACTERISTIC LEACHING PROCEDURE
TRACE METAL CONCENTRATIONS

Client:	**Energy West Mining Company**	Date Reported:	12/30/96
Project ID:	Cottonwood Mine	Date Sampled:	11/25/96
Sample ID:	CTWD 0696	Date Received:	12/02/96
Lab ID:	138973DUP	TCLP Extract:	12/17/96
Matrix:	soil	Date Analyzed:	12/27/96
Condition:	Cool/Intact		

Parameter:	Analytical Result	Regulatory Level	Units
Arsenic	<0.2	5.0	mg/L
Barium	1.4	100	mg/L
Cadmium	<0.05	1.0	mg/L
Chromium	<0.05	5.0	mg/L
Lead	<0.2	5.0	mg/L
Mercury	<0.001	0.20	mg/L
Selenium	<0.2	1.0	mg/L
Silver	<0.1	5.0	mg/L

Toxicity Characteristic Leaching Procedure, Final Rule, Federal Register, 40 CFR 261-302, Part V, EPA Vol. 55, No. 126, June 29, 1990.

Method 6010A : Inductively Coupled Plasma-Atomic Emission Spectroscopy, SW-846, Nov. 1990.

Method 7470A : Mercury in Liquid Waste (Manual Cold Vapor Technique), SW-846, Nov. 1990.

Reviewed by:_____

Inter·Mountain Laboratories, Inc.

1633 Terra Avenue
Sheridan, Wyoming 82801

TOXICITY CHARACTERISTIC LEACHING PROCEDURE
TRACE METAL CONCENTRATIONS

Client:	**Energy West Mining Company**	Date Reported:	12/30/96
Project ID:	Cottonwood Mine	Date Sampled:	11/25/96
Sample ID:	CTWD 0696	Date Received:	12/02/96
Lab ID:	138973DUP	TCLP Extract:	12/17/96
Matrix:	soil	Date Analyzed:	12/27/96
Condition:	Cool/Intact		

Parameter:	Analytical Result	Regulatory Level	Units
Arsenic	<0.2	5.0	mg/L
Barium	1.4	100	mg/L
Cadmium	<0.05	1.0	mg/L
Chromium	<0.05	5.0	mg/L
Lead	<0.2	5.0	mg/L
Mercury	<0.001	0.20	mg/L
Selenium	<0.2	1.0	mg/L
Silver	<0.1	5.0	mg/L

Toxicity Characteristic Leaching Procedure, Final Rule, Federal Register, 40 CFR 261-302, Part V, EPA Vol. 55, No. 126, June 29, 1990.

Method 6010A : Inductively Coupled Plasma-Atomic Emission Spectroscopy, SW-846, Nov. 1990.

Method 7470A : Mercury in Liquid Waste (Manual Cold Vapor Technique), SW-846, Nov. 1990.

Reviewed by:_____

Inter-Mountain Laboratories, Inc.
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ENERGY WEST MINING COMPANY
HUNTINGTON, UTAH
MINE: DEER CREEK

February 12, 1997

Lab No.	Location	Depths	pH	EC mmhos/cm @ 25°C	Calcium meq/l	Magnesium meq/l	Sodium meq/l	SAR	Sand %	Silt %	Clay %	Texture	Carbonate %
139304	DC 0597		7.9	0.56	0.91	1.72	2.28	1.99	66.0	24.0	10.0	SANDY LOAM	0.8
139305	DC 0697		8.5	2.07	0.77	19.4	5.50	1.73	70.0	25.0	5.0	SANDY LOAM	18.5
139306	DC 0797		7.8	0.54	0.98	1.17	2.61	2.52	52.0	32.0	16.0	SANDY LOAM	23.8
139307	DC 0897		7.8	0.29	0.38	0.35	1.67	2.77	94.0	1.0	5.0	SAND	1.0

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ENERGY WEST MINING COMPANY
HUNTINGTON, UTAH
MINE: DEER CREEK

February 12, 1997

Lab No.	Location	Depths	Total Organic Carbon %	Total Sulfur %	T.S. AB t/1000t	Neut. Pot. t/1000t	T.S. ABP t/1000t	Sulfate Sulfur %	Pyritic Sulfur %	Organic Sulfur %	PyrS AB t/1000t	PyrS ABP t/1000t	Boron ppm	Selenium ppm
139304	DC 0597		27.3	0.39	12.2	5.92	-6.26	<0.01	0.09	0.30	2.81	3.11	0.33	0.14
139305	DC 0697		0.6	0.05	1.56	182.	180.						0.06	0.02
139306	DC 0797		10.1	0.13	4.06	276.	272.						0.70	0.14
139307	DC 0897		90.2	0.64	20.0	12.3	-7.73	0.08	0.01	0.55	0.31	12.0	0.29	0.02

Abbreviations used in acid base accounting: T.S.= Total Sulfur, AB= Acid Base, ABP= Acid Base Potential, PyrS= Pyritic Sulfur, Pyr+Org= Pyritic Sulfur + Organic Sulfur, Neut. Pot.= Neutralization Potential

Inter-Mountain Laboratories, Inc.
1633 Terra Avenue Sheridan, Wyoming 82801 Tel. (307) 672-8945

ENERGY WEST MINING COMPANY
HUNTINGTON, UTAH
MINE: DEER CREEK

February 7, 1997

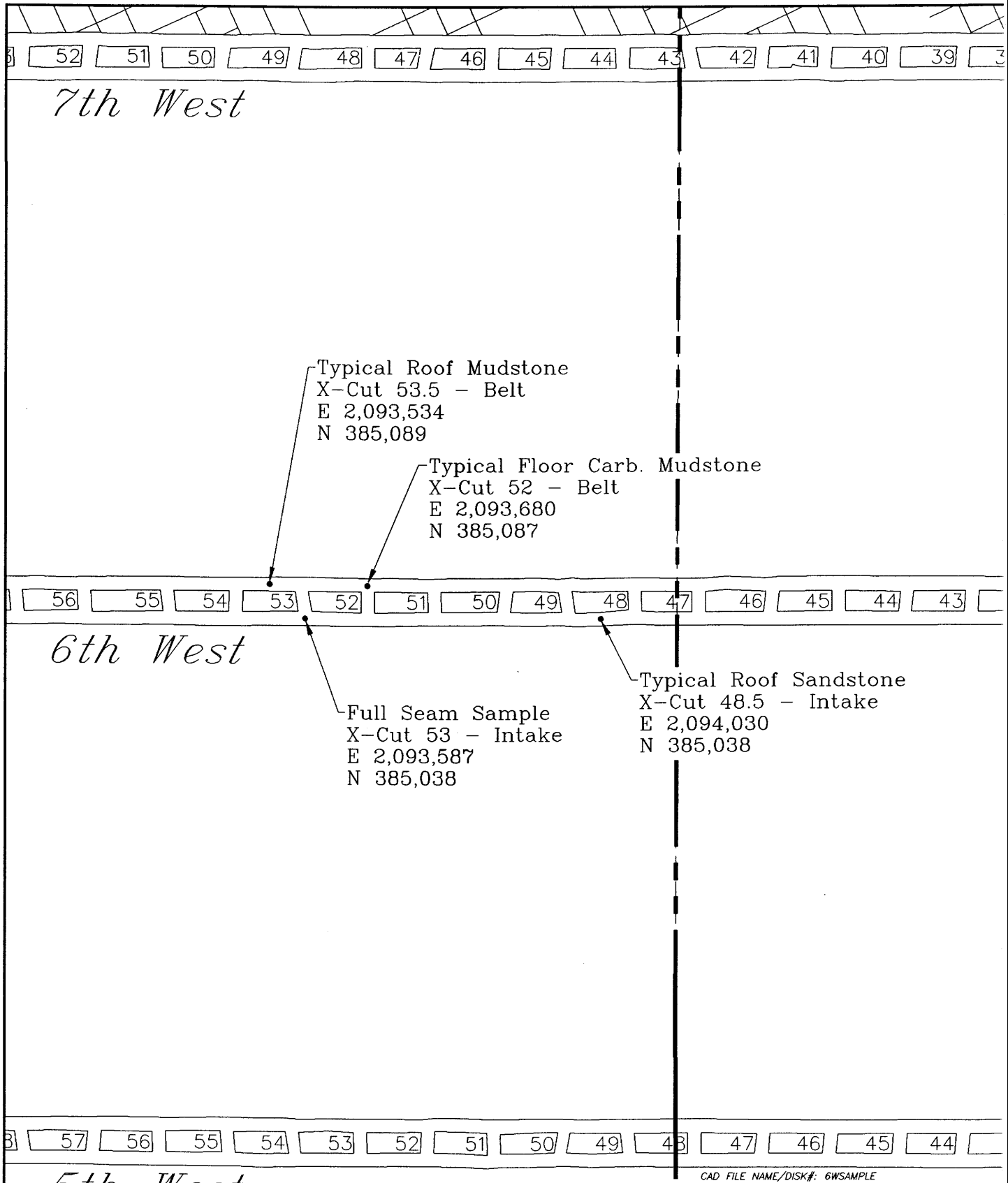
Lab No.	Location	Depths	Sand %	Silt %	Clay %	Texture
			**********	FINES	**********	
139304	DC 0597		66.0	24.0	10.0	SANDY LOAM
139305	DC 0697		70.0	25.0	5.0	SANDY LOAM
139306	DC 0797		52.0	32.0	16.0	SANDY LOAM
139307	DC 0897		77.5	17.5	5.0	LOAMY SAND

Inter-Mountain Laboratories, Inc.

1633 Terra Avenue
Sheridan, Wyoming 82801

Energy West
Munsell Color

Lab No.	Location	Color
139304	DC 0597	5YR 3/1 Very Dark Gray
139305	DC 0697	5Y 2.5/1 Black
139306	DC 0797	2.5Y 6/1 Gray
139307	DC 0897	10YR 4/1 Dark Gray



CAD FILE NAME/DISK#: 6WSAMPLE

ENERGY WEST
MINING COMPANY
HUNTINGTON, UTAH 84528

DEER CREEK MINE
6TH WEST GATEROAD
ROCK SAMPLE LOCATIONS

DRAWN BY:	K. LARSEN		
SCALE:	1" =200'	DRAWING #:	
DATE:	JANUARY 23, 1997	SHEET 1 OF 1	REV.

Inter-Mountain Laboratories, Inc.
1633 Terra Avenue
Sheridan, Wyoming 82801
Tel. (307) 672-8945

ENERGY WEST MINING COMPANY
HUNTINGTON, UTAH
MINE: DEER CREEK

"v 24, 1996

Lab No.	Location	Depths	pH	EC mmhos/cm @ 25°C	Calcium meq/l	Magnesium meq/l	Sodium meq/l	SAR	Sand %	Silt %	Clay %	Texture	Boron ppm	Selenium ppm
132654	DC 0796		8.1	38.8	42.6	10.4	407.	79.1	72.6	15.4	12.0	SANDY LOAM	0.70	<0.02
132655	DC 0896		8.8	44.6	55.4	3.14	475.	87.8	69.6	18.4	12.0	SANDY LOAM	0.68	<0.02

Miscellaneous Abbreviations: SAR= Sodium Adsorption Ratio, CEC= Cation Exchange Capacity, ESP= Exchangeable Sodium Percentage, Exch= Exchangeable, Avail= Available

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ENERGY WEST MINING COMPANY
HUNTINGTON, UTAH
MINE: DEER CREEK

"v 24, 1996

Lab No.	Location	Depths	FINES Sand %	Silt %	Clay %	Texture
132654	DC 0796		72.6	15.4	12.0	SANDY LOAM
132655	DC 0896		69.6	18.4	12.0	SANDY LOAM

ENERGY WEST MINING COMPANY
Mine: DEER CREEK
HUNTINGTON, UTAH

Location: DC 0796
Lab No.: 132654

Sieve Size	Weight	% Retained	% Passing
3/8"	592.4	36.5	63.5
#4	198.3	12.2	51.3
#10	172.3	10.6	40.7
#20	127.1	7.8	32.9
#40	91.7	5.6	27.3
#100	160.4	9.9	17.4
#140	102.5	6.3	11.1
#200	50.6	3.1	8.0
PAN	130.0	8.0	

Location: DC 0896
Lab No.: 132655

Sieve Size	Weight	% Retained	% Passing
3/8"	424.1	27.1	72.9
#4	233.4	14.9	58.0
#10	189.6	12.1	45.9
#20	146.7	9.4	36.5
#40	112.4	7.2	29.3
#100	181.3	11.6	17.7
#140	80.3	5.1	12.6
#200	51.6	3.3	9.3
PAN	145.3	9.3	

Inter-Mountain Laboratories, Inc

1633 Terra Avenue
Sheridan, Wyoming 82801

Energy West
Munsell Color

Lab No.	Location	Color
132654	DC 0796	5Y 2.5/1 BLACK
132655	DC 0896	2.5Y 3/1 VERY DARK GRAY

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ENERGY WEST MINING COMPANY
HUNTINGTON, UTAH
MINE: DEER CREEK

v 24, 1996

Lab No.	Location	Depths	pH	EC mmhos/cm @ 25°C	Saturation %	Calcium meq/l	Magnesium meq/l	Sodium meq/l	SAR	Coarse Fragments %	Sand %	Silt %	Clay %	Texture
132656	DC 0996		9.0	12.3	38.0	68.4	3.15	50.5	8.45	72.3	52.6	27.4	20.0	SANDY CLAY LOAM
132657	DC 1096		7.5	8.20	35.2	28.9	19.3	48.3	9.84	55.3	50.0	31.0	19.0	LOAM

Miscellaneous Abbreviations: SAR= Sodium Adsorption Ratio, CEC= Cation Exchange Capacity, ESP= Exchangeable Sodium Percentage, Exch= Exchangeable, Avail= Available

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ENERGY WEST MINING COMPANY
HUNTINGTON, UTAH
MINE: DEER CREEK

May 24, 1996

Lab No.	Location	Depths	Carbonate %	Total Sulfur %	Sulfate Sulfur %	Pyritic Sulfur %	Organic Sulfur %	Boron ppm	Selenium ppm	Molybdenum ppm	Total Iron ppm	Total Zinc ppm	SO4 PE meq/l
132656	DC 0996		21.1	0.60	0.35	<0.01	0.26	0.98	0.06	0.18	8490.	36.7	68.1
132657	DC 1096		17.8	0.63	0.26	0.14	0.23	1.17	0.02	0.11	9140.	40.9	158.

Abbreviations for extractants: PE= Saturated Paste Extract, H2OSol= water soluble,AB-DTPA= Ammonium Bicarbonate-DTPA, AAO= Acid Ammonium Oxalate
Abbreviations used in acid base accounting: T.S.= Total Sulfur, AB= Acid Base, ABP= Acid Base Potential, PyrS= Pyritic Sulfur, Pyr+Org= Pyritic Sulfur + Organic Sulfur, Neut. Pot.= Neutralization Potential

ENERGY WEST MINING COMPANY
Mine: DEER CREEK
HUNTINGTON, UTAH

Location: DC 0996
Lab No.: 132656

Sieve Size	Weight	% Retained	% Passing
3/8"	175.8	11.7	88.3
#4	357.1	23.8	64.4
#10	273.3	18.2	46.2
#20	183.2	12.2	34.0
#40	130.3	8.7	25.3
#100	154.6	10.3	15.0
#140	61.0	4.1	10.9
#200	37.9	2.5	8.4
PAN	125.5	8.4	

Location: DC 1096
Lab No.: 132657

Sieve Size	Weight	% Retained	% Passing
3/8"	427.4	26.3	73.7
#4	212.8	13.1	60.6
#10	235.7	14.5	46.1
#20	196.7	12.1	33.9
#40	145.2	8.9	25.0
#100	179.0	11.0	14.0
#140	65.4	4.0	10.0
#200	39.3	2.4	7.5
PAN	122.4	7.5	

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ENERGY WEST MINING COMPANY
HUNTINGTON, UTAH
MINE: DEER CREEK/COTTONWOOD

DATE SAMPLED: 2-8-96, 2-12-96
March 22, 1996

Lab No.	Location	Depths	pH	EC mmhos/cm @ 25°C	Calcium meq/l	Magnesium meq/l	Sodium meq/l	SAR	Sand %	Silt %	Clay %	Texture	Carbonate %
131504	DC0296		7.7	0.75	2.58	2.85	1.62	0.98	53.0	27.0	20.0	SANDY CLAY LOAM	0.5
131505	DC0396		7.9	0.41	0.99	0.77	2.29	2.43	63.0	15.0	22.0	SANDY CLAY LOAM	4.0
131506	DC0496		7.1	1.05	6.56	4.03	1.43	0.62	88.0	6.0	6.0	SAND	1.3
131507	DC0596		7.6	0.34	1.35	1.32	0.58	0.50	79.0	13.0	8.0	LOAMY SAND	13.5
131508	DC0696		8.1	0.31	0.99	1.40	0.53	0.49	88.0	5.0	7.0	LOAMY SAND	20.6

Note: These were placed in .95 report (Annual)
(copies)

Miscellaneous Abbreviations: SAR= Sodium Adsorption Ratio, CEC= Cation Exchange Capacity, ESP= Exchangeable Sodium Percentage, Exch= Exchangeable, Avail= Available

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ENERGY WEST MINING COMPANY
HUNTINGTON, UTAH
MINE: DEER CREEK/COTTONWOOD

DATE SAMPLED: 2-8-96, 2-12-96
March 22, 1996

Lab No.	Location	Depths	Total Organic Carbon %	Total Sulfur %	T.S. AB t/1000t	Neut. Pot. t/1000t	T.S. ABP t/1000t	Sulfate Sulfur %	Pyritic Sulfur %	Organic Sulfur %	PyrS AB t/1000t	PyrS ABP t/1000t	Boron ppm	Selenium ppm
131504	DC0296		5.1	0.16	5.00	5.81	0.81						0.38	0.08
131505	DC0396		16.4	0.13	4.06	44.4	40.3						0.43	0.04
131506	DC0496		91.3	0.85	26.6	14.1	-12.5	<0.01	0.23	0.64	7.19	6.89	0.39	<0.02
131507	DC0596		1.5	<0.01	0.00	128.	128.						0.04	<0.02
131508	DC0696		0.6	0.01	0.31	213.	213.						0.02	<0.02

Abbreviations used in acid base accounting: T.S.= Total Sulfur, AB= Acid Base, ABP= Acid Base Potential, PyrS= Pyritic Sulfur, Pyr+Org= Pyritic Sulfur + Organic Sulfur, Neut. Pot.= Neutralization Potential

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Energy West
Munsell Color

Lab No.	Location	Color
131504	DC0296	10YR 4.5/2 Dark Grayish Brown
131505	DC0396	10YR 3/1 Very Dark Gray
131506	DC0496	5Y 2.5/1 Black
131507	DC0596	10YR 6/4 Light Yellowish Brown
131508	DC0696	2.5Y 6.5/1 Gray

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ENERGY WEST MINING COMPANY
HUNTINGTON, UTAH
MINE: COTTONWOOD
SITE: NORTH POND SEDIMENT

DATE SAMPLED: 2-12-96
March 22, 1996

Lab No.	Location	Depths	pH	EC mmhos/cm @ 25°C	Saturation %	Calcium meq/l	Magnesium meq/l	Sodium meq/l	SAR	Sand %	Silt %	Clay %	Texture
131502	CTW0196		7.5	9.41	41.3	23.8	18.2	60.1	13.1	54.0	28.0	18.0	SANDY LOAM
— 131503	CTW0296		7.1	8.61	51.7	29.0	15.3	54.9	11.7	50.0	29.0	21.0	LOAM

— THIS IS TRAIL MTN. SED. POND SAMPLE
TAKEN FROM W.R.S. DUMP LOCATION

Miscellaneous Abbreviations: SAR= Sodium Adsorption Ratio, CEC= Cation Exchange Capacity, ESP= Exchangeable Sodium Percentage, Exch= Exchangeable, Avail= Available

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ENERGY WEST MINING COMPANY
HUNTINGTON, UTAH
MINE: COTTONWOOD
SITE: NORTH POND SEDIMENT

DATE SAMPLED: 2-12-96
March 22, 1996

Lab No.	Location	Depths	Total Organic Carbon %	Total Sulfur %	T.S. AB t/1000t	Neut. Pot. t/1000t	T.S. ABP t/1000t	Sulfate Sulfur %	Pyritic Sulfur %	Organic Sulfur %	PyrS AB t/1000t	PyrS ABP t/1000t	P ppm	Boron ppm
131502	CTW0196		32.5	0.28	8.75	237.	228.						2.12	1.68
131503	CTW0296		52.2	0.57	17.8	135.	117.						2.05	2.69

Abbreviations used in acid base accounting: T.S.= Total Sulfur, AB= Acid Base, ABP= Acid Base Potential, PyrS= Pyritic Sulfur, Pyr+Org= Pyritic Sulfur + Organic Sulfur, Neut. Pot.= Neutralization Potential

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ENERGY WEST MINING COMPANY
HUNTINGTON, UTAH
MINE: COTTONWOOD
SITE: NORTH POND SEDIMENT

DATE SAMPLED: 2-12-96
March 22, 1996

Lab No.	Location	Depths	Total Potassium ppm	Total Sodium ppm	Avail Na meq/100g	Exch Na meq/100g	Chloride PR meq/l	Total Calcium ppm	Total Cadmium ppm	Total Copper ppm	Total Chromium ppm	Total Lead ppm	Total Molybdenum ppm	Total Nickel ppm	Total Cobalt ppm
131502	CTW0196		5000.	7050.0	4.10	1.62	25.5	73500.	<0.01	10.5	27.5	<0.01	0.50	12.0	3.00
131503	CTW0296		5200.	6100.0	3.96	1.12	27.5	36000.	<0.01	11.9	28.8	<0.01	2.49	13.4	3.50

Abbreviations for extractants: PR= Saturated Paste Extract, H2OSol= water soluble, AB-DTPA= Ammonium Bicarbonate-DTPA, AAO= Acid Ammonium Oxalate
Miscellaneous Abbreviations: SAR= Sodium Adsorption Ratio, CEC= Cation Exchange Capacity, ESP= Exchangeable Sodium Percentage, Exch= Exchangeable, Avail= Available

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ENERGY WEST MINING COMPANY
HUNTINGTON, UTAH
MINE: COTTONWOOD
SITE: NORTH POND SEDIMENT

DATE SAMPLED: 2-12-96
March 22, 1996

Lab No.	Location	Depths	Total Selenium ppm	Total Iron ppm	Total Manganese ppm	Total Zinc ppm	Total Kjeldahl Nitrogen %
131502	CTW0196		1.00	7900.	143.	31.5	0.40
131503	CTW0296		1.44	9150.	91.5	42.3	0.62

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TOXICITY CHARACTERISTIC LEACHING PROCEDURE
TOX
TOTAL ORGANIC HALIDES

Client:	**ENERGY WEST**		
Project Location:	Unknown	Report Date:	04/09/96
Sample ID:	TM Pond Sed.	Date Sampled:	02/12/96
Sample Number:	131503/0696G0505	Date Received:	03/21/96
Sample Matrix:	Soil	TCLP Extraction:	03/29/96
Condition:	Intact, Cool, Head Space	Date Analyzed:	04/09/96

Parameter	Concentration (ug/L)	Detection Limit (ug/L)
Total Organic Halides	ND	10
Concentration is the average of the replicates reported below		
Replicate #1	ND	10
Replicate #2	ND	10

ND - Analyte not detected at stated detection limit.

Reference: Toxicity Characteristic Leaching Procedure, Final Rule, Federal Register, 40 CFR 261 Environmental Protection Agency, November 1992.
Method 9020B: TOTAL ORGANIC HALIDES (TOX)
Test Methods for Evaluating Solid Waste, SW-846, United States Environmental Protection Agency, Third Edition, Final Update II, September 1994.

Comments: Sample received and analyzed out of holding time.

Analyst

Review

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QUALITY CONTROL REPORT - TCLP METHOD BLANK

TOX

TOTAL ORGANIC HALIDES

Sample ID:	TCLP Method Blank	Report Date:	04/09/96
Sample Number:	TMB009V	Date Sampled:	NA
Sample Matrix:	TCLP Leachate	Date Received:	NA
Condition:	NA	TCLP Extraction:	03/29/96
		Date Analyzed:	04/09/96

Parameter	Concentration (ug/L)	Detection Limit (ug/L)
Total Organic Halides	ND	10
Concentration is the average of the replicates reported below		
Replicate #1	ND	10
Replicate #2	ND	10

ND - Analyte not detected at stated detection limit.

Reference: Toxicity Characteristic Leaching Procedure, Final Rule, Federal Register, 40 CFR 261, Environmental Protection Agency, November 1992.
Method 9020B: TOTAL ORGANIC HALIDES (TOX)
Test Methods for Evaluating Solid Waste, SW-846, United States Environmental Protection Agency, Third Edition, Final Update II, September 1994.

Comments:

Analyst

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QUALITY CONTROL REPORT - METHOD BLANK
TOX
TOTAL ORGANIC HALIDES

Sample ID:	Method Blank	Report Date:	04/09/96
Sample Number:	MB040996	Date Sampled:	NA
Sample Matrix:	Water	Date Received:	NA
Condition:	NA	Date Analyzed:	04/09/96

Parameter	Concentration (ug/L)	Detection Limit (ug/L)
Total Organic Halides	ND	10
Concentration is the average of the replicates reported below		
Replicate #1	ND	10
Replicate #2	ND	10

ND - Analyte not detected at stated detection limit.

Reference: Method 9020B: TOTAL ORGANIC HALIDES (TOX)
Test Methods for Evaluating Solid Waste, SW-846, United States Environmental Protection Agency, Third Edition, Final Update II, September 1994.

Comments:

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QUALITY CONTROL REPORT - MATRIX SPIKE
TOX
TOTAL ORGANIC HALIDES

Sample ID:	Matrix Spike / Spike Duplicate	Report Date:	04/09/96
Sample Number:	0696G00551 MS/MSD	Date Sampled:	Unknown
Sample Matrix:	Water	Date Received:	03/26/96
Condition:	Intact, Cool, pH=7	Date Analyzed:	04/09/96

Total Organic Halides	Spiked Sample Concentration	Sample Concentration	Spike Amount	Percent Recovery	Acceptance Limits
Matrix Spike	58	ND	50	116%	75-125
Matrix Spike Dup	55	ND	50	109%	75-125
%RPD				6%	

ND - Analyte not detected at stated detection limit
%RPD - Relative percent deviation
All unlabeled values are in units of micrograms per liter (ug/L)

Reference: Method 9020B: TOTAL ORGANIC HALIDES (TOX)
Test Methods for Evaluating Solid Waste, SW-846, United States Environmental Protection Agency, Third Edition, Final Update II, September 1994.

Comments:

Analyst

Review

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Bozeman, Montana 59715

TOXICITY CHARACTERISTIC LEACHING PROCEDURE - TCLP
HSL VOLATILE COMPOUNDS

Client:	ENERGY WEST MINING			
Sample ID:	CTW0296		Date Reported:	03/29/96
Project ID:	TM Pond		Date Sampled:	02/12/96
Laboratory ID:	B962177	131502	Date Received:	03/05/96
Sample Matrix:	Sediment		Date Extracted TCLP:	03/19/96
			Date Analyzed:	03/25/96

Parameter	Analytical Result (mg/L)	Detection Limit (mg/L)	Regulatory Limit (mg/L)
Benzene	ND	0.02	0.5

ND - Compound not detected at stated Detection Limit.
J - Meets identification criteria, below Detection Limit.
B - Compound detected in Method Blank.

QUALITY CONTROL:

Surrogate Recovery	%
1,2-Dichloroethane-d4	98
Toluene-d8	106
Bromofluorobenzene	92

References:

Method 8240, Gas Chromatography/Mass Spectrometry for Volatile Organics, Test Methods for Evaluating Solid Wastes, SW-846, United States Environmental Protection Agency, Rev. 1, November 1992.

Toxicity Characteristic Leaching Procedure, Final Rule, Federal Register, 40 CFR 261-302, Part V, Environmental Protection Agency, Vol. 55, No. 126, June 29, 1990.

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QUALITY ASSURANCE / QUALITY CONTROL

Inter-Mountain Laboratories Inc.

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LAB QA/QC
VOLATILE COMPOUNDS BY GC/MS
METHOD BLANK

Date Analyzed: 03/26/96
Laboratory ID: 3MB-085A
Sample Matrix: Water

Parameter	Analytical Result	Detection Limit	Units
1,1,1-Trichloroethane	ND	5	ug/L
1,1,2,2-Tetrachloroethane	ND	5	ug/L
1,1,2-Trichloroethane	ND	5	ug/L
1,1-Dichloroethane	ND	5	ug/L
1,1-Dichloroethene	ND	5	ug/L
1,2-Dibromoethane	ND	5	ug/L
1,2-Dichloroethane	ND	5	ug/L
1,2-Dichloroethene	ND	5	ug/L
1,2-Dichloropropane	ND	5	ug/L
1,4-Dioxane	ND	500	ug/L
2-Butanone	ND	20	ug/L
2-Hexanone	ND	5	ug/L
4-Methyl-2-pentanone	ND	5	ug/L
Acetone	ND	20	ug/L
Benzene	ND	5	ug/L
Bromodichloromethane	ND	5	ug/L
Bromoform	ND	5	ug/L
Bromomethane	ND	5	ug/L
Carbon Disulfide	ND	5	ug/L
Carbon Tetrachloride	ND	5	ug/L
Chlorobenzene	ND	5	ug/L
Chloroethane	ND	5	ug/L
Chloroform	ND	5	ug/L
Chloromethane	ND	5	ug/L
cis-1,3-Dichloropropene	ND	5	ug/L
Cyclohexane	ND	5	ug/L
Dibromochloromethane	ND	5	ug/L
Ethylbenzene	ND	5	ug/L
m,p-Xylene	ND	5	ug/L
Methylene Chloride	ND	5	ug/L
o-Xylene	ND	5	ug/L

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LAB QA/QC
VOLATILE COMPOUNDS BY GC/MS
METHOD BLANK

Date Analyzed: **03/26/96**
Laboratory ID: 3MB-085A
Sample Matrix: Water

Parameter	Analytical Result	Detection Limit	Units
Styrene	ND	5	ug/L
Tetrachloroethene	ND	5	ug/L
Toluene	ND	5	ug/L
trans-1,3-Dichloropropene	ND	5	ug/L
Trichloroethene	ND	5	ug/L
Vinyl Chloride	ND	5	ug/L

ND - Compound not detected at stated Detection Limit.
J - Meets identification criteria, below Detection Limit.
B - Compound detected in method blank.

QUALITY CONTROL:

Surrogate Recovery	%	Water QC Limits
1,2-Dichloroethane-d4	99	76 - 114
Toluene-d8	106	88 - 110
Bromofluorobenzene	98	86 - 115

References:

Method 8240, Gas Chromatography/Mass Spectrometry for Volatile Organics, Test Methods for Evaluating Solid Wastes, SW-846, United States Environmental Protection Agency, Rev. 1, November 1992.

Analyst

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LAB QA/QC
VOLATILE COMPOUNDS BY GC/MS
TCLP BLANK

Date Analyzed: 03/25/96
Laboratory ID: 3TMB085
Sample Matrix: Extraction fluid
Date Extracted: 03/19/96

Parameter	Analytical Result	Detection Limit	Units
1,1-Dichloroethene	ND	0.005	mg/L
1,2-Dichloroethane	ND	0.005	mg/L
2-Butanone	ND	0.02	mg/L
Benzene	ND	0.005	mg/L
Carbon Tetrachloride	ND	0.005	mg/L
Chlorobenzene	ND	0.005	mg/L
Chloroform	ND	0.005	mg/L
Tetrachloroethene	ND	0.005	mg/L
Trichloroethene	ND	0.005	mg/L
Vinyl Chloride	ND	0.005	mg/L

ND - Compound not detected at stated Detection Limit.
J - Meets identification criteria, below Detection Limit.
B - Compound detected in method blank.

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LAB QA/QC
PURGEABLE ORGANIC COMPOUNDS BY GC/MS - TCLP
MATRIX SPIKE SUMMARY

Date Analyzed: 03/25/96
Laboratory ID: 3TMS2349
Sample Matrix: Water
Date Extracted: 3/19/96

Parameter	Spike Added mg/L	Sample Concentration mg/L	Matrix Spike Concentration mg/L	Matrix Spike Recovery (%)
Vinyl Chloride	0.05	0	0.052	104
1,1-Dichloroethene	0.05	0	0.054	108
1,2-Dichloroethane	0.05	0	0.057	114
Chloroform	0.05	0	0.053	106
Carbon Tetrachloride	0.05	0	0.056	112
Trichloroethene	0.05	0	0.054	108
Benzene	0.05	0.045	0.096	102
Tetrachloroethene	0.05	0	0.054	108
Chlorobenzene	0.05	0	0.052	104
Methyl Ethyl Ketone	0.05	0.006	0.077	142

QUALITY CONTROL:

Surrogate Recovery	%
1,2-Dichloroethane-d4	107
Toluene-d8	106
Bromofluorobenzene	106

References:

Method 8240, Gas Chromatography/Mass Spectrometry for Volatile Organics, Test Methods for Evaluating Solid Wastes, SW-846, United States Environmental Protection Agency, Third Edition, November 1986.

Toxicity Characteristic Leaching Procedure, Final Rule, Federal Register, 40 CFR 261-302, Part V, Environmental Protection Agency, Vol. 55, No. 126, June 29, 1990.

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TENTATIVELY IDENTIFIED COMPOUNDS

Date Analyzed: 03/25/96
Laboratory ID: 3TMB085
Sample Matrix: Extraction fluid
Date Extracted: 03/19/96

QUALITY CONTROL:

Surrogate Recovery	%
1,2-Dichloroethane-d4	98
Toluene-d8	105
Bromofluorobenzene	90

References:

Method 8240, Gas Chromatography/Mass Spectrometry for Volatile Organics, Test Methods for Evaluating Solid Wastes, SW-846, United States Environmental Protection Agency, Third Edition, November 1986.

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ENERGY WEST MINING COMPANY
ORANGEVILLE, UTAH

SITE: DES BEE DOVE TEST PLOTS

September 6, 1996

Lab No.	Location	Depths feet	pH	EC mmhos/cm @ 25°C	Saturation %	Calcium meq/l	Magnesium meq/l	Sodium meq/l	SAR	Sand %	Silt %	Clay %	Texture
135819	TEST PLOT 1- #2	0.0-6.0	7.5	3.46	32.8	15.0	8.06	21.4	6.29	22.0	49.0	29.0	CLAY LOAM
135820	TEST PLOT 2- #3	0.0-6.0	7.5	1.99	32.1	4.68	2.53	13.9	7.34	38.0	38.0	24.0	LOAM
135821	#12A	0.0-2.0	7.0	1.66	44.4	9.68	3.16	5.93	2.34	80.0	10.0	10.0	LOAMY SAND
135822	#12B	0.0-4.0	7.1	3.04	34.3	14.7	6.48	16.5	5.05	30.0	43.0	27.0	CLAY LOAM
135823	#12C	0.0-6.0	7.2	3.39	35.1	17.0	7.72	18.3	5.21	20.0	54.0	26.0	SILT LOAM
135824	#17	0.0-6.0	7.6	1.64	33.1	3.23	1.81	11.6	7.33	28.0	46.0	26.0	LOAM
135825	T. PLOT 3- #16A	0.0-6.0	7.6	1.70	31.7	3.62	1.75	12.3	7.54	12.0	62.0	26.0	SILT LOAM
135826	TEST PLOT 4- #4	0.0-6.0	7.3	1.14	40.5	5.32	2.70	4.04	2.02	16.0	52.0	32.0	SILTY CLAY LOAM
135827	#13	0.0-6.0	7.3	2.40	35.5	6.73	3.44	16.8	7.46	14.0	58.0	28.0	SILTY CLAY LOAM
135828	#24A	0.0-6.0	7.2	1.10	35.4	4.65	2.38	4.33	2.31	29.0	41.0	30.0	CLAY LOAM
135829	#24B	0.0-4.0	7.4	2.42	40.1	16.9	7.71	6.71	1.91	17.0	51.0	32.0	SILTY CLAY LOAM
135830	T. PLOT 5- #5A	0.0-2.0	7.0	1.24	43.7	7.87	2.19	3.63	1.62	80.0	12.0	8.0	LOAMY SAND
135831	#5B	0.0-4.0	7.2	1.58	35.1	5.49	2.90	8.82	4.31	38.0	44.0	18.0	LOAM
135832	#5C	0.0-6.0	7.8	1.37	32.3	2.39	1.55	10.4	7.38	20.0	52.0	28.0	CLAY LOAM
135833	#21	0.0-6.0	7.2	1.70	35.9	4.02	3.04	10.4	5.56	66.0	17.0	17.0	SANDY LOAM
135834	T. PLOT 6- #23A	0.0-6.0	7.3	2.68	37.3	18.1	8.01	7.88	2.18	10.0	61.0	29.0	SILTY CLAY LOAM
135835	TEST PLOT 7- #7	0.0-6.0	7.9	4.55	37.0	8.90	4.47	37.8	14.6	10.0	61.0	29.0	SILTY CLAY LOAM
135836	T. PLOT 8- #19	0.0-6.0	7.9	4.67	37.8	6.03	4.09	42.0	18.7	8.0	64.0	28.0	SILTY CLAY LOAM

Miscellaneous Abbreviations: SAR= Sodium Adsorption Ratio, CEC= Cation Exchange Capacity, ESP= Exchangeable Sodium Percentage, Exch= Exchangeable, Avail= Available

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ENERGY WEST MINING COMPANY
ORANGEVILLE, UTAH

SITE: DES BEE DOVE TEST PLOTS

September 6, 1996

Lab No.	Location	Depths feet	Total Organic Carbon %	Total Sulfur %	T.S. AB t/1000t	Neut. Pot. t/1000t	T.S. ABP t/1000t	Sulfate Sulfur %	Pyritic Sulfur %	Organic Sulfur %	PyrS AB t/1000t	PyrS ABP t/1000t
135819	TEST PLOT 1- #2	0.0-6.0	4.0	0.15	4.69	179.	175.					
135820	TEST PLOT 2- #3	0.0-6.0	17.0	0.17	5.31	216.	210.					
135821	#12A	0.0-2.0	71.3	0.44	13.7	60.2	46.5					
135822	#12B	0.0-4.0	20.2	0.26	8.12	148.	140.					
135823	#12C	0.0-6.0	12.4	0.35	10.9	109.	97.7					
135824	#17	0.0-6.0	24.4	0.31	9.68	108.	98.7					
135825	T. PLOT 3- #16A	0.0-6.0	4.7	0.26	8.12	117.	108.					
135826	TEST PLOT 4- #4	0.0-6.0	4.7	0.03	0.94	165.	164.					
135827	#13	0.0-6.0	4.8	0.24	7.50	137.	130.					
135828	#24A	0.0-6.0	4.4	0.04	1.25	213.	211.					
135829	#24B	0.0-4.0	5.0	0.17	5.31	149.	144.					
135830	T. PLOT 5- #5A	0.0-2.0	67.7	0.47	14.7	84.2	69.5					
135831	#5B	0.0-4.0	50.1	0.50	15.6	108.	92.3					
135832	#5C	0.0-6.0	11.9	0.31	9.68	111.	102.					
135833	#21	0.0-6.0	53.0	0.56	17.5	71.0	53.5					
135834	T. PLOT 6- #23A	0.0-6.0	4.9	0.28	8.75	124.	115.					
135835	TEST PLOT 7- #7	0.0-6.0	4.5	0.32	10.0	122.	112.					
135836	T. PLOT 8- #19	0.0-6.0	4.6	0.36	11.2	118.	107.					

Abbreviations used in acid base accounting: T.S.= Total Sulfur, AB= Acid Base, ABP= Acid Base Potential, PyrS= Pyritic Sulfur, Pyr+Org= Pyritic Sulfur + Organic Sulfur, Neut. Pot.= Neutralization Potential

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Lab No.	Location	Depths feet	P ppm	K ppm	Nitrate-Nitrogen ppm	Boron ppm	Selenium ppm	Total Kjeldahl Nitrogen %	1/3 bar	15 bar
135819	TEST PLOT 1- #2	0.0-6.0	1.07	192.	4.58	0.62	<0.02	0.09	18.0	7.3
135820	TEST PLOT 2- #3	0.0-6.0	1.69	156.	<0.01	0.99	<0.02	0.26	18.1	6.3
135821	#12A	0.0-2.0	1.14	82.0	0.68	1.25	0.02	0.85	16.4	6.0
135822	#12B	0.0-4.0	1.51	161.	0.04	1.35	0.02	0.33	20.0	6.7
135823	#12C	0.0-6.0	1.27	183.	<0.01	0.98	0.02	0.21	19.0	7.3
135824	#17	0.0-6.0	1.38	192.	<0.01	0.98	<0.02	0.33	19.4	7.2
135825	T. PLOT 3- #16A	0.0-6.0	0.88	211.	0.46	1.00	0.02	0.16	19.1	8.5
135826	TEST PLOT 4- #4	0.0-6.0	1.80	193.	<0.01	0.56	<0.02	0.15	20.0	10.0
135827	#13	0.0-6.0	1.33	225.	3.18	1.02	0.02	0.17	19.1	8.7
135828	#24A	0.0-6.0	2.42	233.	0.06	0.53	0.02	0.15	19.2	7.0
135829	#24B	0.0-4.0	1.72	205.	<0.01	0.89	<0.02	0.10	21.0	9.1
135830	T. PLOT 5- #5A	0.0-2.0	0.91	57.0	0.02	1.13	<0.02	0.56	15.0	5.3
135831	#5B	0.0-4.0	0.94	108.	<0.01	1.34	0.02	0.50	19.1	6.2
135832	#5C	0.0-6.0	1.01	189.	0.02	1.06	0.02	0.15	20.4	9.0
135833	#21	0.0-6.0	1.20	102.	0.02	1.09	0.02	0.55	18.0	6.5
135834	T. PLOT 6- #23A	0.0-6.0	1.30	231.	1.66	0.98	<0.02	0.08	22.0	10.4
135835	TEST PLOT 7- #7	0.0-6.0	0.86	246.	1.04	1.19	0.04	0.10	22.0	11.1
135836	T. PLOT 8- #19	0.0-6.0	1.07	262.	4.42	1.18	0.04	0.13	23.0	12.2

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Lab No.	Location	Depths feet	pH	EC mmhos/cm @ 25°C	Saturation %	Calcium meq/l	Magnesium meq/l	Sodium meq/l	SAR	Sand %	Silt %	Clay %	Texture
135836	T. PLOT 8- #19	0.0-6.0	7.9	4.67	37.8	6.03	4.09	42.0	18.7	8.0	64.0	28.0	SILTY CLAY LOAM
135838	135836(DUP)	0.0-6.0	8.0	4.54	37.7	5.84	4.09	42.1	18.9	8.0	64.0	28.0	SILTY CLAY LOAM
135829	#24B	0.0-4.0	7.4	2.42	40.1	16.9	7.71	6.71	1.91	17.0	51.0	32.0	SILTY CLAY LOAM
135839	135829(DUP)	0.0-4.0	7.4	2.50	37.6	16.6	7.65	6.75	1.94	16.0	52.0	32.0	SILTY CLAY LOAM

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Lab No.	Location	Depths feet	Total Organic Carbon %	Total Sulfur %	T.S. AB t/1000t	Neut. Pot. t/1000t	T.S. ABP t/1000t	Sulfate Sulfur %	Pyritic Sulfur %	Organic Sulfur %	PyrS AB t/1000t	PyrS ABP t/1000t
135836	T. PLOT 8- #19	0.0-6.0	4.6	0.36	11.2	118.	107.					
135838	135836(DUP)	0.0-6.0	4.5	0.36	11.2	118.	107.					
135829	#24B	0.0-4.0	5.0	0.17	5.31	149.	144.					
135839	135829(DUP)	0.0-4.0	5.1	0.14	4.37	153.	148.					

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Lab No.	Location	Depths feet	P ppm	K ppm	Nitrate-Nitrogen ppm	Boron ppm	Selenium ppm	Total Kjeldahl Nitrogen %	1/3 bar	15 bar
135836	T. PLOT 8- #19	0.0-6.0	1.07	262.	4.42	1.18	0.04	0.13	23.0	12.2
135838	135836(DUP)	0.0-6.0	1.35	270.	3.96	1.09	0.04	0.13	23.0	11.4
135829	#24B	0.0-4.0	1.72	205.	<0.01	0.89	<0.02	0.10	21.0	9.1
135839	135829(DUP)	0.0-4.0	1.59	203.	<0.01	0.93	<0.02	0.10	21.1	9.1