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4078
RK

June 1, 2012 Hand Delivered

Utah Coal Program
Utah Division of Oil, Gas, and Mining
1594 West North Temple, Suite 1210
P.O. Box 145801
Salt Lake City, Utah 84114-5801

Subj: Clean Copy Submittal for Task ID #4078, PacifiCorp, Wilberg/Cottonwood Mine, C/015/0019, Emery County, Utah.

PacifiCorp, by and through its wholly-owned subsidiary, Energy West Mining Company "Energy West" as mine operator, hereby submits clean copies for finalizing the Wilberg/Cottonwood Mine Mid-Term review.

Eight (8) complete clean copies of the pages within the MRP are submitted for Division certification. A C2 form is included for organization of removal or replacement of items into the Wilberg/Cottonwood MRP. If you have any questions concerning this action, please contact myself at 435-687-4712 or Dennis Oakley at 801-220-4607.

Sincerely,

Dennis Oakley

Kenneth Fleck
Geology and Environmental Affairs Manager

Cc: file

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JUN 01 2012
DIV. OF OIL, GAS & MINING

File in:
☐ Confidential
☐ Shelf
☒ Expandable
Date Folder 060112 C/ 0150019
Incoming Refer to Confidential

P.O. Box 310
15 North Main Street
Huntington, Utah 84528

ENERGY WEST MINING COMPANY
A SUBSIDIARY OF PACIFICORP

APPLICATION FOR COAL PERMIT PROCESSING
Detailed Schedule Of Changes to the Mining And Reclamation Plan

Permittee: PacifiCorp
Mine: Cottonwood/Wilberg Mine **Permit Number:** C/015/0019
Title: Clean Copy Submittal for Task ID #4078, PacifiCorp, Wilberg/Cottonwood Mine, C/015/0019, Emery County, Utah.

Provide a detailed listing of all changes to the Mining and Reclamation Plan, which is required as a result of this proposed permit application. Individually list all maps and drawings that are added, replaced, or removed from the plan. Include changes to the table of contents, section of the plan, or other information as needed to specifically locate, identify and revise the existing Mining and Reclamation Plan. Include page, section and drawing number as part of the description.

			DESCRIPTION OF MAP, TEXT, OR MATERIAL TO BE CHANGED
☐ Add	☒ Replace	☐ Remove	Legal and Financial Volume, Appendix A, Replace officer and director lists.
☐ Add	☒ Replace	☐ Remove	Legal and Financial Volume, Appendix G, Replace Cottonwood/Wilberg permit description.
☐ Add	☒ Replace	☐ Remove	Volume 9, Appendix A, Replace entire appendix.
☐ Add	☒ Replace	☐ Remove	Volume 9, Appendix B, Replace entire appendix.
☐ Add	☒ Replace	☐ Remove	Volume 2, Part 4, Replace entire reclamation bond estimate.
☐ Add	☒ Replace	☐ Remove	Volume 3, Replace Maps CM10519DR, CM10529DR, CM10370DR.
☐ Add	☒ Replace	☐ Remove	Volume 5, Replace Maps CM10489WB, CM10829WB, CM10597WB, CM10587WB, CM10542WB, CM10907WB, CM10807WB, CE10497WB.
☐ Add	☒ Replace	☐ Remove	Volume 6, Replace Maps GENS1870D, CM10742WB.
☐ Add	☒ Replace	☐ Remove	Volume 7, Replace Map CM10529EM.
☐ Add	☐ Replace	☐ Remove	Volume 10, Replace Maps CM10519DR, CM10520DR, CM10826WB, CM10822WB, CM10816WB, CM10823WB, CM10824WB, CM10825WB, CM10877WB, CM10831WB.
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Any other specific or special instruction required for insertion of this proposal into the Mining and Reclamation Plan.

Received by Oil, Gas & Mining

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PacifiCorp, Energy West Mining Company

C/015/0019

Clean Copy Submittal for the Cottonwood/Wilberg Mine, Mid-Term Review

Legal and Financial Volume Appendix A, Officer and Directors List:

Replace List of Current and Current and Past Officers and Directors

Current Listing of Officers and Directors

ENERGY WEST MINING COMPANY
A SUBSIDIARY OF PACIFICORP

BERKSHIRE HATHAWAY, INC. OFFICERS (as of January 1, 2012)			
Name	**Position**	**Address**	**Effective Date***
Warren E. Buffett	Chairman of the Board Chief Executive Officer	1440 Kiewit Plaza Omaha, Nebraska 68131	03/21/2006
Charles T. Munger	Vice Chairman of the Board of Directors	1440 Kiewit Plaza Omaha, Nebraska 68131	03/21/2006
Marc D. Hamburg	Vice President, Principal Financial Officer	1440 Kiewit Plaza Omaha, Nebraska 68131	03/21/2006
Daniel J. Jaksich	Vice President, Principal Accounting Officer	1441 Kiewit Plaza Omaha, Nebraska 68131	02/25/2011
*In place on date of MidAmerican Energy Holdings Company acquisition of PacifiCorp effective March 21, 2006, unless noted otherwise.			

BERKSHIRE HATHAWAY, INC. DIRECTORS (as of January 1, 2012)			
Name	**Position**	**Address**	**Effective Date***
Warren E. Buffett	Chairman of the Board Chief Executive Officer	1440 Kiewit Plaza Omaha, Nebraska 68131	03/21/2006
Charles T. Munger	Vice Chairman of the Board of Directors	1440 Kiewit Plaza Omaha, Nebraska 68131	03/21/2006
Howard G. Buffett	Director	1440 Kiewit Plaza Omaha, Nebraska 68131	03/21/2006
Stephen B. Burke	Director	1440 Kiewit Plaza Omaha, Nebraska 68131	12/22/2009
Susan L. Decker	Director	1440 Kiewit Plaza Omaha, Nebraska 68131	05/05/2007
William H. Gates, III	Director	1440 Kiewit Plaza Omaha, Nebraska 68131	03/21/2006
David S. Gottesman	Director	1440 Kiewit Plaza Omaha, Nebraska 68131	03/21/2006
Charlotte Guyman	Director	1440 Kiewit Plaza Omaha, Nebraska 68131	03/21/2006
Donald R. Keough	Director	1440 Kiewit Plaza Omaha, Nebraska 68131	03/21/2006
Thomas S. Murphy	Director	1440 Kiewit Plaza Omaha, Nebraska 68131	03/21/2006
Ronald L. Olson	Director	1440 Kiewit Plaza Omaha, Nebraska 68131	03/21/2006
Walter Scott, Jr.	Director	1440 Kiewit Plaza Omaha, Nebraska 68131	03/21/2006

*In place on date of MidAmerican Energy Holdings Company acquisition of PacifiCorp effective March 21, 2006, unless noted otherwise.

MIDAMERICAN ENERGY HOLDINGS COMPANY'S OFFICERS (as of January 1, 2012)			
Name	**Position**	**Address**	**Effective Date***
Gregory E. Abel	Chairman of the Board, President and Chief Executive Officer	666 Grand Avenue Des Moines, Iowa 50309 (515) 242-4300	04/28/2011
	President and Chief Executive Officer		04/16/2008
	President and Chief Operating Officer		03/21/2006
Douglas L. Anderson	Senior Vice President, General Counsel and Corporate Secretary	1111 So. 103rd St. Omaha, NE 68214 (402) 231-1581	03/21/2006
Patrick J. Goodman	Senior Vice President and Chief Financial Officer	666 Grand Avenue Des Moines, Iowa 50309 (515) 242-4300	03/21/2006
Brent E. Gale	Senior Vice President , Regulation and Legislation	825 NE Multnomah, Suite 2000 Portland, Oregon 97232 (503) 813-5000	03/21/2006
Calvin Haack	Vice President and Treasurer	666 Grand Avenue Des Moines, Iowa 50309 (515) 242-4300	03/15/2010
Maureen E. Sammon	Senior Vice President and Chief Administrative Officer	666 Grand Avenue Des Moines, Iowa 50309 (515) 242-4300	03/21/2006
Cathy S. Woollums	Senior Vice President, Environmental Services and Chief Environmental Counsel	106 E. Second Street PO Box 4350 Davenport, Iowa 52808 (563)333-8009	02/12/2007
A. Robert Lasich	Vice President and General Counsel - Procurement	4299 Northwest Urbandale Drive Urbandale, Iowa 50322-7916 (515) 281-2201	02/01/2010
John "Jack" Diesing, Jr.	Vice President, Corporate Insurance AON Risk Services	P.O. Box 3307 Omaha, Nebraska 68103-3307 (402) 697-1400	03/21/2006
Steven R. Evans	Vice President Taxation	666 Grand Avenue Des Moines, Iowa 50309 (515) 242-4300	03/21/2006
Wayne F. Irmiter	Vice President and Controller	666 Grand Avenue Des Moines, Iowa 50309 (515) 242-4300	03/21/2006
Paul J. Leighton	Vice President Corporate Law, Assistant General Counsel & Assistant Corporate Secretary	4299 Northwest Urbandale Drive Urbandale, Iowa 50322-7916 (515) 281-2201	03/21/2006
Jonathan M. Weisgall	Vice President Federal Regulation/IPP	1200 New Hampshire Ave. NW, Suite 300 Washington, DC 20036-6812 (202) 828-1378	03/21/2006
Russell H. White	Vice President, General Services	666 Grand Avenue Des Moines, Iowa 50309 (515) 242-4300	03/21/2006
*In place on date of MidAmerican Energy Holdings Company acquisition of PacifiCorp effective March 21, 2006, unless noted			

MIDAMERICAN ENERGY HOLDINGS COMPANY'S DIRECTORS (as of January 1, 2012)			
Name	**Position**	**Address**	**Effective Date**
Gregory E. Abel	Director	666 Grand Avenue Des Moines, Iowa 50309 (515) 242-4300	03/21/2006
Warren E. Buffett	Director	1440 Kiewit Plaza Omaha, Nebraska 68131	03/21/2006
Marc D. Hamburg	Director	1440 Kiewit Plaza Omaha, Nebraska 68131	03/21/2006
Walter Scott, Jr.	Director	1440 Kiewit Plaza Omaha, Nebraska 68131	03/21/2006
*In place on date of MidAmerican Energy Holdings Company acquisition of PacifiCorp effective March 21, 2006, unless noted otherwise.			

PPW HOLDINGS LLC OFFICERS (as of January 1, 2012)			
Name	**Position**	**Address**	**Effective Date***
Gregory E. Abel	President	666 Grand Avenue Des Moines, Iowa 50309 (515) 242-4300	05/23/2005
Steven R. Evans	Vice President Taxation	666 Grand Avenue Des Moines, Iowa 50309 (515) 242-4300	05/18/2006
Calvin D. Haack	Vice President and Treasurer	667 Grand Avenue Des Moines, Iowa 50309 (515) 242-4300	03/15/2010
Wayne F. Irmiter	Vice President and Controller	666 Grand Avenue Des Moines, Iowa 50309 (515) 242-4300	05/18/2006
Paul J. Leighton	Vice President and Secretary	4299 Northwest Urbandale Drive Urbandale, Iowa 50322-7916 (515) 281-2201	05/15/2008
James C. Galt	Assistant Treasurer	666 Grand Avenue Des Moines, Iowa 50309	05/18/2006
*In place on date of MidAmerican Energy Holdings Company acquisition of PacifiCorp effective March 21, 2006, unless noted			

PACIFICORP'S OFFICERS (as of January 1, 2012			
Name	**Position**	**Address**	**Effective Date***
Gregory E. Abel	Chairman of Board and Chief Executive Officer	666 Grand Avenue Des Moines, Iowa 50309 (515) 242-4300	03/21/2006
Stefan A. Bird	Vice President, Commercial and Trading	825 NE Multnomah, Suite 600 Portland, Oregon 97232 (503) 813-5000	02/01/2010
Dean S. Brockbank	Vice President and General Counsel, PacifiCorp Energy	1407 West North Temple Suite 320 Salt Lake City, Utah 84116 (801) 220-2000	08/30/2007
Micheal G. Dunn	President, PacifiCorp Energy	1407 West North Temple Suite 320 Salt Lake City, Utah 84116 (801) 220-2000	02/01/2010
Jeffery B. Erb	Assistant Secretary	825 NE Multnomah, Suite 600 Portland, Oregon 97232 (503) 813-5000	03/13/2002
Natalie L. Hocken	Vice President and General Counsel, Pacific Power	825 NE Multnomah, Suite 1800 Portland, Oregon 97232 (503) 813-5000	01/01/2007
Mark C. Moench	Senior Vice President and General Counsel, PacifiCorp	201 So. Main St. Suite 2400 Salt Lake City, UT 84111 (801) 220-2000	02/01/2010
	Secretary		05/31/2007
Patrick J. Reiten	President, Pacific Power	825 NE Multnomah, Suite 1900 Portland, Oregon 97232 (503) 813-5000	09/15/2006
Douglas K. Stuver	Senior Vice President and Chief Finanial Officer	825 NE Multnomah, Suite 1900 Portland, Oregon 97232 (503) 813-5000	03/01/2008
A. Richard Walje	President, Rocky Mountain Power	201 So. Main St. Suite 2400 Salt Lake City, UT 84111 (801) 220-2000	03/21/2006
Bruce N. Williams	Vice President and Treasurer	825 NE Multnomah Suite 1900 Portland, OR 97232 (503) 813-5000	05/17/2006
	Treasurer		02/16/2000

*In place on date of MidAmerican Energy Holdings Company acquisition of PacifiCorp effective March 21, 2006, unless noted otherwise.

PACIFICORP'S DIRECTORS (as of January 1, 2012)			
Name	**Position**	**Address**	**Effective Date***
Gregory E. Abel	Director	666 Grand Avenue Des Moines, Iowa 50309 (515) 242-4300	03/21/2006
Douglas L. Anderson	Director	302 South 36th Street Omaha, Nebraska 68131 (402) 231-1642	03/21/2006
Micheal G. Dunn	Director	1407 West North Temple Suite 320 Salt Lake City, Utah 84116 (801) 220-2000	02/01/2010
Brent E. Gale	Director	825 NE Multnomah, Suite 2000 Portland, Oregon 97232 (503) 813-5000	03/21/2006
Patrick J. Goodman	Director	666 Grand Avenue Des Moines, Iowa 50309 (515) 242-4300	03/21/2006
Natalie L. Hocken	Director	825 NE Multnomah, Suite 2000 Portland, Oregon 97232 (503) 813-5000	08/30/2007
Mark Moench	Director	201 So. Main St. Suite 2400 Salt Lake City, UT 84111 (801) 220-2000	03/21/2006
Patrick J. Reiten	Director	825 NE Multnomah, Suite 2000 Portland, Oregon 97232 (503) 813-5000	09/15/2006
A. Richard Walje	Director	201 So. Main St. Suite 2400	07/02/2001
*In place on date of MidAmerican Energy Holdings Company acquisition of PacifiCorp effective March 21, 2006, unless noted otherwise.			

ENERGY WEST MINING COMPANY'S OFFICERS (as of January 1, 2012)			
Name	**Position**	**Address**	**Effective Date***
Micheal G. Dunn	President	1407 West North Temple Suite 320 Salt Lake City, Utah 84116 (801) 220-2000	02/01/2010
Dean S. Brockbank	Vice President, General Counsel and Secretary	1407 West North Temple Suite 320 Salt Lake City, Utah 84116 (801) 220-2000	05/01/2008
Cindy A. Crane	Vice President	1407 West North Temple Suite 310 Salt Lake City, Utah 84116 (801) 220-2000	03/26/2009
Jeffery B. Erb	Assistant Secretary	825 NE Multnomah, Suite 600 Portland, OR 97232 (503) 813-5000	10/01/2002
Bruce N. Williams	Treasurer	825 NE Multnomah, Suite 1900 Portland, OR 97232 (503) 813-5000	01/01/1992
Tanya S. Sacks	Assistant Treasurer	825 NE Multnomah, Suite 1900 Portland, OR 97232	02/01/2001
*In place on date of MidAmerican Energy Holdings Company acquisition of PacifiCorp effective March 21, 2006, unless noted otherwise.			

ENERGY WEST MINING COMPANY'S DIRECTORS (as of January 1, 2012)			
Name	**Position**	**Address**	**Effective Date***
Micheal G. Dunn	Director	1407 West North Temple Suite 320	02/01/2010
*In place on date of MidAmerican Energy Holdings Company acquisition of PacifiCorp effective March 21, 2006, unless noted otherwise.			

Summary Listing of Officers and Directors (Past and Present)

ENERGY WEST MINING COMPANY
A SUBSIDIARY OF PACIFICORP

BERKSHIRE HATHAWAY, INC. OFFICERS (as of January 1, 2012)			
Name	**Position**	**Effective Date***	**Departure Date**
Warren E. Buffett	Chairman of the Board Chief Executive Officer	03/21/2006	Current
Charles T. Munger	Vice Chairman of the Board of Directors	03/21/2006	Current
Marc D. Hamburg	Vice President, Principal Financial Officer	03/21/2006	Current
Daniel J. Jaksich	Vice President, Principal Accounting Officer	02/25/2011	Current
*In place on date of MidAmerican Energy Holdings Company acquisition of PacifiCorp effective March 21, 2006, unless noted otherwise.			

BERKSHIRE HATHAWAY, INC. DIRECTORS (as of January 1, 2012)			
Name	**Position**	**Effective Date***	**Departure Date**
Current Directors			
Warren E. Buffett	Chairman of the Board Chief Executive Officer	03/21/2006	Current
Charles T. Munger	Vice Chairman of the Board of Directors	03/21/2006	Current
Stephen B. Burke	Director	12/22/2009	Current
Howard G. Buffett	Director	03/21/2006	Current
Susan L. Decker	Director	05/05/2007	Current
William H. Gates, III	Director	03/21/2006	Current
David S. Gottesman	Director	03/21/2006	Current
Charlotte Guyman	Director	03/21/2006	Current
Donald R. Keough	Director	03/21/2006	Current
Thomas S. Murphy	Director	03/21/2006	Current
Ronald L. Olson	Director	03/21/2006	Current
Walter Scott, Jr.	Director	03/21/2006	Current
Past Directors			
Malcolm G. Chace	Director	03/21/2006	05/05/2007
Daniel J. Jaksich	Controller	03/21/2006	09/26/2007

*In place on date of MidAmerican Energy Holdings Company acquisition of PacifiCorp effective March 21, 2006, unless noted otherwise.

MIDAMERICAN ENERGY HOLDINGS COMPANY'S OFFICERS (as of January 1, 2012)			
Name	**Position**	**Effective Date***	**Departure Date**
Current Officers			
Gregory E. Abel	Chairman of the Board, President and Chief Executive Officer	04/28/2011	Current
	President and Chief Executive Officer	04/16/2008	04/28/2011
	President and Chief Operating Officer	03/21/2006	04/16/2008
Douglas L. Anderson	Senior Vice President, General Counsel	03/21/2006	Current
Patrick J. Goodman	Senior Vice President and Chief Financial Officer	03/21/2006	Current
Brent E. Gale	Senior Vice President , Regulation and Legislation	03/21/2006	Current
Calvin D. Haack	Vice President and Treasurer	03/15/2010	Current
Maureen E. Sammon	Senior Vice President and Chief Administrative Officer	03/21/2006	Current
Cathy S. Woollums	Senior Vice President, Environmental Services and Chief Environmental Counsel	02/12/2007	Current
	Vice President	03/21/2006	02/12/2007
A. Robert Lasich	Vice President and General Counsel - Procurement	02/01/2010	Current
John "Jack" Diesing, Jr.	Vice President, Corporate Insurance AON Risk Services	03/21/2006	Current
Steven R. Evans	Vice President Taxation	03/21/2006	Current
Wayne F. Irmiter	Vice President and Controller	03/21/2006	Current
Paul J. Leighton	Vice President Corporate Law, Assistant General Counsel & Assistant Corporate Secretary	03/21/2006	Current
Jonathan M. Weisgall	Vice President Federal Regulation/IPP	03/21/2006	Current
Russell H. White	Vice President, General Services	03/21/2006	Current

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MIDAMERICAN ENERGY HOLDINGS COMPANY'S OFFICERS (as of January 1, 2012)			
Name	**Position**	**Effective Date***	**Departure Date**
Past Officers			
Davisd L. Sokol	Chairman of the Board	03/21/2006	04/28/2011
William J. Fehrman	Senior Vice President, Regulation and Legislation	03/21/2006	03/21/2006
Brian K. Hankel	Vice President and Treasurer	03/21/2006	03/15/2010
Keith D. Hartje	Senior Vice President	03/21/2006	05/15/2007
Mark C. Moench	Senior Vice President	03/21/2006	03/21/2006
Mitchell L. Pirnie	Vice President and Chief Litigation Counsel	02/12/2007	02/01/2010
*In place on date of MidAmerican Energy Holdings Company acquisition of PacifiCorp effective March 21, 2006, unless noted otherwise.			

MIDAMERICAN ENERGY HOLDINGS COMPANY'S DIRECTORS (as of January 1, 2012)			
Name	**Position**	**Effective Date***	**Departure Date**
Gregory E. Abel	Director	03/21/2006	Current
Warren E. Buffett	Director	03/21/2006	Current
Marc D. Hamburg	Director	03/21/2006	Current
Walter Scott, Jr.	Director	03/21/2006	Current
Past Directors			
David L. Sokol	Director	03/21/2006	04/28/2011

*In place on date of MidAmerican Energy Holdings Company acquisition of PacifiCorp effective March 21, 2006, unless noted otherwise.

PPW HOLDINGS LLC OFFICERS (as of January 1, 2012)			
Name	**Position**	**Effective Date***	**Departure Date**
Gregory E. Abel	President	05/23/2005	Current
Steven R. Evans	Vice President Taxation	05/18/2006	Current
Calvin D. Haack	Vice President and Treasurer	03/15/2010	Current
Brian K. Hankel	Vice President and Treasurer	05/23/2005	03/15/2010
Wayne F. Irmiter	Vice President and Controller	05/18/2006	Current
Mitchell F. Ludwin	Vice President and Secretary	05/18/2006	12/31/2007
Paul J. Leighton	Vice President and Secretary	05/15/2008	Current
James C. Galt	Assistant Treasurer	05/18/2006	Current
*In place on date of MidAmerican Energy Holdings Company acquisition of PacifiCorp effective March 21, 2006, unless noted otherwise.			

PACIFICORP'S OFFICERS (as of January 1, 2012)			
Name	**Position**	**Effective Date***	**Departure Date**
Current Officers			
Gregory E. Abel	Chairman of Board and Chief Executive Officer	03/21/2006	Current
Dean S. Brockbank	Vice President and General Counsel, PacifiCorp Energy	08/30/2007	Current
Stefan A. Bird	Vice President, Commercial and Trading	02/01/2010	Current
Micheal G. Dunn	President, PacifiCorp Energy	02/01/2010	Current
Jeffery B. Erb	Assistant Secretary	03/13/2002	Current
Natalie L. Hocken	Vice President and General Counsel, Pacific Power	01/01/2007	Current
Mark C. Moench	Senior Vice President and General Counsel, PacifiCorp	02/01/2010	Current
	Secretary	05/31/2007	Current
Patrick J. Reiten	President, Pacific Power	09/15/2006	Current
Douglas K. Stuver	Senior Vice President and Chief Finanial Officer	03/01/2008	Current
A. Richard Walje	President, Rocky Mountain Power	03/21/2006	Current
Bruce N. Williams	Vice President and Treasurer	5/17/06	Current
	Treasurer	02/16/2000	5/17/06

*In place on date of MidAmerican Energy Holdings Company acquisition of PacifiCorp effective March 21, 2006, unless noted otherwise.

PACIFICORP'S OFFICERS (as of January 1, 2012)			
Name	**Position**	**Effective Date***	**Departure Date**
Past Officers			
William Fehrman	President, PacifiCorp Energy	03/21/2006	08/30/2007
A. Robert Lasich	President, PacifiCorp Energy	08/30/2007	02/01/2010
	Vice President and General Counsel	03/21/2006	08/30/2007
David J. Mendez	Sr. V.P. and Chief Financial Officer	08/22/2006	02/29/2008
Stan K. Watters	Sr. Vice President	09/15/2006	03/16/2007

*In place on date of MidAmerican Energy Holdings Company acquisition of PacifiCorp effective March 21, 2006, unless noted otherwise.

PACIFICORP'S DIRECTORS (as of January 1, 2012)			
Name	**Position**	**Effective Date***	**Departure Date**
Current Directors			
Gregory E. Abel	Director	03/21/2006	Current
Douglas L. Anderson	Director	03/21/2006	Current
Micheal G. Dunn	Director	02/01/2010	Current
Brent E. Gale	Director	03/21/2006	Current
Patrick J. Goodman	Director	03/21/2006	Current
Natalie L. Hocken	Director	08/30/2007	Current
Mark Moench	Director	03/21/2006	Current
Patrick J. Reiten	Director	09/15/2006	Current
A. Richard Walje	Director	07/02/2001	Current
Past Directors			
William J. Fehrman	Director	03/21/2006	08/30/2007
Nolan E. Karras	Director	2/1993	07/25/2007
A. Robert Lasich	Director	03/21/2006	02/01/2010
David J. Mendez	Director	08/30/2007	02/29/2008
Stan K. Watters	Director	03/21/2006	03/16/2007
*In place on date of MidAmerican Energy Holdings Company acquisition of PacifiCorp effective March 21, 2006, unless noted otherwise.			

ENERGY WEST MINING COMPANY'S OFFICERS (as of January 1, 2012)			
Name	**Position**	**Effective Date***	**Departure Date**
Current Officers			
Micheal G. Dunn	President	02/01/2010	Current
Dean S. Brockbank	Vice President, General Counsel and Secretary	05/01/2008	Current
Cindy A. Crane	Vice President	03/26/2009	Current
Jeffery B. Erb	Assistant Secretary	10/01/2002	Current
Bruce N. Williams	Treasurer	12/01/1992	Current
Tanya S. Sacks	Assistant Treasurer	02/01/2001	Current
Past Officers			
Niel L. Getzelman	President	12/01/2006	04/30/2008
A. Robert Lasich	President	05/01/08	02/01/2010
	Vice President, General Counsel and Secretary	12/01/06	04/30/2008
*In place on date of MidAmerican Energy Holdings Company acquisition of PacifiCorp effective March 21, 2006, unless noted otherwise.			

ENERGY WEST MINING COMPANY'S DIRECTORS (as of January 1, 2012)			
Name	**Position**	**Effective Date***	**Departure Date**
Current Directors			
Micheal G. Dunn	Director	02/01/2010	Current
Past Directors			
Niel L. Getzelman	Director	12/01/2006	04/30/2008
A. Robert Lasich	Director	05/01/08	02/01/2010
*In place on date of MidAmerican Energy Holdings Company acquisition of PacifiCorp effective March 21, 2006, unless noted otherwise.			

PacifiCorp, Energy West Mining Company

C/015/0019

Clean Copy Submittal for the Cottonwood/Wilberg Mine, Mid-Term Review

Legal and Financial Volume Appendix G, Cottonwood/Wilberg Permit Description:

Replace the Current Cottonwood/Wilberg Permit Boundary Description

Cottonwood/Wilberg Permit Boundary Description

T17S, R6E, SLB&M Emery County, UT

Section	Description	Acreage
Sec 13:		
	E½SW¼	80.00
	SE¼	160.00
Sec 24:	E½W½	160.00
	E½	320.00
Sec 25:	N½NE¼	80.00
	Beginning at the Southeast corner of the NE¼ of the SE¼ of Section 25; thence N 160 rods: thence W 116 rods, more or less, to the center line of Cottonwood Creek; thence in a Southerly direction along the center line of said Cottonwood Creek to a point 84 rods, more or less, W of the beginning; thence E 84 rods, more or less, to the point of beginning. Containing 100 acres, more or less of fee lands.	100.00
	Total for Township	**900.00**

T17S, R7E, SLB&M Emery County, UT

Section	Description	Acreage
Sec 15:	E½SW¼	80.00
	E½W½SW¼	40.00
Sec 16:	S½S½SW¼	40.00
	SW¼SW¼SE¼	10.00
Sec 17:	E½SW¼	80.00
	W½SW¼	80.00
	S½SW¼SE¼	20.00
	S½SE¼SE¼	20.00
Sec 18:	Lots 3 and 4	47.10
	SE¼	160.00
Sec 19: (ALL)	Lots 1 - 4	92.67
	E½	320.00
Sec 20: (ALL)	W½	320.00
	W½E½	160.00
	E½E½	160.00
Sec 21:	N½NW¼	80.00
	SE¼NW¼	40.00
	N½SW¼NW¼	20.00
	W½W½W½NE¼	20.00
	SW¼SW¼	40.00
	S½SE¼	80.00
	W½W½NW¼SE¼	10.00
	E½SW¼	80.00
	NW¼SW¼	40.00
	S½SW¼NW¼	20.00
	NE¼NW¼	40.00
Sec 22:	E½NW¼NW¼	20.00
	E½SW¼NW¼	20.00
	E½NW¼SW¼	20.00
	SE¼NW¼	40.00
	SW¼SW¼	40.00
	W½SE¼	80.00
	E½SW¼	80.00
	N½NW¼	80.00
Sec 27:	S½NW¼	80.00
	NW¼NE¼	40.00
	N½NE¼	80.00
	SW¼SW¼ (USFSSUP)	40.00
Sec 28:	E½NE¼NW¼	20.00
	S½NE¼	80.00
	E½SE¼NW¼	20.00
	NW¼NE¼	40.00
Sec 29:	N½NW¼	80.00
	Lots 1 - 3	63.00
Sec 30:	N½NE¼	80.00
	SW¼NE¼	40.00
	NW¼SE¼	40.00

Cottonwood/Wilberg Permit Boundary Description

Sec 34:

Sewer Absorption Field: Beginning S52◦06'48"W, 1664.59 ft. from the Sec. corners of 34, 27, 26, and 35, thence, S15◦23'50"E, 193.05 feet; thence,N69◦13'28"W, 354.72 feet; thence,N14◦04'20"W, 185.61 feet; thence,N29◦53'51"E, 488.38 feet; thence,N00◦47'31"E, 474.97 feet; thence,E, 30 feet; thence,S00◦47'31"W, 421.50 feet; thence,S04◦55'10"E, 598.80 feet, to the point of beginning.
Said parcel contains 3.70 acres more or less.

3.70

Rock and Soil Storage Area -Beginning at a point S 08°10,26" E, 758.72 feet from the east 1/4 corner of section 34, T. 17S., R.7E., SLB&M; thence, S 46° 00'31" W, 377.65 feet; thence N 45°52'24" W, 139.17 feet; thence N 32°54'05" W, 74.56 feet; thence N 23°41'14" E, 40.14 feet; thence N 50°27'20" E, 295.51 feet; thence N 69°41'04" E, 36.66 feet; thence S 44°45'52" E,189.90 feet to the point of beginning. Said parcel contains 1.86 acres more or less.

1.86

New Waste Rock Site: Beginning at point N82°39'28"W, 809.58 feet from the east 1/4 corner of Sec. 34; thence, S 74 09' 46" W, 246.23 feet; thence, S 27 14' 28" W, 647.59 feet; thence, S 46 59' 05" W, 165.64 feet; thence, S 76 41' 51" W, 264.72 feet; thence, N 72 09' 12" W, 670.20 feet; thence, S 06 10' 47" W, 105.57 feet; thence, S 23 08' 12" W, 35.27 feet; thence, S 36 59' 41" W, 71.59 feet; thence, S 40 44' 45" W, 114.04 feet; thence, S 23 37' 34" W, 93.77 feet; thence, S 60 40' 32" W, 113.86 feet; thence, S 05 17' 52" E, 108.19 feet; thence, S 23 20' 37" E, 105.29 feet; thence, S 24 38' 51" W, 61.70 feet; thence, S 31 19' 19" E, 129.90 feet; thence, S 29 19' 58" E, 80.45 feet; thence, S 24 11' 44" E, 104.97 feet; thence, S 47 47' 54" E, 168.95 feet; thence, S 40 17' 54" E, 87.31 feet; thence, S 17 50' 49" W, 43.32 feet; thence, S 72 11' 49" E, 213.13 feet; thence, S 78 08' 28" E, 287.64 feet; thence, N 11 43' 23" E, 86.24 feet; thence, N 73 40' 14" E, 120.87 feet; thence, N 17 04' 33" E, 74.31 feet; thence, N 14 20' 36" W, 65.70 feet; thence, N 17 05' 06" E, 75.21 feet; thence, N 09 13' 24" W, 65.92 feet; thence, N 12 54' 35" W, 99.73 feet; thence, N 02 44' 30" W, 82.47 feet; thence, N 08 32' 17" W, 85.51 feet; thence, N 01 39' 36" W, 104.82 feet; thence, N 17 50' 48" E, 218.03 feet; thence, N 76 41' 51" E, 353.88 feet; thence, N 27 14' 28" E, 629.52 feet; thence, N 50 42' 06" E, 123.74 feet; thence, N 74 09' 48" E, 113.70 feet; thence, N 15 50' 13" W, 150.00 feet; to the point of beginning.
Said parcel contains 25.85 acres more or less.

25.85

Total for Township	3,214.18
Total Permit Acres	**4,114.18**

The Cottonwood/Wilberg Permit Area contains the areas as described above. The area within the described boundary is approximately 4114.18 acres. The total disturbed area at the mine is 45.27 acres. The disturbance is distrubuted as follows:

Disturbed Area Reconciliation Table

Type Area	Area Name	Reclamation Completion Date	Original Disturbed Acreage	Phase I Bond Release Date	Phase II Bond Release Date	Phase III Bond Release Date	Remaining Disturbed Acreage
Mine Site	Cottonwood/Wilberg Main Mine	N/A	20.46				20.46
Mine Site	Leach Field	N/A	3.70				3.70
Storage Area	Rock and Soil Storage Area - AKA Cottonwood/Wilberg/Trail/DesBee Dove Old Waste Rock Site		15.62	Jul-99	Jul-09	Jul-09	1.86
Waste Rock Site	Cottonwood/Trail/DesBeeDove Waste Rock Site - New	N/A	17.44				17.44
Remote Portal	Cottonwood Canyon Area - AKA Fan Portal Area	Nov-98	9.33	Mar-04	Sep-10	Sep-10	1.86
Remote Portal	Miller Canyon Portal Area	Jun-99	0.02	Jun-02	Oct-10	Oct-10	0.00
Total			**66.57**				**45.32**

Refer to Surface and Subsurface ownership maps in Volume 3.

PacifiCorp, Energy West Mining Company

C/015/0019

Clean Copy Submittal for the
Cottonwood/Wilberg Mine,
Mid-Term Review

Volume 2, Part 4, Reclamation Bond Estimates:

Replace Reclamation Bond Estimate

2011

Cottonwood/Wilberg Mine: Reclamation Cost Estimates

Energy West Mining Company

C015/0019

Cottonwood/Wilberg Mine
Bond Summary
C/015/0019

Revised March 2012

Direct Costs		
Grimes Wash Facility		
Demolition	$967,887.38	
Earthwork	$673,586.42	
Revegetation	$36,172.85	
Subtotal	$1,677,646.66	
Overland Conveyor		
Demolition	$23,494.49	
Earthwork	$10,825.80	
Revegetation	$3,061.91	
Subtotal	$37,382.20	
Cottonwood Waste Rock Site		
Demolition	$10,618.49	
Earthwork	$231,606.96	
Rip Rap	$24,151.09	
Revegetation	$33,342.25	
Subtotal	$299,718.79	
Total Direct Costs	**$2,014,747.65**	
Indirect Costs		
Mob/Demob	$201,475.00	10.0%
Contingency	$100,737.00	5.0%
Engineering Redesign	$50,369.00	2.5%
Main Office Expense	$137,003.00	6.8%
Project Mainagement Fee	$50,369.00	2.5%
Total Indirect Costs	**$539,953.00**	26.8%
Total Cost (2011 Dollars)	**$2,554,700.65**	
Escalation factor		0.017
Number of years		5
Escalation	$224,659.00	
Bond Amount (2016 Dollars)	**$2,779,360**	

Cottonwood/Wilberg Mine
Grimes Wash Facility
C/015/0019

Demolition Cost Summary		
Item #	Description	Cost
1-A	Wilberg Fan	$ 3,738.87
1-B	Old Wilberg Fan Pad	$ 1,555.37
1-C	Switch Gear	$ 3,288.87
1-D	Wilberg Transfer Station	$ 20,382.72
1-E	Wilberg Transfer Tower	$ 3,172.12
1-F	Platform Structure	$ 3,393.44
1-G	Elevator	$ 3,393.44
1-H	Covered Parking	$ 120,675.06
1-I	Pumphouse Water Tank	$ 4,353.98
1-J	Diesel Maintenance Building	$ 33,662.99
1-K	Diesel Shop	$ 13,376.47
1-L	Undisturbed Drainage Collar	$ 1,555.37
1-M	Oil Storage Shed	$ 1,379.61
1-N	Bin Wall	$ 18,451.74
1-O	Rock Dust Tank	$ 1,379.61
1-P	Cottonwood Fan and Fuel Tank	$ 6,606.24
1-Q	Substation	$ 2,658.17
1-R	Concrete Silo	$ 240,435.81
1-S	Conveyor System	$ 14,344.85
1-T	Bent Structure	$ 9,473.78
1-U	Crusher	$ 5,287.94
1-V	Breaker Station	$ 14,344.85
1-W	Truck Loadout	$ 86,352.56
1-X	Skid Type Storage	$ 1,801.21
1-Y	Guardrail	$ 23,171.45
1-Z	Crane Pad	$ 6,940.11
1-AA	Salt Storage	$ 5,403.66
1-BB	Miscellaneous Culverts	$ 78,272.99
1-CC	Concrete Pad	$ 79,222.69
1-DD	Asphalt Removal	$ 19,411.41
2-A	Portal Closure	$ 140,400.00
	Total	$ 967,887.38

Revised January 2012

Wilberg Fan 1-A

Description	Wilberg Cost Est.	Equipment		Quantity	Hours	Total Units	Time	Unit	Cost	Total Cost	Ref.
Steel Demolition Cost						10					
	Foreman Average, Outside		Foreman	1			4.0	hr	$ 71.20	$ 284.80	
	Common Building Labor		CLAB	2			4.0	hr	$ 52.70	$ 421.60	
	01 54 33 60 2720	Crane 100 ton		1			4.0	hr	$ 206.25	$ 825.00	
	Equipment Operator, Crane or Shovel		Eqhv	1			4.0	hr	$ 69.45	$ 277.80	
	01 54 33 40 7200	Pickup Truck - 3/4 ton 4x4		1			4.0	hr	$ 13.08	$ 52.32	1
Concrete Demolition Cost					15						2, 3
	Foreman Average, Outside		Foreman	1			1.0	hr	$ 71.20	$ 71.20	
	Common Building Labor		CLAB	2			1.0	hr	$ 52.70	$ 105.40	
	01 54 33 20 0200	Excavator - 1.5 CY		1			1.0	hr	$ 118.43	$ 118.43	
	Equipment Operator, Medium Equipment		Eqmd	1			1.0	hr	$ 67.75	$ 67.75	
	01 54 33 20 0347	Hydraulic Hammer		1			1.0	hr	$ 44.03	$ 44.03	
	01 54 33 20 0200	Excavator - 1.5 CY		1			1.0	hr	$ 118.43	$ 118.43	
	01 54 33 20 0342	Bucket Thumb		1			1.0	hr	$ 21.38	$ 21.38	
	Equipment Operator, Medium Equipment		Eqmd	1			1.0	hr	$ 67.75	$ 67.75	
	01 54 33 40 0700	Compressor - 600 CFM		1			1.0	hr	$ 53.08	$ 53.08	4
	01 54 33 40 0940	Air tools, breaker, pavement, 60 lb.		1			1.0	hr	$ 1.30	$ 1.30	
	01 54 33 40 1000	Hose w/couplings 50 ft., 1" dia		4			1.0	hr	$ 0.51	$ 2.04	
	01 54 33 40 7200	Pickup Truck - 3/4 ton 4x4		1			1.0	hr	$ 13.08	$ 13.08	1
Transportation Costs	01 54 33 40 6500	Trailer, platform, flush deck, 2 axle, 25 ton		1			1.0	hr	$ 13.90	$ 13.90	5
	01 54 33 40 7300	Tractor, 4x2, 220hp		1			1.0	hr	$ 34.90	$ 34.90	
	Truck Driver, Heavy		Drhv	1			1.0	hr	$ 52.25	$ 52.25	
Miscellaneous											
Disposal Fee - Metal	02 41 19.23 0950					10		ton	$ 90.00	$ 900.00	
Demolished Concrete Handling					19.5						6
	01 54 33 20 4760	Loader - 5-1/4 to 5-3/4 CY 290hp		1			1.0	hr	$ 116.68	$ 116.68	
	Equipment Operator, Medium Equipment		Eqmd	1			1.0	hr	$ 67.75	$ 67.75	
	01 54 33 40 6410	Toilet, portable chemical		1			5.0	hr	$ 1.60	$ 8.00	
Total										$ 3,758.87	

Reference Information
1 - From Nielson Construction services contract with Energy West Mining - Includes 3/4 ton 4x4 truck, metal tool box, acetylene kit, rack for oxygen and acetylene, 1/2" electric drill, 71/4 " circular saw, 9" grinder.
2 - Concrete rubble disposed of as fill or permanently backfilled inside portals.
3 - Base on a concrete demolition production of 200 cubic yards per 8 hour shift. (Reference: http://www.indeco-breakers.com).
4 - Added 5% for larger size compressor.
5 - For haul of steel demolition material to Nielsen's landfill. Distance is approximately 11.0 miles one-way. Time estimate is 1.0 hours for one round trip.
6 - A swell factor of 1.3 is used for crushed concrete.

Note: Estimate size of pad at 40' x 10' x 1'

Old Wilberg Fan Pad 1-B											
Description									Cost	Total Cost	Ref.
Steel Demolition Cost	N/A										
Concrete Demolition Cost					40						2, 3
	Foreman Average, Outside		Foreman	1			2.0	hr	$ 71.20	$ 142.40	
	Common Building Labor		CLAB	2			2.0	hr	$ 52.70	$ 210.80	
	01 54 33 20 0200	Excavator - 1.5 CY		1			2.0	hr	$ 118.43	$ 236.86	
	Equipment Operator, Medium Equipment		Eqmd	1			2.0	hr	$ 67.75	$ 135.50	
	01 54 33 20 0347	Hydraulic Hammer		1			2.0	hr	$ 44.03	$ 88.06	
	01 54 33 20 0200	Excavator - 1.5 CY		1			2.0	hr	$ 118.43	$ 236.86	
	01 54 33 20 0342	Bucket Thumb		1			2.0	hr	$ 21.38	$ 42.76	
	Equipment Operator, Medium Equipment		Eqmd	1			2.0	hr	$ 67.75	$ 135.50	
	01 54 33 40 0700	Compressor - 600 CFM		1			2.0	hr	$ 53.08	$ 106.16	4
	01 54 33 40 0940	Air tools, breaker, pavement, 60 lb.		1			2.0	hr	$ 1.30	$ 2.60	
	01 54 33 40 1000	Hose w/couplings 50 ft., 1" dia.		4			2.0	hr	$ 0.51	$ 4.08	
	01 54 33 40 7200	Pickup Truck - 3/4 ton 4x4		1			2.0	hr	$ 13.08	$ 26.16	1
Transportation Costs	N/A										
Miscellaneous											
Disposal Fee - Metal	N/A										
Demolished Concrete Handling					52						6
	01 54 33 20 4760	Loader - 5-1/4 to 5-3/4 CY 290hp		1			1.0	hr	$ 116.68	$ 116.68	
	Equipment Operator, Medium Equipment		Eqmd	1			1.0	hr	$ 67.75	$ 67.75	
	01 54 33 40 6410	Toilet, portable chemical		1			2.0	hr	$ 1.60	$ 3.20	
Total										**$ 1,556.37**	

Reference Information
1 - From Nielson Construction services contract with Energy West Mining - Includes 3/4 ton 4x4 truck, metal tool box, acetylene kit, rack for oxygen and acetylene, 1/2" electric drill, 71/4 " circular saw, 9" grinder.
2 - Concrete rubble disposed of as fill or permanently backfilled inside portals.
3 - Base on a concrete demolition production of 200 cubic yards per 8 hour shift. (Reference: http://www.indeco-breakers.com).
4 - Added 5% for larger size compressor.
5 - For haul of steel demolition material to Nielsen's landfill. Distance is approximately 11.0 miles one-way. Time estimate is 1.0 hours for one round trip.
6 - A swell factor of 1.3 is used for crushed concrete.

Note: Estimate size of pad at 40' x 27' x 1'

Switch Gear 1-C

Description									Cost	Total Cost	Ref.
Steel Demolition Cost						5					
	Foreman Average, Outside		Foreman	1			4.0	hr	$ 71.20	$ 284.80	
	Common Building Labor		CLAB	2			4.0	hr	$ 52.70	$ 421.60	
	01 54 33 60 2720	Crane 100 ton		1			4.0	hr	$ 206.25	$ 825.00	
	Equipment Operator, Crane or Shovel		Eqhv	1			4.0	hr	$ 69.45	$ 277.80	
	01 54 33 40 7200	Pickup Truck - 3/4 ton 4x4		1			4.0	hr	$ 13.08	$ 52.32	1
Concrete Demolition Cost					22						2, 3
	Foreman Average, Outside		Foreman	1			1.0	hr	$ 71.20	$ 71.20	
	Common Building Labor		CLAB	2			1.0	hr	$ 52.70	$ 105.40	
	01 54 33 20 0200	Excavator - 1.5 CY		1			1.0	hr	$ 118.43	$ 118.43	
	Equipment Operator, Medium Equipment		Eqmd	1			1.0	hr	$ 67.75	$ 67.75	
	01 54 33 20 0347	Hydraulic Hammer		1			1.0	hr	$ 44.03	$ 44.03	
	01 54 33 20 0200	Excavator - 1.5 CY		1			1.0	hr	$ 118.43	$ 118.43	
	01 54 33 20 0342	Bucket Thumb		1			1.0	hr	$ 21.38	$ 21.38	
	Equipment Operator, Medium Equipment		Eqmd	1			1.0	hr	$ 67.75	$ 67.75	
	01 54 33 40 0700	Compressor - 600 CFM		1			1.0	hr	$ 53.08	$ 53.08	4
	01 54 33 40 0940	Air tools, breaker, pavement, 60 lb.		1			1.0	hr	$ 1.30	$ 1.30	
	01 54 33 40 1000	Hose w/couplings 50 ft., 1" dia.		4			1.0	hr	$ 0.51	$ 2.04	
	01 54 33 40 7200	Pickup Truck - 3/4 ton 4x4		1			1.0	hr	$ 13.08	$ 13.08	1
Transportation Costs	01 54 33 40 6500	Trailer, platform, flush deck, 2 axle, 25 ton		1			1.0	hr	$ 13.90	$ 13.90	
	01 54 33 40 7300	Tractor, 4x2, 220hp		1			1.0	hr	$ 34.90	$ 34.90	
	Truck Driver, Heavy		Drhv	1			1.0	hr	$ 52.25	$ 52.25	
Miscellaneous											
Disposal Fee - Metal	02 41 19.23 0950					5		ton	$ 90.00	$ 450.00	
Demolished Concrete Handling					28.6						6
	01 54 33 20 4760	Loader - 5-1/4 to 5-3/4 CY 290hp		1			1.0	hr	$ 116.68	$ 116.68	
	Equipment Operator, Medium Equipment		Eqmd	1			1.0	hr	$ 67.75	$ 67.75	
	01 54 33 40 6410	Toilet, portable chemical		1			5.0	hr	$ 1.60	$ 8.00	
Total										$ 3,288.87	

Reference Information

1 - From Nielson Construction services contract with Energy West Mining - Includes 3/4 ton 4x4 truck, metal tool box, acetylene kit, rack for oxygen and acetylene, 1/2" electric drill, 71/4 " circular saw, 9" grinder.
2 - Concrete rubble disposed of as fill or permanently backfilled inside portals.
3 - Base on a concrete demolition production of 200 cubic yards per 8 hour shift. (Reference: http://www.indeco-breakers.com).
4 - Added 5% for larger size compressor.
5 - For haul of steel demolition material to Nielsen's landfill. Distance is approximately 11.0 miles one-way. Time estimate is 1.0 hours for one round trip.
6 - A swell factor of 1.3 is used for crushed concrete.

Wilberg Transfer Station 1-D											
Description		Equipment							Cost	Total Cost	Ref.
Steel Demolition Cost						75					
	Foreman Average, Outside		Foreman	1			24.0	hr	$ 71.20	$ 1,708.80	
	Common Building Labor		CLAB	2			24.0	hr	$ 52.70	$ 2,529.60	
	01 54 33 60 2720	Crane 100 ton		1			24.0	hr	$ 206.25	$ 4,950.00	
	Equipment Operator, Crane or Shovel		Eqhv	1			24.0	hr	$ 69.45	$ 1,666.80	
	01 54 33 40 7200	Pickup Truck - 3/4 ton 4x4		1			24.0	hr	$ 13.08	$ 313.92	1
Concrete Demolition Cost	N/A										2, 3
Transportation Costs	01 54 33 40 6500	Trailer, platform, flush deck, 2 axle, 25 ton		1			24.0	hr	$ 13.90	$ 333.60	5
	01 54 33 40 7300	Tractor, 4x2, 220hp		1			24.0	hr	$ 34.90	$ 837.60	
	Truck Driver, Heavy		Drhv	1			24.0	hr	$ 52.25	$ 1,254.00	
Miscellaneous											
Disposal Fee - Metal	02 41 19.23 0950					75		ton	$ 90.00	$ 6,750.00	
Demolished Concrete Handling	N/A										
	01 54 33 40 6410	Toilet, portable chemical		1			24.0	hr	$ 1.60	$ 38.40	
Total										**$ 20,382.72**	

Reference Information
1 - From Nielson Construction services contract with Energy West Mining - Includes 3/4 ton 4x4 truck, metal tool box, acetylene kit, rack for oxygen and acetylene, 1/2" electric drill, 71/4 " circular saw, 9" grinder.
2 - Concrete rubble disposed of as fill or permanently backfilled inside portals.
3 - Base on a concrete demolition production of 200 cubic yards per 8 hour shift. (Reference: http://www.indeco-breakers.com).

5 - For haul of steel demolition material to Nielsen's landfill. Distance is approximately 11.0 miles one-way. Time estimate is 1.0 hours for one round trip.

Wilberg Transfer Tower 1-E											
Description	Equipment Reference Number								Cost	Total Cost	Ref.
Steel Demolition Cost											
	Foreman Average, Outside		Foreman	1		10	4.0	hr	$ 71.20	$ 284.80	
	Common Building Labor		CLAB	2			4.0	hr	$ 52.70	$ 421.60	
	01 54 33 60 2720	Crane 100 ton		1			4.0	hr	$ 206.25	$ 825.00	
	Equipment Operator, Crane or Shovel		Eqhv	1			4.0	hr	$ 69.45	$ 277.80	
	01 54 33 40 7200	Pickup Truck - 3/4 ton 4x4		1			4.0	hr	$ 13.08	$ 52.32	1
Concrete Demolition Cost	N/A										2, 3
Transportation Costs	01 54 33 40 6500	Trailer, platform, flush deck, 2 axle, 25 ton		1			4.0	hr	$ 13.90	$ 55.60	5
	01 54 33 40 7300	Tractor, 4x2, 220hp		1			4.0	hr	$ 34.90	$ 139.60	
	Truck Driver, Heavy		Drhv	1			4.0	hr	$ 52.25	$ 209.00	
Miscellaneous											
Disposal Fee - Metal	02 41 19.23 0950					10		ton	$ 90.00	$ 900.00	
Demolished Concrete Handling	N/A										
	01 54 33 40 6410	Toilet, portable chemical		1			4.0	hr	$ 1.60	$ 6.40	
Total										**$ 3,172.12**	

Reference Information
1 - From Nielson Construction services contract with Energy West Mining - Includes 3/4 ton 4x4 truck, metal tool box, acetylene kit, rack for oxygen and acetylene, 1/2" electric drill, 71/4 " circular saw, 9" grinder.
2 - Concrete rubble disposed of as fill or permanently backfilled inside portals.
3 - Base on a concrete demolition production of 200 cubic yards per 8 hour shift. (Reference: http://www.indeco-breakers.com).

5 - For haul of steel demolition material to Nielsen's landfill. Distance is approximately 11.0 miles one-way. Time estimate is 1.0 hours for one round trip.

Platform Structure 1-F											
Description: Platform Structure	Means Reference Number (2008 Means Construction Cost Data)	Equipment	Labor	Quantity (number)	Volume (cy)	Weight (tons)	Time (hr)	Unit	Cost	Total Cost	Ref.
Steel Demolition Cost						10					
	Foreman Average, Outside		Foreman	1			4.0	hr	$ 71.20	$ 284.80	
	Common Building Labor		CLAB	2			4.0	hr	$ 52.70	$ 421.60	
	01 54 33 60 2720	Crane 100 ton		1			4.0	hr	$ 206.25	$ 825.00	
	Equipment Operator, Crane or Shovel		Eqhv	1			4.0	hr	$ 69.45	$ 277.80	
	01 54 33 40 0190	Aeriel Lift, 60 feet		1			4.0	hr	$ 55.33	$ 221.32	
	01 54 33 40 7200	Pickup Truck - 3/4 ton 4x4		1			4.0	hr	$ 13.08	$ 52.32	1
Concrete Demolition Cost											2, 3
Transportation Costs	01 54 33 40 6500	Trailer, platform, flush deck, 2 axle, 25 ton		1			4.0	hr	$ 13.90	$ 55.60	5
	01 54 33 40 7300	Tractor, 4x2, 220hp		1			4.0	hr	$ 34.90	$ 139.60	
	Truck Driver, Heavy		Drhv	1			4.0	hr	$ 52.25	$ 209.00	
Miscellaneous											
Disposal Fee - Metal	02 41 19.23 0950					10		ton	$ 90.00	$ 900.00	
Demolished Concrete Handling	N/A										
	01 54 33 40 8410	Toilet, portable chemical		1			4.0	hr	$ 1.60	$ 6.40	
Total										**$ 3,393.44**	

Reference Information
1 - From Nielson Construction services contract with Energy West Mining - Includes 3/4 ton 4x4 truck, metal tool box, acetylene kit, rack for oxygen and acetylene, 1/2" electric drill, 71/4 " circular saw, 9" grinder.
2 - Concrete rubble disposed of as fill or permanently backfilled inside portals.
3 - Base on a concrete demolition production of 200 cubic yards per 8 hour shift. (Reference: http://www.indeco-breakers.com).

5 - For haul of steel demolition material to Nielsen's landfill. Distance is approximately 11.0 miles one-way. Time estimate is 1.0 hours for one round trip.

Elevator 1-G											
Description Elevator	**Reference Number (2012 Means Construction Cost Data)**	**Equipment**	**Labor**	**Quantity (number)**	**Volume (cy)**	**Weight (tons)**	**Time (hr)**	**Unit**	**Cost**	**Total Cost**	**Ref.**
Steel Demolition Cost						10					
	Foreman Average, Outside		Foreman	1			4.0	hr	$ 71.20	$ 284.80	
	Common Building Labor		CLAB	2			4.0	hr	$ 52.70	$ 421.60	
	01 54 33 60 2720	Crane 100 ton		1			4.0	hr	$ 206.25	$ 825.00	
	Equipment Operator, Crane or Shovel		Eqhv	1			4.0	hr	$ 69.45	$ 277.80	
	01 54 33 40 0190	Aeriel Lift, 60 feet		1			4.0	hr	$ 55.33	$ 221.32	
	01 54 33 40 7200	Pickup Truck - 3/4 ton 4x4		1			4.0	hr	$ 13.08	$ 52.32	1
Concrete Demolition Cost	N/A										2, 3
Transportation Costs	01 54 33 40 6500	Trailer, platform, flush deck, 2 axle, 25 ton		1			4.0	hr	$ 13.90	$ 55.60	5
	01 54 33 40 7300	Tractor, 4x2, 220hp		1			4.0	hr	$ 34.90	$ 139.60	
	Truck Driver, Heavy		Drhv	1			4.0	hr	$ 52.25	$ 209.00	
Miscellaneous											
Disposal Fee - Metal	02 41 19.23 0950					10		ton	$ 90.00	$ 900.00	
Demolished Concrete Handling	N/A										
	01 54 33 40 6410	Toilet, portable chemical		1			4.0	hr	$ 1.60	$ 6.40	
Total										**$ 3,393.44**	

Reference Information
1 - From Nielson Construction services contract with Energy West Mining - Includes 3/4 ton 4x4 truck, metal tool box, acetylene kit, rack for oxygen and acetylene, 1/2" electric drill, 71/4 " circular saw, 9" grinder.
2 - Concrete rubble disposed of as fill or permanently backfilled inside portals.
3 - Base on a concrete demolition production of 200 cubic yards per 8 hour shift. (Reference: http://www.indeco-breakers.com).

5 - For haul of steel demolition material to Nielsen's landfill. Distance is approximately 11.0 miles one-way. Time estimate is 1.0 hours for one round trip.

Covered Parking 1-H											
Description Covered Parking	Means Reference Number (2011 Heavy Construction Cost Data)	Equipment	Labor	Quantity (number)	Volume (cy)	Weight (tons)	Time (hr)	Unit	Cost	Total Cost	Ref.
Steel Demolition Cost						20					
	Foreman Average, Outside		Foreman	1			112.0	hr	$ 71.20	$ 7,974.40	
	Common Building Labor		CLAB	2			112.0	hr	$ 52.70	$ 11,804.80	
	01 54 33 40 7200	Pickup Truck - 3/4 ton 4x4		1			112.0	hr	$ 13.08	$ 1,464.96	1
Concrete Demolition Cost					700						2, 3
	Foreman Average, Outside		Foreman	1			112.0	hr	$ 71.20	$ 7,974.40	
	Common Building Labor		CLAB	2			112.0	hr	$ 52.70	$ 11,804.80	
	01 54 33 20 0200	Excavator - 1.5 CY		1			112.0	hr	$ 118.43	$ 13,264.16	
	Equipment Operator, Medium Equipment		Eqmd	1			112.0	hr	$ 67.75	$ 7,588.00	
	01 54 33 20 0347	Hydraulic Hammer		1			112.0	hr	$ 44.03	$ 4,931.36	
	01 54 33 20 0200	Excavator - 1.5 CY		1			112.0	hr	$ 118.43	$ 13,264.16	
	01 54 33 20 0342	Bucket Thumb		1			112.0	hr	$ 21.38	$ 2,394.56	
	Equipment Operator, Medium Equipment		Eqmd	1			112.0	hr	$ 67.75	$ 7,588.00	
	01 54 33 40 0700	Compressor - 600 CFM		1			112.0	hr	$ 53.08	$ 5,944.96	4
	01 54 33 40 0940	Air tools, breaker, pavement, 60 lb.		1			112.0	hr	$ 1.30	$ 145.60	
	01 54 33 40 1000	Hose w/couplings 50 ft., 1" dia.		4			112.0	hr	$ 0.51	$ 228.48	
	01 54 33 40 7200	Pickup Truck - 3/4 ton 4x4		1			112.0	hr	$ 13.08	$ 1,464.96	1
Transportation Costs	01 54 33 40 6500	Trailer, platform, flush deck, 2 axle, 25 ton		1			2.0	hr	$ 13.90	$ 27.80	5
	01 54 33 40 7300	Tractor, 4x2, 220hp		1			2.0	hr	$ 34.90	$ 69.80	
	Truck Driver, Heavy		Drhv	1			2.0	hr	$ 52.25	$ 104.50	
Miscellaneous											
Disposal Fee - Metal	02 41 19.23 0950					20		ton	$ 90.00	$ 1,800.00	
Demolished Concrete Handling					910						6
	01 54 33 20 4760	Loader - 5-1/4 to 5-3/4 CY 290hp		1			112.0	hr	$ 116.68	$ 13,068.16	
	Equipment Operator, Medium Equipment		Eqmd	1			112.0	hr	$ 67.75	$ 7,588.00	
	01 54 33 40 6410	Toilet, portable chemical		1			112.0	hr	$ 1.60	$ 179.20	
Total										$ 120,675.06	

Reference Information
1 - From Nielson Construction services contract with Energy West Mining - Includes 3/4 ton 4x4 truck, metal tool box, acetylene kit, rack for oxygen and acetylene, 1/2" electric drill, 71/4 " circular saw, 9" grinder.
2 - Concrete rubble disposed of as fill or permanently backfilled inside portals.
3 - Base on a concrete demolition production of 50 cubic yards per 8 hour shift. (Best guess considering how constructed).
4 - Added 5% for larger size compressor.
5 - For haul of steel demolition material to Nielsen's landfill. Distance is approximately 11.0 miles one-way. Time estimate is 1.0 hours for one round trip.
6 - A swell factor of 1.3 is used for crushed concrete.

Pumphouse Water Tank 1-I												
Description Pumphouse Water Tank	**Means Reference Number (2011 Heavy Construction Cost Data)**	**Equipment**	**Labor**	**Quantity (number)**	**Volume (cy)**	**Weight (tons)**	**Time (hr)**	**Unit**	**Cost**	**Total Cost**	**Ref.**
Steel Demolition Cost						15					
	Foreman Average, Outside		Foreman	1			6.0	hr	$ 71.20	$ 427.20	
	Common Building Labor		CLAB	2			6.0	hr	$ 52.70	$ 632.40	
	01 54 33 60 2720	Crane 100 ton		1			6.0	hr	$ 206.25	$ 1,237.50	
	Equipment Operator, Crane or Shovel		Eqhv	1			6.0	hr	$ 69.45	$ 416.70	
	01 54 33 40 7200	Pickup Truck - 3/4 ton 4x4		1			6.0	hr	$ 13.08	$ 78.48	1
Concrete Demolition Cost	N/A										2, 3
Transportation Costs	01 54 33 40 6500	Trailer, platform, flush deck, 2 axle, 25 ton		1			2.0	hr	$ 13.90	$ 27.80	5
	01 54 33 40 7300	Tractor, 4x2, 220hp		1			2.0	hr	$ 34.90	$ 69.80	
	Truck Driver, Heavy		Drhv	1			2.0	hr	$ 52.25	$ 104.50	
Miscellaneous											
Disposal Fee - Metal	02 41 19.23 0950					15		ton	$ 90.00	$ 1,350.00	
Demolished Concrete Handling	N/A										
	01 54 33 40 6410	Toilet, portable chemical		1			6.0	hr	$ 1.60	$ 9.60	
Total										**$ 4,353.98**	

Reference Information
1 - From Nielson Construction services contract with Energy West Mining - Includes 3/4 ton 4x4 truck, metal tool box, acetylene kit, rack for oxygen and acetylene, 1/2" electric drill, 71/4 " circular saw, 9" grinder.
2 - Concrete rubble disposed of as fill or permanently backfilled inside portals.
3 - Base on a concrete demolition production of 200 cubic yards per 8 hour shift. (Reference: http://www.indeco-breakers.com).

5 - For haul of steel demolition material to Nielsen's landfill. Distance is approximately 11.0 miles one-way. Time estimate is 1.0 hours for one round trip.

Diesel Maintenance Building 1-J											
Description Diesel Maintenance Building	**Means Reference Number (2012 Heavy Construction Cost Data)**	**Equipment**	**Labor**	**Quantity (number)**	**Volume (cy)**	**Weight (tons)**	**Time (hr)**	**Unit**	**Cost**	**Total Cost**	**Ref.**
Steel Demolition Cost						20					
	Foreman Average, Outside		Foreman	1			8.0	hr	$ 71.20	$ 569.60	
	Common Building Labor		CLAB	2			8.0	hr	$ 52.70	$ 843.20	
	01 54 33 60 2720	Crane 100 ton		1			8.0	hr	$ 206.25	$ 1,650.00	
	Equipment Operator, Crane or Shovel		Eqhv	1			8.0	hr	$ 69.45	$ 555.60	
	01 54 33 40 7200	Pickup Truck - 3/4 ton 4x4		1			8.0	hr	$ 13.08	$ 104.64	1
Concrete Demolition Cost					600						2, 3
	Foreman Average, Outside		Foreman	1			32.0	hr	$ 71.20	$ 2,278.40	
	Common Building Labor		CLAB	2			32.0	hr	$ 52.70	$ 3,372.80	
	01 54 33 20 0200	Excavator - 1.5 CY		1			32.0	hr	$ 118.43	$ 3,789.76	
	Equipment Operator, Medium Equipment		Eqmd	1			32.0	hr	$ 67.75	$ 2,168.00	
	01 54 33 20 0347	Hydraulic Hammer		1			32.0	hr	$ 44.03	$ 1,408.96	
	01 54 33 20 0200	Excavator - 1.5 CY		1			32.0	hr	$ 118.43	$ 3,789.76	
	01 54 33 20 0342	Bucket Thumb		1			32.0	hr	$ 21.38	$ 684.16	
	Equipment Operator, Medium Equipment		Eqmd	1			32.0	hr	$ 67.75	$ 2,168.00	
	01 54 33 40 0700	Compressor - 600 CFM		1			32.0	hr	$ 53.08	$ 1,698.56	4
	01 54 33 40 0940	Air tools, breaker, pavement, 60 lb.		1			32.0	hr	$ 1.30	$ 41.60	
	01 54 33 40 1000	Hose w/couplings 50 ft., 1" dia		4			32.0	hr	$ 0.51	$ 65.28	
	01 54 33 40 7200	Pickup Truck - 3/4 ton 4x4		1			32.0	hr	$ 13.08	$ 418.56	1
Transportation Costs	01 54 33 40 6500	Trailer, platform, flush deck, 2 axle, 25 ton		1			3.0	hr	$ 13.90	$ 41.70	5
	01 54 33 40 7300	Tractor, 4x2, 220hp		1			3.0	hr	$ 34.90	$ 104.70	
	Truck Driver, Heavy		Drhv	1			3.0	hr	$ 52.25	$ 156.75	
Miscellaneous											
Disposal Fee - Metal	02 41 19.23 0950					20		ton	$ 90.00	$ 1,800.00	
Demolished Concrete Handling					780						6
	01 54 33 20 4760	Loader - 5-1/4 to 5-3/4 CY 290hp		1			32.0	hr	$ 116.68	$ 3,733.76	
	Equipment Operator, Medium Equipment		Eqmd	1			32.0	hr	$ 67.75	$ 2,168.00	
	01 54 33 40 6410	Toilet, portable chemical		1			32.0	hr	$ 1.60	$ 51.20	
Total										**$ 33,662.99**	

Reference Information
1 - From Nielson Construction services contract with Energy West Mining - Includes 3/4 ton 4x4 truck, metal tool box, acetylene kit, rack for oxygen and acetylene, 1/2" electric drill, 71/4 " circular saw, 9" grinder.
2 - Concrete rubble disposed of as fill or permanently backfilled inside portals.
3 - Base on a concrete demolition production of 150 cubic yards per 8 hour shift. (Complexity of demolishing building).
4 - Added 5% for larger size compressor.
5 - For haul of steel demolition material to Nielsen's landfill. Distance is approximately 11.0 miles one-way. Time estimate is 1.0 hours for one round trip.
6 - A swell factor of 1.3 is used for crushed concrete.

Diesel Shop 1-K

Description	Means Reference Number (Nielson Construction Costs)	Equipment		Quantity (Number)	Volume (CY)	Weight (tons)	Time (hr)	Unit	Cost	Total Cost	Ref.
Diesel Shop											
Steel Demolition Cost						30					
	Foreman Average, Outside		Foreman	1			12.0	hr	$ 71.20	$ 854.40	
	Common Building Labor		CLAB	3			12.0	hr	$ 52.70	$ 1,897.20	
	01 54 33 60 2720	Crane 100 ton		1			12.0	hr	$ 206.25	$ 2,475.00	
	Equipment Operator, Crane or Shovel		Eqhv	1			12.0	hr	$ 69.45	$ 833.40	
	01 54 33 40 0190	Aeriel Lift, 60 feet		1			12.0	hr	$ 55.33	$ 663.96	
	01 54 33 40 7200	Pickup Truck - 3/4 ton 4x4		1			12.0	hr	$ 13.08	$ 156.96	1
Concrete Demolition Cost					97.4						2, 3
	Foreman Average, Outside		Foreman	1			4.0	hr	$ 71.20	$ 284.80	
	Common Building Labor		CLAB	2			4.0	hr	$ 52.70	$ 421.60	
	01 54 33 20 0200	Excavator - 1.5 CY		1			4.0	hr	$ 118.43	$ 473.72	
	Equipment Operator, Medium Equipment		Eqmd	1			4.0	hr	$ 67.75	$ 271.00	
	01 54 33 20 0347	Hydraulic Hammer		1			4.0	hr	$ 44.03	$ 176.12	
	01 54 33 20 0200	Excavator - 1.5 CY		1			4.0	hr	$ 118.43	$ 473.72	
	01 54 33 20 0342	Bucket Thumb		1			4.0	hr	$ 21.38	$ 85.52	
	Equipment Operator, Medium Equipment		Eqmd	1			4.0	hr	$ 67.75	$ 271.00	
	01 54 33 40 0700	Compressor - 600 CFM		1			4.0	hr	$ 53.08	$ 212.32	4
	01 54 33 40 0940	Air tools, breaker, pavement, 60 lb		1			4.0	hr	$ 1.30	$ 5.20	
	01 54 33 40 1000	Hose w/couplings 50 ft., 1" dia.		4			4.0	hr	$ 0.51	$ 8.16	
	01 54 33 40 7200	Pickup Truck - 3/4 ton 4x4		1			4.0	hr	$ 13.08	$ 52.32	1
Transportation Costs	01 54 33 40 6500	Trailer, platform, flush deck, 2 axle, 25 ton		1			3.0	hr	$ 13.90	$ 41.70	5
	01 54 33 40 7300	Tractor, 4x2, 220hp		1			3.0	hr	$ 34.90	$ 104.70	
	Truck Driver, Heavy		Drhv	1			3.0	hr	$ 52.25	$ 156.75	
Miscellaneous											
Disposal Fee - Metal	02 41 19.23 0950					30		ton	$ 90.00	$ 2,700.00	
Demolished Concrete Handling					126.62						6
	01 54 33 20 4760	Loader - 5-1/4 to 5-3/4 CY 290hp		1			4.0	hr	$ 116.68	$ 466.72	
	Equipment Operator, Medium Equipment		Eqmd	1			4.0	hr	$ 67.75	$ 271.00	
	01 54 33 40 6410	Toilet, portable chemical		1			12.0	hr	$ 1.60	$ 19.20	
Total										**$ 13,376.47**	

Reference Information
1 - From Nielson Construction services contract with Energy West Mining - Includes 3/4 ton 4x4 truck, metal tool box, acetylene kit, rack for oxygen and acetylene, 1/2" electric drill, 71/4 " circular saw, 9" grinder.
2 - Concrete rubble disposed of as fill or permanently backfilled inside portals.
3 - Base on a concrete demolition production of 200 cubic yards per 8 hour shift. (Reference: http://www.indeco-breakers.com).
4 - Added 5% for larger size compressor.
5 - For haul of steel demolition material to Nielsen's landfill. Distance is approximately 11.0 miles one-way. Time estimate is 1.0 hours for one round trip.
6 - A swell factor of 1.3 is used for crushed concrete.

Note: Concrete demo estimate based on foundation stem walls 90' long x 36' wide x 4' tall x 1' thick. Floor was estimated 90' x 36' x 6".

Undisturbed Drainage Collar 1-L												
Description	Labor/Equipment/Material	Equipment		Quantity	Volume	Waste Factor	Time	Unit	Cost	Total Cost	Ref.
Undisturbed Drainage Collar 1-L											
Steel Demolition Cost	N/A										
Concrete Demolition Cost											
					41						
	Foreman Average, Outside		Foreman	1			2.00	hr	$ 71.20	$ 142.40	2, 3
	Common Building Labor		CLAB	2			2.00	hr	$ 52.70	$ 210.80	
	01 54 33 20 0200	Excavator - 1.5 CY		1			2.00	hr	$ 118.43	$ 236.86	
	Equipment Operator, Medium Equipment		Eqmd	1			2.00	hr	$ 67.75	$ 135.50	
	01 54 33 20 0347	Hydraulic Hammer		1			2.00	hr	$ 44.03	$ 88.06	
	01 54 33 20 0200	Excavator - 1.5 CY		1			2.00	hr	$ 118.43	$ 236.86	
	01 54 33 20 0342	Bucket Thumb		1			2.00	hr	$ 21.38	$ 42.76	
	Equipment Operator, Medium Equipment		Eqmd	1			2.00	hr	$ 67.75	$ 135.50	
	01 54 33 40 0700	Compressor - 600 CFM		1			2.00	hr	$ 53.08	$ 106.16	4
	01 54 33 40 0940	Air tools, breaker, pavement, 60 lb.		1			2.00	hr	$ 1.30	$ 2.60	
	01 54 33 40 1000	Hose w/couplings 50 ft., 1" dia.		4			2.00	hr	$ 0.51	$ 4.08	
	01 54 33 40 7200	Pickup Truck - 3/4 ton 4x4		1			2.00	hr	$ 13.08	$ 26.16	1
Transportation Costs	N/A										
Miscellaneous											
Disposal Fee - Metal	N/A										
Demolished Concrete Handling											
	01 54 33 20 4760	Loader - 5-1/4 to 5-3/4 CY 290hp		1	53.3		1.00	hr	$ 116.68	$ 116.68	6
	Equipment Operator, Medium Equipment		Eqmd	1			1.00	hr	$ 67.75	$ 67.75	
	01 54 33 40 6410	Toilet, portable chemical		1			2.00	hr	$ 1.60	$ 3.20	
Total										$ 1,555.37	

Reference Information
1 - From Nielson Construction services contract with Energy West Mining - Includes 3/4 ton 4x4 truck, metal tool box, acetylene kit, rack for oxygen and acetylene, 1/2" electric drill, 71/4 " circular saw, 9" grinder.
2 - Concrete rubble disposed of as fill or permanently backfilled inside portals.
3 - Base on a concrete demolition production of 200 cubic yards per 8 hour shift. (Reference: http://www.indeco-breakers.com).
4 - Added 5% for larger size compressor.
5 - For haul of steel demolition material to Nielsen's landfill. Distance is approximately 11.0 miles one-way. Time estimate is 1.0 hours for one round trip.
6 - A swell factor of 1.3 is used for crushed concrete.

Note: Concrete volume estimates: 130' x 6' x 1' stem wall plus flat work

Oil Storage Shed 1-M												
Description	Reference Publication	Equipment		Quantity	Volume	Weight	Time		Cost	Total Cost	Ref.
Steel Demolition Cost												
	Foreman Average, Outside		Foreman	1		5	2.0	hr	$ 71.20	$ 142.40	
	Common Building Labor		CLAB	1			2.0	hr	$ 52.70	$ 105.40	
	01 54 33 60 2720	Crane 100 ton		1			2.0	hr	$ 206.25	$ 412.50	
	Equipment Operator, Crane or Shovel		Eqhv	1			2.0	hr	$ 69.45	$ 138.90	
	01 54 33 40 7200	Pickup Truck - 3/4 ton 4x4		1			2.0	hr	$ 13.08	$ 26.16	1
Concrete Demolition Cost	N/A										2, 3
Transportation Costs	01 54 33 40 6500	Trailer, platform, flush deck, 2 axle, 25 ton		1			1.0	hr	$ 13.90	$ 13.90	5
	01 54 33 40 7300	Tractor, 4x2, 220hp		1			1.0	hr	$ 34.90	$ 34.90	
	Truck Driver, Heavy		Drhv	1			1.0	hr	$ 52.25	$ 52.25	
Miscellaneous												
Disposal Fee - Metal	02 41 19.23 0950					5		ton	$ 90.00	$ 450.00	
Demolished Concrete Handling	N/A										
	01 54 33 40 6410	Toilet, portable chemical		1			2.0	hr	$ 1.60	$ 3.20	
Total										$ 1,379.61	

Reference Information
1 - From Nielson Construction services contract with Energy West Mining - Includes 3/4 ton 4x4 truck, metal tool box, acetylene kit, rack for oxygen and acetylene, 1/2" electric drill, 71/4 " circular saw, 9" grinder.
2 - Concrete rubble disposed of as fill or permanently backfilled inside portals.
3 - Base on a concrete demolition production of 200 cubic yards per 8 hour shift. (Reference: http://www.indeco-breakers.com).

5 - For haul of steel demolition material to Nielsen's landfill. Distance is approximately 11.0 miles one-way. Time estimate is 1.0 hours for one round trip.

Bin Wall 1-N											
Description											
Bin/Wall											
Steel Demolition Cost											
	Foreman Average, Outside		Foreman	1		59	24.0	hr	$ 71.20	$ 1,708.80	
	Common Building Labor		CLAB	2			24.0	hr	$ 52.70	$ 2,529.60	
	01 54 33 60 2720	Crane 100 ton		1			24.0	hr	$ 206.25	$ 4,950.00	
	01 54 33 40 0190	Aerial Lift, 60 feet		1			24.0	hr	$ 55.33	$ 1,327.92	
	Equipment Operator, Crane or Shovel		Eqhv	1			24.0	hr	$ 69.45	$ 1,666.80	
	01 54 33 40 7200	Pickup Truck - 3/4 ton 4x4		1			24.0	hr	$ 13.08	$ 313.92	1
Concrete Demolition Cost	N/A										2, 3
Transportation Costs	01 54 33 40 6500	Trailer, platform, flush deck, 2 axle, 25 ton		1			6.0	hr	$ 13.90	$ 83.40	5
	01 54 33 40 7300	Tractor, 4x2, 220hp		1			6.0	hr	$ 34.90	$ 209.40	
	Truck Driver, Heavy		Drhv	1			6.0	hr	$ 52.25	$ 313.50	
Miscellaneous											
Disposal Fee - Metal	02 41 19.23 0950					59		ton	$ 90.00	$ 5,310.00	
Demolished Concrete Handling	N/A										
	01 54 33 40 6410	Toilet, portable chemical		1			24.0	hr	$ 1.60	$ 38.40	
Total										$ 18,451.74	

Reference Information

1 - From Nielson Construction services contract with Energy West Mining - Includes 3/4 ton 4x4 truck, metal tool box, acetylene kit, rack for oxygen and acetylene, 1/2" electric drill, 71/4 " circular saw, 9" grinder.

2 - Concrete rubble disposed of as fill or permanently backfilled inside portals.

3 - Base on a concrete demolition production of 200 cubic yards per 8 hour shift. (Reference: http://www.indeco-breakers.com).

5 - For haul of steel demolition material to Nielsen's landfill. Distance is approximately 11.0 miles one-way. Time estimate is 1.0 hours for one round trip.

Rock Dust Tank 1-O

Description	Code	Equipment		Quantity		Weight (tons)	Time (hr)	Unit	Cost	Total Cost	Ref.
Rock Dust Tank 1-O											
Steel Demolition Cost											
	Foreman Average, Outside		Foreman	1		5					
	Common Building Labor		CLAB	1			2.0	hr	$ 71.20	$ 142.40	
	01 54 33 60 2720	Crane 100 ton		1			2.0	hr	$ 52.70	$ 105.40	
	Equipment Operator, Crane or Shovel		Eghv	1			2.0	hr	$ 206.25	$ 412.50	
	01 54 33 40 7200	Pickup Truck - 3/4 ton 4x4		1			2.0	hr	$ 69.45	$ 138.90	
Concrete Demolition Cost	N/A			1			2.0	hr	$ 13.08	$ 26.16	1
Transportation Costs	01 54 33 40 6500	Trailer, platform, flush deck, 2 axle, 25 ton		1			1.0	hr	$ 13.90	$ 13.90	2, 3
	01 54 33 40 7300	Tractor, 4x2, 220hp		1			1.0	hr	$ 34.90	$ 34.90	5
	Truck Driver, Heavy		Drhv	1			1.0	hr	$ 52.25	$ 52.25	
Miscellaneous											
Disposal Fee - Metal	02 41 19.23 0950					5		ton	$ 90.00	$ 450.00	
Demolished Concrete Handling	N/A										
	01 54 33 40 6410	Toilet, portable chemical		1			2.0	hr	$ 1.60	$ 3.20	
Total										**$ 1,379.61**	

Reference Information
1 - From Nielson Construction services contract with Energy West Mining - Includes 3/4 ton 4x4 truck, metal tool box, acetylene kit, rack for oxygen and acetylene, 1/2" electric drill, 71/4 " circular saw, 9" grinder.
2 - Concrete rubble disposed of as fill or permanently backfilled inside portals.
3 - Base on a concrete demolition production of 200 cubic yards per 8 hour shift. (Reference: http://www.indeco-breakers.com).

5 - For haul of steel demolition material to Nielsen's landfill. Distance is approximately 11.0 miles one-way. Time estimate is 1.0 hours for one round trip.

Cottonwood Fan and Fuel Tank 1-P												
Description Cottonwood Fan and Fuel Tank	Means Reference Number (2011 Heavy Construction Cost Data)	Equipment	Crew	Quantity (number)	Volume (cy)	Weight (tons)	Time (hr)	Unit	Cost	Total Cost	Ref.
Steel Demolition Cost						20					
	Foreman Average, Outside		Foreman	1			8.0	hr	$ 71.20	$ 569.60	
	Common Building Labor		CLAB	2			8.0	hr	$ 52.70	$ 843.20	
	01 54 33 60 2720	Crane 100 ton		1			8.0	hr	$ 206.25	$ 1,650.00	
	Equipment Operator, Crane or Shovel		Eqhv	1			8.0	hr	$ 69.45	$ 555.60	
	01 54 33 40 7200	Pickup Truck - 3/4 ton 4x4		1			8.0	hr	$ 13.08	$ 104.64	1
Concrete Demolition Cost					30						2, 3
	Foreman Average, Outside		Foreman	1			1.0	hr	$ 71.20	$ 71.20	
	Common Building Labor		CLAB	2			1.0	hr	$ 52.70	$ 105.40	
	01 54 33 20 0200	Excavator - 1.5 CY		1			1.0	hr	$ 118.43	$ 118.43	
	Equipment Operator, Medium Equipment		Eqmd	1			1.0	hr	$ 67.75	$ 67.75	
	01 54 33 20 0347	Hydraulic Hammer		1			1.0	hr	$ 44.03	$ 44.03	
	01 54 33 20 0200	Excavator - 1.5 CY		1			1.0	hr	$ 118.43	$ 118.43	
	01 54 33 20 0342	Bucket Thumb		1			1.0	hr	$ 21.38	$ 21.38	
	Equipment Operator, Medium Equipment		Eqmd	1			1.0	hr	$ 67.75	$ 67.75	
	01 54 33 40 0700	Compressor - 600 CFM		1			1.0	hr	$ 53.08	$ 53.08	4
	01 54 33 40 0940	Air tools, breaker, pavement, 60 lb.		1			1.0	hr	$ 1.30	$ 1.30	
	01 54 33 40 1000	Hose w/couplings 50 ft., 1" dia.		4			1.0	hr	$ 0.51	$ 2.04	
	01 54 33 40 7200	Pickup Truck - 3/4 ton 4x4		1			1.0	hr	$ 13.08	$ 13.08	1
Transportation Costs	01 54 33 40 6500	Trailer, platform, flush deck, 2 axle, 25 ton		1			2.0	hr	$ 13.90	$ 27.80	5
	01 54 33 40 7300	Tractor, 4x2, 220hp		1			2.0	hr	$ 34.90	$ 69.80	
	Truck Driver, Heavy		Drhv	1			2.0	hr	$ 52.25	$ 104.50	
Miscellaneous											
Disposal Fee - Metal	02 41 19.23 0950					20		ton	$ 90.00	$ 1,800.00	
Demolished Concrete Handling					39						6
	01 54 33 20 4760	Loader - 5-1/4 to 5-3/4 CY 290hp		1			1.0	hr	$ 116.68	$ 116.68	
	Equipment Operator, Medium Equipment		Eqmd	1			1.0	hr	$ 67.75	$ 67.75	
	01 54 33 40 6410	Toilet, portable chemical		1			8.0	hr	$ 1.60	$ 12.80	
Total										$ 6,506.24	

Reference Information
1 - From Nielson Construction services contract with Energy West Mining - Includes 3/4 ton 4x4 truck, metal tool box, acetylene kit, rack for oxygen and acetylene, 1/2" electric drill, 71/4 " circular saw, 9" grinder.
2 - Concrete rubble disposed of as fill or permanently backfilled inside portals.
3 - Base on a concrete demolition production of 200 cubic yards per 8 hour shift. (Reference: http://www.indeco-breakers.com).
4 - Added 5% for larger size compressor.
5 - For haul of steel demolition material to Nielsen's landfill. Distance is approximately 11.0 miles one-way. Time estimate is 1.0 hours for one round trip.
6 - A swell factor of 1.3 is used for crushed concrete.

Substation 1-Q											
Description Substation	Means Reference Number Building Reconstruction Cost Data	Equipment	Labor	Quantity (number)	Volume (cy)	Weight (tons)	Time (hr)	Unit	Cost	Total Cost	Ref.
Steel Demolition Cost						10					
	Foreman Average, Outside		Foreman	1			4.0	hr	$ 71.20	$ 284.80	
	Common Building Labor		CLAB	1			4.0	hr	$ 52.70	$ 210.80	
	01 54 33 60 2720	Crane 100 ton		1			4.0	hr	$ 206.25	$ 825.00	
	Equipment Operator, Crane or Shovel		Eqhv	1			4.0	hr	$ 69.45	$ 277.80	
	01 54 33 40 7200	Pickup Truck - 3/4 ton 4x4		1			4.0	hr	$ 13.08	$ 52.32	1
Concrete Demolition Cost	N/A										2, 3
Transportation Costs	01 54 33 40 6500	Trailer, platform, flush deck, 2 axle, 25 ton		1			1.0	hr	$ 13.90	$ 13.90	5
	01 54 33 40 7300	Tractor, 4x2, 220hp		1			1.0	hr	$ 34.90	$ 34.90	
	Truck Driver, Heavy		Drhv	1			1.0	hr	$ 52.25	$ 52.25	
Miscellaneous											
Disposal Fee - Metal	02 41 19.23 0950					10		ton	$ 90.00	$ 900.00	
Demolished Concrete Handling	N/A										
	01 54 33 40 6410	Toilet, portable chemical		1			4.0	hr	$ 1.60	$ 6.40	
Subtotal										$ 2,658.17	

Reference Information
1 - From Nielson Construction services contract with Energy West Mining - Includes 3/4 ton 4x4 truck, metal tool box, acetylene kit, rack for oxygen and acetylene, 1/2" electric drill, 71/4 " circular saw, 9" grinder.
2 - Concrete rubble disposed of as fill or permanently backfilled inside portals.
3 - Base on a concrete demolition production of 200 cubic yards per 8 hour shift. (Reference: http://www.indeco-breakers.com).

5 - For haul of steel demolition material to Nielsen's landfill. Distance is approximately 11.0 miles one-way. Time estimate is 1.0 hours for one round trip.

Concrete Silo 1-R												
Description Concrete Silo	Means Reference Number (2012 Heavy Construction Cost Data)	Equipment	Labor	Quantity (number)	Volume (cy)	Weight (tons)	Time (hr)	Unit	Cost	Total Cost	Ref.
Steel Demolition Cost						50					
	Foreman Average, Outside		Foreman	1			192.0	hr	$ 71.20	$ 13,670.40	
	Common Building Labor		CLAB	2			192.0	hr	$ 52.70	$ 20,236.80	
	01 54 33 60 2720	Crane 100 ton		1			192.0	hr	$ 206.25	$ 39,600.00	
	Equipment Operator, Crane or Shovel		Eqhv	1			192.0	hr	$ 69.45	$ 13,334.40	
	01 54 33 40 7200	Pickup Truck - 3/4 ton 4x4		1			192.0	hr	$ 13.08	$ 2,511.36	1
Concrete Demolition Cost					1200						2, 3
	Foreman Average, Outside		Foreman	1			192.0	hr	$ 71.20	$ 13,670.40	
	Common Building Labor		CLAB	2			192.0	hr	$ 52.70	$ 20,236.80	
	01 54 33 20 0200	Excavator - 1.5 CY		1			192.0	hr	$ 118.43	$ 22,738.56	
	Equipment Operator, Medium Equipment		Eqmd	1			192.0	hr	$ 67.75	$ 13,008.00	
	01 54 33 20 0347	Hydraulic Hammer		1			192.0	hr	$ 44.03	$ 8,453.76	
	01 54 33 20 0200	Excavator - 1.5 CY		1			192.0	hr	$ 118.43	$ 22,738.56	
	01 54 33 20 0342	Bucket Thumb		1			192.0	hr	$ 21.38	$ 4,104.96	
	Equipment Operator, Medium Equipment		Eqmd	1			192.0	hr	$ 67.75	$ 13,008.00	
	01 54 33 40 0700	Compressor - 600 CFM		1			192.0	hr	$ 53.08	$ 10,191.36	4
	01 54 33 40 0940	Air tools, breaker, pavement, 60 lb.		1			192.0	hr	$ 1.30	$ 249.60	
	01 54 33 40 1000	Hose w/couplings 50 ft., 1" dia		4			192.0	hr	$ 0.51	$ 391.68	
	01 54 33 40 7200	Pickup Truck - 3/4 ton 4x4		1			192.0	hr	$ 13.08	$ 2,511.36	1
Transportation Costs	01 54 33 20 5310	Dump Truck - 4 axle, 18 CY		4			12.0	hr	$ 82.60	$ 3,964.80	5
	Truck Driver, Heavy		Drhv	4			12.0	hr	$ 52.25	$ 2,508.00	
	01 54 33 40 7300	Tractor, 4x2, 220hp		1			2.0	hr	$ 34.90	$ 69.80	6
	01 54 33 40 6500	Trailer, platform, flush deck, 2 axle, 25 ton		1			2.0	hr	$ 13.08	$ 26.16	
	Truck Driver, Heavy		Trhv	1			2.0	hr	$ 52.25	$ 104.50	
Miscellaneous											
Disposal Fee - Metal	02 41 19.23 0950					50		ton	$ 90.00	$ 4,500.00	
Demolished Concrete Handling					1560						7
	01 54 33 20 4760	Loader - 5-1/4 to 5-3/4 CY 290hp		1			45.0	hr	$ 116.68	$ 5,250.60	
	Equipment Operator, Medium Equipment		Eqmd	1			45.0	hr	$ 67.75	$ 3,048.75	
	01 54 33 40 6410	Toilet, portable chemical		1			192.0	hr	$ 1.60	$ 307.20	
Total										**$ 240,435.81**	

Reference Information
1 - From Nielson Construction services contract with Energy West Mining - Includes 3/4 ton 4x4 truck, metal tool box, acetylene kit, rack for oxygen and acetylene, 1/2" electric drill, 71/4 " circular saw, 9" grinder.
2 - Concrete rubble disposed of as fill or permanently backfilled inside portals.
3 - Base on a concrete demolition production of 50 cubic yards per 8 hour shift. (Reference: http://www.indeco-breakers.com).
4 - Added 5% for larger size compressor.
5 - For haul of concrete rubble to fill area on site. Time estimate is 30 minutes for one round trip.
6 - For haul of steel demolition material to Nielsen's landfill. Distance is approximately 11.0 miles one-way. Time estimate is 1.0 hours for one round trip.
7 - A swell factor of 1.3 is used for crushed concrete.

Conveyor System 1-S											
Description Conveyor System	Means Reference Number [29 Nielsen Construction Cost Data]	Equipment	Labor	Quantity (number)	Volume (cy)	Weight (tons)	Time (hr)	Unit	Cost	Total Cost	Ref.
Steel Demolition Cost						50					
	Foreman Average, Outside		Foreman	1			20.0	hr	$ 71.20	$ 1,424.00	
	Common Building Labor		CLAB	2			20.0	hr	$ 52.70	$ 2,108.00	
	01 54 33 60 2720	Crane 100 ton		1			20.0	hr	$ 206.25	$ 4,125.00	
	Equipment Operator, Crane or Shovel		Eqhv	1			20.0	hr	$ 69.45	$ 1,389.00	
	01 54 33 40 7200	Pickup Truck - 3/4 ton 4x4		1			20.0	hr	$ 13.08	$ 261.60	1
Concrete Demolition Cost	N/A										2, 3
Transportation Costs	01 54 33 40 6500	Trailer, platform, flush deck, 2 axle, 25 ton		1			5.0	hr	$ 13.90	$ 69.50	5
	01 54 33 40 7300	Tractor, 4x2, 220hp		1			5.0	hr	$ 34.90	$ 174.50	
	Truck Driver, Heavy		Drhv	1			5.0	hr	$ 52.25	$ 261.25	
Miscellaneous											
Disposal Fee - Metal	02 41 19.23 0950					50		ton	$ 90.00	$ 4,500.00	
Demolished Concrete Handling	N/A										
	01 54 33 40 6410	Toilet, portable chemical		1			20.0	hr	$ 1.60	$ 32.00	
Total										**$ 14,344.85**	

Reference Information

1 - From Nielson Construction services contract with Energy West Mining - Includes 3/4 ton 4x4 truck, metal tool box, acetylene kit, rack for oxygen and acetylene, 1/2" electric drill, 71/4 " circular saw, 9" grinder.

2 - Concrete rubble disposed of as fill or permanently backfilled inside portals.

3 - Base on a concrete demolition production of 200 cubic yards per 8 hour shift. (Reference: http://www.indeco-breakers.com).

5 - For haul of steel demolition material to Nielsen's landfill. Distance is approximately 11.0 miles one-way. Time estimate is 1.0 hours for one round trip.

Description	Means Reference Number (Building Construction Cost Data)	Equipment	Labor	Quantity (number)	Volume (cy)	Weight (tons)	Time (hr)	Unit	Cost	Total Cost	Ref.
Bent Structure 1-T											
Steel Demolition Cost						20					
	Foreman Average, Outside		Foreman	1			16.0	hr	$ 71.20	$ 1,139.20	
	Common Building Labor		CLAB	2			16.0	hr	$ 52.70	$ 1,686.40	
	01 54 33 60 2720	Crane 100 ton		1			16.0	hr	$ 206.25	$ 3,300.00	
	Equipment Operator, Crane or Shovel		Eqhv	1			16.0	hr	$ 69.45	$ 1,111.20	
	01 54 33 40 7200	Pickup Truck - 3/4 ton 4x4		1			16.0	hr	$ 13.08	$ 209.28	1
Concrete Demolition Cost	N/A										2, 3
Transportation Costs	01 54 33 40 6500	Trailer, platform, flush deck, 2 axle, 25 ton		1			2.0	hr	$ 13.90	$ 27.80	5
	01 54 33 40 7300	Tractor, 4x2, 220hp		1			2.0	hr	$ 34.90	$ 69.80	
	Truck Driver, Heavy		Drhv	1			2.0	hr	$ 52.25	$ 104.50	
Miscellaneous											
Disposal Fee - Metal	02 41 19.23.0950					20		ton	$ 90.00	$ 1,800.00	
Demolished Concrete Handling	N/A										
	01 54 33 40 6410	Toilet, portable chemical		1			16.0	hr	$ 1.60	$ 25.60	
Total										**$ 9,473.78**	

Reference Information
1 - From Nielson Construction services contract with Energy West Mining - Includes 3/4 ton 4x4 truck, metal tool box, acetylene kit, rack for oxygen and acetylene, 1/2" electric drill, 71/4 " circular saw, 9" grinder.
2 - Concrete rubble disposed of as fill or permanently backfilled inside portals.
3 - Base on a concrete demolition production of 200 cubic yards per 8 hour shift. (Reference: http://www.indeco-breakers.com).

5 - For haul of steel demolition material to Nielsen's landfill. Distance is approximately 11.0 miles one-way. Time estimate is 1.0 hours for one round trip.

Crusher 1-U											
Description / Category	Construction Service Number / Description	Equipment		Quantity Number	Volume	Weight Tons	Time	Unit	Cost	Total Cost	Ref.
Steel Demolition Cost						15					
	Foreman Average, Outside		Foreman	1			8.0	hr	$ 71.20	$ 569.60	
	Common Building Labor		CLAB	2			8.0	hr	$ 52.70	$ 843.20	
	01 54 33 60 2720	Crane 100 ton		1			8.0	hr	$ 206.25	$ 1,650.00	
	Equipment Operator, Crane or Shovel		Eqhv	1			8.0	hr	$ 69.45	$ 555.60	
	01 54 33 40 7200	Pickup Truck - 3/4 ton 4x4		1			8.0	hr	$ 13.08	$ 104.64	1
Concrete Demolition Cost	N/A										2, 3
Transportation Costs	01 54 33 40 6500	Trailer, platform, flush deck, 2 axle, 25 ton		1			2.0	hr	$ 13.90	$ 27.80	5
	01 54 33 40 7300	Tractor, 4x2, 220hp		1			2.0	hr	$ 34.90	$ 69.80	
	Truck Driver, Heavy		Drhv	1			2.0	hr	$ 52.25	$ 104.50	
Miscellaneous											
Disposal Fee - Metal	02 41 19.23 0950					15		ton	$ 90.00	$ 1,350.00	
Demolished Concrete Handling	N/A										
	01 54 33 40 6410	Toilet, portable chemical		1			8.0	hr	$ 1.60	$ 12.80	
Total										**$ 5,287.94**	

Reference Information
1 - From Nielson Construction services contract with Energy West Mining - Includes 3/4 ton 4x4 truck, metal tool box, acetylene kit, rack for oxygen and acetylene, 1/2" electric drill, 71/4 " circular saw, 9" grinder.
2 - Concrete rubble disposed of as fill or permanently backfilled inside portals.
3 - Base on a concrete demolition production of 200 cubic yards per 8 hour shift. (Reference: http://www.indeco-breakers.com).

5 - For haul of steel demolition material to Nielsen's landfill. Distance is approximately 11.0 miles one-way. Time estimate is 1.0 hours for one round trip.

Breaker Station 1-V

Description / Breakdown	Category Number / Description	Equipment		Quantity / Number	Volume / Area	Weight / Length	Time	Unit	Cost	Total Cost	Ref.
Steel Demolition Cost						50					
	Foreman Average, Outside		Foreman	1			20.0	hr	$ 71.20	$ 1,424.00	
	Common Building Labor		CLAB	2			20.0	hr	$ 52.70	$ 2,108.00	
	01 54 33 60 2720	Crane 100 ton		1			20.0	hr	$ 206.25	$ 4,125.00	
	Equipment Operator, Crane or Shovel		Eqhv	1			20.0	hr	$ 69.45	$ 1,389.00	
	01 54 33 40 7200	Pickup Truck - 3/4 ton 4x4		1			20.0	hr	$ 13.08	$ 261.60	1
Concrete Demolition Cost	N/A										2, 3
Transportation Costs	01 54 33 40 6500	Trailer, platform, flush deck, 2 axle, 25 ton		1			5.0	hr	$ 13.90	$ 69.50	5
	01 54 33 40 7300	Tractor, 4x2, 220hp		1			5.0	hr	$ 34.90	$ 174.50	
	Truck Driver, Heavy		Drhv	1			5.0	hr	$ 52.25	$ 261.25	
Miscellaneous											
Disposal Fee - Metal	02 41 19.23 0950					50		ton	$ 90.00	$ 4,500.00	
Demolished Concrete Handling	N/A										
	01 54 33 40 6410	Toilet, portable chemical		1			20.0	hr	$ 1.60	$ 32.00	
Total										**$ 14,344.85**	

Reference Information
1 - From Nielson Construction services contract with Energy West Mining - Includes 3/4 ton 4x4 truck, metal tool box, acetylene kit, rack for oxygen and acetylene, 1/2" electric drill, 71/4 " circular saw, 9" grinder.
2 - Concrete rubble disposed of as fill or permanently backfilled inside portals.
3 - Base on a concrete demolition production of 200 cubic yards per 8 hour shift. (Reference: http://www.indeco-breakers.com).

5 - For haul of steel demolition material to Nielsen's landfill. Distance is approximately 11.0 miles one-way. Time estimate is 1.0 hours for one round trip.

Truck Loadout 1-W												
Description	**Equipment Reference Number**	**Equipment**	**Labor**	**Quantity (Number)**	**Volume (cy)**	**Weight (tons)**	**Time**		**Cost**	**Total Cost**		**Ref.**
Steel Demolition Cost												
	Foreman Average, Outside		Foreman	1		304						
	Common Building Labor		CLAB	2			122.0	hr	$ 71.20	$ 8,686.40		
	01 54 33 60 2720	Crane 100 ton		1			122.0	hr	$ 52.70	$ 12,858.80		
	Equipment Operator, Crane or Shovel		Eqhv	1			122.0	hr	$ 206.25	$ 25,162.50		
	01 54 33 40 7200	Pickup Truck - 3/4 ton 4x4		1			122.0	hr	$ 69.45	$ 8,472.90		
Concrete Demolition Cost	N/A						122.0	hr	$ 13.08	$ 1,595.76		1
Transportation Costs	01 54 33 40 6500	Trailer, platform, flush deck, 2 axle, 25 ton		1								2, 3
	01 54 33 40 7300	Tractor, 4x2, 220hp		1			20.0	hr	$ 13.90	$ 278.00		5
	Truck Driver, Heavy		Drhv	1			20.0	hr	$ 34.90	$ 698.00		
Miscellaneous							20.0	hr	$ 52.25	$ 1,045.00		
Disposal Fee - Metal	02 41 19 23 0950					304		ton	$ 90.00	$ 27,360.00		
Demolished Concrete Handling	N/A											
	01 54 33 40 6410	Toilet, portable chemical		1			122.0	hr	$ 1.60	$ 195.20		
Total										$ 88,352.56		

Reference Information
1 - From Nielson Construction services contract with Energy West Mining - Includes 3/4 ton 4x4 truck, metal tool box, acetylene kit, rack for oxygen and acetylene, 1/2" electric drill, 71/4 " circular saw, 9" grinder.
2 - Concrete rubble disposed of as fill or permanently backfilled inside portals.
3 - Base on a concrete demolition production of 200 cubic yards per 8 hour shift. (Reference: http://www.indeco-breakers.com).

5 - For haul of steel demolition material to Nielsen's landfill. Distance is approximately 11.0 miles one-way. Time estimate is 1.0 hours for one round trip.

Skid Type Storage 1-X											
Description	Reference Number (RS Means Construction Publication)	Equipment	Type	Quantity (Number)	Volume (CY)	Weight (tons)	Time (hr)	Unit	Cost	Total Cost	Ref.
Skid Type Storage											
Steel Demolition Cost						5					
	Foreman Average, Outside		Foreman	1			2.0	hr	$ 71.20	$ 142.40	
	Common Building Labor		CLAB	2			5.0	hr	$ 52.70	$ 527.00	
	01 54 33 60 2720	Crane 100 ton		1			2.0	hr	$ 206.25	$ 412.50	
	Equipment Operator, Crane or Shovel		Eqhv	1			2.0	hr	$ 69.45	$ 138.90	
	01 54 33 40 7200	Pickup Truck - 3/4 ton 4x4		1			2.0	hr	$ 13.08	$ 26.16	1
Concrete Demolition Cost	N/A										2, 3
Transportation Costs	01 54 33 40 8500	Trailer, platform, flush deck, 2 axle, 25 ton		1			1.0	hr	$ 13.90	$ 13.90	5
	01 54 33 40 7300	Tractor, 4x2, 220hp		1			1.0	hr	$ 34.90	$ 34.90	
	Truck Driver, Heavy		Drhv	1			1.0	hr	$ 52.25	$ 52.25	
Miscellaneous											
Disposal Fee - Metal	02 41 19.23 0950					5		ton	$ 90.00	$ 450.00	
Demolished Concrete Handling	N/A										
	01 54 33 40 6410	Toilet, portable chemical		1			2.0	hr	$ 1.60	$ 3.20	
Total										$ 1,801.21	

Reference Information

1 - From Nielson Construction services contract with Energy West Mining - Includes 3/4 ton 4x4 truck, metal tool box, acetylene kit, rack for oxygen and acetylene, 1/2" electric drill, 71/4 " circular saw, 9" grinder.

2 - Concrete rubble disposed of as fill or permanently backfilled inside portals.

3 - Base on a concrete demolition production of 200 cubic yards per 8 hour shift. (Reference: http://www.indeco-breakers.com).

5 - For haul of steel demolition material to Nielsen's landfill. Distance is approximately 11.0 miles one-way. Time estimate is 1.0 hours for one round trip.

Guardrail 1-Y											
Description Guardrail	Means Reference Number (2011 Heavy Construction Cost Data)	Equipment	Labor	Crew Size Number	Volume Factor	Production Factor	Time	Unit	Cost	Total Cost	Ref.
Steel Demolition Cost						130					
	Foreman Average, Outside		Foreman	1			24.0	hr	$ 71.20	$ 1,708.80	
	Common Building Labor		CLAB	3			24.0	hr	$ 52.70	$ 3,794.40	
	01 54 33 40 0470	Back-hoe 112hp		1			24.0	hr	$ 76.00	$ 1,824.00	
	Equipment Operator, Light Equipment		Eqlt	1			24.0	hr	$ 65.15	$ 1,563.60	
	01 54 33 40 0700	Compressor - 600 CFM		1			24.0	hr	$ 53.08	$ 1,273.92	
	01 54 33 40 0940	Air tools, breaker, pavement, 60 lb.		1			24.0	hr	$ 1.30	$ 31.20	
	01 54 33 40 1000	Hose w/couplings 50 ft., 1" dia.		4			24.0	hr	$ 0.51	$ 48.96	
	01 54 33 40 7200	Pickup Truck - 3/4 ton 4x4		1			24.0	hr	$ 13.08	$ 313.92	1
Concrete Demolition Cost	N/A										2, 3
Transportation Costs	01 54 33 40 6500	Trailer, platform, flush deck, 2 axle, 25 ton		1			9.0	hr	$ 13.90	$ 125.10	5
	01 54 33 40 7300	Tractor, 4x2, 220hp		1			9.0	hr	$ 34.90	$ 314.10	
	Truck Driver, Heavy		Drhv	1			9.0	hr	$ 52.25	$ 470.25	
Miscellaneous											
Disposal Fee - Metal	02 41 19.23 0950					130		ton	$ 90.00	$ 11,700.00	
Demolished Concrete Handling	N/A										
	01 54 33 40 6410	Toilet, portable chemical		1			2.0	hr	$ 1.60	$ 3.20	
Total										**$ 23,171.45**	

Reference Information
1 - From Nielson Construction services contract with Energy West Mining - Includes 3/4 ton 4x4 truck, metal tool box, acetylene kit, rack for oxygen and acetylene, 1/2" electric drill, 71/4 " circular saw, 9" grinder.
2 - Concrete rubble disposed of as fill or permanently backfilled inside portals.
3 - Base on a concrete demolition production of 200 cubic yards per 8 hour shift. (Reference: http://www.indeco-breakers.com).

5 - For haul of steel demolition material to Nielsen's landfill. Distance is approximately 11.0 miles one-way. Time estimate is 1.0 hours for one round trip.

Crane Pad 1-Z												
Description Crane Pad	**Means Reference Number** (2011 Heavy Construction Cost Data)	**Equipment**	**Labor**	**Quantity (number)**	**Volume (cy)**	**Weight (tons)**	**Time (hrs)**	**Units**	**Cost**	**Total Cost**	**Ref.**
Steel Demolition Cost						27					
	Foreman Average, Outside		Foreman	1			11.0	hr	$ 71.20	$ 783.20	
	Common Building Labor		CLAB	2			11.0	hr	$ 52.70	$ 1,159.40	
	01 54 33 60 2720	Crane 100 ton		1			11.0	hr	$ 206.25	$ 2,268.75	
	Equipment Operator, Crane or Shovel		Eqhv	1			11.0	hr	$ 69.45	$ 763.95	
	01 54 33 40 7200	Pickup Truck - 3/4 ton 4x4		1			11.0	hr	$ 13.08	$ 143.88	1
Concrete Demolition Cost					30						2, 3
	Foreman Average, Outside		Foreman	1			1.0	hr	$ 71.20	$ 71.20	
	Common Building Labor		CLAB	2			1.0	hr	$ 52.70	$ 105.40	
	01 54 33 20 0200	Excavator - 1.5 CY		1			1.0	hr	$ 118.43	$ 118.43	
	Equipment Operator, Medium Equipment		Eqmd	1			1.0	hr	$ 67.75	$ 67.75	
	01 54 33 20 0347	Hydraulic Hammer		1			1.0	hr	$ 44.03	$ 44.03	
	01 54 33 20 0200	Excavator - 1.5 CY		1			1.0	hr	$ 118.43	$ 118.43	
	01 54 33 20 0342	Bucket Thumb		1			1.0	hr	$ 21.38	$ 21.38	
	Equipment Operator, Medium Equipment		Eqmd	1			1.0	hr	$ 67.75	$ 67.75	
	01 54 33 40 7200	Pickup Truck - 3/4 ton 4x4		1			1.0	hr	$ 13.08	$ 13.08	1
Transportation Costs	01 54 33 40 6500	Trailer, platform, flush deck, 2 axle, 25 ton		1			1.0	hr	$ 13.90	$ 13.90	5
	01 54 33 40 7300	Tractor, 4x2, 220hp		1			1.0	hr	$ 34.90	$ 34.90	
	Truck Driver, Heavy		Drhv	1			1.0	hr	$ 52.25	$ 52.25	
Miscellaneous											
Disposal Fee - Metal	02 41 19.23 0950					10		ton	$ 90.00	$ 900.00	
Demolished Concrete Handling					39						6
	01 54 33 20 4760	Loader - 5-1/4 to 5-3/4 CY 290hp		1			1.0	hr	$ 116.68	$ 116.68	
	Equipment Operator, Medium Equipment		Eqmd	1			1.0	hr	$ 67.75	$ 67.75	
	01 54 33 40 6410	Toilet, portable chemical		1			5.0	hr	$ 1.60	$ 8.00	
Total										$ 6,940.11	

Reference Information

1 - From Nielson Construction services contract with Energy West Mining - Includes 3/4 ton 4x4 truck, metal tool box, acetylene kit, rack for oxygen and acetylene, 1/2" electric drill, 71/4 " circular saw, 9" grinder.
2 - Concrete rubble disposed of as fill or permanently backfilled inside portals.
3 - Base on a concrete demolition production of 200 cubic yards per 8 hour shift. (Reference: http://www.indeco-breakers.com).
4 - Added 5% for larger size compressor.
5 - For haul of steel demolition material to Nielsen's landfill. Distance is approximately 11.0 miles one-way. Time estimate is 1.0 hours for one round trip.
6 - A swell factor of 1.3 is used for crushed concrete.

Salt Storage 1-AA											
Description Salt Storage	**Means Reference Number (2004 Heavy Construction Cost Data)**	**Equipment**	**Crew Type**	**Quantity (number)**	**Volume (CY)**	**Weight (ton)**	**Time (hr)**		**Cost**	**Total Cost**	**Ref.**
Steel Demolition Cost						2					
	Foreman Average, Outside		Foreman	1			2.0	hr	$ 71.20	$ 142.40	
	Common Building Labor		CLAB	1			2.0	hr	$ 52.70	$ 105.40	
	01 54 33 60 2720	Crane 100 ton		1			2.0	hr	$ 206.25	$ 412.50	
	Equipment Operator, Crane or Shovel		Eqhv	1			2.0	hr	$ 69.45	$ 138.90	
	01 54 33 40 7200	Pickup Truck - 3/4 ton 4x4		1			2.0	hr	$ 13.08	$ 26.16	1
Concrete Demolition Cost					150						2, 3
	Foreman Average, Outside		Foreman	1			6.0	hr	$ 71.20	$ 427.20	
	Common Building Labor		CLAB	2			6.0	hr	$ 52.70	$ 632.40	
	01 54 33 20 0200	Excavator - 1.5 CY		1			6.0	hr	$ 118.43	$ 710.58	
	Equipment Operator, Medium Equipment		Eqmd	1			6.0	hr	$ 67.75	$ 406.50	
	01 54 33 20 0347	Hydraulic Hammer		1			6.0	hr	$ 44.03	$ 264.18	
	01 54 33 20 0200	Excavator - 1.5 CY		1			6.0	hr	$ 118.43	$ 710.58	
	01 54 33 20 0342	Bucket Thumb		1			6.0	hr	$ 21.38	$ 128.28	
	Equipment Operator, Medium Equipment		Eqmd	1			6.0	hr	$ 67.75	$ 406.50	
	01 54 33 40 0700	Compressor - 600 CFM		1			6.0	hr	$ 53.08	$ 318.48	4
	01 54 33 40 0940	Air tools, breaker, pavement, 60 lb.		1			6.0	hr	$ 1.30	$ 7.80	
	01 54 33 40 1000	Hose w/couplings 50 ft., 1" dia.		4			6.0	hr	$ 0.51	$ 12.24	
	01 54 33 40 7200	Pickup Truck - 3/4 ton 4x4		1			6.0	hr	$ 13.08	$ 78.48	1
Transportation Costs	01 54 33 40 6500	Trailer, platform, flush deck, 2 axle, 25 ton		1			1.0	hr	$ 13.90	$ 13.90	5
	01 54 33 40 7300	Tractor, 4x2, 220hp		1			1.0	hr	$ 34.90	$ 34.90	
	Truck Driver, Heavy		Drhv	1			1.0	hr	$ 52.25	$ 52.25	
Miscellaneous											
Disposal Fee - Metal	02 41 19.23 0950					2		ton	$ 90.00	$ 180.00	
Demolished Concrete Handling					195						6
	01 54 33 20 4760	Loader - 5-1/4 to 5-3/4 CY 290hp		1			1.0	hr	$ 116.68	$ 116.68	
	Equipment Operator, Medium Equipment		Eqmd	1			1.0	hr	$ 67.75	$ 67.75	
	01 54 33 40 6410	Toilet, portable chemical		1			6.0	hr	$ 1.60	$ 9.60	
Total										$ 5,403.68	

Reference Information
1 - From Nielson Construction services contract with Energy West Mining - Includes 3/4 ton 4x4 truck, metal tool box, acetylene kit, rack for oxygen and acetylene, 1/2" electric drill, 71/4 " circular saw, 9" grinder.
2 - Concrete rubble disposed of as fill or permanently backfilled inside portals.
3 - Base on a concrete demolition production of 200 cubic yards per 8 hour shift. (Reference: http://www.indeco-breakers.com).
4 - Added 5% for larger size compressor.
5 - For haul of steel demolition material to Nielsen's landfill. Distance is approximately 11.0 miles one-way. Time estimate is 1.0 hours for one round trip.
6 - A swell factor of 1.3 is used for crushed concrete.

Miscellaneous Culverts 1-BB											
Description Miscellaneous Culverts	Means Reference Number (2012 Heavy Construction Cost Data)	Equipment	Labor	Quantity (number)	Volume (cy)	Weight (tons)	Time (hr)	Unit	Cost	Total Cost	Ref.
Steel Demolition Cost						316					
	Foreman Average, Outside		Foreman	1			126.4	hr	$ 71.20	$ 8,999.68	
	Common Building Labor		CLAB	2			126.4	hr	$ 52.70	$ 13,322.56	
	Excavator - 1.5 CY	Excavator - 1.5 CY		1			126.4	hr	$ 118.43	$ 14,969.55	
	Equipment Operator, Medium Equipment		Eqmd	1			126.4	hr	$ 67.75	$ 8,563.60	
	01 54 33 40 7200	Pickup Truck - 3/4 ton 4x4		1			126.4	hr	$ 13.08	$ 1,653.31	1
Concrete Demolition Cost	N/A										2, 3
Transportation Costs	01 54 33 40 6500	Trailer, platform, flush deck, 2 axle, 25 ton		1			21.0	hr	$ 13.90	$ 291.90	5
	01 54 33 40 7300	Tractor, 4x2, 220hp		1			21.0	hr	$ 34.90	$ 732.90	
	Truck Driver, Heavy		Drhv	1			21.0	hr	$ 52.25	$ 1,097.25	
Miscellaneous											
Disposal Fee - Metal	02 41 19.23 0950					316		ton	$ 90.00	$ 28,440.00	
Demolished Concrete Handling	N/A										
	01 54 33 40 6410	Toilet, portable chemical		1			126.4	hr	$ 1.60	$ 202.24	
Total										$ 76,272.99	

Reference Information
1 - From Nielson Construction services contract with Energy West Mining - Includes 3/4 ton 4x4 truck, metal tool box, acetylene kit, rack for oxygen and acetylene, 1/2" electric drill, 71/4 " circular saw, 9" grinder.
2 - Concrete rubble disposed of as fill or permanently backfilled inside portals.
3 - Base on a concrete demolition production of 200 cubic yards per 8 hour shift. (Reference: http://www.indeco-breakers.com).

5 - For haul of steel demolition material to Nielsen's landfill. Distance is approximately 11.0 miles one-way. Time estimate is 1.0 hours for one round trip.

Concrete Pad 1-CC												
Description Concrete Pad	Means Reference Book	Equipment	Labor	Quantity (number)	Volume (cy)	Weight (tons)	Time (hr)	Unit	Cost	Total Cost	Ref.
Steel Demolition Cost						10					
	Foreman Average, Outside		Foreman	1			42.0	hr	$ 71.20	$ 2,990.40	
	Common Building Labor		CLAB	2			42.0	hr	$ 52.70	$ 4,426.80	
	01 54 33 20 0200	Excavator - 1.5 CY		1			42.0	hr	$ 118.43	$ 4,974.06	
	Equipment Operator, Medium Equipment		Eqmd	1			42.0	hr	$ 67.75	$ 2,845.50	
	01 54 33 20 0347	Hydraulic Hammer		1			42.0	hr	$ 44.03	$ 1,849.26	
	01 54 33 40 7200	Pickup Truck - 3/4 ton 4x4		1			42.0	hr	$ 13.08	$ 549.36	1
Concrete Demolition Cost					2106						2, 3
	Foreman Average, Outside		Foreman	1			84.0	hr	$ 71.20	$ 5,980.80	
	Common Building Labor		CLAB	2			84.0	hr	$ 52.70	$ 8,853.60	
	01 54 33 20 0200	Excavator - 1.5 CY		1			84.0	hr	$ 118.43	$ 9,948.12	
	Equipment Operator, Medium Equipment		Eqmd	1			84.0	hr	$ 67.75	$ 5,691.00	
	01 54 33 20 0347	Hydraulic Hammer		1			84.0	hr	$ 44.03	$ 3,698.52	
	01 54 33 20 0200	Excavator - 1.5 CY		1			84.0	hr	$ 118.43	$ 9,948.12	
	01 54 33 20 0342	Bucket Thumb		1			84.0	hr	$ 21.38	$ 1,795.92	
	Equipment Operator, Medium Equipment		Eqmd	1			84.0	hr	$ 67.75	$ 5,691.00	
	01 54 33 40 7200	Pickup Truck - 3/4 ton 4x4		1			84.0	hr	$ 13.08	$ 1,098.72	1
Transportation Costs	01 54 33 40 6500	Trailer, platform, flush deck, 2 axle, 25 ton		1			1.0	hr	$ 13.90	$ 13.90	5
	01 54 33 40 7300	Tractor, 4x2, 220hp		1			1.0	hr	$ 34.90	$ 34.90	
	Truck Driver, Heavy		Drhv	1			1.0	hr	$ 52.25	$ 52.25	
Miscellaneous											
Disposal Fee - Metal	02 41 19.23 0950					10		ton	$ 90.00	$ 900.00	
Demolished Concrete Handling					2737.8						6
	01 54 33 20 4760	Loader - 5-1/4 to 5-3/4 CY 290hp		1			42.0	hr	$ 116.68	$ 4,900.56	
	Equipment Operator, Medium Equipment		Eqmd	1			42.0	hr	$ 67.75	$ 2,845.50	
	01 54 33 40 6410	Toilet, portable chemical		1			84.0	hr	$ 1.60	$ 134.40	
Total										$ 79,222.69	

Reference Information
1 - From Nielson Construction services contract with Energy West Mining - Includes 3/4 ton 4x4 truck, metal tool box, acetylene kit, rack for oxygen and acetylene, 1/2" electric drill, 71/4 " circular saw, 9" grinder.
2 - Concrete rubble disposed of as fill or permanently backfilled inside portals.
3 - Base on a concrete demolition production of 200 cubic yards per 8 hour shift. (Reference: http://www.indeco-breakers.com).
4 - Added 5% for larger size compressor.
5 - For haul of steel demolition material to Nielsen's landfill. Distance is approximately 11.0 miles one-way. Time estimate is 1.0 hours for one round trip.
6 - A swell factor of 1.3 is used for crushed concrete.

Asphalt Removal 1-DD											
Description	Activity Description	Equipment	Labor	Quantity (number)	Volume (cy)	Weight (tons)	Time (hr)	Unit	Cost	Total Cost	Ref.
Steel Demolition Cost	N/A										
Asphalt Demolition Cost					2618						
	Foreman Average, Outside		Foreman	1			15.0	hr	$ 71.20	$ 1,068.00	1
	01 54 33 20 4760	Loader - 5.5 CY		1			15.0	hr	$ 116.68	$ 1,750.20	
	Equipment Operator, Medium Equipment		Eqmd	1			15.0	hr	$ 67.75	$ 1,016.25	
Transportation Costs	01 54 33 20 5310	Dump Truck - 4 axle, 18 CY		4			57.0	hr	$ 13.90	$ 3,169.20	3
	Truck Driver, Light		Trlt	4			57.0	hr	$ 50.75	$ 11,571.00	
Miscellaneous											
Disposal Fee - Metal	02 41 19 19 0100							ton	$ -	$ -	4
					3403.4						5
	01 54 33 40 7200	Pickup Truck - 3/4 ton 4x4		1			57.0		$ 13.08	$ 745.56	
	01 54 33 40 8410	Toilet, portable chemical		1			57.0	hr	$ 1.60	$ 91.20	
Total										$ 19,411.41	

Reference Information
1 - Base on a asphalt demolition production of 5 minutes per loaded truck (15cy). Includes scoop and dump into truck.
2 - From Nielson Construction services contract with Energy West Mining - Includes 3/4 ton 4x4 truck, metal tool box, acetylene kit, rack for oxygen and acetylene, 1/2" electric drill, 71/4 " circular saw, 9" grinder.
3 - For haul of asphalt demo material to Nielsen's landfill. Distance is approximately 11.0 miles one-way. Time estimate is 1.0 hours for one round trip.
4 - Land fill disposal fees are waived sa this material will be reused as an appropriate fill material.
5 - A swell factor of 1.3 is used for crushed concrete.

Portal Closure 2-A											
Portal											
Steel Demolition Cost	(see note)										
Concrete Demolition Cost	(see note)										
Miscellaneous											
Portal Closure	AML1		27				ea	$ 5,200.00	$ 140,400.00		
									$ 140,400.00		

Note: Costs are all inclusive of equipment and labor to backfill and seal portal.

Earthwork Costs Summary

Cottonwood/Wilberg Mine
Grimes Wash Facility
C/015/0019

Revised January 2012

Earthwork Summary	
Description	Cost
Stage 1 Dozer/Track-Hoe Work	$ 381,945.26
Stage 1 Scraper Work	$ 82,107.00
Stage II Dozer/Track-Hoe Work	$ 188,982.16
Stage II Scraper Work	$ 20,552.00
Total	$ [illegible]

Means Reference Number	Description	Equipment Rental Cost	Operator Labor Cost	Equipment Hourly Cost	Number of Units	Total Equipment Cost	Units	Quantity	Units	Production Rate	Units	Equip. & Labor Time (Hrs)	Units	Cost
01 54 33 20 4360	Dozer - 410hp	$ 263.13	$ 67.75	$ 330.88	1	330.88	$/HR	109,636.8	CY	158.0	CY/HR	693.9	HR	$ 229,597.63
01 54 33 20 0320	Excavator - 2.5 CY	$ 201.63	$ 67.75	$ 269.38	1	269.38	$/HR			(see note)		346.95	HR	$ 93,461.39
														$ 323,059.02
Miscellaneous														
	Foreman Average, Outside			$ 71.20	1	$ 71.20	$/HR					693.9	HR	$ 49,406.00
01 54 33 40 6410	Toilet, portable chemical			$ 1.60	1							693.9	HR	$ 1,110.24
01 54 33 40 7200	Pickup Truck - 3/4 ton 4x4			$ 13.08	1	$ 13.08	$/HR					639.9	HR	$ 8,370.00
	Total													$ 381,945.26

Note: Track-hoe is utilized to support Dozer activities. Usage is dictated by 1/2 Dozer hours.

Stage I Scraper Work

Means Reference Number	Station(s) and Type Equipment	Hourly Equipment Cost	Operators Hourly Wage Rate	Hourly Cost	Number of Units	Total Hourly Costs	Units	Quantity	Units	Production Rate	Units	Estim. Labor Time/Dia.	Units	Cost
	Station 5+00 - 6+00 to 1+00 - 2+00													
01 54 33 20 3600	Scraper - selp prop duale 31 CY	$ 347.13	$ 67.75	$ 414.88	1	$ 414.88	$/HR	1028.3	CY	515	CY/HR	2	HR	$ 830.00
	Station 5+00 - 6+00 to 2+00 - 3+00													
01 54 33 20 3600	Scraper - selp prop duale 31 CY	$ 347.13	$ 67.75	$ 414.88	1	$ 414.88	$/HR	2990	CY	772	CY/HR	3.9	HR	$ 1,618.00
	Station 6+00 - 7+00 to 2+00 - 3+00													
01 54 33 20 3600	Scraper - selp prop duale 31 CY	$ 347.13	$ 67.75	$ 414.88	1	$ 414.88	$/HR	156	CY	605	CY/HR	0.3	HR	$ 124.00
	Station 6+00 - 7+00 to 3+00 - 4+00													
01 54 33 20 3600	Scraper - selp prop duale 31 CY	$ 347.13	$ 67.75	$ 414.88	1	$ 414.88	$/HR	4136.6	CY	908	CY/HR	4.6	HR	$ 1,908.00
	Station 6+00 - 7+00 to 4+00 - 5+00													
01 54 33 20 3600	Scraper - selp prop duale 31 CY	$ 347.13	$ 67.75	$ 414.88	1	$ 414.88	$/HR	5255.9	CY	498	CY/HR	10.6	HR	$ 4,398.00
	Station 7+00 - 8+00 to 4+00 - 5+00													
01 54 33 20 3600	Scraper - selp prop duale 31 CY	$ 347.13	$ 67.75	$ 414.88	1	$ 414.88	$/HR	3071.9	CY	396	CY/HR	7.8	HR	$ 3,236.00
	Station 7+00 - 8+00 to 12+00 - 13+00													
01 54 33 20 3600	Scraper - selp prop duale 31 CY	$ 347.13	$ 67.75	$ 414.88	1	$ 414.88	$/HR	5180.5	CY	643	CY/HR	8.1	HR	$ 3,361.00
	Station 8+00 - 9+00 to 12+00 - 13+00													
01 54 33 20 3600	Scraper - selp prop duale 31 CY	$ 347.13	$ 67.75	$ 414.88	1	$ 414.88	$/HR	4249.7	CY	702	CY/HR	6.1	HR	$ 2,531.00
	Station 8+00 - 9+00 to 13+00 - 14+00													
01 54 33 20 3600	Scraper - selp prop duale 31 CY	$ 347.13	$ 67.75	$ 414.88	1	$ 414.88	$/HR	4794.4	CY	618	CY/HR	7.8	HR	$ 3,236.00
	Station 8+00 - 9+00 to 14+00 - 15+00													
01 54 33 20 3600	Scraper - selp prop duale 31 CY	$ 347.13	$ 67.75	$ 414.88	1	$ 414.88	$/HR	5830.5	CY	594	CY/HR	9.8	HR	$ 4,066.00
	Station 8+00 - 9+00 to 15+00 - 16+00													
01 54 33 20 3600	Scraper - selp prop duale 31 CY	$ 347.13	$ 67.75	$ 414.88	1	$ 414.88	$/HR	3627	CY	532	CY/HR	6.8	HR	$ 2,821.00
	Station 9+00 - 10+00 to 15+00 - 16+00													
01 54 33 20 3600	Scraper - selp prop duale 31 CY	$ 347.13	$ 67.75	$ 414.88	1	$ 414.88	$/HR	2164.5	CY	572	CY/HR	3.8	HR	$ 1,577.00
	Station 9+00 - 10+00 to 16+00 - 16+25													
01 54 33 20 3600	Scraper - selp prop duale 31 CY	$ 347.13	$ 67.75	$ 414.88	1	$ 414.88	$/HR	872.3	CY	551	CY/HR	1.6	HR	$ 664.00
	Station 9+00 - 10+00 to RF 8+00 - 9+00													
01 54 33 20 3600	Scraper - selp prop duale 31 CY	$ 347.13	$ 67.75	$ 414.88	1	$ 414.88	$/HR	872.3	CY	551	CY/HR	1.6	HR	$ 664.00
	Station 9+00 - 10+00 to RF 7+00 - 8+00													
01 54 33 20 3600	Scraper - selp prop duale 31 CY	$ 347.13	$ 67.75	$ 414.88	1	$ 414.88	$/HR	967.2	CY	498	CY/HR	1.9	HR	$ 788.00
	Station 9+00 - 10+00 to RF 7+00 - 8+00													
01 54 33 20 3600	Scraper - selp prop duale 31 CY	$ 347.13	$ 67.75	$ 414.88	1	$ 414.88	$/HR	4394	CY	498	CY/HR	8.8	HR	$ 3,651.00
	Station 9+00 - 10+00 to RF 5+00 - 6+00													
01 54 33 20 3600	Scraper - selp prop duale 31 CY	$ 347.13	$ 67.75	$ 414.88	1	$ 414.88	$/HR	5961.8	CY	454	CY/HR	13.1	HR	$ 5,435.00
	Station 9+00 - 10+00 to RF 4+00 - 5+00													
01 54 33 20 3600	Scraper - selp prop duale 31 CY	$ 347.13	$ 67.75	$ 414.88	1	$ 414.88	$/HR	1870.7	CY	429	CY/HR	4.4	HR	$ 1,825.00
	Station 9+00 - 10+00 to RF 3+00 - 4+00													
01 54 33 20 3600	Scraper - selp prop duale 31 CY	$ 347.13	$ 67.75	$ 414.88	1	$ 414.88	$/HR	1913.6	CY	406	CY/HR	4.7	HR	$ 1,950.00
	Station 9+00 - 10+00 to RF 2+00 - 3+00													
01 54 33 20 3600	Scraper - selp prop duale 31 CY	$ 347.13	$ 67.75	$ 414.88	1	$ 414.88	$/HR	5757.7	CY	386	CY/HR	14.9	HR	$ 6,182.00
	Station 9+00 - 10+00 to RF 1+00 - 2+00													
01 54 33 20 3600	Scraper - selp prop duale 31 CY	$ 347.13	$ 67.75	$ 414.88	1	$ 414.88	$/HR	884	CY	386	CY/HR	2.3	HR	$ 954.00
	Station 10+00 - 11+00 to RF 1+00 - 2+00													
01 54 33 20 3600	Scraper - selp prop duale 31 CY	$ 347.13	$ 67.75	$ 414.88	1	$ 414.88	$/HR	6704.1	CY	377	CY/HR	17.8	HR	$ 7,385.00
	Station 10+00 - 11+00 to RF 0+00 - 1+00													
01 54 33 20 3600	Scraper - selp prop duale 31 CY	$ 347.13	$ 67.75	$ 414.88	1	$ 414.88	$/HR	2588.3	CY	386	CY/HR	6.7	HR	$ 2,780.00
	Sub-Totals							80,213.3	CY			145.4	HR	$ 81,984.00
Miscellaneous														
01 54 33 20 0320	Excavator - 2.5 CY	$ 201.63	$ 67.75	$ 269.38	1	$ 269.38	$/HR			(see note)		74.7	HR	$ 20,123.00
	Total													$ 82,107.00

Note: Track-hoe is used to support the activities of the Scraper. Useage is dictated by 1/2 Scraper hours.

[illegible]														
Means Reference Number	[illegible] Equipment	[illegible] Equipment Cost	[illegible] Wage Rate	Hourly Cost	[illegible]	[illegible]	Units	Quantity	Units	Production Rate	[illegible]	Equip/Labor Time/Dis.	Units	Cost
01 54 33 20 4360	Dozer - 410hp	$ 263.13	$ 67.75	$ 330.88	1	330.88	$/HR	54,141.0	CY	158.00	CY/HR	342.7	HR	$ 113,392.58
01 54 33 20 0320	Excavator - 2.5 CY	$ 201.63	$ 67.75	$ 269.38	1	269.38	$/HR			(see note)		171.35	HR	$ 46,158.26
	Sub-Totals													$ 159,550.84
Miscellaneous														
01 54 33 40 6410	Toilet, portable chemical			$ 1.60	1							342.7	HR	$ 548.32
	Foreman Average, Outside			$ 71.20	1	$ 71.20	$/HR					342.7	HR	$ 24,400.00
01 54 33 40 7200	Pickup Truck - 3/4 ton 4x4			$ 13.08	1	$ 13.08	$/HR					342.7	HR	$ 4,483.00
	Total													$ 188,982.16

Note: Track-hoe is utilized to support Dozer activities. Usage is dictated by 1/2 Dozer hours.

[illegible]														
Means Reference Code	[illegible] Equipment	[illegible] Equipment Cost	Operator Hourly Wage	Hourly Total	[illegible]	[illegible]	Units	Quantity	Units	Production Rate	Units	Equip. Labor Time/Dis.	Units	Cost
	Station 16+00 - 17+00 to 4+00 - 5+00 (1/12)													
01 54 33 20 3600	Scraper - selp prop duale 31 CY	$ 347.13	$ 67.75	$ 414.88	1	$ 414.88	$/HR	780.0	CY	386.0	CY/HR	2	HR	$ 830.00
	Station 16+00 - 17+00 to 5+00 -6+00 (2/12)													
01 54 33 20 3600	Scraper - selp prop duale 31 CY	$ 347.13	$ 67.75	$ 414.88	1	$ 414.88	$/HR	2,400.0	CY	429.0	CY/HR	5.6	HR	$ 2,323.00
	Station 16+00 - 17+00 to 6+00 - 7+00 (3/12)													
01 54 33 20 3600	Scraper - selp prop duale 31 CY	$ 347.13	$ 67.75	$ 414.88	1	$ 414.88	$/HR	2,162.0	CY	482.0	CY/HR	4.5	HR	$ 1,867.00
	Station 17+00 - 18+00 (MC) to 6+00 - 7+00 (RF) (4/12)													
01 54 33 20 3600	Scraper - selp prop duale 31 CY	$ 347.13	$ 67.75	$ 414.88	1	$ 414.88	$/HR	437.0	CY	482.0	CY/HR	0.9	HR	$ 373.00
	Station 17+00 - 18+00 (MC) to 7+00 - 8+00 (RF) (5/12)													
01 54 33 20 3600	Scraper - selp prop duale 31 CY	$ 347.13	$ 67.75	$ 414.88	1	$ 414.88	$/HR	3,467.0	CY	396.0	CY/HR	8.8	HR	$ 3,651.00
	Station 17+00 - 18+00 (MC) to 8+00 - 9+00 (RF) (6/12)													
01 54 33 20 3600	Scraper - selp prop duale 31 CY	$ 347.13	$ 67.75	$ 414.88	1	$ 414.88	$/HR	4,692.0	CY	572.0	CY/HR	8.2	HR	$ 3,402.00
	Station 17+00-18+00 (MC) to 15+00-16+00 (MC) (7/12)													
01 54 33 20 3600	Scraper - selp prop duale 31 CY	$ 347.13	$ 67.75	$ 414.88	1	$ 414.88	$/HR	2,068.0	CY	702.0	CY/HR	2.9	HR	$ 1,203.00
	Station 17+00 - 18+00 to 20+00 - 21+00 (8/12)													
01 54 33 20 3600	Scraper - selp prop duale 31 CY	$ 347.13	$ 67.75	$ 414.88	1	$ 414.88	$/HR	1,329.0	CY	908.0	CY/HR	1.5	HR	$ 622.00
	Station 17+00 - 18+00 to 21+00 - 22+00 (9/12)													
01 54 33 20 3600	Scraper - selp prop duale 31 CY	$ 347.13	$ 67.75	$ 414.88	1	$ 414.88	$/HR	1,281.0	CY	813.0	CY/HR	1.6	HR	$ 664.00
	Station 18+00 - 19+00 to 21+00 - 22+00 (10/12)													
01 54 33 20 3600	Scraper - selp prop duale 31 CY	$ 347.13	$ 67.75	$ 414.88	1	$ 414.88	$/HR	901.0	CY	965.0	CY/HR	0.9	HR	$ 373.00
	Station 18+00 - 19+00 to 22+00 - 23+00 (11/12)													
01 54 33 20 3600	Scraper - selp prop duale 31 CY	$ 347.13	$ 67.75	$ 414.88	1	$ 414.88	$/HR	432.0	CY	908.0	CY/HR	0.5	HR	$ 207.00
	Station 18+00 - 19+00 to 23+00 - 24+00 (12/12)													
	Sub-Totals							19,949.0	CY			37.4	HR	$ 15,515.00
Miscellaneous														
01 54 33 20 0320	Excavator - 2.5 CY	$ 201.63	$ 67.75	$ 269.38	1	$ 269.38	$/HR			(see note)		18.7	HR	$ 5,037.00
	Total													$ 20,552.00

Note: Track-hoe is used to support the activities of the Scraper. Useage is dictated by 1/2 Scraper hours.

Cottonwood Mine Area

Packing[A]													
Volume						21		AC					
Excavator, 2 CY	$ 153.00	$ 67.75			1		7140.0	CY	340	CY/AC			
Subtotal									180	CY/HR	39.7	HR	$8,756
Seeding*/Planting**													$8,756
Seeds													
Final Reclamation Seed Mix			$ 4,111.75	$ 52.70		21	504	lbs	1	Acre/HR	21		$ 5,218.45
Seedlings													
Serviceberry			$ 1.59	$ 52.70	1		400		470	Trees/Day	6.8	HR	$ 994.81
Fourwing Saltbrush			$ 1.59	$ 52.70	1		400		470	Trees/Day	6.8	HR	$ 994.81
Green Mormon Tea			$ 1.59	$ 52.70	1		400		470	Trees/Day	6.8	HR	$ 994.81
Big White Rabbitbrush			$ 1.59	$ 52.70	1		400		470	Trees/Day	6.8	HR	$ 994.81
Douglas Fir			$ 1.59	$ 52.70	1		120	Trees	470	Trees/Day	2.0	HR	$ 298.44
Blue Spruce			$ 1.59	$ 52.70	1		80	Trees	470	Trees/Day	1.4	HR	$ 198.96
Subtotal													$ 9,695.09
Mulching													
Hay			$ 100.00				21	AC	0.67	AC/HR	14.00		
Hay Quantity***							4000	LBS/AC					$ 4,200.00
Mulcher, Diesel powered	$ 34.75				1						14.00	HR	$ 486.50
Flat Bed Truck	$ 23.75	$ 50.75			1						14.00	HR	$ 1,043.00
CLAB				52.70	2						14.00	HR	$ 1,475.60
Hydromulch							21	AC	0.67	AC/HR			
Truck 4 x 2, 220hp	$ 34.90	$ 52.70			1						14.00	HR	$ 1,226.40
Hydromulcher, 3000 gal	$ 34.75	$ 52.25			1						14.00	HR	$ 1,218.00
Wood Fiber Mulch****			$ 10.50	per 50 lb. bag			2000	LBS/AC					$ 8,820.00
CLAB				52.70	3						14.00	HR	$ 2,213.40
Subtotal													$ 19,277.00
Total													$ 37,929.30

* Seedmix prices based on Stevenson Intermountain Seed Prices quoted in February 2011. See attached.

** Seedling tree prices based on Lone Peak Conservation Nursery (now contracted to High Mountain Nursery) Prices in February 2011 (http://www.highmtnnursery.com/servlet/StoreFront). Production rate is based on RSMeans Heavy Construction Cost Data 2011, 32 93 43.10 0710.

*** Cost of Hay is based on local prices of $100/ton (Personal Communication).

**** Current (1/2012) price for woodfiber mulch from Granite Seed, Lehi, Utah. Phone contact.

[A] RSMeans Heavy Construction Cost Data 2011 - Refer to Wage and Rate Sheet

Drain Field Area

Position													
Volume						3.7		AC					
Excavator, 2 CY	$ 153.00	$ 67.75			1		1258.0	CY	340	CY/AC			
									180	CY/HR	7.0	HR	$1,543
Subtotal													$1,543
Seeding/Planting													
Final Reclamation Seed Mix			$ 131.10	$ 52.70		3.7	94.8	lbs	1	Acre/HR	3.7		$ 326.09
Subtotal													$ 326.09
Mulching													
Hay			$ 100.00				3.7	AC	0.67	AC/HR	2.47		
Hay Quantity***							4000	LBS/AC					$ 740.00
Mulcher, Diesel powered	$ 34.75				1						2.47	HR	$ 85.72
Flat Bed Truck	$ 23.75	$ 50.75			1						2.47	HR	$ 183.77
CLAB				52.70	2						2.47	HR	$ 259.99
Hydromulch							3.7	AC	0.67	AC/HR			
Truck 4 x 2, 220hp	$ 34.90	$ 52.70			1						2.47	HR	$ 216.08
Hydromulcher, 3000 gal	$ 34.75	$ 52.25			1						2.47	HR	$ 214.60
Wood Fiber Mulch****			$ 10.50	per 50 lb. bag			2000	LBS/AC					$ 1,554.00
CLAB				52.70	3						2.47	HR	$ 389.98
Subtotal													$ 3,744.56
Total													$ 4,213.55

* Seedmix prices based on Stevenson Intermountain Seed Prices quoted in February 2011. See attached.
** Seedling tree prices based on Lone Peak Conservation Nursery (now contracted to High Mountain Nursery) Prices in February 2011 (http://www.highmtnnursery.com/servlet/StoreFront).
*** Cost of Hay is based on local prices of $100/ton (Personal Communication).
**** Current (1/2012) price for woodfiber mulch from Granite Seed, Lehi, Utah. Phone contact.
[A] RSMeans Heavy Construction Cost Data 2011 - Refer to Wage and Rate Sheet

Cottonwood/Wilberg Mine
Waste Rock Site
C/015/0019

Revised March 2012

Waste Rock Site Cost Summary	
Description	Cost
Demolition	$ 10,618.49
Earthwork	$ 231,606.96
Riprap	$ 24,151.09
Revegetation	$ 33,342.25
Total	$ 299,718.79

Waste Rock Site											
Description Waste Rock Site	Means Reference Number (CostWorks Heavy Construction Cost Data)	Equipment	Labor	Quantity (number)	Volume (cy)	Weight (tons)	Time (hr)	Time Unit	Cost	Total Cost	Ref.
Steel Demolition Cost						5					
	Foreman Average, Outside		Foreman	1			8.0	hr	$ 71.20	$ 569.60	
	Common Building Labor		CLAB	2			8.0	hr	$ 52.70	$ 843.20	
	01 54 33 20 0300	Excavator - 2.0 CY		1			8.0	hr	$ 153.00	$ 1,224.00	
	Equipment Operator, Medium Equipment		Eqmd	1			8.0	hr	$ 67.75	$ 542.00	
	01 54 33 40 7200	Pickup Truck - 3/4 ton 4x4		1			8.0	hr	$ 13.08	$ 104.64	1
Concrete Demolition Cost											2, 3
Transportation Costs	01 54 33 40 6500	Trailer, platform, flush deck, 2 axle, 25 ton		1			1.0	hr	$ 13.90	$ 13.90	5
	01 54 33 40 7300	Tractor, 4x2, 220hp		1			1.0	hr	$ 34.90	$ 34.90	
	Truck Driver, Heavy		Drhv	1			1.0	hr	$ 52.25	$ 52.25	
Miscellaneous											
Disposal Fee - Metal	02 41 19.23 0950					5		ton	$ 90.00	$ 450.00	
Net Fence Removal*	02 41 13.60 1600		CLAB	2			64.0	hr	$ 52.70	$ 6,745.60	
	01 54 33 40 6410	Toilet, portable chemical		1			24.0	hr	$ 1.60	$ 38.40	
Total										$ 10,618.49	

Reference Information
1 - From Nielson Construction services contract with Energy West Mining - Includes 3/4 ton 4x4 truck, metal tool box, acetylene kit, rack for oxygen and acetylene, 1/2" electric drill, 71/4 " circular saw, 9" grinder.
2 - Concrete rubble disposed of as fill or permanently backfilled inside portals.
3 - Base on a concrete demolition production of 200 cubic yards per 8 hour shift. (Reference: http://www.indeco-breakers.com).
4 - Net Fence, 3500 linear feet. Demolition production rate is 430/day
5 - For haul of steel demolition material to Nielsen's landfill. Distance is approximately 11.0 miles one-way. Time estimate is 1.0 hours for one round trip.

Waste Rock Site Dozer Track-Hoe Work - Phase 1

Means Reference Number	Station-Location-Type Equipment	Equip. Purchase Cost	Operator Hourly Wage Rate	Hourly Cost	Qty	Ea. Mach. Cost	Units	Quantity	Units	Production Rate	Units	Equip. Labor Time/Dia.	Units	Cost
01 54 33 20 4360	Dozer - 410hp	$ 263.13	$ 67.75	$ 330.88	1	$ 330.88	$/HR	54,500.0	CY	158.0	CY/HR	344.9	HR	$ 114,120.51
01 54 33 20 0320	Excavator - 2.5 CY	$ 201.63	$ 67.75	$ 269.38	1	$ 269.38	$/HR			(see note)		172.45	HR	$ 46,454.58
	Sub-Totals													$ 160,576.09
Miscellaneous														
	Foreman Average, Outside			$ 71.20	1	$ 71.20	$/HR					344.9	HR	$ 24,557.00
01 54 33 40 7200	Pickup Truck - 3/4 ton 4x4			$ 13.08	1	$ 13.08	$/HR					344.9	HR	$ 4,511.00
	Total Phase 1 Earthwork													$ 189,643.09

Waste Rock Site Excavator Track-Hoe Work - Phase 2

Means Reference Number	Station-Location-Type Equipment	Equip. Purchase Cost	Operator Hourly Wage Rate	Hourly Cost	Qty	Ea. Mach. Cost	Units	Quantity	Units	Production Rate	Units	Equip. Labor Time/Dia.	Units	Cost
01 54 33 20 4360	Dozer - 410hp	$ 263.13	$ 67.75	$ 330.88	1	$ 330.88	$/HR	8,233.0	CY	158.0	CY/HR	39.4	HR	$ 13,036.67
01 54 33 20 0320	Excavator - 2.5 CY	$ 201.63	$ 67.75	$ 269.38	1	$ 269.38	$/HR			(see note)		19.7	HR	$ 5,306.79
	Sub-Totals													$ 18,343.46
Miscellaneous														
	Foreman Average, Outside			$ 71.20	1	$ 71.20	$/HR					39.4	HR	$ 2,805.00
01 54 33 40 7200	Pickup Truck - 3/4 ton 4x4			$ 13.08	1	$ 13.08	$/HR					39.4	HR	$ 515.00
	Total Phase 2 Earthwork													$ 21,663.46

Waste Rock Site Excavator Track-Hoe Work - Phase 3

Means Reference Number	Station-Location-Type Equipment	Equip. Purchase Cost	Operator Hourly Wage Rate	Hourly Cost	Qty	Ea. Mach. Cost	Units	Quantity	Units	Production Rate	Units	Equip. Labor Time/Dia.	Units	Cost
01 54 33 20 0320	Excavator - 2.5 CY	$ 201.63	$ 67.75	$ 269.38	1	269.38	$/HR	1,435.0	LF	200	LF/day	57.40	HR	$ 15,462.41
	Sub-Totals													$ 15,462.41
Miscellaneous														
	Foreman Average, Outside			$ 71.20	1	$ 71.20	$/HR					57.4	HR	$ 4,087.00
01 54 33 40 7200	Pickup Truck - 3/4 ton 4x4			$ 13.08	1	$ 13.08	$/HR					57.4	HR	$ 751.00
	Total Phase 3 Earthwork													$ 20,300.41
													Total Cost	$ 231,606.96

Note: Track-hoe is utilized to support Dozer activities. Usage is dictated by 1/2 Dozer hours.

Riprap Channels														
							660			50	LF/Hr	13.2	Hr	
3/4" Rock*				$ 27.00				216	Tons					$ 5,832.00
6" Rock*				$ 22.00				459.0	Tons					$ 10,098.00
Loader - 5.5 CY	01 54 33 20 4760	$ 116.68	$ 67.75			1								$ 2,434.48
Dump Truck - 4 axle, 18 CY	01 54 33 20 5310	$ 82.60	$ 50.75			1								$ 1,760.22
Excavator, 2 CY	01 54 33 20 0300	$ 153.00	$ 67.75			1								$ 2,913.90
Foreman Average, Outside	Foreman				$ 71.20	1								$ 939.84
Pickup Truck - 3/4 ton 4x4	01 54 33 40 7200	$ 13.08				1								$ 172.66
Total														$ 28,151.00

* Based on Nielson's Construction current (1/2012) prices.

[A] RSMeans Heavy Construction Cost Data 2011 - Refer to Wage and Rate Sheet

Packing													
Volume						18		AC					
Excavator, 2 CY	$ 153.00	$ 67.75			1		6120.0	CY	340	CY/AC			
Subtotal									180	CY/HR	34.0	HR	$ 7,505.50
Seeding*/Planting**													
Final Reclamation Seed Mix			$ 823.23	$ 52.70		18	810	lbs	1	Acre/HR	18		$ 1,771.83
Subtotal													$ 1,771.83
Mulching													
Hay			$ 100.00				18	AC	0.67	AC/HR	26.9		
Hay Quantity***							2000	LBS/AC					$ 1,800.00
Mulcher, Diesel powered	$ 34.75				1						26.9	HR	$ 933.58
Flat Bed Truck	$ 23.75	$ 50.75			1						26.9	HR	$ 2,001.49
CLAB				52.70	2						26.9	HR	$ 2,831.64
Hydromulch							18	AC	0.67	AC/HR			
Truck 4 x 2, 220hp	$ 34.90	$ 52.70			1						26.9	HR	$ 2,353.43
Hydromulcher, 3000 gal	$ 34.75	$ 52.25			1						26.9	HR	$ 2,337.31
Wood Fiber Mulch****			$ 10.50	per 50 lb. bag			2000	LBS/AC					$ 7,560.00
CLAB				52.70	3						26.9	HR	$ 4,247.46
Subtotal													$ 24,035.93
Total													$ 33,313.25

* Seedmix prices based on Stevenson Intermountain Seed Prices quoted in February 2011. See attached.
** Seedling tree prices based on Lone Peak Conservation Nursery (now contracted to High Mountain Nursery) Prices in February 2011 (http://www.highmtnnursery.com/servlet/StoreFront).
*** Cost of Hay is based on local prices of $100/ton (Personal Communication).
**** Current (1/2012) price for woodfiber mulch from Granite Seed, Lehi, Utah. Phone contact.
[A] RSMeans Heavy Construction Cost Data 2011 - Refer to Wage and Rate Sheet

Cottonwood/Wilberg Mine
Cottonwood Overland Conveyor
C/015/0019

Revised March 2012

		Cost
Demolition	$	23,494.49
Earthwork	$	10,825.80
Revegetation	$	3,061.91
[illegible]	$	[illegible]

												Ref.
Steel Demolition Cost												
	Foreman Average, Outside		Foreman	1		70	28.0	hr	$ 71.20	$ 1,993.60		
	Common Building Labor		CLAB	2			28.0	hr	$ 52.70	$ 2,951.20		
	01 54 33 60 2720	Crane 100 ton		1			28.0	hr	$ 206.25	$ 5,775.00		
	Equipment Operator, Crane or Shovel		Eqhv	1			28.0	hr	$ 69.45	$ 1,944.60		
	01 54 33 40 7200	Pickup Truck - 3/4 ton 4x4		1			28.0	hr	$ 13.08	$ 366.24		1
Concrete Demolition Cost					150							2, 3
	Foreman Average, Outside		Foreman	1			6.0	hr	$ 71.20	$ 427.20		
	Common Building Labor		CLAB	1			6.0	hr	$ 52.70	$ 316.20		
	01 54 33 20 0200	Excavator - 1.5 CY		1			6.0	hr	$ 118.43	$ 710.58		
	Equipment Operator, Medium Equipment		Eqmd	1			6.0	hr	$ 67.75	$ 406.50		
	01 54 33 20 0347	Hydraulic Hammer		1			6.0	hr	$ 44.03	$ 264.18		
	01 54 33 20 0200	Excavator - 1.5 CY		1			6.0	hr	$ 118.43	$ 710.58		
	01 54 33 20 0342	Bucket Thumb		1			6.0	hr	$ 21.38	$ 128.28		
	Equipment Operator, Medium Equipment		Eqmd	1			6.0	hr	$ 67.75	$ 406.50		
	01 54 33 40 7200	Pickup Truck - 3/4 ton 4x4		1			6.0	hr	$ 13.08	$ 78.48		1
Transportation Costs	01 54 33 40 6500	Trailer, platform, flush deck, 2 axle, 25 ton		1			7.0	hr	$ 13.90	$ 97.30		4
	01 54 33 40 7300	Tractor, 4x2, 220hp		1			7.0	hr	$ 34.90	$ 244.30		
	Truck Driver, Heavy		Drhv	1			7.0	hr	$ 52.25	$ 365.75		
Miscellaneous												
Disposal Fee - Metal	02 41 19.23 0950					70		ton	$ 90.00	$ 6,300.00		
Demolished Concrete Handling	(buried in backfill)				195							5
	01 54 33 40 6410	Toilet, portable chemical		1			5.0	hr	$ 1.60	$ 8.00		

Reference Information
1 - From Nielson Construction services contract with Energy West Mining - Includes 3/4 ton 4x4 truck, metal tool box, acetylene kit, rack for oxygen and acetylene, 1/2" electric drill, 71/4 " circular saw, 9" grinder.
2 - Concrete rubble disposed of as fill or permanently backfilled inside portals.
3 - Base on a concrete demolition production of 200 cubic yards per 8 hour shift. (Reference: http://www.indeco-breakers.com).
4 - For haul of steel demolition material to Nielsen's landfill. Distance is approximately 15.0 miles one-way. Time estimate is 1.5 hours for one round trip.
5 - A swell factor of 1.3 is used for crushed concrete.

Means Reference											
											Cost
01 54 33 20 4760	Loader - 5.5 CY	$ 116.68	$ 67.75	$ 184.43	1	184.43	$/HR	15.0	HR		2,766.5
01 54 33 20 4150	Dozer - 105hp	$ 63.18	$ 67.75	$ 130.93	1	130.93	$/HR	15.0	HR		1,964.0
01 54 33 20 0320	Excavator - 2.5 CY	$ 201.63	$ 67.75	$ 269.38	1	269.38	$/HR	15.0	HR		4,040.7
Sub-totals										$	8,771.10
Miscellaneous											
	Foreman Average, Outside			$ 71.20	1	$ 71.20	$/HR	15.0	HR	$	1,068.00
	Common Building Labor			$ 52.70	1	$ 52.70	$/HR	15.0	HR	$	790.50
01 54 33 40 7200	Pickup Truck - 3/4 ton 4x4	$ 13.08			1		$/HR	15.0	HR	$	196.20
Total										$	10,825.80

Note: Equipment used during earthwork activities manipulate surface to blend with surrounding topography. No earth quantities were calculated.

Packing														Cost
Volume							1.5		AC					
Excavator, 2 CY	$	153.00	$	67.75				510.0	CY	340	CY/AC			
Pickup Truck - 3/4 ton 4x4	$	13.08				1				180	CY/HR	2.8	HR	$ 625.46
Subtotal						1						2.8	HR	$ 36.62
Seeding*/Planting**														$ 662.08
Final Reclamation Seed Mix														
Pickup Truck - 3/4 ton 4x4	$	13.08	$	295.75	52.7		1.5	48	lbs	1	Acre/HR	1.5	HR	$ 374.80
Subtotal						1						1.5	HR	$ 19.62
Mulching														$ 394.42
Hay***			$	100.00				1.5	AC	0.67	AC/HR	2.24		
Hay Quantity								2000	LBS/AC					$ 150.00
Mulcher, Diesel powered	$	34.75				1						2.24	HR	$ 77.80
Flat Bed Truck	$	23.75	$	50.75		1						2.24	HR	$ 166.79
CLAB					52.70	2						2.24	HR	$ 235.97
Hydromulch								1.5	AC	0.67	AC/HR			
Truck 4 x 2, 220hp	$	34.90	$	52.70		1						2.24	HR	$ 196.12
Hydromulcher, 3000 gal	$	34.75	$	52.25		1						2.24	HR	$ 194.78
Wood Fiber Mulch****			$	10.50	per 50 lb. bag			2000	LBS/AC					$ 630.00
CLAB					52.70	3						2.24	HR	$ 353.96
Subtotal														$ 2,005.41
Total														$ 3,061.91

* Seedmix prices based on Stevenson Intermountain Seed Prices quoted in February 2011. See attached.
** Seedling tree prices based on Lone Peak Conservation Nursery (now contracted to High Mountain Nursery) Prices in February 2011 (http://www.highmtnnursery.com/servlet/StoreFront).
*** Cost of Hay is based on local prices of $100/ton (Personal Communication).
**** Current (1/2012) price for woodfiber mulch from Granite Seed, Lehi, Utah. Phone contact.
[A] RSMeans Heavy Construction Cost Data 2011 - Refer to Wage and Rate Sheet

Reclamation Seed Cost per Pound PLS - 2011		
Common Name	Scientific Name	Price/lb PLS
Grasses		
Alkali Sacaton	*Sporobolus airoides*	$ 24.00
Bluebunch Wheatgrass	*Agropyron spicatum*	$ 5.90
Bottlebrush Squirreltail	*Sitanion hystrix*	$ 18.00
Crested Wheatgrass	*Agropyron cristatum*	$ 2.20
Galleta	*Pleuraphis jamesii* Torr.	$ 25.00
Great Basin Wild Rye	*Leymus cinereus*	$ 8.00
Indian Ricegrass	*Oryzopsis hymenoides var. Paloma*	$ 9.50
Intermediate Wheatgrass	*Agropyron intermedium*	$ 2.10
Kentucky Bluegrass	*Poa pretenses*	$ 2.00
Mountain Brome	*Bromus marginatus*	$ 3.95
Needle and Thread Grass	*Stipa comata*	$ 33.00
Salina Wildrye	*Elymus salinus*	$ 35.00
Sandberg Bluegrass	*Poa secunda*	$ 4.95
Streambank Wheatgrass	*Agropyron riparium*	$ 3.50
Slender Wheatgrass	*Elymus trachycaulus ssp. trachycaulus*	$ 3.75
Thickspike Wheatgrass	*Agropyron dasystachyum*	$ 3.50
Western Wheatgrass	*Agropyron smithii var. Rosanna*	$ 2.75
Forbes		
Blue Flax	*Linum lewisii*	$ 7.90
Blueleaf Aster	*Aster glaucodes*	$ 90.00
Louisiana Sage	*Artemisia ludoviciana*	$ 90.00
Northern Sweetvetch	*Hedysarum boreale*	$ 55.00
Pacific Aster	*Aster chilensis*	$ 90.00
Alfalfa	*Medicago sativa var. Ladak*	$ 3.50
Utah Sweet Vetch	*Hedysarum boreale*	$ 55.00
Firecracker Penstemon	*Penstemon eatonii*	$ 75.00
Small Burnet	*Sanguisorba minor*	$ 1.20
Lewis Flax	*Linum Lewisii*	$ 7.90
Globemallow	*Sphaeralcea coccinea*	$ 80.00
Yellow Sweetclover	*Melilotus officinalis*	$ 3.00
Palmer Penstemon	*Penstemon palmeri*	$ 17.00
Prairie Aster	*Aster tanacetifolius*	$ 80.00
Rocky Mountain Penstemon	*Penstemon strictus*	$ 24.00
Silky Lupine	*Lupinus sericeus*	$ 49.00
Shrubs		
Big Sagebrush	*Artemisia tridentata*	$ 48.00
Black Sagebrush	*Artemisia nova*	$ 48.00
Shadscale	*Atriplex confertifolia*	$ 9.00
Bitterbrush	*Purshia tridentate*	$ 16.50
Castle Valley Saltbrush	*Atriplex cuneata*	$ 19.00
Curleaf Mahogany	*Cercocarpus ledifolius*	$ 26.00
Fourwing Saltbush	*Atriplex canescens*	$ 9.75
Saskatoon Serviceberry	*Amelanchier alnifolia*	$ 46.00
Mat Saltbrush	*Atriplex corrugata*	$ 22.00
Skunkbush Sumac	*Rhus trilobata*	$ 28.00
Winterfat	*Ceratoides lanata*	$ 26.00
Green Mormon Tea	*Ephedra viridis*	$ 12.50
Low Rabbitbrush	*Chrysothamnus viscidiflorus*	$ 44.00
Big White Rabbitbrush	*Chrysothamnus nauseosus var.*	$ 44.00
Snowberry	*Symphoricarpus oreophilus*	$ 39.00
True Mountain Mahogany	*Cercocarpus montanus*	$ 38.00
Trees and Shrub (tubes)		
Douglas Fir	*Pseudotsuga menziesii*	$ 1.59
Serviceberry	*Amelanchier Alinfolia*	$ 1.59
Fourwing Saltbush	*Atriplex canescens*	$ 1.59
Green Mormon Tea	*Ephedra viridis*	$ 1.59
Big White Rabbitbrush	*Chrysothamnus nauseosus var.*	$ 1.59
Colorado Blue Spruce	*Picea pungens*	$ 1.59

PacifiCorp, Energy West Mining Company

C/015/0019

Clean Copy Submittal for the
Cottonwood/Wilberg Mine,
Mid-Term Review

Volume 9, Appendix A:

Replace Appendix A

PACIFICORP
ENERGY WEST
HYDROLOGIC MONITORING PROGRAM
DEER CREEK, WILBERG/COTTONWOOD, DES-BEE-DOVE and TRAIL MOUNTAIN MINES

I. MONITORING LOCATIONS

A. Surface Water Hydrology (for maps refer to Deer Creek, Wilberg/Cottonwood, Des-Bee-Dove Mine: Volume 9 Map HM-1, Deer Creek Volume 12 R645-301-700: Hydrologic Monitoring Map MFS1851D Mill Fork Lease for East Mountain locations listed below / Trail Mountain Mine: Volume 3 Plate 7-1 and Plate 7-2 for Trail Mountain locations listed below)

1. Cottonwood Creek Drainage System

a. ***Cottonwood Canyon Creek*** (refer to Deer Creek, Wilberg/Cottonwood, Des-Bee-Dove Mine: Volume 9 Map HM-1 or Trail Mountain Mine Permit Volume 3 Plate 7-1)

(1) SW-1 - Above Trail Mtn. Mine
(Approximately 5000 feet upstream from the inlet culvert for the disturbed area.) 2150 feet South, 2000 feet East of the Northwest corner of Section 24, Township 17 South, Range 6 East.

(2) SW-2 - Below Trail Mtn. Mine
(Approximately 200 feet downstream from the outlet culvert for the disturbed area.) 1300 feet South, 1750 feet West of the Northeast corner of Section 25, Township 17 South, Range 6 East.

(3) CCC01 - USGS Flume:
(Approximately 7800 feet downstream from the outlet culvert for the disturbed area.)1500 feet North, 200 feet East of the Southwest corner of Section 31, Township 17 South, Range 7 East.

(4) SW-3 - Below Trail Mtn. Mine
(Approximately 3800 feet above confluence with Straight Canyon) 2400 feet South, 2400 feet East of the Northeast corner of Section 6, Township 18 South, Range 6 East.

b. ***Unnamed Drainage off Straight Canyon*** (refer to Trail Mountain Mine Permit Volume 3 Plate 7-1)

(1) T-19
(Approximately 200 feet upstream from the from confluence with Straight Canyon) 2500 feet South, 1100 feet East of the Northeast corner of Section 3, Township 18 South, Range 6 East.

c. ***Grimes Wash*** (refer to Deer Creek, Wilberg/Cottonwood, Des-Bee-Dove Mine: Volume 9 Map HM-1)

(1) GWR01 - Right Fork:
(Approximately 1500 feet upstream of the inlet culvert for the disturbed area.) 550 feet North, 1500 feet West of the Southwest corner of Section 22, Township 17 South, Range 7 East.

(2) GWR02 - Left Fork:
(Approximately 50 feet upstream of the inlet culvert for the disturbed area.) 200 feet South, 2350 feet East of the Northwest corner of Section 27, Township 17 South, Range 7 East.

(3) GWR03 - Below the mine:
(Approximately 500 feet downstream of the outlet culvert below the disturbed area.) 1770 feet South, 1820 feet West of the Northeast corner of Section 27, Township 17 South, Range 7 East.

d. ***Indian Creek*** (refer to Deer Creek Volume 12 R645-301-700: Hydrologic Monitoring Map MFS1851D)

(1) ICA - Indian Creek Above
(Approximately 2500 feet northwest of the Mill Fork permit boundary) 400 feet North, 2350 feet West of the Southwest corner of Section 3, Township 16 South, Range 6 East.

(2) ICF - Indian Creek Flume
(Approximately 2100 feet west of the Mill Fork permit boundary) 300 feet North, 3400 feet West of the Southwest corner of Section 10, Township 16 South, Range 6 East.

(3) ICD - Indian Creek Ditch
(Approximately 1600 feet west of the Mill Fork permit boundary, irrigation ditch for Upper Joes Valley) 240 feet North, 2850 feet West of the Southwest corner of Section 15, Township 16 South, Range 6 East.

(4) ICB - Indian Creek Below
(Approximately 3700 feet west of the Mill Fork permit boundary, junction of Indian Creek and FDR040) 70 feet North, 120 feet West of the Southwest corner of Section 16, Township 16 South, Range 6 East.

2. Huntington Creek Drainage System

a. ***Huntington Creek*** (refer to Deer Creek, Wilberg/Cottonwood, Des-Bee-Dove Mine: Volume 9 Map HM-1)

(1) HCC01 - Above Deer Creek Confluence:
1400 feet north, 2200 feet west of the southeast corner of Section 36, Township 16 South, Range 7 East.

(2) HCC02 - Below Deer Creek Confluence:
300 feet north, 300 feet west of the southwest corner of Section 31, Township 16 South, Range 8 East.

(3) HCC04 - @ Research Farm*
800 feet north, 200 feet east of the southwest corner of Section 5, Township 17 South, Range 8 East.
*Not listed on map due to scale.

b. ***Deer Creek*** (refer to Deer Creek, Wilberg/Cottonwood, Des-Bee-Dove Mine: Volume 9 Map HM-1)

(1) DCR01 - Above the mine:
(Approximately 600 feet upstream from the mine facility.) 200 feet North, 800 feet West of the

Southeast corner of Section 10, Township 17 South, Range 7 East.

(2) DCR04 - Near C1/C2 Belt Intersection: (Approximately 5,000 feet downstream from the mine facility.) 300 feet North, 2000 feet East of the Southeast corner of Section 2, Township 17 South, Range 7 East.

(3) DCR06 - @ Huntington Creek Confluence: (Approximately 15,000 feet downstream from the facility) 1400 feet north, 1100 feet east of the southeast corner of Section 6, Township 16 South, Range 7 East.

c. ***Meetinghouse Canyon - South Fork*** (refer to Deer Creek, Wilberg/Cottonwood, Des-Bee-Dove Mine: Volume 9 Map HM-1)

(1) MHC01 - Meetinghouse Canyon South Fork (Approximately 200 feet upstream from the north and south convergence.) 800 feet North, 1500 feet East of the Southwest corner of Section 35, Township 16 South, Range 7 East.

d. ***Rilda Canyon*** (refer to Deer Creek, Wilberg/Cottonwood, Des-Bee-Dove Mine: Volume 9 Map HM-1)

(1) RCF-1 - Rilda Canyon - Right Fork: (Approximately 4000 feet upstream from the Right and Left fork convergence.) 400 feet South, 200 feet West of the Northeast corner of Section 30, Township 16 South, Range 7 East.

(2) RCLF1 - Rilda Canyon - Left Fork, below Rilda Canyon Portals: (Approximately 200 feet upstream from the Right and Left fork convergence.) 2400 feet North, 2100 feet West of the Southeast corner of Section 29, Township 16 South, Range 7 East.

(3) RCLF2 - Rilda Canyon - Left Fork, above Rilda Canyon Portals: (Approximately 1600 feet upstream from the Right and Left fork convergence.) 1600 feet North, 2300 feet West of the Southwest corner of Section 29, Township 16 South, Range 7 East.

(4) RCF2 - Rilda Canyon - Above NEWUSSD springs: 2500 feet South, 400 feet West of the Northeast corner of Section 29, Township 16 South, Range 7 East.

(5) RCF3 - Rilda Canyon - Below NEWUSSD springs: 2550 feet South, 1000 feet East of the Northeast corner of Section 28, Township 16 South, Range 7 East.

(6) RCW4 - Rilda Canyon: (Approximately 1000 feet upstream from the confluence with Huntington Creek.) 850 feet North, 1900 feet West of the Southeast corner of Section 26, Township 16 South, Range 7 East.

e. ***Mill Fork Canyon*** (refer to Deer Creek Volume 12 R645-301-700: Hydrologic Monitoring Map MFS1851D)

(1) MFA01 - Mill Fork Canyon - Above Old Mine: (Approximately 2000 feet above old mine portals @ end of USFS development road.) 100 feet North, 1500 feet West of the Southeast corner of Section 17, Township 16 South, Range 7 East.

(2) MFB02 - Mill Fork Canyon - Above Huntington Creek Confluence: (Approximately 200 feet above confluence with Huntington Creek @ culvert outfall.) 100 feet South, 1900 feet East of the Northwest corner of Section 22, Township 16 South, Range 7 East.

(3) MFU03 - Mill Fork Canyon - Above Mill Fork Fault Crossing: (Approximately 700 feet upstream of projected Mill Fork Fault crossing) 1150 feet North, 1700 feet East of the Southwest corner of Section 17, Township 16 South, Range 7 East.

3. **Reclamation Monitoring:** Following final reclamation, backfilling and grading monitoring will be conducted at points immediately above and below the reclaimed site.

B. Groundwater Hydrology

1. **East Mountain Springs** (refer to Deer Creek, Wilberg/Cottonwood, Des-Bee-Dove Mine Permit : Volume 9 maps HM-4 and HM-5)

Burnt Tree *	80-41
Elk Spring [1] *	80-43
Sheba Springs *	80-44*
Ted's Tub	80-46*
79-2	80-47
79-10 *	80-48
79-15	80-50
79-23 *	82-51
79-24	82-52*
79-26 *	84-56*
79-28 (Flag Lake)	89-60(Alpine Spring)
79-29 *	89-61 [1]
79-32	89-65
79-34	89-66
79-35 *	89-67
79-38	89-68
79-40	Rilda Canyon-(Meters 2&3) [2]

* Recession Study Springs (Flow August & September)
[1]-Developed by NEWUSSD in 2009
[2]-NEWUSSD controls Rilda Canyon meters. Monitoring will be conducted when meters are functioning.

2. **Trail Mountain Springs** (refer to Trail Mountain Mine Permit Volume 3 Plate 7-1)

T-6	T-14
T-8	T-15
T-9	T-16
T-10	T-18 (Oliphant Mine Discharge)

3. **East Mountain Springs - Mill Fork Area** (refer to Deer Creek Permit Volume 12 R645-301-700: Hydrologic Monitoring Map MFS1851D)

EM-216
JV-9
JV-34
MF-7
MF-10
MF-19B
MF-213
MF-219
MFR-10
EMPOND
Little Bear Spring
MFR-30
RR-5
RR-15
RR-23A
SP1-26
SP1-29
UJV-101
UJV-206
UJV-213
Grants Spring

4. **Piezometric Data**

a. Surface

(1) Rilda Canyon (refer to Deer Creek, Wilberg/Cottonwood, Des-Bee-Dove Mine: Volume 9 Map HM-1)

P1
P5
P6
P7
EM-47

(2) Cottonwood Canyon Creek

East Mountain (refer to Deer Creek, Wilberg/Cottonwood, Des-Bee-Dove Mine: Volume 9 Map HM-1)

EM-31
CCCW-1A
CCCW-1S
CCCW-2A
CCCW-3A
CCCW-3S U
CCCW-3S L

Trail Mountain (refer to Trail Mountain Mine Permit Volume 3 Plate 7-1)

TM-1B
TM-3

b. Underground: In-Mine

(1) Deer Creek Mine (Refer to Annual Hydrologic Reports for Locations : Map HM-2)

5. In-Mine Water Locations

a. Deer Creek Mine (Refer to Annual Hydrologic Reports for Locations : Map HM-2)

b. Wilberg/Cottonwood Mines (Refer to Annual Hydrologic Reports for Locations : Map HM-3)

c. Trail Mountain Mine (Refer to Annual Hydrologic Reports for Locations : PLATE 7-3)

6. Waste Rock Wells (refer to Deer Creek, Wilberg/Cottonwood, Des-Bee-Dove Mine: Volume 9 Map HM-1)

a. Deer Creek
b. Cottonwood

C. UPDES Monitoring Locations

a. ***Deer Creek Mine***
UPDES UT0023604
001- Sediment Pond
002- Mine Discharge

b. ***Wilberg/Cottonwood Mines***
UPDES UT0022896
001- Mine Discharge @ Cottonwood Canyon (TMA)
003- Sediment Pond @ Mine Facilities
005- Sediment Pond Discharge @ Waste Rock Site

d. ***Trail Mountain Mine***
UPDES UT0023728
001- Sediment Pond
002- Mine Discharge

II. MONITORING SCHEDULE (see enclosed monitoring schedules for operational, baseline, and reclamation monitoring)

A. Field Measurements

Field Measurements collected during quality sampling: Listed below are the sites which will be monitored by PacifiCorp - Energy West in accordance with the guidelines established by DOGM; i.e.

- Date and Time
- Flow
- pH
- Temperature
- Conductivity
- Dissolved oxygen (perennial streams only)

Surface Monitoring

Surface monitoring locations will be field monitored quarterly for all field parameters, except Indian Creek - monitoring to be conducted during baseflow only.

1. Cottonwood Canyon Creek

a. Cottonwood Canyon Creek

(1) SW-1
(2) SW-2
(3) CCC01 - USGS Flume
(4) SW-3

b. Grimes Wash

(1) GWR01
(2) GWR02
(3) GWR03

c. Indian Creek

(1) ICA
(2) ICF
(3) ICD
(4) ICB

d. Straight Canyon

(1) T-19 (Unnamed Side Drainage)

2. Huntington Canyon Drainage

a. Deer Creek

(1) DCR01
(2) DCR04
(3) DCR06

b. Huntington Creek

(1) HCC01
(2) HCC02
(3) HCC04

Flow in Huntington Creek is measured only at HCC01 by Utah Power, and will be reported in the Annual Hydrologic Report.

c. Meetinghouse Canyon - South Fork:

(1) MCH01

d. Rilda Canyon

(1) RCF1*
(2) RCLF 1
(3) RCLF 2
(4) RCF2
(5) RCF3
(6) RCW4

* Baseline flow will be measured adjacent to EM-163

e. Mill Fork Canyon

(1) MFA01
(2) MFB02
(3) MFU03

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HYDROLOGIC MONITORING PROGRAM
DEER CREEK, WILBERG/COTTONWOOD, DES-BEE-DOVE and TRAIL MOUNTAIN MINES

Groundwater Monitoring

1. East Mountain Springs (see monitoring location list I.B.1)

2. Trail Mountain Springs (see monitoring location list I.B.2)

3. East Mountain Springs - Mill Fork Area (see monitoring location list I.B.3)

   East/Trail Mountain Springs will be field monitored during the months of July and October. In addition, the East Mountain Recession Study Springs (denoted by asterisks in the Monitoring Location section) and Trail Mountain Springs will be field monitored for flow only from July through October. T-18: Oliphant Mine Discharge will be collected and analyzed quarterly. Rilda Canyon Springs - (NEWUSSD: Meters 2 & 3; when functioning) will be field monitored monthly depending upon access.

4. In-Mine

   a. Deer Creek
   b. Wilberg/Cottonwood
   c. Trail Mountain

   In-mine locations will be field monitored quarterly for all field parameters except pH, conductivity, and dissolved oxygen.

5. Piezometric Wells

   a. Surface

      Piezometric surface wells will be field monitored for level only on a monthly basis depending upon access.

      (1) Rilda Canyon (see Map HM-1 for locations)

      P1
      P5
      P6
      P7
      EM-47

(2) Cottonwood Canyon Creek (see Map HM-1 for locations)

EM-31
CCCW-1A
CCCW-1S
CCCW-2A
CCCW-3A
CCCW-3S U
CCCW-3S L
TM-1B
TM-3

6. Waste Rock Wells

a. Deer Creek
b. Cottonwood

UPDES Monitoring

1. Deer Creek
2. Wilberg/Cottonwood
3. Trail Mountain

UPDES sites will be monitored as specified in the individual permits.

Reclamation Monitoring

Surface Water Resources: (see enclosed summary of operational, baseline, and reclamation monitoring schedules)
Surface monitoring locations will be field monitored monthly for flow and all field parameters quarterly until bond release.

Ground Water Resources: (see enclosed summary of operational, baseline, and reclamation monitoring schedules)

Springs — East/Trail Mountain Springs will be field monitored during the months of July and October.

Rilda Canyon Springs (NEWUSSD: Meters 2 & 3; when functioning)) will be field monitored monthly for flow depending upon access. East/Trail Mountain Springs (including Rilda

Springs and T-18 [Oliphant Mine]) monitoring will be conducted until permit area reduction approval or unless otherwise approved by the Division.

Wells: Piezometric surface wells (Rilda Canyon and Cottonwood Canyon including TM-3 in Straight Canyon): will be field monitored for level only on a monthly basis depending upon access. Piezometric surface well monitoring will be conducted until permit area reduction approval or unless otherwise approved by the Division.

Waste Rock Wells and TM-1B: will be field monitored for level only on a quarterly basis. Monitoring will be conducted until sealing during final reclamation.

UPDES: Sites will be monitored as specified in the individual permits

B. Quality Sampling (Laboratory Measurements)

a. **Surface Water Hydrology:** Water samples will be collected and analyzed quarterly (one sample at low flow and high flow) during the first or second week of the quarter, except for Indian Creek - quality samples will be collected during baseflow only. Parameters analyzed are those listed in the DOGM Guidelines for Surface Water Quality (see Table 1-Surface Water Quality Parameter List). Quarterly sampling was initiated during March 1988 and will continue throughout the year; i.e., June, September, and December. Baseline analysis was performed in 2001 and will be repeated every five years there-after.

a. Cottonwood Creek Drainage

(1) Cottonwood Canyon Creek

(a) SW-1
(b) SW-2
(c) SW-3

(2) Grimes Wash

(a) GWR01
(b) GWR02

(c) GWR03

(3) Indian Creek

(a) ICA
(b) ICD
(c) ICB

(4) Straight Canyon

(a) T-19

b. Huntington Creek Drainage

(1) Deer Creek

(a) DCR01
(b) DCR04
(c) DCR06

(2) Huntington Creek

(a) HCC01
(b) HCC02
(c) HCC04

(3) Meetinghouse Canyon - South Fork:

(a) MCH01

(5) Rilda Canyon

(a) RCF1
(b) RCF3
(c) RCW4

(6) Mill Fork Canyon

(a) MFA01
(b) MFB02

(c) MFU03

Reclamation Monitoring - Surface Water Hydrology: Water samples will be collected and analyzed quarterly (one sample at low flow and high flow) during the first or second week of the quarter. Parameters analyzed are those listed in the DOGM Guidelines for Surface Water Quality (see Table 1-Surface Water Quality Parameter List). Sampling will be conducted on a quarterly basis until bond release. Baseline analysis will be performed on the 5th and 9th years following reclamation. In no case will baseline sampling time frame exceed 5 years converting from operational to reclamation monitoring.

2. Groundwater Hydrology

a. East/Trail Mountain Springs: Water samples will be collected and analyzed during the months of July and October. Rilda Canyon Springs (NEWUSSD: Meters 2 & 3; when functioning) and T-18 (Oliphant Mine Discharge) will be monitored for quarterly for quality. Parameters analyzed are those listed in the DOGM Guidelines for Groundwater Water Quality (see Table 2-Ground Water Quality Parameter List).

b. In-Mine: Two water samples will be collected and analyzed per mine quarterly. Parameters analyzed are those listed in the DOGM Guidelines for Groundwater Water Quality (see Table 2-Ground Water Quality Parameter List).

c. Wells: TM-1B will be sampled quarterly. Parameters analyzed are those listed in the DOGM Guidelines for Groundwater Water Quality (see Table 2-Ground Water Quality Parameter List).

d. Waste Rock Wells: One water sample will be collected and analyzed per location quarterly. Parameters analyzed are those listed in the DOGM Guidelines for Groundwater Water Quality (see Table 2-Ground Water Quality Parameter List).

Baseline analysis was performed in 2001 and will be repeated every five years thereafter.

Reclamation Monitoring - Groundwater Hydrology:

a. East/Trail Mountain Springs: Water samples will be collected and analyzed during the months of July and October. Rilda Canyon Springs

(NEWUSSD: Meters 2 & 3; when functioning) will be monitored quarterly for quality. Parameters analyzed are those listed in the DOGM Guidelines for Groundwater Water Quality (see Table 2-Ground Water Quality Parameter List). East/Trail Mountain Springs (including Rilda Springs and T-18 [Oliphant Mine Discharge]) monitoring will be conducted until permit area reduction approval or unless otherwise approved by the Division.

b. In-Mine: Two water samples will be collected and analyzed per mine quarterly until the mine is sealed or the sites become inaccessible. Parameters analyzed are those listed in the DOGM Guidelines for Groundwater Water Quality (see Table 2-Ground Water Quality Parameter List).

c. Wells: Well TM-1B will be sealed during final reclamation. Quarterly sampling will continue until sealing. Parameters analyzed are those listed in the DOGM Guidelines for Groundwater Water Quality (see Table 2-Ground Water Quality Parameter List).

d. Waste Rock Wells: Waste rock wells will be sealed during final reclamation. One water sample will be collected and analyzed per location quarterly until well sealing. Parameters analyzed are those listed in the DOGM Guidelines for Groundwater Water Quality (see Table 2-Ground Water Quality Parameter List).

e. Post Reclamation Monitoring: PacifiCorp commits to conduct annual surveys to identify new discharge locations within and below sealed portals. If discharge occurs, one water sample will be collected and analyzed per location quarterly. Parameters analyzed are those listed in the DOGM Guidelines for Groundwater Water Quality (see Table 2-Ground Water Quality Parameter List). Baseline analysis will be performed on the 5^{th} and 9^{th} year.

3. UPDES Monitoring Sites

a. Deer Creek Mine
b. Wilberg/Cottonwood Mines
c. Trail Mountain Mine

UPDES sites will be monitored as specified in the individual permits.

III. ANNUAL REPORTS

All data collected regarding the hydrology of East/Trail Mountain will be summarized by the applicant in an annual Hydrologic Monitoring Report. Copies of the report will be submitted to the Utah State Division of Oil, Gas and Mining. In addition, any raw data collected will be submitted to the Utah State Division of Oil, Gas and Mining on a quarterly basis.

PacifiCorp, Energy West Mining Company

C/015/0019

Clean Copy Submittal for the Cottonwood/Wilberg Mine, Mid-Term Review

Volume 9, Appendix B:

Replace Appendix B

Permit No. UT0022896
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 - Energy West Mining Company - Cottonwood/Wilberg Mine

is hereby authorized to discharge from its facility located approximately 8 miles northwest of Orangeville in Emery County, Utah, with the outfalls:

001 located at latitude 39°19'05", and longitude 111°11'19"
003 located at latitude 39°19'07", and longitude 111°07'13"
004 located at latitude 39°18'43", and longitude 111°10'35"
005 located at latitude 39°17'43", and longitude 111°07'18"

to receiving waters named

Grimes Wash and Cottonwood Canyon Creek, thence to Cottonwood Creek (Tributary to The Colorado River)

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

This permit shall become effective on November 1, 2007.

This permit and the authorization to discharge shall expire at midnight, October 31, 2012.

Signed this 1st day of October, 2007.

Walter L. Baker, P.E.
Executive Secretary
Utah Water Quality Board

TABLE OF CONTENTS

I. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

A. Definitions.

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

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

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

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

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

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

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

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

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

6. An "instantaneous" measurement, for monitoring requirements, is defined as a single reading, observation, or measurement.

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

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

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

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

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

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

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

14. "Coal pile runoff" means the rainfall runoff from or through any coal storage pile.

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

16. "Point Source" means any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharges. This term does not include return flows from irrigated agriculture or agriculture storm water runoff.

17. "10-year, 24-hour precipitation event" means the maximum 24-hour precipitation event with a probable reoccurrence interval of once in 10 years. This information is available in *Weather Bureau Technical Paper No. 40*, May 1961 and *NOAA Atlas 2*, 1973 for the 11 Western States, and may be obtained from the National Climatic Center of the Environmental Data Service, National Oceanic and Atmospheric Administration, U.S. Department of Commerce.

B. Description of Discharge Point.

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

Outfall Number	Location of Discharge Points
001	Continuous ground water discharge to Cottonwood Canyon Creek at latitude 39°19'5" and longitude 111°11'19"
003	Surface water runoff pond to Grimes Wash at latitude 39°19'07" and longitude 111°07'13"
004	Ground water discharge (minor seepage) to Cottonwood Canyon Creek at latitude 39°18'43" and longitude 111°10'35"
005	Waste rock sedimentation pond to Grimes Wash at latitude 39°17'43" and longitude 111°07'18"

C. Narrative Standard.

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

D. Specific Limitations and Self-monitoring Requirements.

1. Effective immediately and lasting the duration of this permit, the permittee is authorized to discharge from Outfalls 001, 003, 004 and 005. Such discharges shall be limited and monitored by the permittee as specified in the following table:

Effluent Characteristics	Effluent Limitations a/				Monitoring Requirements	
	30 Day Average	7 Day Average	Daily Minimum	Daily Maximum	Sample Frequency	Sample Type
Flow, MGD [1]	Report	[2]NA	NA	Report	Monthly	Measured
[illegible]	25	35	NA	70	Monthly	Grab
[illegible]	NA	NA	NA	1.0	Monthly	Grab
[illegible]	NA	NA	NA	Report	Monthly	Grab
[illegible]	NA	NA	NA	1.0	Monthly	Grab
pH, standard units	NA	NA	6.5	9.0	Monthly	Grab
Oil & Grease, mg/L c/	NA	NA	NA	NA/10	NA/Monthly	NA/Grab
Oil & Grease, floating, solids, visible foam, c/	NA	NA	NA	None	Monthly	Visual

[1] *MGD: million gallons per day* [2] *NA: not applicable* [3] *mg/L : milligrams per liter*

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

There shall be no discharge of sanitary wastes.

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

b/ The sum of all discharge points shall not exceed 1 ton/day (2000 lbs/day) for TDS.

c/ A sample for oil and grease is required when a sheen is observed or there is another reason to believe oil may be present. If a sheen is observed, a sample of that effluent shall be collected immediately thereafter and oil and grease shall not exceed 10 mg/L in concentration, otherwise enter "NA". A visual inspection for oil and grease, floating solids, and visible foam shall be performed at least once per month at all outfalls. There shall be no sheen, floating solids, or visible foam in other than trace amounts.

2. Samples taken in compliance with the monitoring requirements specified above shall be taken at the following locations: at the outfall prior to mixing with any receiving water.

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

Effluent Characteristics	Daily Maximum
Settleable Solids	0.5 mL/L

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

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

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

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

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

E. Storm Water Requirements. It has been determined that the permittee has a regulated storm water discharge as per *UAC R317-8-3.9.*, therefore, the following permit conditions governing storm water discharges apply.

1. Coverage of This Section.

   a. Discharges Covered Under This Section. The requirements listed under this section shall apply to storm water discharges from coal mining-related areas (SIC Major Group 12) if they are not subject to effluent limitations guidelines under *40 CFR Part 434*.

      (1) Site Coverage. Storm water discharges from the following portions of coal mines may be eligible for this permit: haul roads (nonpublic roads on which coal or coal refuse is conveyed), access roads (nonpublic roads providing light vehicular traffic within the facility property and to public roadways), railroad spurs, sidings, and internal haulage lines (rail lines used for hauling coal within the facility property and to offsite commercial railroad lines or loading areas), conveyor belts, chutes, and aerial tramway haulage areas (areas under and around coal or refuse conveyor areas, including transfer stations), equipment storage and maintenance yards, coal handling buildings and structures, and inactive coal mines and related areas (abandoned and

other inactive mines, refuse disposal sites and other mining-related areas on private lands).

b. Limitations. Storm water discharges from inactive mining activities occurring on Federal lands where an operator cannot be identified are not eligible for coverage under this permit.

c. Co-Located Industrial Activities. When an industrial facility, described by paragraph *a.* (above) of this section, has industrial activities being conducted onsite that meet the description(s) of industrial activities in another section(s), that industrial facility shall comply with any and all applicable monitoring and pollution prevention plan requirements of the other section(s) in addition to all applicable requirements in this section. The monitoring and pollution prevention plan terms and conditions of this multi-sector permit are additive for industrial activities being conducted at the same industrial facility. The operator of the facility shall determine which other monitoring and pollution prevention plan section(s) of this permit (if any) are applicable to the facility.

2. Prohibition of Non-storm Water Discharges.

a. The following non-storm water discharges may be authorized by this permit provided the non-storm water component of the discharge is in compliance with this section (Section E): discharges from fire fighting activities; fire hydrant flushings; potable water sources including waterline flushings; drinking fountain water; irrigation drainage, lawn watering; routine external building washdown water where detergents or other compounds have not been used in the process; pavement washwaters where spills or leaks of toxic or hazardous materials (including oils and fuels) have not occurred (unless all spilled material has been removed) and where detergents are not used; air conditioning condensate; uncontaminated compressor condensate; uncontaminated springs; uncontaminated ground water; and foundation or footing drains where flows are not contaminated with process materials such as solvents.

b. In addition to the broad prohibition of non-storm water discharges, listed above, point source discharges of pollutant seeps or underground drainage from inactive coal mines and refuse disposal areas that do not occur as storm water discharges in response to precipitation events are also excluded from coverage under this permit. In addition, floordrains from maintenance buildings and other similar drains in mining and preparation plant areas are prohibited.

3. Storm Water Pollution Prevention Plan Requirements. Most of the active coal mining-related areas, described in paragraph 1.a.(1) above, are subject to sediment and erosion control regulations of the U.S. Office of Surface Mining (OSM) that enforces the *Surface Mining Control and Reclamation Act* (*SMCRA*). OSM has granted authority to the Utah Division of Oil Gas and Mining (DOGM) to implement *SMCRA* through State *SMCRA* regulations. All *SMCRA* requirements regarding control of erosion, siltation and other pollutants resulting

from storm water runoff, including road dust resulting from erosion, shall be primary requirements of the pollution prevention plan and shall be included in the contents of the plan directly, or by reference. Where determined to be appropriate for protection of water quality, additional sedimentation and erosion controls may be warranted.

a. Contents of Plan. The plan shall include at a minimum, the following items:

(1) Pollution Prevention Team. Each plan shall identify a specific individual or individuals within the facility organization as members of a storm water Pollution Prevention Team that are responsible for developing the storm water pollution prevention plan and assisting the facility manager in its implementation, maintenance, and revision. The plan shall clearly identify the responsibilities of each team member. The activities and responsibilities of the team shall address all aspects of the facility's storm water pollution prevention plan.

(2) Description of Potential Pollutant Sources. Each plan shall provide a description of potential sources that may reasonably be expected to add significant amounts of pollutants to storm water discharges or that may result in the discharge of pollutants during dry weather from separate storm sewers draining the facility. Each plan shall identify all activities and significant materials that may potentially be significant pollutant sources. Each plan shall include, at a minimum:

(a) Deadlines for Plan Preparation and Compliance

Pacificorp shall prepare and implement a plan in compliance with the provisions of this permit below within 270 days of the effective date of this permit.

(b) Keeping Plans Current

The permittee shall amend the plan whenever there is a change in design, construction, operation, or maintenance, that has a significant effect on the potential for the discharge of pollutants to the waters of the State or if the storm water pollution prevention plan proves to be ineffective in eliminating or significantly minimizing pollutants from sources identified by the plan, or in otherwise achieving the general objectives of controlling pollutants in storm water discharges associated with the activities at the mine.

(c) Drainage

i) A site map, such as a drainage map required for *SMCRA* permit applications, that indicate drainage areas and storm

water outfalls. These shall include but not be limited to the following:

a) Drainage direction and discharge points from all applicable mining-related areas described in paragraph *1.a(1).* (Site Coverage) above, including culvert and sump discharges from roads and rail beds and also from equipment and maintenance areas subject to storm runoff of fuel, lubricants and other potentially harmful liquids.

b) Location of each existing erosion and sedimentation control structure or other control measures for reducing pollutants in storm water runoff.

c) Receiving streams or other surface water bodies.

d) Locations exposed to precipitation that contain acidic spoil, refuse or unreclaimed disturbed areas.

e) Locations where major spills or leaks of toxic or hazardous pollutants have occurred.

f) Locations where liquid storage tanks containing potential pollutants, such as caustics, hydraulic fluids and lubricants, are exposed to precipitation.

g) Locations where fueling stations, vehicle and equipment maintenance areas are exposed to precipitation.

h) Locations of outfalls and the types of discharges contained in the drainage areas of the outfalls.

ii) For each area of the facility that generates storm water discharges associated with the mining-related activity with a reasonable potential for containing significant amounts of pollutants, a prediction of the direction of flow, and an identification of the types of pollutants that are likely to be present in storm water discharges associated with the activity. Factors to consider include the toxicity of the pollutant; quantity of chemicals used, produced or discharged; the likelihood of contact with storm water; and history of significant leaks or spills of toxic or hazardous pollutants. Flows with a significant potential for causing erosion shall be

identified.

(d) Inventory of Exposed Materials. An inventory of the types of materials handled at the site that potentially may be exposed to precipitation. Such inventory shall include a narrative description of significant materials that have been handled, treated, stored or disposed in a manner to allow exposure to storm water 3 years prior to the effective date of this permit; method and location of onsite storage or disposal; materials management practices employed to minimize contact of materials with storm water runoff 3 years prior to the effective date of this permit; a description of existing structural and nonstructural control measures to reduce pollutants in storm water runoff; and a description of any treatment the storm water receives.

(e) Spills and Leaks. A list of significant spills and leaks of toxic or hazardous pollutants that occurred at areas that are exposed to precipitation or that otherwise drain to a storm water conveyance at the facility after the date of 3 years prior to the effective date of this permit. Such list shall be updated as appropriate during the term of the permit.

(f) Sampling Data. A summary of any existing discharge sampling data describing pollutants in storm water discharges from the portions of the facility covered by this permit, including a summary of any sampling data collected during the term of this permit.

(g) Risk Identification and Summary of Potential Pollutant Sources. A narrative description of the potential pollutant sources from the following activities: truck traffic on haul roads and resulting generation of sediment subject to runoff and dust generation; fuel or other liquid storage; pressure lines containing slurry, hydraulic fluid or other potential harmful liquids; and loading or temporary storage of acidic refuse or spoil. Specific potential pollutants shall be identified where known.

(3) Measures and Controls. Each facility covered by this permit shall develop a description of storm water management controls appropriate for the facility and implement such controls. The appropriateness and priorities of controls in a plan shall reflect identified potential sources of pollutants at the facility. The description of storm water management controls shall address the following minimum components, including a schedule for implementing such controls.

(a) Good Housekeeping. Good housekeeping requires the maintenance

of areas that may contribute pollutants to storm water discharges in a clean, orderly manner. These would be practices that would minimize the generation of pollutants at the source or before it would be necessary to employ sediment ponds or other control measures at the discharge outlets. Where applicable, such measures or other equivalent measures would include the following: sweepers and covered storage to minimize dust generation and storm runoff; conservation of vegetation where possible to minimize erosion; watering of haul roads to minimize dust generation; collection, removal, and proper disposal of waste oils and other fluids resulting from vehicle and equipment maintenance; or other equivalent measures.

(b) Preventive Maintenance. A preventive maintenance program shall involve timely inspection and maintenance of storm water management devices as well as inspecting and testing facility equipment and systems to uncover conditions that could cause breakdowns or failures resulting in discharges of pollutants to surface waters, and ensuring appropriate maintenance of such equipment and systems. Where applicable, such measures would include the following: removal and proper disposal of settled solids in catch basins to allow sufficient retention capacity; periodic replacement of siltation control measures subject to deterioration such as straw bales; inspections of storage tanks and pressure lines for fuels, lubricants, hydraulic fluid or slurry to prevent leaks due to deterioration or faulty connections; or other equivalent measures.

(c) Spill Prevention and Response Procedures. Areas where potential spills that can contribute pollutants to storm water discharges can occur, and their accompanying drainage points shall be identified clearly in the storm water pollution prevention plan. Where appropriate, specifying material handling procedures, storage requirements, and use of equipment such as diversion valves in the plan should be considered. Procedures for cleaning up spills shall be identified in the plan and made available to the appropriate personnel. The necessary equipment to implement a clean up should be available to personnel.

(d) Inspections. In addition to or as part of the comprehensive site evaluation required under paragraph *3.a.(4)* of this section, qualified facility personnel shall be identified to inspect designated areas of the facility at appropriate intervals specified in the plan. The following shall be included in the plan:

i) Active Mining-Related Areas and Those Inactive Areas Under

SMCRA Bond Authority. The plan shall require quarterly inspections by the facility personnel for areas of the facility covered by pollution prevention plan requirements. This inspection interval corresponds with the quarterly inspections for the entire facility required to be provided by *SMCRA* authority inspectors for all mining-related areas under *SMCRA* authority, including sediment and erosion control measures. Inspections by the facility representative may be done at the same time as the mandatory inspections performed by *SMCRA* inspectors. Records of inspections of the *SMCRA* authority facility representative shall be maintained.

ii) Inactive Mining-Related Areas Not Under *SMCRA* Bond. The plan shall require annual inspections by the facility representative except in situations referred to in paragraph *3.a.(4)(d)* below.

iii) Inspection Records. The plan shall require that inspection records of the facility representative and those of the SMCRA authority inspector shall be maintained. A set of tracking or follow-up procedures shall be used to ensure that appropriate actions are taken in response to the inspections.

(e) Employee Training. Employee training programs shall inform personnel responsible for implementing activities identified in the storm water pollution prevention plan or otherwise responsible for storm water management at all levels of responsibility of the components and goals of the storm water pollution prevention plan. Training should address topics such as spill response, good housekeeping and material management practices. The pollution prevention plan shall identify periodic dates for such training.

(f) Recordkeeping and Internal Reporting Procedures. A description of incidents (such as spills, or other discharges) along with other information describing the quality and quantity of storm water discharges shall be included in the plan required under this part. Inspections and maintenance activities shall be documented and records of such activities shall be incorporated into the plan.

(g) Non-storm Water Discharges.

i) Certification. The plan shall include a certification that the discharge has been tested or evaluated for the presence of non-storm water discharges such as drainage from underground portions of inactive mines or floor drains from

maintenance or coal handling buildings. The certification shall include the identification of potential significant sources of non-storm water discharges at the site, a description of the results of any test and/or evaluation, a description of the evaluation criteria or testing method used, the date of any testing and/or evaluation, and the onsite drainage points that were directly observed during the test. Certifications shall be signed in accordance with *Part VI.G.* of this permit.

ii) Exceptions. Except for flows from fire fighting activities, authorized sources of non-storm water listed in paragraph *2.(a)* of this section that are combined with storm water discharges associated with industrial activity must be identified in the plan. The plan shall identify and ensure the implementation of appropriate pollution prevention measures for the non-storm water component(s) of the discharge.

iii) Failure to Certify. If the facility is unable to provide the certification required (testing or other evaluation for non-storm water discharges), the *Executive Secretary* must be notified within 180 days after the effective date of this permit. If the failure to certify is caused by the inability to perform adequate tests or evaluations, such notification shall describe: the procedure of any test conducted for the presence of non-storm water discharges; the results of such test or other relevant observations; potential sources of non-storm water to the storm discharge lines; and why adequate tests for such storm discharge lines were not feasible. Non-storm water discharges to waters of the State that are not authorized by a *UPDES* permit are unlawful, and must be terminated.

(h) Sediment and Erosion Control. The plan shall identify areas that, due to topography, activities, or other factors, have a high potential for significant soil erosion, and identify structural, vegetative, and/or stabilization measures to be used to limit erosion and reduce sediment concentrations in storm water discharges. As indicated in paragraph *3.* above, *SMCRA* requirements regarding sediment and erosion control measures are primary requirements of the pollution prevention plan for mining-related areas subject to *SMCRA* authority. The following sediment and erosion control measures or other equivalent measures, should be included in the plan where reasonable and appropriate for all areas subject to storm water runoff:

i) Stabilization Measures. Interim and permanent stabilization measures to minimize erosion and lessen amount of structural

sediment control measures needed, including: mature vegetation preservation; temporary seeding; permanent seeding and planting; temporary mulching, matting, and netting; sod stabilization; vegetative buffer strips; temporary chemical mulch, soil binders, and soil palliatives; nonacidic roadsurfacing material; and protective trees.

ii) Structural Measures. Structural measures to lessen erosion and reduce sediment discharges, including: silt fences; earth dikes; straw dikes; gradient terraces; drainage swales; sediment traps; pipe slope drains; porous rock check dams; sedimentation ponds; riprap channel protection; capping of contaminated sources; and physical/chemical treatment of storm water.

(i) Management of Flow. The plan shall contain a narrative consideration of the appropriateness of traditional storm water management practices (other than those as sediment and erosion control measures listed above) used to manage storm water runoff in a manner that reduces pollutants in storm water runoff from the site. The plan shall provide that the measures, which the permittee determines to be reasonable and appropriate, shall be implemented and maintained. Appropriate measures may include: discharge diversions; drainage/storm water conveyances; runoff dispersion; sediment control and collection; vegetation/soil stabilization; capping of contaminated sources; treatment; or other equivalent measures.

(4) Comprehensive Site Compliance Evaluation. Qualified personnel shall conduct site compliance evaluations at intervals specified in the plan, but in no case less than once a year. Such evaluations shall provide:

(a) Areas contributing to a storm water discharge associated with coal mining-related areas shall be visually inspected for evidence of, or the potential for, pollutants entering the drainage system. These areas include haul and access roads; railroad spurs, sidings, and internal haulage lines; conveyor belts, chutes and aerial tramways; equipment storage and maintenance yards; coal handling buildings and structures; and inactive mines and related areas. Measures to reduce pollutant loadings shall be evaluated to determine whether they are adequate and properly implemented in accordance with the terms of the permit or whether additional control measures are needed. Structural storm water management measures, sediment and erosion control measures, and other structural pollution prevention measures, as indicated in paragraphs *3.a.(3)(h)* and *3.a.(3)(i)* above and where identified in the plan, shall be observed to ensure that they are

operating correctly. A visual evaluation of any equipment needed to implement the plan, such as spill response equipment, shall be made.

(b) Based on the results of the evaluation, the description of potential pollutant sources identified in the plan, in accordance with paragraph *3.a.(2)* of this section, and pollution prevention measures and controls identified in the plan, in accordance with paragraph *3.a.(3)* of this section, shall be revised as appropriate within 2 weeks of such evaluation and shall provide for implementation of any changes to the plan in a timely manner. For inactive mines, such revisions may be extended to a maximum of 12 weeks after the evaluation.

(c) A report summarizing the scope of the evaluation, personnel making the evaluation, the date(s) of the evaluation, major observations relating to the implementation of the storm water pollution prevention plan, and actions taken in accordance with paragraph *3.a.(4)(b)* above shall be made and retained as part of the storm water pollution prevention plan for at least 3 years after the date of the evaluation. The report shall identify any incidents of noncompliance. Where a report does not identify any incidents of noncompliance, the report shall contain a certification that the facility is in compliance with the storm water pollution prevention plan and this permit. The report shall be signed in accordance with *Part VI.G.* (Signatory Requirements) of this permit.

(d) Where compliance evaluation schedules overlap with inspections required under *3.a.(3)(d)*, the compliance evaluation may be conducted in place of one such inspection. Where annual site compliance evaluations are shown in the plan to be impractical for inactive mining sites due to the remote location and inaccessibility of the site, site inspections required under this part shall be conducted at appropriate intervals specified in the plan, but, in no case less than once in 3 years.

4. Numeric Effluent Limitations. There are no additional numeric effluent limitations beyond those described in *Part I.D.* of this permit.

5. Monitoring and Reporting Requirements.

a. Analytical Monitoring Requirements. The permittee must monitor their storm water discharges associated with industrial activity at least quarterly (4 times per year) during years 2 and 4 of the permit cycle except as provided in paragraphs *5.a.(3)* (Sampling Waiver), *5.a.(4)* (Representative Discharge), and *5.a.(5)* (Alternative Certification). The Permittee is required to monitor their storm water discharges for the pollutants of concern listed in Table E. below. Reports must be made in

accordance with *5.b.* (Reporting). In addition to the parameters listed in Table E. below, the Permittee must provide the date and duration (in hours) of the storm event(s) sampled; rainfall measurements or estimates (in inches) of the storm event that generated the sampled runoff; the duration between the storm event sampled and the end of the previous measurable (greater than 0.1 inch rainfall) storm event; and an estimate of the total volume (in gallons) of the discharge sampled.

Table E.
Monitoring Requirements for Coal Mining Facilities

Pollutants of Concern	Cut-Off Concentration
Total Recoverable Aluminum	0.75 mg/L
Total Recoverable Iron	1.0 mg/L
Total Suspended Solids	100 mg/L

(1) Monitoring Periods. Coal mining facilities shall monitor samples collected during the sampling periods of: January through March, April through June, July through September, and October through December for the years specified in paragraph *a.* (above).

(2) Sample Type. A minimum of one grab sample shall be taken. All such samples shall be collected from the discharge resulting from a storm event that is greater than 0.1 inches in magnitude and that occurs at least 72 hours from the previously measurable (greater than 0.1 inch rainfall) storm event. The required 72-hour storm event interval is waived where the preceding measurable storm event did not result in a measurable discharge from the facility. The required 72-hour storm event interval may also be waived where the permittee documents that less than a 72-hour interval is representative for local storm events during the season when sampling is being conducted. The grab sample shall be taken during the first 30 minutes of the discharge. If the collection of a grab sample during the first 30 minutes is impracticable, a grab sample can be taken during the first hour of the discharge, and the discharger shall submit with the monitoring report a description of why a grab sample during the first 30 minutes was impracticable. If storm water discharges associated with industrial activity commingle with process or nonprocess water, then where practicable permittees must attempt to sample the storm water discharge before it mixes with the non-storm water discharge.

(3) Sampling Waiver.

(a) Adverse Conditions. When a discharger is unable to collect samples within a specified sampling period due to adverse climatic conditions, the discharger shall collect a substitute sample from a separate qualifying event in the next monitoring period and submit the data along with the data for the routine sample in that period.

Adverse weather conditions that may prohibit the collection of samples include weather conditions that create dangerous conditions for personnel (such as local flooding, high winds, hurricanes, tornadoes, electrical storms, etc.) or otherwise make the collection of a sample impracticable (drought, extended frozen conditions, etc.).

(b) Low Concentration Waiver. When the average concentration for a pollutant calculated from all monitoring data collected from an outfall during the second year monitoring is less than the corresponding value for that pollutant listed in Table E. under the column Monitoring Cut-Off Concentration, a facility may waive monitoring and reporting requirements for the fourth year monitoring period. The facility must submit to the *Executive Secretary*, in lieu of the monitoring data, a certification that there has not been a significant change in industrial activity or the pollution prevention measures in area of the facility that drains to the outfall for which sampling was waived.

(c) Inactive and Unstaffed Site. When a discharger is unable to conduct quarterly chemical storm water sampling at an inactive and unstaffed site, the operator of the facility may exercise a waiver of the monitoring requirements as long as the facility remains inactive and unstaffed. The facility must submit to the *Executive Secretary*, in lieu of monitoring data, a certification statement on the *Storm Water Discharge Monitoring Report* (*SWDMR*) stating that the site is inactive and unstaffed so that collecting a sample during a qualifying event is not possible.

(4) Representative Discharge. When a facility has two or more outfalls that, based on a consideration of industrial activity, significant materials, and management practices and activities within the area drained by the outfall, the permittee reasonably believes discharge substantially identical effluents, the permittee may test the effluent of one of such outfalls and report that the quantitative data also applies to the substantially identical outfall(s) provided that the permittee includes in the storm water pollution prevention plan a description of the location of the outfalls and explains in detail why the outfalls are expected to discharge substantially identical effluents. In addition, for each outfall that the permittee believes is representative, an estimate of the size of the drainage area (in square feet) and an estimate of the runoff coefficient of the drainage area [e.g., low (under 40 percent), medium (40 to 65 percent), or high (above 65 percent)] shall be provided in the plan. The permittee shall include the description of the location of the outfalls, explanation of why outfalls are expected to discharge substantially identical effluents, and estimate of the size of the

drainage area and runoff coefficient with the *SWDMR*.

(5) Alternative Certification. A discharger is not subject to the monitoring requirements of this section provided the discharger makes a certification for a given outfall or on a pollutant-by-pollutant basis in lieu of monitoring reports required under paragraph *b.* below, under penalty of law, signed in accordance with *Part VI.G.* (Signatory Requirements), that material handling equipment or activities, raw materials, intermediate products, final products, waste materials, by-products, industrial machinery or operations, or significant materials from past industrial activity that are located in areas of the facility within the drainage area of the outfall are not presently exposed to storm water and are not expected to be exposed to storm water for the certification period. Such certification must be retained in the storm water pollution prevention plan, and submitted to *DWQ* in accordance with *Part V.B.* of this permit. In the case of certifying that a pollutant is not present, the permittee must submit the certification along with the monitoring reports required under paragraph *b.* below. If the permittee cannot certify for an entire period, they must submit the date exposure was eliminated and any monitoring required up until that date. This certification option is not applicable to compliance monitoring requirements associated with effluent limitations.

b. Reporting. Permittees shall submit monitoring results for each outfall associated with industrial activity [or a certification in accordance with Sections *(3)*, *(4)*, or *(5)* above] obtained during the second year reporting period, on *Storm Water Discharge Monitoring Report* (*SWDMR*) form(s) postmarked no later than the 31st day of the following March. Monitoring results [or a certification in accordance with Sections *(3)*, *(4)*, or *(5)* above] obtained during the fourth year reporting period shall be submitted on *SWDMR* form(s) postmarked no later than the 31st day of the following March. For each outfall, one signed *SWDMR* form must be submitted to the *Executive Secretary* per storm event sampled. Signed copies of *SWDMRs*, or said certifications, shall be submitted to the *Executive Secretary* at the address listed in *Part II.D.* of the permit.

(1) Additional Notification. In addition to filing copies of discharge monitoring reports in accordance with paragraph *b.* (above), coal-mining related facilities with at least one storm water discharge associated with industrial activity through a large or medium municipal separate storm sewer system (systems serving a population of 100,000 or more) must submit signed copies of discharge monitoring reports to the operator of the municipal separate storm sewer system in accordance with the dates provided in paragraph *b.* (above).

c. Visual Examination of Storm Water Quality. Coal mining-related facilities shall perform and document a visual examination of a representative storm water

discharge at the following frequencies: quarterly for active areas under *SMCRA* bond located in areas with average annual precipitation over 20 inches; semi-annually for inactive areas under *SMCRA* bond, and active areas under *SMCRA* bond located in areas with average annual precipitation of 20 inches or less; visual examinations are not required at inactive areas not under *SMCRA* bond.

(1) Visual Monitoring Periods. Examinations shall be conducted in each of the following periods for the purposes of visually inspecting storm water runoff or snow melt: Quarterly-January through March; April through June; July through September; and October through December. Semi-annually—January through June and July through December.

(2) Sample and Data Collection. Examinations shall be made of samples collected within the first 60 minutes (or as soon thereafter as practical, but not to exceed two hours) of when the runoff or snowmelt begins discharging. The examinations shall document observations of color, odor, clarity, floating solids, settled solids, suspended solids, foam, oil sheen, and other obvious indicators of storm water pollution. The examination must be conducted in a well lit area. No analytical tests are required to be performed on the samples. All such samples shall be collected from the discharge resulting from a storm event that is greater than 0.1 inches in magnitude and that occurs at least 72 hours from the previously measurable (greater than 0.1 inch rainfall) storm event. Where practicable, the same individual will carry out the collection and examination of discharges for the life of the permit.

(3) Visual Storm Water Discharge Examination Reports. Visual examination reports must be maintained onsite in the pollution prevention plan. The report shall include the examination date and time, examination personnel, the nature of the discharge (i.e., runoff or snow melt), visual quality of the storm water discharge (including observations of color, odor, clarity, floating solids, settled solids, suspended solids, foam, oil sheen, and other obvious indicators of storm water pollution), and probable sources of any observed storm water contamination.

(4) Representative Discharge. When a facility has two or more outfalls that, based on a consideration of industrial activity, significant materials, and management practices and activities within the area drained by the outfall, the permittee reasonably believes discharge substantially identical effluents, the permittee may collect a sample of effluent of one of such outfalls and report that the examination data also applies to the substantially identical outfalls provided that the permittee includes in the storm water pollution prevention plan a description of the location of the outfalls and explaining in detail why the outfalls are expected to discharge substantially identical effluents. In addition, for each outfall that the

permittee believes is representative, an estimate of the size of the drainage area (in square feet) and an estimate of the runoff coefficient of the drainage area [e.g., low (under 40 percent), medium (40 to 65 percent), or high (above 65 percent)] shall be provided in the plan.

(5) Adverse Conditions. When a discharger is unable to collect samples over the course of the visual examination period as a result of adverse climatic conditions, the discharger must document the reason for not performing the visual examination and retain this documentation onsite with the records of the visual examination. Adverse weather conditions which may prohibit the collection of samples include weather conditions that create dangerous conditions for personnel (such as local flooding, high winds, hurricanes, tornadoes, electrical storms, etc.) or otherwise make the collection of a sample impracticable (drought, extended frozen conditions, etc.).

(6) Inactive and Unstaffed Site. When a discharger is unable to conduct visual storm water examinations at an inactive and unstaffed site, the operator of the facility may exercise a waiver of the monitoring requirement as long as the facility remains inactive and unstaffed. The facility must maintain a certification with the pollution prevention plan stating that the site is inactive and unstaffed so that performing visual examinations during a qualifying event is not feasible.

II. MONITORING, RECORDING AND REPORTING REQUIREMENTS

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

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

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

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

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

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

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

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

1. The date, exact place, and time of sampling or measurements:

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

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

I. Twenty-four Hour Notice of Noncompliance Reporting.

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

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

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

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

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

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

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

   a. A description of the noncompliance and its cause;

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

   c. The estimated time noncompliance is expected to continue if it has not been

corrected; and,

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

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

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

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

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

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

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

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

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

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

III. COMPLIANCE RESPONSIBILITIES

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

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

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

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

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

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

G. Bypass of Treatment Facilities.

1. Bypass not exceeding limitations. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the

provisions of paragraphs 2 and 3 of this section. Return of removed substances, as described in *Part III.F*, to the discharge stream shall not be considered a bypass under the provisions of this paragraph.

2. Notice:

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

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

3. Prohibition of bypass.

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

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

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

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

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

H. Upset Conditions.

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

2. Conditions necessary for a demonstration of upset. A permittee who wishes to establish

the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

IV. GENERAL REQUIREMENTS

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

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

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

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

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

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

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

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

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

   a. The authorization is made in writing by a person described above and submitted

to the Executive Secretary, and,

b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility, such as the position of plant manager, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.)

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

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

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

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

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

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

K. Property Rights. The issuance of this permit does not convey any property rights of any sort, or

any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations.

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

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

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

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

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

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

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

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

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

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

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

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 - Energy West Mining Company – Deer Creek Mine

is hereby authorized to discharge from its facility located approximately 8 miles northwest of Huntington in Emery County, Utah, with the outfalls:

001 located at latitude 39°21'36", and longitude 111°06'35"
002 located at latitude 39°21'29", and longitude 111°06'57"

to receiving waters named

Deer Creek, thence to Huntington Creek (Tributary to The Colorado River)

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

This permit shall become effective on December 1, 2007.

This permit and the authorization to discharge shall expire at midnight, November 30, 2012.

Signed this 20th day of November, 2007.

Walter L. Baker, P.E.
Executive Secretary
Utah Water Quality Board

TABLE OF CONTENTS

I. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

A. Definitions.

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

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

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

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

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

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

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

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

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

6. An "instantaneous" measurement, for monitoring requirements, is defined as a single reading, observation, or measurement.

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

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

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

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

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

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

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

14. "Coal pile runoff" means the rainfall runoff from or through any coal storage pile.

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

16. "Point Source" means any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharges. This term does not include return flows from irrigated agriculture or agriculture storm water runoff.

17. "10-year, 24-hour precipitation event" means the maximum 24-hour precipitation event with a probable reoccurrence interval of once in 10 years. This information is available in *Weather Bureau Technical Paper No. 40*, May 1961 and *NOAA Atlas 2*, 1973 for the 11 Western States, and may be obtained from the National Climatic Center of the

Environmental Data Service, National Oceanic and Atmospheric Administration, U.S. Department of Commerce.

B. Description of Discharge Points.

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

Outfall Number	Location of Discharge Points
001	Sedimentation pond for surface water runoff, discharges to Deer Creek at latitude 39°21'36" and longitude 111°06'35".
002	Mine water discharge to Deer Creek at latitude 39°21'29" and longitude 111°06'57".

C. Narrative Standard.

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

D. Specific Limitations and Self-monitoring Requirements.

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

Effluent Characteristic	Effluent Limitations a/				Monitoring Requirements	
	30-Day Average	7-Day Average	Daily Minimum	Daily Maximum	Sample Frequency	Sample Type
Flow, MGD	Report	NA	NA	Report	Monthly	Measured
TSS, mg/L	25	35	NA	70	Monthly	Grab
Total Fe, mg/L	NA	NA	NA	1.0	Monthly	Grab
TDS (001), mg/L b/	NA	NA	NA	Report	Monthly	Grab
TDS (002), mg/L b/	NA	NA	NA	1000	Monthly	Grab
TDS (001) tons/day b/	NA	NA	NA	1.0	Monthly	Grab
pH, standard units	NA	NA	6.5	9.0	Monthly	Grab

Oil & Grease, mg/L c/	NA	NA	NA	NA/10	NA/Monthly	NA/Grab
Oil & Grease, floating solids, visible foam, c/	NA	NA	NA	None	Monthly	Visual
[1] *MGD: million gallons per day*		[2] *NA: not applicable*		[3] *mg/L : milligrams per liter*		

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

There shall be no discharge of sanitary wastes.

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

b/ For TDS, the concentration shall be reported for both outfalls and the concentration shall be limited to 1000 mg/L for outfall 002 (mine water discharge). The discharge from outfall 001 shall not exceed 1 ton or 2000 lbs per day for TDS.

c/ A sample for oil and grease is required when a sheen is observed or there is another reason to believe oil may be present. If a sheen is observed, a sample of that effluent shall be collected immediately thereafter and oil and grease shall not exceed 10 mg/L in concentration, otherwise enter "NA". A visual inspection for oil and grease, floating solids, and visible foam shall be performed at least once per month at all outfalls. There shall be no sheen, floating solids, or visible foam in other than trace amounts.

2. Samples taken in compliance with the monitoring requirements specified above shall be taken at the following locations: at the outfall prior to mixing with any receiving water.

3. Any overflow, increase in volume of a discharge, or discharge from a bypass system caused by precipitation within any 24-hour period less than or equal to the 10-year precipitation event (or snowmelt of equivalent volume) at all surface runoff pond (outfall 001) may comply with the following limitation instead of the total suspended solids limitations contained in Part I.D.1:

Effluent Characteristics	Daily Maximum
Settleable Solids	0.5 mL/L

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

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

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

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

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

E. Storm Water Requirements. It has been determined that the permittee has a regulated storm water discharge as per *UAC R317-8-3.9.*, therefore, the following permit conditions governing storm water discharges apply.

1. Coverage of This Section.

a. Discharges Covered Under This Section. The requirements listed under this section shall apply to storm water discharges from coal mining-related areas (SIC Major Group 12) if they are not subject to effluent limitations guidelines under *40 CFR Part 434.*

(1) Site Coverage. Storm water discharges from the following portions of coal mines may be eligible for this permit: haul roads (nonpublic roads on which coal or coal refuse is conveyed), access roads (nonpublic roads providing light vehicular traffic within the facility property and to public roadways), railroad spurs, sidings, and internal haulage lines (rail lines used for hauling coal within the facility property and to offsite commercial railroad lines or loading areas), conveyor belts, chutes, and aerial tramway haulage areas (areas under and around coal or refuse conveyor areas, including transfer stations), equipment storage and maintenance yards, coal handling buildings and structures, and inactive coal mines and related areas (abandoned and other inactive mines, refuse disposal sites and other mining-related areas on private lands).

b. Limitations. Storm water discharges from inactive mining activities occurring on Federal lands where an operator cannot be identified are not eligible for coverage under this permit.

c. Co-Located Industrial Activities. When an industrial facility, described by paragraph *a.* (above) of this section, has industrial activities being conducted onsite that meet the description(s) of industrial activities in another section(s), that industrial facility shall comply with any and all applicable monitoring and pollution prevention plan requirements of the other section(s) in addition to all applicable requirements in this section. The monitoring and pollution prevention plan terms and conditions of this multi-sector permit are additive for industrial activities being conducted at the same industrial facility. The operator of the facility shall determine which other monitoring and pollution prevention plan section(s) of this permit (if any) are applicable to the facility.

2. Prohibition of Non-storm Water Discharges.

a. The following non-storm water discharges may be authorized by this permit provided the non-storm water component of the discharge is in compliance with this section (Section E): discharges from fire fighting activities; fire hydrant flushings; potable water sources including waterline flushings; drinking fountain water; irrigation drainage, lawn watering; routine external building washdown water where detergents or other compounds have not been used in the process; pavement washwaters where spills or leaks of toxic or hazardous materials (including oils and fuels) have not occurred (unless all spilled material has been removed) and where detergents are not used; air conditioning condensate; uncontaminated compressor condensate; uncontaminated springs; uncontaminated ground water; and foundation or footing drains where flows are not contaminated with process materials such as solvents.

b. In addition to the broad prohibition of non-storm water discharges, listed above, point source discharges of pollutant seeps or underground drainage from inactive coal mines and refuse disposal areas that do not occur as storm water discharges in response to precipitation events are also excluded from coverage under this permit. In addition, floordrains from maintenance buildings and other similar drains in mining and preparation plant areas are prohibited.

3. Storm Water Pollution Prevention Plan Requirements. Most of the active coal mining-related areas, described in paragraph *1.a.(1)* above, are subject to sediment and erosion control regulations of the U.S. Office of Surface Mining (OSM) that enforces the *Surface Mining Control and Reclamation Act* (*SMCRA*). OSM has granted authority to the Utah Division of Oil Gas and Mining (DOGM) to implement *SMCRA* through State *SMCRA* regulations. All *SMCRA* requirements regarding control of erosion, siltation and other pollutants resulting from storm water runoff, including road dust resulting from erosion, shall be primary requirements of the pollution prevention plan and shall be included in the contents of the plan directly, or by reference. Where determined to be appropriate for protection of water quality, additional sedimentation and erosion controls may be warranted.

a. Contents of Plan. The plan shall include at a minimum, the following items:

(1) Pollution Prevention Team. Each plan shall identify a specific individual or individuals within the facility organization as members of a storm water Pollution Prevention Team that are responsible for developing the storm water pollution prevention plan and assisting the facility manager in its implementation, maintenance, and revision. The plan shall clearly identify the responsibilities of each team member. The activities and responsibilities of the team shall address all aspects of the facility's storm water pollution prevention plan.

(2) Description of Potential Pollutant Sources. Each plan shall provide a description of potential sources that may reasonably be expected to add significant amounts of pollutants to storm water discharges or that may result in the discharge of pollutants during dry weather from separate storm sewers draining the facility. Each plan shall identify all activities and significant materials that may potentially be significant pollutant sources. Each plan shall include, at a minimum:

(a) Deadlines for Plan Preparation and Compliance

Pacificorp shall prepare and implement a plan in compliance with the provisions of this permit below within 270 days of the effective date of this permit.

(b) Keeping Plans Current

The permittee shall amend the plan whenever there is a change in design, construction, operation, or maintenance, that has a significant effect on the potential for the discharge of pollutants to the waters of the State or if the storm water pollution prevention plan proves to be ineffective in eliminating or significantly minimizing pollutants from sources identified by the plan, or in otherwise achieving the general objectives of controlling pollutants in storm water discharges associated with the activities at the mine.

(c) Drainage

i) A site map, such as a drainage map required for *SMCRA* permit applications, that indicate drainage areas and storm water outfalls. These shall include but not be limited to the following:

a) Drainage direction and discharge points from all applicable mining-related areas described in paragraph *1.a(1).* (Site Coverage) above, including culvert and sump discharges from roads and rail beds

and also from equipment and maintenance areas subject to storm runoff of fuel, lubricants and other potentially harmful liquids.

b) Location of each existing erosion and sedimentation control structure or other control measures for reducing pollutants in storm water runoff.

c) Receiving streams or other surface water bodies.

d) Locations exposed to precipitation that contain acidic spoil, refuse or unreclaimed disturbed areas.

e) Locations where major spills or leaks of toxic or hazardous pollutants have occurred.

f) Locations where liquid storage tanks containing potential pollutants, such as caustics, hydraulic fluids and lubricants, are exposed to precipitation.

g) Locations where fueling stations, vehicle and equipment maintenance areas are exposed to precipitation.

h) Locations of outfalls and the types of discharges contained in the drainage areas of the outfalls.

ii) For each area of the facility that generates storm water discharges associated with the mining-related activity with a reasonable potential for containing significant amounts of pollutants, a prediction of the direction of flow, and an identification of the types of pollutants that are likely to be present in storm water discharges associated with the activity. Factors to consider include the toxicity of the pollutant; quantity of chemicals used, produced or discharged; the likelihood of contact with storm water; and history of significant leaks or spills of toxic or hazardous pollutants. Flows with a significant potential for causing erosion shall be identified.

(d) Inventory of Exposed Materials. An inventory of the types of materials handled at the site that potentially may be exposed to precipitation. Such inventory shall include a narrative description of significant materials that have been handled, treated, stored or disposed in a manner to allow exposure to storm water 3 years prior

to the effective date of this permit; method and location of onsite storage or disposal; materials management practices employed to minimize contact of materials with storm water runoff 3 years prior to the effective date of this permit; a description of existing structural and nonstructural control measures to reduce pollutants in storm water runoff; and a description of any treatment the storm water receives.

(e) Spills and Leaks. A list of significant spills and leaks of toxic or hazardous pollutants that occurred at areas that are exposed to precipitation or that otherwise drain to a storm water conveyance at the facility after the date of 3 years prior to the effective date of this permit. Such list shall be updated as appropriate during the term of the permit.

(f) Sampling Data. A summary of any existing discharge sampling data describing pollutants in storm water discharges from the portions of the facility covered by this permit, including a summary of any sampling data collected during the term of this permit.

(g) Risk Identification and Summary of Potential Pollutant Sources. A narrative description of the potential pollutant sources from the following activities: truck traffic on haul roads and resulting generation of sediment subject to runoff and dust generation; fuel or other liquid storage; pressure lines containing slurry, hydraulic fluid or other potential harmful liquids; and loading or temporary storage of acidic refuse or spoil. Specific potential pollutants shall be identified where known.

(3) Measures and Controls. Each facility covered by this permit shall develop a description of storm water management controls appropriate for the facility and implement such controls. The appropriateness and priorities of controls in a plan shall reflect identified potential sources of pollutants at the facility. The description of storm water management controls shall address the following minimum components, including a schedule for implementing such controls.

(a) Good Housekeeping. Good housekeeping requires the maintenance of areas that may contribute pollutants to storm water discharges in a clean, orderly manner. These would be practices that would minimize the generation of pollutants at the source or before it would be necessary to employ sediment ponds or other control measures at the discharge outlets. Where applicable, such measures or other equivalent measures would include the following: sweepers and covered storage to minimize dust generation and storm runoff;

conservation of vegetation where possible to minimize erosion; watering of haul roads to minimize dust generation; collection, removal, and proper disposal of waste oils and other fluids resulting from vehicle and equipment maintenance; or other equivalent measures.

(b) Preventive Maintenance. A preventive maintenance program shall involve timely inspection and maintenance of storm water management devices as well as inspecting and testing facility equipment and systems to uncover conditions that could cause breakdowns or failures resulting in discharges of pollutants to surface waters, and ensuring appropriate maintenance of such equipment and systems. Where applicable, such measures would include the following: removal and proper disposal of settled solids in catch basins to allow sufficient retention capacity; periodic replacement of siltation control measures subject to deterioration such as straw bales; inspections of storage tanks and pressure lines for fuels, lubricants, hydraulic fluid or slurry to prevent leaks due to deterioration or faulty connections; or other equivalent measures.

(c) Spill Prevention and Response Procedures. Areas where potential spills that can contribute pollutants to storm water discharges can occur, and their accompanying drainage points shall be identified clearly in the storm water pollution prevention plan. Where appropriate, specifying material handling procedures, storage requirements, and use of equipment such as diversion valves in the plan should be considered. Procedures for cleaning up spills shall be identified in the plan and made available to the appropriate personnel. The necessary equipment to implement a clean up should be available to personnel.

(d) Inspections. In addition to or as part of the comprehensive site evaluation required under paragraph *3.a.(4)* of this section, qualified facility personnel shall be identified to inspect designated areas of the facility at appropriate intervals specified in the plan. The following shall be included in the plan:

i) Active Mining-Related Areas and Those Inactive Areas Under *SMCRA* Bond Authority. The plan shall require quarterly inspections by the facility personnel for areas of the facility covered by pollution prevention plan requirements. This inspection interval corresponds with the quarterly inspections for the entire facility required to be provided by *SMCRA* authority inspectors for all mining-related areas under *SMCRA* authority, including sediment and erosion control measures.

Inspections by the facility representative may be done at the same time as the mandatory inspections performed by *SMCRA* inspectors. Records of inspections of the *SMCRA* authority facility representative shall be maintained.

ii) Inactive Mining-Related Areas Not Under *SMCRA* Bond. The plan shall require annual inspections by the facility representative except in situations referred to in paragraph *3.a.(4)(d)* below.

iii) Inspection Records. The plan shall require that inspection records of the facility representative and those of the SMCRA authority inspector shall be maintained. A set of tracking or follow-up procedures shall be used to ensure that appropriate actions are taken in response to the inspections.

(e) Employee Training. Employee training programs shall inform personnel responsible for implementing activities identified in the storm water pollution prevention plan or otherwise responsible for storm water management at all levels of responsibility of the components and goals of the storm water pollution prevention plan. Training should address topics such as spill response, good housekeeping and material management practices. The pollution prevention plan shall identify periodic dates for such training.

(f) Recordkeeping and Internal Reporting Procedures. A description of incidents (such as spills, or other discharges) along with other information describing the quality and quantity of storm water discharges shall be included in the plan required under this part. Inspections and maintenance activities shall be documented and records of such activities shall be incorporated into the plan.

(g) Non-storm Water Discharges.

i) Certification. The plan shall include a certification that the discharge has been tested or evaluated for the presence of non-storm water discharges such as drainage from underground portions of inactive mines or floor drains from maintenance or coal handling buildings. The certification shall include the identification of potential significant sources of non-storm water discharges at the site, a description of the results of any test and/or evaluation, a description of the evaluation criteria or testing method used, the date of any testing and/or evaluation, and the onsite drainage points that were directly observed during the test. Certifications shall be

signed in accordance with *Part VI.G.* of this permit.

ii) Exceptions. Except for flows from fire fighting activities, authorized sources of non-storm water listed in paragraph *2.a.* above that are combined with storm water discharges associated with industrial activity must be identified in the plan. The plan shall identify and ensure the implementation of appropriate pollution prevention measures for the non-storm water component(s) of the discharge.

iii) Failure to Certify. If the facility is unable to provide the certification required (testing or other evaluation for non-storm water discharges), the *Executive Secretary* must be notified within 180 days after the effective date of this permit. If the failure to certify is caused by the inability to perform adequate tests or evaluations, such notification shall describe: the procedure of any test conducted for the presence of non-storm water discharges; the results of such test or other relevant observations; potential sources of non-storm water to the storm discharge lines; and why adequate tests for such storm discharge lines were not feasible. Non-storm water discharges to waters of the State that are not authorized by a *UPDES* permit are unlawful, and must be terminated.

(h) Sediment and Erosion Control. The plan shall identify areas that, due to topography, activities, or other factors, have a high potential for significant soil erosion, and identify structural, vegetative, and/or stabilization measures to be used to limit erosion and reduce sediment concentrations in storm water discharges. As indicated in paragraph *3.* above, *SMCRA* requirements regarding sediment and erosion control measures are primary requirements of the pollution prevention plan for mining-related areas subject to *SMCRA* authority. The following sediment and erosion control measures or other equivalent measures, should be included in the plan where reasonable and appropriate for all areas subject to storm water runoff:

i) Stabilization Measures. Interim and permanent stabilization measures to minimize erosion and lessen amount of structural sediment control measures needed, including: mature vegetation preservation; temporary seeding; permanent seeding and planting; temporary mulching, matting, and netting; sod stabilization; vegetative buffer strips; temporary chemical mulch, soil binders, and soil palliatives; nonacidic roadsurfacing material; and protective trees.

ii) Structural Measures. Structural measures to lessen erosion and reduce sediment discharges, including: silt fences; earth dikes; straw dikes; gradient terraces; drainage swales; sediment traps; pipe slope drains; porous rock check dams; sedimentation ponds; riprap channel protection; capping of contaminated sources; and physical/chemical treatment of storm water.

(i) Management of Flow. The plan shall contain a narrative consideration of the appropriateness of traditional storm water management practices (other than those as sediment and erosion control measures listed above) used to manage storm water runoff in a manner that reduces pollutants in storm water runoff from the site. The plan shall provide that the measures, which the permittee determines to be reasonable and appropriate, shall be implemented and maintained. Appropriate measures may include: discharge diversions; drainage/storm water conveyances; runoff dispersion; sediment control and collection; vegetation/soil stabilization; capping of contaminated sources; treatment; or other equivalent measures.

(4) Comprehensive Site Compliance Evaluation. Qualified personnel shall conduct site compliance evaluations at intervals specified in the plan, but in no case less than once a year. Such evaluations shall provide:

(a) Areas contributing to a storm water discharge associated with coal mining-related areas shall be visually inspected for evidence of, or the potential for, pollutants entering the drainage system. These areas include haul and access roads; railroad spurs, sidings, and internal haulage lines; conveyor belts, chutes and aerial tramways; equipment storage and maintenance yards; coal handling buildings and structures; and inactive mines and related areas. Measures to reduce pollutant loadings shall be evaluated to determine whether they are adequate and properly implemented in accordance with the terms of the permit or whether additional control measures are needed. Structural storm water management measures, sediment and erosion control measures, and other structural pollution prevention measures, as indicated in paragraphs *3.a.(3)(h)* and *3.a.(3)(i)* above and where identified in the plan, shall be observed to ensure that they are operating correctly. A visual evaluation of any equipment needed to implement the plan, such as spill response equipment, shall be made.

(b) Based on the results of the evaluation, the description of potential pollutant sources identified in the plan, in accordance with paragraph *3.a.(2)* of this section, and pollution prevention measures and controls identified in the plan, in accordance with paragraph *3.a.(3)* of this

section, shall be revised as appropriate within 2 weeks of such evaluation and shall provide for implementation of any changes to the plan in a timely manner. For inactive mines, such revisions may be extended to a maximum of 12 weeks after the evaluation.

(c) A report summarizing the scope of the evaluation, personnel making the evaluation, the date(s) of the evaluation, major observations relating to the implementation of the storm water pollution prevention plan, and actions taken in accordance with paragraph *3.a.(4)(b)* above shall be made and retained as part of the storm water pollution prevention plan for at least 3 years after the date of the evaluation. The report shall identify any incidents of noncompliance. Where a report does not identify any incidents of noncompliance, the report shall contain a certification that the facility is in compliance with the storm water pollution prevention plan and this permit. The report shall be signed in accordance with *Part VI.G.* (Signatory Requirements) of this permit.

(d) Where compliance evaluation schedules overlap with inspections required under *3.a.(3)(d)*, the compliance evaluation may be conducted in place of one such inspection. Where annual site compliance evaluations are shown in the plan to be impractical for inactive mining sites due to the remote location and inaccessibility of the site, site inspections required under this part shall be conducted at appropriate intervals specified in the plan, but, in no case less than once in 3 years.

4. Numeric Effluent Limitations. There are no additional numeric effluent limitations beyond those described in *Part I.D.* of this permit.

5. Monitoring and Reporting Requirements.

a. Analytical Monitoring Requirements. The permittee must monitor their storm water discharges associated with industrial activity at least quarterly (4 times per year) during years 2 and 4 of the permit cycle except as provided in paragraphs *5.a.(3)* (Sampling Waiver), *5.a.(4)* (Representative Discharge), and *5.a.(5)* (Alternative Certification). The Permittee is required to monitor their storm water discharges for the pollutants of concern listed in Table E. below. Reports must be made in accordance with *5.b.* (Reporting). In addition to the parameters listed in Table E. below, the Permittee must provide the date and duration (in hours) of the storm event(s) sampled; rainfall measurements or estimates (in inches) of the storm event that generated the sampled runoff; the duration between the storm event sampled and the end of the previous measurable (greater than 0.1 inch rainfall) storm event; and an estimate of the total volume (in gallons) of the discharge sampled.

Table E.
Monitoring Requirements for Coal Mining Facilities

Pollutants of Concern	Cut-Off Concentration
Total Recoverable Aluminum	0.75 mg/L
Total Recoverable Iron	1.0 mg/L
Total Suspended Solids	100 mg/L

(1) Monitoring Periods. Coal mining facilities shall monitor samples collected during the sampling periods of: January through March, April through June, July through September, and October through December for the years specified in paragraph *a.* (above).

(2) Sample Type. A minimum of one grab sample shall be taken. All such samples shall be collected from the discharge resulting from a storm event that is greater than 0.1 inches in magnitude and that occurs at least 72 hours from the previously measurable (greater than 0.1 inch rainfall) storm event. The required 72-hour storm event interval is waived where the preceding measurable storm event did not result in a measurable discharge from the facility. The required 72-hour storm event interval may also be waived where the permittee documents that less than a 72-hour interval is representative for local storm events during the season when sampling is being conducted. The grab sample shall be taken during the first 30 minutes of the discharge. If the collection of a grab sample during the first 30 minutes is impracticable, a grab sample can be taken during the first hour of the discharge, and the discharger shall submit with the monitoring report a description of why a grab sample during the first 30 minutes was impracticable. If storm water discharges associated with industrial activity commingle with process or nonprocess water, then where practicable permittees must attempt to sample the storm water discharge before it mixes with the non-storm water discharge.

(3) Sampling Waiver.

(a) Adverse Conditions. When a discharger is unable to collect samples within a specified sampling period due to adverse climatic conditions, the discharger shall collect a substitute sample from a separate qualifying event in the next monitoring period and submit the data along with the data for the routine sample in that period. Adverse weather conditions that may prohibit the collection of samples include weather conditions that create dangerous conditions for personnel (such as local flooding, high winds, hurricanes, tornadoes, electrical storms, etc.) or otherwise make the collection of a sample impracticable (drought, extended frozen conditions, etc.).

(b) Low Concentration Waiver. When the average concentration for a pollutant calculated from all monitoring data collected from an outfall during the second year monitoring is less than the corresponding value for that pollutant listed in Table E. under the column Monitoring Cut-Off Concentration, a facility may waive monitoring and reporting requirements for the fourth year monitoring period. The facility must submit to the *Executive Secretary*, in lieu of the monitoring data, a certification that there has not been a significant change in industrial activity or the pollution prevention measures in area of the facility that drains to the outfall for which sampling was waived.

(c) Inactive and Unstaffed Site. When a discharger is unable to conduct quarterly chemical storm water sampling at an inactive and unstaffed site, the operator of the facility may exercise a waiver of the monitoring requirements as long as the facility remains inactive and unstaffed. The facility must submit to the *Executive Secretary*, in lieu of monitoring data, a certification statement on the *Storm Water Discharge Monitoring Report* (*SWDMR*) stating that the site is inactive and unstaffed so that collecting a sample during a qualifying event is not possible.

(4) Representative Discharge. When a facility has two or more outfalls that, based on a consideration of industrial activity, significant materials, and management practices and activities within the area drained by the outfall, the permittee reasonably believes discharge substantially identical effluents, the permittee may test the effluent of one of such outfalls and report that the quantitative data also applies to the substantially identical outfall(s) provided that the permittee includes in the storm water pollution prevention plan a description of the location of the outfalls and explains in detail why the outfalls are expected to discharge substantially identical effluents. In addition, for each outfall that the permittee believes is representative, an estimate of the size of the drainage area (in square feet) and an estimate of the runoff coefficient of the drainage area [e.g., low (under 40 percent), medium (40 to 65 percent), or high (above 65 percent)] shall be provided in the plan. The permittee shall include the description of the location of the outfalls, explanation of why outfalls are expected to discharge substantially identical effluents, and estimate of the size of the drainage area and runoff coefficient with the *SWDMR*.

(5) Alternative Certification. A discharger is not subject to the monitoring requirements of this section provided the discharger makes a certification for a given outfall or on a pollutant-by-pollutant basis in lieu of monitoring reports required under paragraph *b.* below, under penalty of law, signed in accordance with *Part VI.G.* (Signatory Requirements), that material

handling equipment or activities, raw materials, intermediate products, final products, waste materials, by-products, industrial machinery or operations, or significant materials from past industrial activity that are located in areas of the facility within the drainage area of the outfall are not presently exposed to storm water and are not expected to be exposed to storm water for the certification period. Such certification must be retained in the storm water pollution prevention plan, and submitted to *DWQ* in accordance with *Part V.B.* of this permit. In the case of certifying that a pollutant is not present, the permittee must submit the certification along with the monitoring reports required under paragraph *b.* below. If the permittee cannot certify for an entire period, they must submit the date exposure was eliminated and any monitoring required up until that date. This certification option is not applicable to compliance monitoring requirements associated with effluent limitations.

b. Reporting. Permittees shall submit monitoring results for each outfall associated with industrial activity [or a certification in accordance with Sections *(3)*, *(4)*, or *(5)* above] obtained during the second year reporting period, on *Storm Water Discharge Monitoring Report* (*SWDMR*) form(s) postmarked no later than the 31st day of the following March. Monitoring results [or a certification in accordance with Sections *(3)*, *(4)*, or *(5)* above] obtained during the fourth year reporting period shall be submitted on *SWDMR* form(s) postmarked no later than the 31st day of the following March. For each outfall, one signed *SWDMR* form must be submitted to the *Executive Secretary* per storm event sampled. Signed copies of *SWDMRs*, or said certifications, shall be submitted to the *Executive Secretary* at the address listed in *Part II.D.* of the permit.

(1) Additional Notification. In addition to filing copies of discharge monitoring reports in accordance with paragraph *b.* (above), coal-mining related facilities with at least one storm water discharge associated with industrial activity through a large or medium municipal separate storm sewer system (systems serving a population of 100,000 or more) must submit signed copies of discharge monitoring reports to the operator of the municipal separate storm sewer system in accordance with the dates provided in paragraph *b.* (above).

c. Visual Examination of Storm Water Quality. Coal mining-related facilities shall perform and document a visual examination of a representative storm water discharge at the following frequencies: quarterly for active areas under *SMCRA* bond located in areas with average annual precipitation over 20 inches; semi-annually for inactive areas under *SMCRA* bond, and active areas under *SMCRA* bond located in areas with average annual precipitation of 20 inches or less; visual examinations are not required at inactive areas not under *SMCRA* bond.

(1) Visual Monitoring Periods. Examinations shall be conducted in each of

the following periods for the purposes of visually inspecting storm water runoff or snow melt: Quarterly-January through March; April through June; July through September; and October through December. Semi-annually—January through June and July through December.

(2) Sample and Data Collection. Examinations shall be made of samples collected within the first 60 minutes (or as soon thereafter as practical, but not to exceed two hours) of when the runoff or snowmelt begins discharging. The examinations shall document observations of color, odor, clarity, floating solids, settled solids, suspended solids, foam, oil sheen, and other obvious indicators of storm water pollution. The examination must be conducted in a well lit area. No analytical tests are required to be performed on the samples. All such samples shall be collected from the discharge resulting from a storm event that is greater than 0.1 inches in magnitude and that occurs at least 72 hours from the previously measurable (greater than 0.1 inch rainfall) storm event. Where practicable, the same individual will carry out the collection and examination of discharges for the life of the permit.

(3) Visual Storm Water Discharge Examination Reports. Visual examination reports must be maintained onsite in the pollution prevention plan. The report shall include the examination date and time, examination personnel, the nature of the discharge (i.e., runoff or snow melt), visual quality of the storm water discharge (including observations of color, odor, clarity, floating solids, settled solids, suspended solids, foam, oil sheen, and other obvious indicators of storm water pollution), and probable sources of any observed storm water contamination.

(4) Representative Discharge. When a facility has two or more outfalls that, based on a consideration of industrial activity, significant materials, and management practices and activities within the area drained by the outfall, the permittee reasonably believes discharge substantially identical effluents, the permittee may collect a sample of effluent of one of such outfalls and report that the examination data also applies to the substantially identical outfalls provided that the permittee includes in the storm water pollution prevention plan a description of the location of the outfalls and explaining in detail why the outfalls are expected to discharge substantially identical effluents. In addition, for each outfall that the permittee believes is representative, an estimate of the size of the drainage area (in square feet) and an estimate of the runoff coefficient of the drainage area [e.g., low (under 40 percent), medium (40 to 65 percent), or high (above 65 percent)] shall be provided in the plan.

(5) Adverse Conditions. When a discharger is unable to collect samples over the course of the visual examination period as a result of adverse climatic

conditions, the discharger must document the reason for not performing the visual examination and retain this documentation onsite with the records of the visual examination. Adverse weather conditions which may prohibit the collection of samples include weather conditions that create dangerous conditions for personnel (such as local flooding, high winds, hurricanes, tornadoes, electrical storms, etc.) or otherwise make the collection of a sample impracticable (drought, extended frozen conditions, etc.).

(6) Inactive and Unstaffed Site. When a discharger is unable to conduct visual storm water examinations at an inactive and unstaffed site, the operator of the facility may exercise a waiver of the monitoring requirement as long as the facility remains inactive and unstaffed. The facility must maintain a certification with the pollution prevention plan stating that the site is inactive and unstaffed so that performing visual examinations during a qualifying event is not feasible.

II. MONITORING, RECORDING AND REPORTING REQUIREMENTS

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

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

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

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

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

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

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

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

1. The date, exact place, and time of sampling or measurements:

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

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

I. Twenty-four Hour Notice of Noncompliance Reporting.

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

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

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

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

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

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

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

   a. A description of the noncompliance and its cause;

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

   c. The estimated time noncompliance is expected to continue if it has not been

corrected; and,

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

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

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

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

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

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

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

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

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

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

III. COMPLIANCE RESPONSIBILITIES

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

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

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

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

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

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

G. Bypass of Treatment Facilities.

1. Bypass not exceeding limitations. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the

provisions of paragraphs 2 and 3 of this section. Return of removed substances, as described in *Part III.F*, to the discharge stream shall not be considered a bypass under the provisions of this paragraph.

2. Notice:

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

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

3. Prohibition of bypass.

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

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

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

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

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

H. Upset Conditions.

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

2. Conditions necessary for a demonstration of upset. A permittee who wishes to establish

the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

IV. GENERAL REQUIREMENTS

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

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

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

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

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

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

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

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

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

a. The authorization is made in writing by a person described above and submitted

to the Executive Secretary, and,

b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility, such as the position of plant manager, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.)

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

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

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

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

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

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

K. Property Rights. The issuance of this permit does not convey any property rights of any sort, or

any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations.

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

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

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

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

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

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

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

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

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

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

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

Permit No. UT0023728
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 - Energy West Mining Company – Trail Mountain Mine

is hereby authorized to discharge from its facility located approximately 10 miles northwest of Orangeville in Emery County, Utah, with the outfalls:

001 located at latitude 39°19'00", and longitude 111°11'20"
002 located at latitude 39°19'03", and longitude 111°11'25"

to receiving waters named

Cottonwood Canyon Creek, thence to Cottonwood Creek (Tributary to The Colorado River)

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

This permit shall become effective on January 1, 2008.

This permit and the authorization to discharge shall expire at midnight, December 31, 2012.

Signed this 7th day of November, 2007.

Walter L. Baker, P.E.
Executive Secretary
Utah Water Quality Board

TABLE OF CONTENTS

I. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

A. Definitions.

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

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

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

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

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

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

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

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

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

6. An "instantaneous" measurement, for monitoring requirements, is defined as a single reading, observation, or measurement.

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

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

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

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

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

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

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

14. "Coal pile runoff" means the rainfall runoff from or through any coal storage pile.

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

16. "Point Source" means any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharges. This term does not include return flows from irrigated agriculture or agriculture storm water runoff.

17. "10-year, 24-hour precipitation event" means the maximum 24-hour precipitation event with a probable reoccurrence interval of once in 10 years. This information is available in *Weather Bureau Technical Paper No. 40*, May 1961 and *NOAA Atlas 2,* 1973 for the 11 Western States, and may be obtained from the National Climatic Center of the Environmental Data Service, National Oceanic and Atmospheric Administration, U.S. Department of Commerce.

B. Description of Discharge Points.

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

Outfall Number	Location of Discharge Points
001	Sedimentation pond for surface water runoff, discharges to Cottonwood Canyon Creek at latitude 39°19'00" and longitude 111°11'20".
002	Mine water discharge to Cottonwood Canyon Creek at latitude 39°19'03" and longitude 111°11'25".

C. Narrative Standard.

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

D. Specific Limitations and Self-monitoring Requirements.

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

Effluent Characteristics	Effluent Limitations a/				Monitoring Requirements	
	30 Day Average	7 Day Average	Daily Minimum	Daily Maximum	Sample Frequency	Sample Type
Flow, [1]MGD	Report	[2]NA	NA	Report	Monthly	Measured
TSS, [3]mg/L	25	35	NA	70	Monthly	Grab
Total Iron, mg/L	NA	NA	NA	1.3	Monthly	Grab
TDS (001), mg/L b/	NA	NA	NA	Report	Monthly	Grab
TDS (002), mg/L b/	NA	NA	NA	1136	Monthly	Grab
TDS (001),tons/day b/	NA	NA	NA	1.0	Monthly	Grab
pH, standard units	NA	NA	6.5	9.0	Monthly	Grab
Oil & Grease, mg/L c/	NA	NA	NA	NA/10	NA/Monthly	NA/Grab
Oil & Grease, floating solids, visible foam, c/	NA	NA	NA	None	Monthly	Visual

[1] MGD: million gallons per day *[2] NA: not applicable* *[3] mg/L : milligrams per liter*

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

There shall be no discharge of sanitary wastes.

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

b/ For TDS, the concentration shall be reported for both outfalls and the concentration shall be limited to 1136 mg/L for outfall 002 (mine water discharge). Discharge point outfall 001 shall not exceed 1 ton or 2000 lbs per day for TDS.

c/ A sample for oil and grease is required when a sheen is observed or there is another reason to believe oil may be present. If a sheen is observed, a sample of that effluent shall be collected immediately thereafter and oil and grease shall not exceed 10 mg/L in concentration, otherwise enter "NA". A visual inspection for oil and grease, floating solids, and visible foam shall be performed at least once per month at all outfalls. There shall be no sheen, floating solids, or visible foam in other than trace amounts.

2. Samples taken in compliance with the monitoring requirements specified above shall be taken at the following locations: at the outfall prior to mixing with any receiving water.

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

Effluent Characteristics	Daily Maximum
Settleable Solids	0.5 mL/L

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

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

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

5. The operator shall have the burden of proof that the discharge or increase in discharge was caused by the applicable precipitation event described in Parts I.D.3. and D.4. The alternate

limitation in Parts I.D.3. and D.4. shall not apply to treatment systems that treat underground mine water only.

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

E. Storm Water Requirements. It has been determined that the permittee has a regulated storm water discharge as per *UAC R317-8-3.9.*, therefore, the following permit conditions governing storm water discharges apply.

1. Coverage of This Section.

a. Discharges Covered Under This Section. The requirements listed under this section shall apply to storm water discharges from coal mining-related areas (SIC Major Group 12) if they are not subject to effluent limitations guidelines under *40 CFR Part 434.*

(1) Site Coverage. Storm water discharges from the following portions of coal mines may be eligible for this permit: haul roads (nonpublic roads on which coal or coal refuse is conveyed), access roads (nonpublic roads providing light vehicular traffic within the facility property and to public roadways), railroad spurs, sidings, and internal haulage lines (rail lines used for hauling coal within the facility property and to offsite commercial railroad lines or loading areas), conveyor belts, chutes, and aerial tramway haulage areas (areas under and around coal or refuse conveyor areas, including transfer stations), equipment storage and maintenance yards, coal handling buildings and structures, and inactive coal mines and related areas (abandoned and other inactive mines, refuse disposal sites and other mining-related areas on private lands).

b. Limitations. Storm water discharges from inactive mining activities occurring on Federal lands where an operator cannot be identified are not eligible for coverage under this permit.

c. Co-Located Industrial Activities. When an industrial facility, described by paragraph *a.* (above) of this section, has industrial activities being conducted onsite that meet the description(s) of industrial activities in another section(s), that industrial facility shall comply with any and all applicable monitoring and pollution prevention plan requirements of the other section(s) in addition to all applicable requirements in this section. The monitoring and pollution prevention plan terms and conditions of this multi-sector permit are additive for industrial activities being conducted at the same industrial facility. The operator of the facility shall determine which other

monitoring and pollution prevention plan section(s) of this permit (if any) are applicable to the facility.

2. Prohibition of Non-storm Water Discharges.

a. The following non-storm water discharges may be authorized by this permit provided the non-storm water component of the discharge is in compliance with this section (Section E): discharges from fire fighting activities; fire hydrant flushings; potable water sources including waterline flushings; drinking fountain water; irrigation drainage, lawn watering; routine external building washdown water where detergents or other compounds have not been used in the process; pavement washwaters where spills or leaks of toxic or hazardous materials (including oils and fuels) have not occurred (unless all spilled material has been removed) and where detergents are not used; air conditioning condensate; uncontaminated compressor condensate; uncontaminated springs; uncontaminated ground water; and foundation or footing drains where flows are not contaminated with process materials such as solvents.

b. In addition to the broad prohibition of non-storm water discharges, listed above, point source discharges of pollutant seeps or underground drainage from inactive coal mines and refuse disposal areas that do not occur as storm water discharges in response to precipitation events are also excluded from coverage under this permit. In addition, floordrains from maintenance buildings and other similar drains in mining and preparation plant areas are prohibited.

3. Storm Water Pollution Prevention Plan Requirements. Most of the active coal mining-related areas, described in paragraph *1.a.(1)* above, are subject to sediment and erosion control regulations of the U.S. Office of Surface Mining (OSM) that enforces the *Surface Mining Control and Reclamation Act* (*SMCRA*). OSM has granted authority to the Utah Division of Oil Gas and Mining (DOGM) to implement *SMCRA* through State *SMCRA* regulations. All *SMCRA* requirements regarding control of erosion, siltation and other pollutants resulting from storm water runoff, including road dust resulting from erosion, shall be primary requirements of the pollution prevention plan and shall be included in the contents of the plan directly, or by reference. Where determined to be appropriate for protection of water quality, additional sedimentation and erosion controls may be warranted.

a. Contents of Plan. The plan shall include at a minimum, the following items:

(1) Pollution Prevention Team. Each plan shall identify a specific individual or individuals within the facility organization as members of a storm water Pollution Prevention Team that are responsible for developing the storm water pollution prevention plan and assisting the facility manager in its implementation, maintenance, and revision. The plan shall clearly identify the responsibilities of each team member. The activities and responsibilities of the team shall address all aspects of the facility's storm water pollution prevention plan.

(2) Description of Potential Pollutant Sources. Each plan shall provide a description of potential sources that may reasonably be expected to add significant amounts of pollutants to storm water discharges or that may result in the discharge of pollutants during dry weather from separate storm sewers draining the facility. Each plan shall identify all activities and significant materials that may potentially be significant pollutant sources. Each plan shall include, at a minimum:

(a) Deadlines for Plan Preparation and Compliance

Pacificorp shall prepare and implement a plan in compliance with the provisions of this permit below within 270 days of the effective date of this permit.

(b) Keeping Plans Current

The permittee shall amend the plan whenever there is a change in design, construction, operation, or maintenance, that has a significant effect on the potential for the discharge of pollutants to the waters of the State or if the storm water pollution prevention plan proves to be ineffective in eliminating or significantly minimizing pollutants from sources identified by the plan, or in otherwise achieving the general objectives of controlling pollutants in storm water discharges associated with the activities at the mine.

(c) Drainage

i) A site map, such as a drainage map required for *SMCRA* permit applications, that indicate drainage areas and storm water outfalls. These shall include but not be limited to the following:

a) Drainage direction and discharge points from all applicable mining-related areas described in paragraph *1.a(1).* (Site Coverage) above, including culvert and sump discharges from roads and rail beds and also from equipment and maintenance areas subject to storm runoff of fuel, lubricants and other potentially harmful liquids.

b) Location of each existing erosion and sedimentation control structure or other control measures for reducing pollutants in storm water runoff.

c) Receiving streams or other surface water bodies.

d) Locations exposed to precipitation that contain acidic spoil, refuse or unreclaimed disturbed areas.

e) Locations where major spills or leaks of toxic or hazardous pollutants have occurred.

f) Locations where liquid storage tanks containing potential pollutants, such as caustics, hydraulic fluids and lubricants, are exposed to precipitation.

g) Locations where fueling stations, vehicle and equipment maintenance areas are exposed to precipitation.

h) Locations of outfalls and the types of discharges contained in the drainage areas of the outfalls.

ii) For each area of the facility that generates storm water discharges associated with the mining-related activity with a reasonable potential for containing significant amounts of pollutants, a prediction of the direction of flow, and an identification of the types of pollutants that are likely to be present in storm water discharges associated with the activity. Factors to consider include the toxicity of the pollutant; quantity of chemicals used, produced or discharged; the likelihood of contact with storm water; and history of significant leaks or spills of toxic or hazardous pollutants. Flows with a significant potential for causing erosion shall be identified.

(d) Inventory of Exposed Materials. An inventory of the types of materials handled at the site that potentially may be exposed to precipitation. Such inventory shall include a narrative description of significant materials that have been handled, treated, stored or disposed in a manner to allow exposure to storm water 3 years prior to the effective date of this permit; method and location of onsite storage or disposal; materials management practices employed to minimize contact of materials with storm water runoff 3 years prior to the effective date of this permit; a description of existing structural and nonstructural control measures to reduce pollutants in storm water runoff; and a description of any treatment the storm water receives.

(e) Spills and Leaks. A list of significant spills and leaks of toxic or hazardous pollutants that occurred at areas that are exposed to precipitation or that otherwise drain to a storm water conveyance at

the facility after the date of 3 years prior to the effective date of this permit. Such list shall be updated as appropriate during the term of the permit.

(f) Sampling Data. A summary of any existing discharge sampling data describing pollutants in storm water discharges from the portions of the facility covered by this permit, including a summary of any sampling data collected during the term of this permit.

(g) Risk Identification and Summary of Potential Pollutant Sources. A narrative description of the potential pollutant sources from the following activities: truck traffic on haul roads and resulting generation of sediment subject to runoff and dust generation; fuel or other liquid storage; pressure lines containing slurry, hydraulic fluid or other potential harmful liquids; and loading or temporary storage of acidic refuse or spoil. Specific potential pollutants shall be identified where known.

(3) Measures and Controls. Each facility covered by this permit shall develop a description of storm water management controls appropriate for the facility and implement such controls. The appropriateness and priorities of controls in a plan shall reflect identified potential sources of pollutants at the facility. The description of storm water management controls shall address the following minimum components, including a schedule for implementing such controls.

(a) Good Housekeeping. Good housekeeping requires the maintenance of areas that may contribute pollutants to storm water discharges in a clean, orderly manner. These would be practices that would minimize the generation of pollutants at the source or before it would be necessary to employ sediment ponds or other control measures at the discharge outlets. Where applicable, such measures or other equivalent measures would include the following: sweepers and covered storage to minimize dust generation and storm runoff; conservation of vegetation where possible to minimize erosion; watering of haul roads to minimize dust generation; collection, removal, and proper disposal of waste oils and other fluids resulting from vehicle and equipment maintenance; or other equivalent measures.

(b) Preventive Maintenance. A preventive maintenance program shall involve timely inspection and maintenance of storm water management devices as well as inspecting and testing facility equipment and systems to uncover conditions that could cause breakdowns or failures resulting in discharges of pollutants to surface waters, and ensuring appropriate maintenance of such equipment and

systems. Where applicable, such measures would include the following: removal and proper disposal of settled solids in catch basins to allow sufficient retention capacity; periodic replacement of siltation control measures subject to deterioration such as straw bales; inspections of storage tanks and pressure lines for fuels, lubricants, hydraulic fluid or slurry to prevent leaks due to deterioration or faulty connections; or other equivalent measures.

(c) Spill Prevention and Response Procedures. Areas where potential spills that can contribute pollutants to storm water discharges can occur, and their accompanying drainage points shall be identified clearly in the storm water pollution prevention plan. Where appropriate, specifying material handling procedures, storage requirements, and use of equipment such as diversion valves in the plan should be considered. Procedures for cleaning up spills shall be identified in the plan and made available to the appropriate personnel. The necessary equipment to implement a clean up should be available to personnel.

(d) Inspections. In addition to or as part of the comprehensive site evaluation required under paragraph *3.a.(4)* of this section, qualified facility personnel shall be identified to inspect designated areas of the facility at appropriate intervals specified in the plan. The following shall be included in the plan:

i) Active Mining-Related Areas and Those Inactive Areas Under *SMCRA* Bond Authority. The plan shall require quarterly inspections by the facility personnel for areas of the facility covered by pollution prevention plan requirements. This inspection interval corresponds with the quarterly inspections for the entire facility required to be provided by *SMCRA* authority inspectors for all mining-related areas under *SMCRA* authority, including sediment and erosion control measures. Inspections by the facility representative may be done at the same time as the mandatory inspections performed by *SMCRA* inspectors. Records of inspections of the *SMCRA* authority facility representative shall be maintained.

ii) Inactive Mining-Related Areas Not Under *SMCRA* Bond. The plan shall require annual inspections by the facility representative except in situations referred to in paragraph *3.a.(4)(d)* below.

iii) Inspection Records. The plan shall require that inspection records of the facility representative and those of the SMCRA

authority inspector shall be maintained. A set of tracking or follow-up procedures shall be used to ensure that appropriate actions are taken in response to the inspections.

(e) Employee Training. Employee training programs shall inform personnel responsible for implementing activities identified in the storm water pollution prevention plan or otherwise responsible for storm water management at all levels of responsibility of the components and goals of the storm water pollution prevention plan. Training should address topics such as spill response, good housekeeping and material management practices. The pollution prevention plan shall identify periodic dates for such training.

(f) Recordkeeping and Internal Reporting Procedures. A description of incidents (such as spills, or other discharges) along with other information describing the quality and quantity of storm water discharges shall be included in the plan required under this part. Inspections and maintenance activities shall be documented and records of such activities shall be incorporated into the plan.

(g) Non-storm Water Discharges.

i) Certification. The plan shall include a certification that the discharge has been tested or evaluated for the presence of non-storm water discharges such as drainage from underground portions of inactive mines or floor drains from maintenance or coal handling buildings. The certification shall include the identification of potential significant sources of non-storm water discharges at the site, a description of the results of any test and/or evaluation, a description of the evaluation criteria or testing method used, the date of any testing and/or evaluation, and the onsite drainage points that were directly observed during the test. Certifications shall be signed in accordance with *Part VI.G.* of this permit.

ii) Exceptions. Except for flows from fire fighting activities, authorized sources of non-storm water listed in paragraph *2.a.* above that are combined with storm water discharges associated with industrial activity must be identified in the plan. The plan shall identify and ensure the implementation of appropriate pollution prevention measures for the non-storm water component(s) of the discharge.

iii) Failure to Certify. If the facility is unable to provide the certification required (testing or other evaluation for non-storm water discharges), the *Executive Secretary* must be

notified within 180 days after the effective date of this permit. If the failure to certify is caused by the inability to perform adequate tests or evaluations, such notification shall describe: the procedure of any test conducted for the presence of non-storm water discharges; the results of such test or other relevant observations; potential sources of non-storm water to the storm discharge lines; and why adequate tests for such storm discharge lines were not feasible. Non-storm water discharges to waters of the State that are not authorized by a *UPDES* permit are unlawful, and must be terminated.

(h) Sediment and Erosion Control. The plan shall identify areas that, due to topography, activities, or other factors, have a high potential for significant soil erosion, and identify structural, vegetative, and/or stabilization measures to be used to limit erosion and reduce sediment concentrations in storm water discharges. As indicated in paragraph *3.* above, *SMCRA* requirements regarding sediment and erosion control measures are primary requirements of the pollution prevention plan for mining-related areas subject to *SMCRA* authority. The following sediment and erosion control measures or other equivalent measures, should be included in the plan where reasonable and appropriate for all areas subject to storm water runoff:

i) Stabilization Measures. Interim and permanent stabilization measures to minimize erosion and lessen amount of structural sediment control measures needed, including: mature vegetation preservation; temporary seeding; permanent seeding and planting; temporary mulching, matting, and netting; sod stabilization; vegetative buffer strips; temporary chemical mulch, soil binders, and soil palliatives; nonacidic roadsurfacing material; and protective trees.

ii) Structural Measures. Structural measures to lessen erosion and reduce sediment discharges, including: silt fences; earth dikes; straw dikes; gradient terraces; drainage swales; sediment traps; pipe slope drains; porous rock check dams; sedimentation ponds; riprap channel protection; capping of contaminated sources; and physical/chemical treatment of storm water.

(i) Management of Flow. The plan shall contain a narrative consideration of the appropriateness of traditional storm water management practices (other than those as sediment and erosion control measures listed above) used to manage storm water runoff in a manner that reduces pollutants in storm water runoff from the site. The plan shall provide that the measures, which the permittee

determines to be reasonable and appropriate, shall be implemented and maintained. Appropriate measures may include: discharge diversions; drainage/storm water conveyances; runoff dispersion; sediment control and collection; vegetation/soil stabilization; capping of contaminated sources; treatment; or other equivalent measures.

(4) Comprehensive Site Compliance Evaluation. Qualified personnel shall conduct site compliance evaluations at intervals specified in the plan, but in no case less than once a year. Such evaluations shall provide:

(a) Areas contributing to a storm water discharge associated with coal mining-related areas shall be visually inspected for evidence of, or the potential for, pollutants entering the drainage system. These areas include haul and access roads; railroad spurs, sidings, and internal haulage lines; conveyor belts, chutes and aerial tramways; equipment storage and maintenance yards; coal handling buildings and structures; and inactive mines and related areas. Measures to reduce pollutant loadings shall be evaluated to determine whether they are adequate and properly implemented in accordance with the terms of the permit or whether additional control measures are needed. Structural storm water management measures, sediment and erosion control measures, and other structural pollution prevention measures, as indicated in paragraphs *3.a.(3)(h)* and *3.a.(3)(i)* above and where identified in the plan, shall be observed to ensure that they are operating correctly. A visual evaluation of any equipment needed to implement the plan, such as spill response equipment, shall be made.

(b) Based on the results of the evaluation, the description of potential pollutant sources identified in the plan, in accordance with paragraph *3.a.(2)* of this section, and pollution prevention measures and controls identified in the plan, in accordance with paragraph *3.a.(3)* of this section, shall be revised as appropriate within 2 weeks of such evaluation and shall provide for implementation of any changes to the plan in a timely manner. For inactive mines, such revisions may be extended to a maximum of 12 weeks after the evaluation.

(c) A report summarizing the scope of the evaluation, personnel making the evaluation, the date(s) of the evaluation, major observations relating to the implementation of the storm water pollution prevention plan, and actions taken in accordance with paragraph *3.a.(4)(b)* above shall be made and retained as part of the storm water pollution prevention plan for at least 3 years after the date of the evaluation. The report shall identify any incidents of noncompliance. Where a report does not identify any incidents of noncompliance, the report shall contain a certification that the facility is in compliance with the storm water pollution prevention plan and this permit. The report

shall be signed in accordance with *Part VI.G.* (Signatory Requirements) of this permit.

(d) Where compliance evaluation schedules overlap with inspections required under *3.a.(3)(d)*, the compliance evaluation may be conducted in place of one such inspection. Where annual site compliance evaluations are shown in the plan to be impractical for inactive mining sites due to the remote location and inaccessibility of the site, site inspections required under this part shall be conducted at appropriate intervals specified in the plan, but, in no case less than once in 3 years.

4. Numeric Effluent Limitations. There are no additional numeric effluent limitations beyond those described in *Part I.D.* of this permit.

5. Monitoring and Reporting Requirements.

a. Analytical Monitoring Requirements. The permittee must monitor their storm water discharges associated with industrial activity at least quarterly (4 times per year) during years 2 and 4 of the permit cycle except as provided in paragraphs *5.a.(3)* (Sampling Waiver), *5.a.(4)* (Representative Discharge), and *5.a.(5)* (Alternative Certification). The Permittee is required to monitor their storm water discharges for the pollutants of concern listed in Table E. below. Reports must be made in accordance with *5.b.* (Reporting). In addition to the parameters listed in Table E. below, the Permittee must provide the date and duration (in hours) of the storm event(s) sampled; rainfall measurements or estimates (in inches) of the storm event that generated the sampled runoff; the duration between the storm event sampled and the end of the previous measurable (greater than 0.1 inch rainfall) storm event; and an estimate of the total volume (in gallons) of the discharge sampled.

Table E.
Monitoring Requirements for Coal Mining Facilities

Pollutants of Concern	Cut-Off Concentration
Total Recoverable Aluminum	0.75 mg/L
Total Recoverable Iron	1.0 mg/L
Total Suspended Solids	100 mg/L

(1) Monitoring Periods. Coal mining facilities shall monitor samples collected during the sampling periods of: January through March, April through June, July through September, and October through December for the years specified in paragraph *a.* (above).

(2) Sample Type. A minimum of one grab sample shall be taken. All such samples shall be collected from the discharge resulting from a storm event that is greater than 0.1 inches in magnitude and that occurs at least 72

hours from the previously measurable (greater than 0.1 inch rainfall) storm event. The required 72-hour storm event interval is waived where the preceding measurable storm event did not result in a measurable discharge from the facility. The required 72-hour storm event interval may also be waived where the permittee documents that less than a 72-hour interval is representative for local storm events during the season when sampling is being conducted. The grab sample shall be taken during the first 30 minutes of the discharge. If the collection of a grab sample during the first 30 minutes is impracticable, a grab sample can be taken during the first hour of the discharge, and the discharger shall submit with the monitoring report a description of why a grab sample during the first 30 minutes was impracticable. If storm water discharges associated with industrial activity commingle with process or nonprocess water, then where practicable permittees must attempt to sample the storm water discharge before it mixes with the non-storm water discharge.

(3) Sampling Waiver.

(a) Adverse Conditions. When a discharger is unable to collect samples within a specified sampling period due to adverse climatic conditions, the discharger shall collect a substitute sample from a separate qualifying event in the next monitoring period and submit the data along with the data for the routine sample in that period. Adverse weather conditions that may prohibit the collection of samples include weather conditions that create dangerous conditions for personnel (such as local flooding, high winds, hurricanes, tornadoes, electrical storms, etc.) or otherwise make the collection of a sample impracticable (drought, extended frozen conditions, etc.).

(b) Low Concentration Waiver. When the average concentration for a pollutant calculated from all monitoring data collected from an outfall during the second year monitoring is less than the corresponding value for that pollutant listed in Table E. under the column Monitoring Cut-Off Concentration, a facility may waive monitoring and reporting requirements for the fourth year monitoring period. The facility must submit to the *Executive Secretary*, in lieu of the monitoring data, a certification that there has not been a significant change in industrial activity or the pollution prevention measures in area of the facility that drains to the outfall for which sampling was waived.

(c) Inactive and Unstaffed Site. When a discharger is unable to conduct quarterly chemical storm water sampling at an inactive and unstaffed site, the operator of the facility may exercise a waiver of the monitoring requirements as long as the facility

remains inactive and unstaffed. The facility must submit to the *Executive Secretary*, in lieu of monitoring data, a certification statement on the *Storm Water Discharge Monitoring Report* (*SWDMR*) stating that the site is inactive and unstaffed so that collecting a sample during a qualifying event is not possible.

(4) Representative Discharge. When a facility has two or more outfalls that, based on a consideration of industrial activity, significant materials, and management practices and activities within the area drained by the outfall, the permittee reasonably believes discharge substantially identical effluents, the permittee may test the effluent of one of such outfalls and report that the quantitative data also applies to the substantially identical outfall(s) provided that the permittee includes in the storm water pollution prevention plan a description of the location of the outfalls and explains in detail why the outfalls are expected to discharge substantially identical effluents. In addition, for each outfall that the permittee believes is representative, an estimate of the size of the drainage area (in square feet) and an estimate of the runoff coefficient of the drainage area [e.g., low (under 40 percent), medium (40 to 65 percent), or high (above 65 percent)] shall be provided in the plan. The permittee shall include the description of the location of the outfalls, explanation of why outfalls are expected to discharge substantially identical effluents, and estimate of the size of the drainage area and runoff coefficient with the *SWDMR*.

(5) Alternative Certification. A discharger is not subject to the monitoring requirements of this section provided the discharger makes a certification for a given outfall or on a pollutant-by-pollutant basis in lieu of monitoring reports required under paragraph *b.* below, under penalty of law, signed in accordance with *Part VI.G.* (Signatory Requirements), that material handling equipment or activities, raw materials, intermediate products, final products, waste materials, by-products, industrial machinery or operations, or significant materials from past industrial activity that are located in areas of the facility within the drainage area of the outfall are not presently exposed to storm water and are not expected to be exposed to storm water for the certification period. Such certification must be retained in the storm water pollution prevention plan, and submitted to *DWQ* in accordance with *Part V.B.* of this permit. In the case of certifying that a pollutant is not present, the permittee must submit the certification along with the monitoring reports required under paragraph *b.* below. If the permittee cannot certify for an entire period, they must submit the date exposure was eliminated and any monitoring required up until that date. This certification option is not applicable to compliance monitoring requirements associated with effluent limitations.

b. Reporting. Permittees shall submit monitoring results for each outfall associated with industrial activity [or a certification in accordance with Sections *(3)*, *(4)*, or

(5) above] obtained during the second year reporting period, on *Storm Water Discharge Monitoring Report* (*SWDMR*) form(s) postmarked no later than the 31st day of the following March. Monitoring results [or a certification in accordance with Sections *(3)*, *(4)*, or *(5)* above] obtained during the fourth year reporting period shall be submitted on *SWDMR* form(s) postmarked no later than the 31st day of the following March. For each outfall, one signed *SWDMR* form must be submitted to the *Executive Secretary* per storm event sampled. Signed copies of *SWDMR*s, or said certifications, shall be submitted to the *Executive Secretary* at the address listed in *Part II.D.* of the permit.

(1) Additional Notification. In addition to filing copies of discharge monitoring reports in accordance with paragraph *b.* (above), coal-mining related facilities with at least one storm water discharge associated with industrial activity through a large or medium municipal separate storm sewer system (systems serving a population of 100,000 or more) must submit signed copies of discharge monitoring reports to the operator of the municipal separate storm sewer system in accordance with the dates provided in paragraph *b.* (above).

c. Visual Examination of Storm Water Quality. Coal mining-related facilities shall perform and document a visual examination of a representative storm water discharge at the following frequencies: quarterly for active areas under *SMCRA* bond located in areas with average annual precipitation over 20 inches; semi-annually for inactive areas under *SMCRA* bond, and active areas under *SMCRA* bond located in areas with average annual precipitation of 20 inches or less; visual examinations are not required at inactive areas not under *SMCRA* bond.

(1) Visual Monitoring Periods. Examinations shall be conducted in each of the following periods for the purposes of visually inspecting storm water runoff or snow melt: Quarterly-January through March; April through June; July through September; and October through December. Semi-annually—January through June and July through December.

(2) Sample and Data Collection. Examinations shall be made of samples collected within the first 60 minutes (or as soon thereafter as practical, but not to exceed two hours) of when the runoff or snowmelt begins discharging. The examinations shall document observations of color, odor, clarity, floating solids, settled solids, suspended solids, foam, oil sheen, and other obvious indicators of storm water pollution. The examination must be conducted in a well lit area. No analytical tests are required to be performed on the samples. All such samples shall be collected from the discharge resulting from a storm event that is greater than 0.1 inches in magnitude and that occurs at least 72 hours from the previously measurable (greater than 0.1 inch rainfall) storm event. Where practicable, the same individual will carry out the collection and examination of discharges for the life of the permit.

(3) Visual Storm Water Discharge Examination Reports. Visual examination reports must be maintained onsite in the pollution prevention plan. The report shall include the examination date and time, examination personnel, the nature of the discharge (i.e., runoff or snow melt), visual quality of the storm water discharge (including observations of color, odor, clarity, floating solids, settled solids, suspended solids, foam, oil sheen, and other obvious indicators of storm water pollution), and probable sources of any observed storm water contamination.

(4) Representative Discharge. When a facility has two or more outfalls that, based on a consideration of industrial activity, significant materials, and management practices and activities within the area drained by the outfall, the permittee reasonably believes discharge substantially identical effluents, the permittee may collect a sample of effluent of one of such outfalls and report that the examination data also applies to the substantially identical outfalls provided that the permittee includes in the storm water pollution prevention plan a description of the location of the outfalls and explaining in detail why the outfalls are expected to discharge substantially identical effluents. In addition, for each outfall that the permittee believes is representative, an estimate of the size of the drainage area (in square feet) and an estimate of the runoff coefficient of the drainage area [e.g., low (under 40 percent), medium (40 to 65 percent), or high (above 65 percent)] shall be provided in the plan.

(5) Adverse Conditions. When a discharger is unable to collect samples over the course of the visual examination period as a result of adverse climatic conditions, the discharger must document the reason for not performing the visual examination and retain this documentation onsite with the records of the visual examination. Adverse weather conditions which may prohibit the collection of samples include weather conditions that create dangerous conditions for personnel (such as local flooding, high winds, hurricanes, tornadoes, electrical storms, etc.) or otherwise make the collection of a sample impracticable (drought, extended frozen conditions, etc.).

(6) Inactive and Unstaffed Site. When a discharger is unable to conduct visual storm water examinations at an inactive and unstaffed site, the operator of the facility may exercise a waiver of the monitoring requirement as long as the facility remains inactive and unstaffed. The facility must maintain a certification with the pollution prevention plan stating that the site is inactive and unstaffed so that performing visual examinations during a qualifying event is not feasible.

II. MONITORING, RECORDING AND REPORTING REQUIREMENTS

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

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

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

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

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

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

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

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

1. The date, exact place, and time of sampling or measurements:
2. The individual(s) who performed the sampling or measurements;

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

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

I. Twenty-four Hour Notice of Noncompliance Reporting.

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

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

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

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

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

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

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

   a. A description of the noncompliance and its cause;

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

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

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

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

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

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

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

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

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

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

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

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

III. COMPLIANCE RESPONSIBILITIES

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

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

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

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

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

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

G. Bypass of Treatment Facilities.

1. Bypass not exceeding limitations. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs 2 and 3 of this section. Return of removed substances, as

described in *Part III.F*, to the discharge stream shall not be considered a bypass under the provisions of this paragraph.

2. Notice:

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

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

3. Prohibition of bypass.

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

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

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

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

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

H. Upset Conditions.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

IV. GENERAL REQUIREMENTS

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

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

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

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

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

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

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

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

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

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

b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility, such as the position of plant manager, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.)

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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