

## APPENDICES

APPENDIX A

DEFINITION OF TERMS

AND ABBREVIATIONS

## DEFINITION OF TERMS AND ABBREVIATIONS

Abatement (mine drainage usage) - The lessening of pollution effects of mine drainage

AMD - Abbreviation of acid mine drainage

Anticline - A fold of rock beds that is convex upward

Background (water quality map) - The natural or normal concentration of a chemical in water

Bony- Rock that has a high carbon content--usually refers to the dark colored coal mining waste material

cfs - Abbreviation of cubic feet per second--a unit of fluid or gaseous flow

Coal structure contour - A contour line drawn through points of equal elevation on the coal bed or horizon, in order to depict the attitude of the rocks

Concentration (water quality usage) - The amount of a substance occurring in a given amount of water-common units are parts per million (ppm) or milligrams per liter (mg/l)

Deep mine - An underground mine

Dip - The angle at which a plane (usually a rock bedding plane) is inclined from the horizontal. The dip direction is defined as at right angle to the strike in the downward direction

Downcutting - Process of stream channel erosion

Drift - A deep mine entry driven directly into a horizontal or near horizontal coal seam or vein when it outcrops or is exposed at the ground surface

EPA - Abbreviation for Environmental Protection Agency

Evapo-transpiration - A collective term meaning the loss of water to the atmosphere from both evaporation and transpiration by vegetation

Fold axis - A line drawn on a rock stratum at the point of intersection of the axial plane (which is a plane passing through the trough of a syncline or the peak of an anticline)

Grab sample - Samples of point source pollution. For example, deep mine discharges, seepage from spoil piles, coal refuse, or a combination of the above

Head (of water) - Water pressure expressed as the feet of elevation difference between the top of the water and the point at which the pressure is existed

lbs/day - Abbreviation of pounds per day--used in water quality as the unit for the amount of material carried by flowing water

Load (water quality usage) - The quantity of material carried by flowing water--generally expressed as pounds per day

MDD - Abbreviation for Mine Development Drawing

mg/l - Abbreviation of milligrams per liter, which is a weight to volume ratio commonly used in water quality analysis. It expresses the weight in milligrams of a substance occurring in one liter of water. Several substances are commonly expressed as the equivalent weight of another substance, such as acidity and hardness, which are expressed as equivalent weights of calcium carbonate

Modular sample - A sample of drainage from a small watershed unit. These samples were useful in differentiating between polluted and non-polluted regions of a watershed

Monthly sample - A periodic sampling of drainage from an upstream portion of the mainstream, or a major tributary of the mainstream. These samples were used primarily to ascertain and then monitor known pollution areas

pH - The negative logarithm to the base ten of the hydrogen ion concentration (expressed in moles per liter) in solution

Paleoenvironment - The environment of an area at some specified time in the distant past

Permeability - The degree of capability of a rock to allow the flow of water. The higher the permeability, the greater the flow of water at any given pressure.

Regime - A reach of stream which has a regular pattern of water quality, usually either highly acid or mildly acid

Shaft - A near vertical mine entrance

Slope - An inclined (but not vertical) mine entryway driven from the land surface down to the seam

Stratigraphy - The science of formation, composition, sequence and correlation of stratified rocks

Strike - The direction of a horizontal line on the plane that is tangent to the surface of a stratum at the point of measurement

Strip mining - Mining method whereby the overlying materials are removed to expose the mineral for extraction

Structure contour - A line drawn through all points of equal elevation on an inclined strata

Syncline - A fold of rock beds that is convex downward

Tap-off - A discharge mechanism (generally a bore hole) used to regulate mine pool elevation

Tipple - Structure above a mine shaft, particularly a coal mine, in which loaded mine cars are emptied by being tipped over

Transpiration - The normal loss of water vapor to the atmosphere from plants

WPA - Abbreviation for the Works Progress Administration

Weir - A wooden flow measuring structure with a V notch that is inserted in a stream channel to cause water to flow through the V notch. The height of the water in the V notch is convertible to a flow volume

Wrench Fault - A strike-slip fault whose plane is nearly vertical and the movement along which was basically horizontal

## APPENDIX B

### CROSS REFERENCES

CROSS REFERENCE SHEET

ORIGINAL EPA STATION NUMBERS/  
NEW NUMBERS ON SKELLY & LOY MINE DEVELOPMENT DRAWING

ASSIGNED SKELLY & LOY <u>STA. NO.</u>	E.P.A. STORET <u>STA. NO.</u>	ASSIGNED SKELLY & LOY <u>STA. NO.</u>	E.P.A. STORET <u>STA. NO.</u>
.11	TRA-000	14.5	AL T-008
.14	ALT-003	14.6	AL T-009
.15	TRA-300	14.7	PWR-600
.16	ALT-004	15.0	PWR-700
.17	ALT-005	15.1	AL T-010
6.0	LLR-000	15.2	PWR-800
6.01	LLR-100	15.3	AL T-011
6.03	LLR-200	16	CUR-041
6.04	ALT-022	16.1	CLR-120
6.05	PAT-008	17.0	JAR-000
6.06	CLR-440	17.1	JAR-100
6.07	CLR-450	17.2	HUZ-004
6.08	PAT-009	17.3	HUZ-005
6.2	BBU-000	21	CCP-000
6.3	BBU-100	21.1	HUZ-007
6.4	ALT-017	22	HUZ-008
6.5	BBU-200	23	CCP-100
6.6	BBU-300	26	LOR-000
6.7	BBU-400	26.1	LOR-100
6.8	ALT-018	26.2	HUZ-009
6.81	ALT-019	27	LOR-200
6.82	ALT-020	27.1	HUZ-010
6.83	BBU-500	28	LOR-300
6.9	ALT -021	28. 1	HUZ-011
11	PWR-000	31	UPM-000
12	AL T-006	32	UPM-100
13	PWR-100	33	UPM-200
14	PWR-200	34	HUZ-017
14.1	ALT -007	35	UPM-300
14.2	PWR-300	36	HUZ-019
14.3	PWR-400	37	UNB-000
14.4	PWR-500	37.1	UNB-100

<u>ASSIGNED SKELLY &amp; LOY STA. NO.</u>	<u>E.P.A. STORET STA. NO.</u>	<u>ASSIGNED SKELLY &amp; LOY STA. NO.</u>	<u>E.P.A. STORET STA. NO.</u>
38	HUZ-013	109	HUZ-090
39	UNB-200	110	HUZ-089
39.1	HUZ-014	111	HUZ-088
39.2	HUZ-015	112	HUZ-087
40	HUZ-101	113	HUZ-080
40.1	UNB-300	114	HUZ-079
43	CUR-043	115	HUZ-078
44	LPR-000	116	MBE-100
44.1	HUZ-120	117	HUZ-077
44.2	LPR-100	118	MBE-000
44.3	LPR-200	119	HUZ-076
45	PTT -100	120	MOS-042
46	PTT-200	121	HUZ-075
47	PTT-300	122	HUZ-074
63	LGR-000	123	HUZ-105
63.1	LGR-100	124	HUZ-072
64	LGR-200	125	HUZ-071
65	HUZ-024	126	HUZ-070
65.1	LGR-300	127	HUZ-069
65.2	HUZ -025	128	HUZ-068
65.3	HUZ-026	129	TRR-300
68	RNR-000	130	HUZ-066
69	RNR-100	131	TRR-200
69.2	HUZ-031	132	HUZ-065
69.3	HUZ-100	133	TRR-100
69.4	HUZ-029	134	HUZ-061
70	HUZ-030	135	HUZ-056
71	RNR-300	136	TRR-000
71 .1	HUZ-028	137	MOS-040
72. 1	VFR-000	138	BYR-000
73	CLE-004	139	HUZ-051
74	RNR-400	140	PHL-001
75	HUZ-027	141	HUZ-067
101	HUZ-086	142	HUZ-064
102	HUZ-085	143	HUZ-063
103	HUZ-084	144	PHL-002
104	HUZ-083	145	PHL-003
105	HUZ-081	146	PHL-004
106	MMB-000	147	HUZ-062
107	MMB-100	148	HUZ-060
108	HUZ-082	149	HUZ-059



ASSIGNED SKELLY & LOY <u>STA. NO.</u>	E.P.A. STORET <u>STA. NO.</u>	ASSIGNED SKELLY & LOY <u>STA. NO.</u>	E.P.A. STORET <u>STA. NO.</u>
150	HUZ-058	191	HUZ-046
151	HUZ-057	192	HUZ-045
152	HUZ-055	193	HUZ-044
153	HUZ-054	194	HUZ-043
154	HUZ-053	195	HUZ-035
155	HUZ-052	196	HUZ-038
156	PHL-069	197	HUZ-037
157	MOS-020	198	LLA-200
158	PHL-015	199	HUZ-106
159	PHL-017	200	PHL-011
160	CDS-200	201	PHL-010
161	PHL-018	202	HWK-200
162	PHL-019	203	SUL-300
163	PHL-022	204	PHL-051
164	PHL-020	205	PHL-052
165	PHL-021	206	GFR-300
166	PHL-023	207	PHL-060
167	PHL-024	208	PHL-061
168	PHL-025	209	PHL-062
169	PHL-028	210	BMC-300
170	PHL-029	211	KAR-015
171	PHL-027	212	KAR-016
172	PHL-026		
173	OMI -000		
174	MOS-160		
175	PHL-032		
176	PHL-036		
177	PHL-037		
178	PHL-039		
179	PHL-038		
180	MOS-140		
181	PHL-040		
182	PHL-041		
183	PHL-042		
184	MOS-130		
185	HUZ-048		
186	HUZ-047		
187	CLO-300		
188	HUZ-104		
189	BGG-000		
190	HUZ-107		

APPENDIX C

PROPERTY OWNERSHIP

## TABULATION OF PROPERTY OWNERS

This tabulation considers major property owners, established from tax map books. A more detailed property investigation shall be conducted during final design phase:

### Abatement Area A (Cambria County--Cresson Twp., Gallitzen Twp.)

I. P. Bradley  
Clearfield Bituminous Coal Corporation

### Abatement Area B (Cambria County--Gallitzen Twp., Dean Twp.)

Polly Jo Haller c/o Joseph Haller  
Commonwealth of Pennsylvania (State Game  
Lands # 1 64)  
Joseph Copouillez, et al  
Haws Refractories Company  
George M. Patterson, Hrs.  
L. G. Wolf, et al  
Lawrence Sherbine  
Robert S. Conrad, et al  
Annie Powell

### Abatement Area C (Cambria County)

Annie Powell  
Sam Woodcock  
Frank Good, et al  
Edward Bell  
Alva W. Lewis  
A. E. Lovell  
Harbison Walker Refractories  
C. E. Powell  
George W. Troxell  
B. A. McDonnell  
G. B. Troxell, et al  
State Game Lands # 108  
How. Apple, et al

H. E. Fulkerson, Hrs. c/o Mrs. H. L. Stevenson  
William Rickard  
Annie Powell  
Lemuel E. Hollen

Abatement Area D

Cambria Coal Company  
W. C. Green

Abatement Area E

Swank Brick Company  
H. Swank & Sons  
Hiram Swank & Sons  
Mervin and Nataline Killian  
John Rex  
Clearfield County  
Elwood Burgess  
Jennie Nelson  
Alice Rex  
R & L Burchill

Abatement Area F (Clearfield County--Bigler Twp.)

Margaret and Daniel Wrobleski  
Joseph and C. Iraca  
George Durica  
Arthur Kitko  
Everett Shoff  
Middle Pennsylvania Coal Company  
W. Bloom  
R & D Nevling  
Middle Pennsylvania Coal Corporation

Abatement Area G (Clearfield County--Bigler Twp.)

Middle Pennsylvania Coal Corporation  
Blain Kunsman  
George Templeton  
Joe Linderman  
R & D Nevling

Abatement Area H (Clearfield County--Bigler Twp.)

Middle Pennsylvania Coal Company  
W. P. and E. V. Kitko  
Herbert E. Walter  
Elizabeth A. Ruffner, et al  
R. Ball  
W. Shultz  
Ethel Wilson  
William E. Glass  
John Johnson  
S. R. Hansel  
John Lee, et al  
Samuel Hegarty, est.

Abatement Area I (Clearfield County--Bigler Twp., Woodward Twp.)

Middle Pennsylvania Coal Company  
Herbert E. Walter  
S. R. Hanse  
John Johnson  
State Public Building Authority  
Samuel Hegarty, est.  
Arthur and Mary Kitko  
Dinant Wardo  
L. Hourdeaux  
L & F Godin  
James Rounsley  
Flango Bros. Coal Company  
Grace Wardo  
Clearfield County  
Mike Rebar  
Louis Hourdeaux  
Gus Hourdeaux  
John Lewis  
Ethel Wilson  
William E. Glass  
G. William Yapple, Jr., et ux  
Lewis Godin  
Paul and Betty Ponist  
E. A. Ruffner  
Seckinger and Ruffner  
Middle Pennsylvania Coal Company  
W. Shultz  
Charles Davis  
Dan P. Arnold, Tr., et al

Kelly Bloom, et al  
Middle Pennsylvania Coal Corporation  
E & A Rusnak  
M & A Fetchn  
A. Fetchn  
Peter Swistock  
Mitch Moskalik  
Catherine Yeaney  
John M. Chase, Sr., est.

Abatement Area J (Clearfield County--Bigler Twp., Woodward Twp.)

Robert Spencer  
S & H Hansel  
Lewis Godin  
V. E. and J. L. Erickson  
John Chase, est.  
M. Henderson  
John Redding, et al  
J. Bohachik  
T. Varonsh  
Katie Lipko  
Joseph Slogaski  
Michael Behun

Abatement Area K (Clearfield County--Woodward Twp.)

First National Bank of Philipsburg  
Gourd Baughman  
Clair Smeal  
John K. Johnston, et al  
John M. Chase, Sr., est.  
Middle Pennsylvania Coal Corporation  
Thomas Rowdes  
Francis Ralston, et al  
D.T.Mitchell,Jr.  
S. R. Hansel, et al  
M. H. and J. Lytle  
Edward Kelley, et al

Abatement Area L

Diamond "T" Strip Mining Corporation  
John Litzinger, et ux  
Clearfield Bituminous Coal Corporation  
Walker and Nevling  
Potts Run Coal Company  
Warren Bell, est hrs.

Abatement Area M

Warren Bell, est. hrs.  
Clearfield Bituminous Coal Corporation  
Potts Run Coal Company

Abatement Area N

Potts Run Coal Company  
Warren Bell, est hrs.  
Robert Morse  
John M. Chase, Sr., est., et al  
Clearfield Bituminous Coal Corporation  
George Solomon  
Clearfield Trust Company, Tr., et al  
Potts Run Coal Company  
Robert Clark  
Grace O'Connor  
Alexander Durandetto  
How. Rowles  
Clearfield Consolidated Collieries, Inc.  
Thomas and Helen Cupp  
Joseph Iraca

Abatement Area P

Penn State University  
H. A. Kratzer  
Francis and Carolyn Shillen  
Harry T. Smith  
Harry Smith

Abatement Area Q

William and B. Williams  
John and Sadie Butler  
George Smeal  
Harbison Walker Refractories Company  
Wms. Gr. Clay Products Inc.  
B. Welker  
Peter Lansberry Estate  
Woolridge Coal Company  
P & E Armstrong  
James and Lillian Forcey  
Lynn and Dorothy Peters  
Ray S. Walker  
Merrill and Wava Owens

Abatement Area R

Kittanning Coal Company  
Mr. A. J. Steinman  
Phillipsburg Coal and Land Company

Abatement Area S

Phillipsburg Coal and Land Company  
David M. Ellis  
Kittanning Coal Company  
Anthony A. and Doris G., Stanley T. and Wanda,  
Edward W. and Patricia Jedrziewski

Abatement Area T (Clearfield County)

George and Barbara Vaughan  
Kittanning Coal Company  
J. K. Nevling Trustees, et al  
Gallan and Burnosky  
Carl Smith  
C & A Randolph  
Raymond Myers, et al  
James and Mabel Patterson  
Reams and Myers  
Lewis Stein  
John Redding



Abatement Area T (Centre County)

James Furst  
James L. Stott, est.  
Joseph and Christine Rusnak  
G. Ira Scott  
Lloyd Davis  
John Davis  
Womelsdorf and Dunkle  
Philipsburg Coal and Land Company  
Mary Harvey Fenity  
Clearview Two Inc.  
Philipsburg Coal and Land Company  
Austin Powder Company  
Gene C. Miller  
Harold E. and Virginia Vaughn  
Elmer Vaughn  
Walter B. and Faye E. Laird  
Moshannon Valley TV Cable Company, Inc.  
Virginia M. Thompson  
Silas R. and Florence Thompson  
Joseph E. and Eleanor Mulson  
Anna C. Gray  
Stephen Smith  
School District of Philipsburg  
Leland Miller  
Rushton Mining Company  
Mabel Morrison, et al  
L. J. Milson  
M. M. Kolesar  
Harry Harpster, et al  
Thomas Beaver Estate  
Mary Hollis  
L. Baughman  
Harbison Walker Refractories  
General Refractories Company  
Melvin Wilkinson  
H & S Hess  
A. J. Haney  
John Cassick  
P. Cassick  
Furst Reynolds  
Harry Meyer  
H. B. Scott Estate

Abatement Area U

General Refractories Company  
S & J Yarger  
V & T Lipnicky  
E. Finberg, et al  
Isaac Finberg, et al  
Peter Vallery, et ux  
Ray and Marie Smith  
John and Emma Pinto  
Albert Krouse  
Oliver and Janet Mease  
David Lobb  
Cyrus and Grace Mease  
Dorothy and George Luciano  
E.C.M. Company  
Mrs. James Passmore Estate  
Harbison Walker Refractories Company

Abatement Area V

Jack and Mary Reese  
F. C. Drane Heirs, c/o Bessie Drane  
John Erb Estate  
Walter Lobb  
Dahlin Bros.  
Harper Meyer  
Samuel and Tillie Reams  
J. Olink  
Sophia Gonzalez  
J. Golembesky  
Harry Mattern

Abatement Area W

A. M. McClure  
A. B. Jr. and D. McClure  
Jacob Mock, est.  
Leroy Thompson  
G. E. Haupt Heirs  
Edmund and Ruth Waring  
Dory Gross  
L. R. Korman  
Robert Bailey  
James Burge, et al  
Daniel Ayres Estate, et al

M. J. Woods  
Reuben H. Mull  
John T. Waring  
Wilton Turner  
Maxton Coal Company  
John Nutall  
Philipsburg Coal and Land Company

Abatement Area X

Clearfield Bituminous Coal Corporation  
Mike Deliman, Jr.  
Kettle Creek Corporation  
Stewart Womer, et ux  
Victor Rydberg  
Richard M. Hess Estate

Abatement Area Y

Clearfield Bituminous Coal Corporation  
Justina McLaughlin  
Robert Koshko  
Robert and Jane Koshko  
Cherry Run Coal Company  
Cart C. and Regina B. Borger