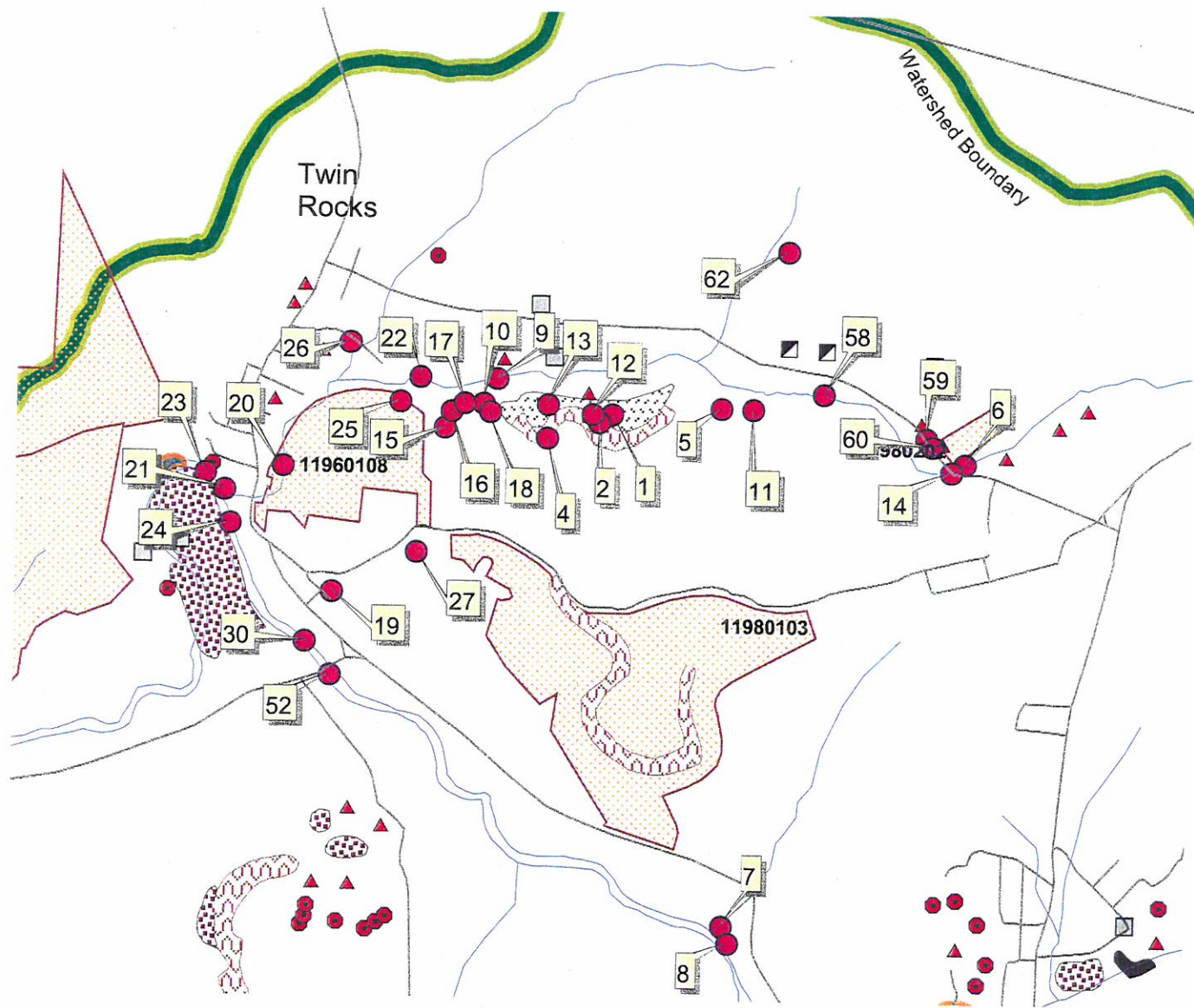


**Smith Energy, Inc. S.M.P. 11980202
Laurel Land Development
S.M.P. s 11980103 and 11960108**



0 0.5 1 1.5 2 Miles

0 0.5 1 1.5 2 Kilometers



WATER QUALITY DATA SUMMARY																							
Laurel Land Development			Pre-Application																				
Blacklick Township			Cambria County																				
Description-L.K. deep mine discharge, northern permit area			Latitude 40-29-56 Longitude 78-51-03 Fig. 4 MP# 1																				
Sample Date	Monitoring Point	Sample Number	FLOW (gpm)	pH (field)	pH (lab)	Specific Conduct. (umhos/cm)	Temp. (field) (deg. C)	Total Acidity (calculated) (mg/l)	Net Acidity (lab) (mg/l)	Total Alkalinity (mg/l)	Total Fe (mg/l)	Ferrous Fe (mg/l)	Total Al (mg/l)	Total Mn (mg/l)	Total Mg (mg/l)	Total Ca (mg/l)	Total Sulfates (mg/l)	Total Hardness (mg/l)	Susp. Solids (mg/l)	Acid Loading (lbs/day)	Fe Loading (lbs/day)	Mn Loading (lbs/day)	Al Loading (lbs/day)
09/30/88	5		20.0		2.61	860	nd	129.92	178	0	1.76						403		0.2	42.79	0.42	0.44	nd
10/25/88	5		25.0		2.94	930		67.94	190	0	2.82						436		0.2	57.10	0.85	0.55	nd
11/16/88	5		25.0		2.70	670		108.61	152	0	2.52						258		37.6	45.68	0.76	0.46	nd
12/16/88	5		18.0		2.57	870		138.21	180	0	1.20						351		1.6	38.94	0.26	0.16	nd
01/23/89	5		15.0		2.75	620		94.30	145	0	1.40						243		7.3	26.14	0.25	0.22	nd
02/09/89	5		20.0		2.66	740		114.17	134	0	1.35						268		0.4	32.21	0.32	0.25	nd
09/27/89	5		20.0		2.70	730		105.32	134	0	1.42						283		7.6	32.21	0.34	0.32	nd
12/27/89	5		20.0		2.66	850		115.05	149	0	1.47						278		6.0	35.82	0.35	0.33	nd
03/21/90	5		30.0		2.66	650		112.82	110	0	1.08						241		0.4	39.67	0.39	0.26	nd
06/26/90	5		25.0		2.68	700		108.18	116	0	0.99						245		0.4	34.86	0.30	0.29	nd
09/20/90	5		25.0		2.55	760		144.85	140	0	1.05						327		1.6	42.07	0.32	0.35	nd
12/19/90	5		50.0		2.83	620		78.22	99	0	1.10						208		2.8	59.50	0.66	0.60	nd
03/26/91	5		50.0		3.16	560		37.81	81	0	0.82						213		0.4	48.68	0.49	0.41	nd
06/20/91	5		20.0		2.81	680		81.02	118	0	0.91						262		2.4	28.37	0.22	0.22	nd
09/24/91	5		15.0		2.97	700		58.51	128	0	1.08						265		13.2	23.08	0.19	0.24	nd
12/03/91	5		35.0		2.70	820		106.39	178	0	1.52						314		12.4	74.88	0.64	0.75	nd
03/31/92	5		6.0		3.11	642		43.63	114	0	1.12						208		3.2	8.22	0.08	0.08	nd
06/30/92	5		8.0		3.00	825		57.10	174	0	1.74						320		0.8	16.73	0.17	0.15	nd
08/03/92	5	4344251			3.10			101.36	114	0	1.26		10.20	0.98			167		<2	nd	nd	nd	nd
09/18/92	5		15.0		2.97	860		59.60	162	0	1.60						299		0.4	29.21	0.29	0.21	nd
10/05/92	5	4344294			3.00			142.09	138	0	1.86		15.20	1.57			258		<2	nd	nd	nd	nd
12/08/92	5		32.0		2.85	900		78.87	190	0	2.30						337		0.4	73.08	0.88	0.54	nd
3/19/93	5		215.0		2.99	854		123.95	145	0	1.79		11.89	1.19			288		2.0	374.47	4.63	3.08	30.73
03/29/93	5		330.0		3.28	485		28.18	64	0	0.35			0.65			101		0.7	253.86	1.39	2.58	nd
3/29/93	5		585.2		3.60	521		47.79	70	0	0.41		5.88	0.82			163		<2	490.28	2.88	5.77	41.36
4/15/93	5		158.1		3.12	710		82.68	102	0	1.17		7.26	0.81			213		<2	193.65	2.22	1.54	13.80
4/26/93	5		136.0		3.14	634		72.74	83	0	0.84		5.98	0.68			199		<2	136.34	1.37	1.11	9.78
5/5/93	5		143.0		3.12	638		73.71	86	0	0.88		5.81	0.74			193		2.0	147.31	1.51	1.27	9.99
5/17/93	5		108.0		3.11	694		83.04	95	0	0.93		7.28	0.82			231		<2	123.33	1.21	1.06	9.45
6/1/93	5		118.0		3.16	738		84.80	109	0	0.97		8.30	0.91			240		6.0	154.32	1.38	1.29	11.77
6/17/93	5		91.2		3.26	669		67.55	98	0	0.74		6.60	0.85			242		2.0	107.54	0.81	0.93	7.24
06/25/93	5		15.0		3.12	650		41.06	106	0	0.75			0.76			257		0.4	19.11	0.14	0.14	nd
09/30/93	5		15.0		3.07	800		47.13	118	0	1.10			1.05			304		0.4	21.28	0.20	0.19	nd
12/07/93	5		200.0		3.13	590		39.57	78	0	0.60			0.63			173		0.4	187.51	1.44	1.51	nd
12/28/93	5	4305052			3.70			35.84	42	0	0.37		4.19	0.89			136		14.0	nd	nd	nd	nd
03/28/94	5		280.0		3.37	470		23.13	54	0	0.27			0.67			204		0.4	181.74	0.91	2.25	nd
06/30/94	5		15.0		3.26	720		31.64	110	0	0.82			1.18			294		0.8	19.83	0.15	0.21	nd
07/21/94	5	4346265			3.20			93.20	124	0	1.03		10.20	1.29			222		<3	nd	nd	nd	nd
09/29/94	5		20.0		3.12	730		42.81	128	0	1.00			1.35			349		0.4	30.77	0.24	0.32	nd
12/13/94	5		250.0		3.14	580		39.49	94	0	0.62			1.02			248		0.4	282.47	1.86	3.07	nd
03/31/95	5		210.0		3.04	730		51.16	126	0	1.28			1.34			322		1.2	318.05	3.23	3.38	nd
06/30/95	5		60.0		2.93	820		64.89	128	0	1.40			1.53			254		0.4	92.31	1.01	1.10	nd
09/06/95	5	4346337			3.10			135.82	154	0	1.60		15.90	1.98			325		<3	nd	nd	nd	nd
04/02/96	5	4328129			3.20			74.92	94	0	1.00		6.93	1.29			244		<3	nd	nd	nd	nd
03/04/97	5	4328120			3.20			69.68	82	0	0.72		6.18	1.11			189		<3	nd	nd	nd	nd
12/12/97	5	4305690			3.20			76.11	94	0	0.95		7.26	1.01			224		<3	nd	nd	nd	nd
03/04/98	5	4305804			3.80			35.84	48	0	<.3		4.43	1.60			185		<.3	nd	nd	nd	nd
06/18/98	5	4305946			3.30			70.92	92	0	1.10		7.31	1.32			297		<.3	nd	nd	nd	nd

WATER QUALITY DATA SUMMARY																								
Laurel Land Development												Pre-Application												
Blacklick Township												Cambria County												
Description-L.K. seep Northern Section of Permit												Latitude 40-29-55 Longitude 78-51-05											Fig. 4 MP# 2	
Sample	Monitoring	Sample	Specific	Temp.	Total Acidity	Net Acidity	Total	Total	Ferrous	Total	Total	Total	Total	Total	Total	Total	Total	Susp.	Acid	Fe	Mn	Al		
Date	Point	Number	Conduct.	(field)	(calculated)	(lab)	Alkalinity	Fe	Fe	Al	Mn	Mg	Ca	Sulfates	Hardness	Solids	(mg/l)	Loading	Loading	Loading	Loading			
			(umhos/cm)	(deg. C)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)		
3/19/93	5-A		143.0	3.16	706	nd	83.62	96	0	0.85		8.14	0.93			253	<2	165.18	1.46	1.60	13.99			
3/29/93	5-A		15.0	3.59	521		43.13	63	0	0.48		5.00	0.69			456	<2	11.41	0.09	0.12	0.90			
4/15/93	5-A		10.8	3.20	631		66.80	82	0	0.84		5.74	0.70			182	<2	10.58	0.11	0.09	0.75			
4/26/93	5-A		331.8	3.25	546		54.74	64	0	0.51		4.39	0.56			174	2.0	256.04	2.03	2.23	17.51			
5/5/93	5-A		26.0	3.24	567		56.82	68	0	0.56		4.60	0.63			184	<2	21.10	0.18	0.20	1.44			
5/17/93	5-A		6.5	3.25	581		57.24	66	0	0.51		4.82	0.62			173	2.0	5.13	0.04	0.05	0.38			
6/1/93	5-A		1.0	3.25	658		66.86	90	0	0.59		6.47	0.74			215	6.0	1.09	0.01	0.01	0.08			
6/17/93	5-A		34.0	3.40	579		51.90	47	0	0.44		5.32	0.74			206	2.0	19.33	0.18	0.30	2.17			

WATER QUALITY DATA SUMMARY																									
Laurel Land Development			Pre-Application																						
Blacklick Township			Cambria County																						
Description-L.K. deep mine discharge northern permit area			Latitude		40-29-53		Longitude		78-51-13													Fig. 4 MP#		4	
Sample	Monitoring	Sample	FLOW	pH	pH	Specific	Temp.	Total Acidity	Net Acidity	Total	Total	Ferrous	Total	Total	Total	Total	Total	Total	Susp.	Acid	Fe	Mn	Al		
Date	Point	Number	(gpm)	(field)	(lab)	Conduct.	(field)	(calculated)	(lab)	Alkalinity	Fe	Fe	Al	Mn	Mg	Ca	Sulfates	Hardness	Solids	Loading	Loading	Loading	Loading		
						(umhos/cm)	(deg. C)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)		
3/19/93	6-A		36.0		3.58	416	nd	37.16	45	0	0.10		4.06	0.68			165		<2	19.65	0.04	0.29	1.76		
3/29/93	6-A		80.4		3.91	334		25.36	40	0	0.09		3.18	0.72			113		<2	38.75	0.09	0.70	3.07		
4/15/93	6-A		37.9		3.67	357		34.53	37	0	0.32		3.95	0.59			119		4.0	16.63	0.15	0.27	1.80		
4/26/93	6-A		120.9		3.68	303		23.62	30	0	0.18		2.14	0.47			102		<2	42.87	0.26	0.68	3.11		
5/5/93	6-A		37.9		3.62	336		25.94	35	0	0.18		2.26	0.53			123		<2	15.90	0.08	0.24	1.03		
5/17/93	6-A		23.3		3.65	356		26.91	37	0	0.30		2.52	0.53			121		<2	10.36	0.08	0.15	0.71		
6/1/93	6-A		11.1		3.72	360		27.97	45	0	0.75		2.78	0.56			115		<2	5.96	0.10	0.07	0.37		
6/17/93	6-A		16.5		3.73	371		24.96	40	0	0.27		2.50	0.59			132		<2	7.97	0.05	0.12	0.50		

WATER QUALITY DATA SUMMARY																							
Laurel Land Development																		Pre-Application					
Blacklick Township																		Cambria County					
Description-L.K. deep mine discharge, northern permit area																		Fig. 4 MP# 5					
Sample Date	Monitoring Point	Sample Number	FLOW (gpm)	pH (field)	pH (lab)	Specific Conduct. (umhos/cm)	Temp. (deg. C)	Total Acidity (calculated) (mg/l)	Net Acidity (lab) (mg/l)	Total Alkalinity (mg/l)	Total Fe (mg/l)	Ferrous Fe (mg/l)	Total Al (mg/l)	Total Mn (mg/l)	Total Mg (mg/l)	Total Ca (mg/l)	Total Sulfates (mg/l)	Total Hardness (mg/l)	Susp. Solids (mg/l)	Acid Loading (lbs/day)	Fe Loading (lbs/day)	Mn Loading (lbs/day)	Al Loading (lbs/day)
9/30/88	35		8.0		2.69	880	nd	127.67	168	0	8.92			1.27			397		0.4	16.15	0.86	0.12	nd
10/25/88	35		8.0		2.92	102		77.71	192	0	5.78			1.36			497		1.2	18.46	0.56	0.13	nd
1/23/89	35		10.0		2.87	652		79.02	147	0	3.70			1.15			320		0.8	17.67	0.44	0.14	nd
2/9/89	35		12.0		2.67	725		111.28	126	0	1.40			0.75			270		0.4	18.17	0.20	0.11	nd
3/31/89	35		22.0		3.00	502		52.26	68	0	0.70			0.40			151		0.8	17.98	0.19	0.11	nd
4/20/89	35		24.0		2.70	548		103.65	98	0	1.25			0.67			253		2.0	28.27	0.36	0.19	nd
9/27/89	35		20.0		2.70	715		106.35	132	0	2.10			0.90			287		83.0	31.73	0.50	0.22	nd
12/27/89	35		30.0		2.71	758		103.64	123	0	2.01			0.78			392		6.4	44.35	0.72	0.28	nd
3/21/90	35		45.0		2.69	615		106.13	92	0	1.39			0.56			229		0.4	49.76	0.75	0.30	nd
6/26/90	35		40.0		2.75	625		92.07	92	0	1.02			0.57			208		1.6	44.23	0.49	0.27	nd
9/20/90	35		35.0		2.60	710		130.61	120	0	1.65			0.80			279		2.0	50.48	0.69	0.34	nd
12/19/90	35		60.0		2.81	445		80.85	64	0	1.20			0.40			158		2.8	46.16	0.87	0.29	nd
3/26/91	35		60.0		3.24	460		31.14	60	0	0.69			0.39			164		0.4	43.27	0.50	0.28	nd
6/20/91	35		20.0		2.84	580		79.06	96	0	2.24			0.70			244		2.4	23.08	0.54	0.17	nd
6/26/91	35	4305921			3.60			52.83	66	0	2.25		5.06	3.38			198		<2	nd	nd	nd	nd
9/24/91	35		15.0		2.82	759		85.16	144	0	2.98			1.10			345		7.6	25.96	0.54	0.20	nd
12/3/91	35		45.0		2.68	760		110.58	136	0	2.06			0.72			259		1.6	73.56	1.11	0.39	nd
3/31/92	35		70.0		3.14	562		39.92	90	0	1.18			0.43			195		2.8	75.73	0.99	0.36	nd
6/23/92	35		35.0		3.00	885		57.24	169	0	2.20			0.92			374		0.8	71.10	0.93	0.39	nd
9/18/92	35		40.0		2.97	830		61.65	150	0	2.60			0.80			266		0.4	72.12	1.25	0.38	nd
12/8/92	35		50.0		2.92	890		67.60	146	0	2.40			0.80			309		0.4	87.75	1.44	0.48	nd
3/19/93	35		140.0		3.03	739		101.88	114	0	2.00		8.79	0.69			245		<2	191.00	3.37	1.16	14.79
3/29/93	35		350.0		3.32	390		26.46	52	0	0.80			0.30			62		5.2	218.76	3.37	1.26	nd
3/29/93	35		604.8		3.61	445		34.98	55	0	0.86		3.56	0.37			156		10.0	400.56	6.25	2.69	25.88
4/15/93	35		384.0		3.21	646		73.19	87	0	1.03		6.97	0.56			225		<2	399.26	4.75	2.58	32.17
4/26/93	35		5.3		3.22	563		66.26	73	0	1.45		5.68	0.46			176		76.0	4.66	0.09	0.03	0.36
5/5/93	35		42.6		3.17	618		74.67	81	0	1.91		6.29	0.53			192		32.0	41.58	0.98	0.27	3.22
5/17/93	35		278.0		3.15	657		80.09	93	0	1.36		7.23	0.58			214		<2	312.10	4.54	1.94	24.16
6/1/93	35		266.0		3.20	694		83.27	110	0	1.68		8.31	0.65			237		<2	350.43	5.37	2.08	26.57
6/17/93	35		9.3		3.28	611		64.09	90	0	0.99		6.18	0.54			197		<2	10.07	0.11	0.06	0.69
6/25/93	35		35.0		3.15	600		38.88	122	0	1.05			0.50			253		0.4	51.33	0.44	0.21	nd
9/30/93	35		30.0		2.98	800		58.82	120	0	2.10			0.65			280		0.8	43.27	0.76	0.23	nd
12/7/93	35		135.0		3.00	565		53.77	50	0	1.18			0.52			170		0.8	81.14	1.91	0.84	nd
3/28/94	35		300.0		3.37	480		23.30	56	0	0.32			0.69			155		2.0	201.94	1.15	2.49	nd
6/30/94	35		35.0		3.28	720		30.41	106	0	0.82			1.18			353		0.4	44.59	0.34	0.50	nd
7/21/94	35	4346266			3.10			108.76	142	0	2.45		11.00	0.84			137		<3	0.00	0.00	0.00	nd
9/29/94	35		30.0		3.09	700		45.37	126	0	0.95			1.35			318		1.2	45.44	0.34	0.49	nd
12/13/94	35		135.0		3.18	470		35.59	74	0	0.69			0.51			181		0.4	120.08	1.12	0.83	nd
3/31/95	35		30.0		3.01	710		54.45	128	0	1.34			1.28			295		1.2	46.16	0.48	0.46	nd
6/30/95	35		30.0		2.89	800		70.75	134	0	1.48			1.54			251		0.8	48.32	0.53	0.56	nd
9/6/95	35	4346338			3.40			54.15	60	0	4.65		3.64	0.90			183		<3	nd	nd	nd	nd
4/2/96	35	4328128			3.20			68.52	90	0	1.24		5.93	0.48			211		<3	nd	nd	nd	nd
3/4/97	35	4328121			3.30			49.85	64	0	0.62		4.06	0.39			160		<3	nd	nd	nd	nd

WATER QUALITY DATA SUMMARY																							
Laurel Land Development			Pre-Application																				
Blacklick Township			Cambria County																	Fig. 4 MP#		6	
Description-Coalpit Run, upstream			Latitude		40-29-51		Longitude		78-50-08														
Sample Date	Monitoring Point	Sample Number	FLOW (gpm)	pH (field)	pH (lab)	Specific Conduct. (umhos/cm)	Temp. (deg. C)	Total Acidity (calculated) (mg/l)	Net Acidity (lab) (mg/l)	Total Alkalinity (mg/l)	Total Fe (mg/l)	Ferrous Fe (mg/l)	Total Al (mg/l)	Total Mn (mg/l)	Total Mg (mg/l)	Total Ca (mg/l)	Total Sulfates (mg/l)	Total Hardness (mg/l)	Susp. Solids (mg/l)	Acid Loading (lbs/day)	Fe Loading (lbs/day)	Mn Loading (lbs/day)	Al Loading (lbs/day)
12/12/97	57	4305687		4.70					15	8	0.37		1.73	0.54			70		<3	nd	nd	nd	nd
3/4/98	57	4305808		4.70					20	8	0.33		2.03	0.60			100		<3	nd	nd	nd	nd
6/18/98	57	4305949		4.30					28	6	0.88		3.15	1.32			170		<3	nd	nd	nd	nd

WATER QUALITY DATA SUMMARY																															
Laurel Land Development											Pre-Application																				
Blacklick Township											Cambria County																				
Description-Unnamed trib SBBC downstream											Latitude		40-28-55		Longitude		78-50-44													Fig. 4 MP#	7
Sample Date	Monitoring Point	Sample Number	FLOW (gpm)	pH (field)	pH (lab)	Specific Conduct. (umhos/cm)	Temp. (deg. C)	Total Acidity (calculated) (mg/l)	Net Acidity (lab) (mg/l)	Total Alkalinity (mg/l)	Total Fe (mg/l)	Ferrous Fe (mg/l)	Total Al (mg/l)	Total Mn (mg/l)	Total Mg (mg/l)	Total Ca (mg/l)	Total Sulfates (mg/l)	Total Hardness (mg/l)	Susp. Solids (mg/l)	Acid Loading (lbs/day)	Fe Loading (lbs/day)	Mn Loading (lbs/day)	Al Loading (lbs/day)								
3/19/93	64		143.0		3.16	706	nd	83.62	96	0	0.85		8.14	0.93			253		<2	165.18	1.46	1.60	13.99								
3/29/93	64		15.0		3.59	521		43.13	63	0	0.48		5.00	0.69			456		<2	11.41	0.09	0.12	0.90								
4/15/93	64		10.8		3.20	631		66.80	82	0	0.84		5.74	0.70			182		<2	10.58	0.11	0.09	0.75								
4/26/93	64		331.8		3.25	546		54.74	64	0	0.51		4.39	0.56			174		2.0	256.04	2.03	2.23	17.51								
5/5/93	64		26.0		3.24	567		56.82	68	0	0.56		4.60	0.63			184		<2	21.10	0.18	0.20	1.44								
5/17/93	64		6.5		3.25	581		57.24	66	0	0.51		4.82	0.62			173		2.0	5.13	0.04	0.05	0.38								
6/1/93	64		1.0		3.25	658		66.86	90	0	0.59		6.47	0.74			215		6.0	1.09	0.01	0.01	0.08								
6/17/93	64		34.0		3.40	579		51.90	47	0	0.44		5.32	0.74			206		2.0	19.33	0.18	0.30	2.17								

WATER QUALITY DATA SUMMARY																							
Laurel Land Development			Pre-Application																				
Blacklick Township			Cambria County																	Fig. 4 MP#		8	
Description-SBBC Upstream			Latitude		40-28-53		Longitude		78-50-43														
Sample Date	Monitoring Point	Sample Number	FLOW (gpm)	pH (field)	pH (lab)	Specific Conduct. (umhos/cm)	Temp. (field) (deg. C)	Total Acidity (calculated) (mg/l)	Net Acidity (lab) (mg/l)	Total Alkalinity (mg/l)	Total Fe (mg/l)	Ferrous Fe (mg/l)	Total Al (mg/l)	Total Mn (mg/l)	Total Mg (mg/l)	Total Ca (mg/l)	Total Sulfates (mg/l)	Total Hardness (mg/l)	Susp. Solids (mg/l)	Acid Loading (lbs/day)	Fe Loading (lbs/day)	Mn Loading (lbs/day)	Al Loading (lbs/day)
3/22/93	65		TLG		5.06	505	nd	6.64	14	3	2.06		N/D	0.37			159		16.0	nd	nd	nd	nd
4/15/93	65		TLG		4.83	612		11.58	18	1	3.73		N/D	0.45			244		34.0	nd	nd	nd	nd
5/17/93	65		TLG		7.52	917		13.10	1	44	4.54		N/D	0.49			380		56.0	nd	nd	nd	nd
6/1/93	65		TLG		5.57	538		11.21	3	3	3.76		N/D	0.53			199		36.0	nd	nd	nd	nd

WATER QUALITY DATA SUMMARY																																		
T.J. Mining					SMP 11890102																													
Blacklick Township					Cambria County																													
Description-Coalpit Run - Downstream					Latitude					40-30-00					Longitude					78-51-21					Fig. 4 MP#					9				
Sample	Monitoring	Sample	Flow	pH	pH	Specific	Temp.	Total Acidity	Net Acidity	Total	Total	Ferrous	Total	Total	Total	Total	Total	Susp.	Acid	Fe	Mn	Al												
Date	Point	Number	(gpm)	(field)	(lab)	Conduct.	(deg. C)	(calculated)	(lab)	Alkalinity	Fe	Fe	Al	Mn	Mg	Ca	Sulfates	Hardness	Solids	Loading	Loading	Loading	Loading											
						(umhos/cm)		(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)											
9/30/88	2		315.0		3.10	510	nd	45.24	69		0.47			2.49			223	0.8	261.25	1.78	9.43	nd												
10/25/88	2		420.0		3.70	440		14.87	53		0.68			1.72			223	11.2	267.57	3.43	8.68	nd												
11/16/88	2		550.0		3.10	470		43.97	100		0.69			1.47			217	0.4	661.10	4.56	9.72	nd												
12/16/88	2		700.0		2.90	600		67.24	104		0.80			1.42			271	0.2	875.06	6.73	11.95	nd												
1/23/89	2		740.0		2.90	540		67.19	93		0.82			1.36			247	0.9	827.22	7.29	12.10	nd												
2/9/89	2		1115.0		2.90	500		67.15	72		0.90			1.22			204	1.2	964.97	12.06	16.35	nd												
9/27/89	2		850.0		3.11	460		43.67	52		0.66			1.84			208	4.4	531.28	6.74	18.80	nd												
11/6/89	2	4301272			3.70			46.49	72	0	0.47		5.78	1.74			132	<2	nd	nd	nd	nd												
12/27/89	2		975.0		3.23	360		32.05	38		0.35			1.03			132	14.0	445.34	4.10	12.07	nd												
1/22/90	2	4301319			4.00			25.76	32	0	0.96		3.12	0.47			64	7.0	nd	nd	nd	nd												
3/21/90	2		1000.0		3.03	371		48.97	40		0.35			0.93			141	1.2	480.80	4.21	11.18	nd												
6/26/90	2		1000.0		3.07	500		46.09	60		0.51			1.35			172	0.4	721.20	6.13	16.23	nd												
9/20/90	2		1000.0		2.90	471		66.63	54		0.68			1.26			224	2.0	649.08	8.17	15.15	nd												
12/19/90	2		1200.0		3.69	205		13.11	26		0.82			0.42			75	11.6	375.02	11.83	6.06	nd												
2/12/91	2	4301678			4.10			26.07	32	2	0.72		3.36	0.82			107	<2	nd	nd	nd	nd												
3/26/91	2		1250.0		3.84	270		9.16	28		0.36			0.56			111	1.6	420.70	5.41	8.41	nd												
6/20/91	2		1250.0		3.05	470		48.41	66		0.68			1.28			210	2.0	991.65	10.22	19.23	nd												
6/26/91	2	4305922			3.50			49.69	64	0	0.85		5.15	1.68			142	<2	nd	nd	nd	nd												
7/26/91	2	4305975			3.50			46.83	62	0	0.90		4.69	1.44			174	<2	nd	nd	nd	nd												
9/24/91	2		400.0		3.15	530		39.91	82		0.51			1.86			212	1.6	394.26	2.45	8.94	nd												
12/3/91	2		1000.0		3.77	312		10.94	20		0.46			0.70			105	17.2	240.40	5.53	8.41	nd												
12/10/91	2	4305113			4.00			24.99	32	1	0.37		3.04	1.16			129	<2	nd	nd	nd	nd												
1/15/92	2	4344979			3.90			27.96	36	0	0.46		3.41	0.83			95	<2	nd	nd	nd	nd												
3/31/92	2		1200.0		3.84	352		9.71	38		0.48			0.68			111	9.2	548.11	6.92	9.81	nd												
6/23/92	2		270.0		3.50	600		20.06	96	0	0.53			1.61			438	1.7	311.56	1.72	5.23	nd												
8/3/92	2	4344249			3.60			47.60	62	0	0.69		5.63	1.07			118	<2	0.00	0.00	0.00	nd												
9/18/92	2		250.0		3.28	580		31.89	92	0	1.14			1.52			213	0.4	276.46	3.43	4.57	nd												
9/23/92	2	4344284			3.70			35.20	48	0	0.57		3.86	1.25			108	2.0	nd	nd	nd	nd												
10/5/92	2	4344292			3.50			76.03	88	0	1.31		9.65	1.71			207	4.0	nd	nd	nd	nd												
12/8/92	2		1280.0		3.41	525		23.12	68	0	0.60			1.20			178	0.4	1046.22	9.23	18.46	nd												
3/25/93	2	4344437			4.20			16.28	24	4	0.50		1.98	0.43			65	8.0	nd	nd	nd	nd												
3/29/93	2				4.45	215		5.31	16	0	1.05			0.40			46	16.0	nd	nd	nd	nd												
4/20/93	2	4344465			3.80			29.68	42	0	0.40		3.53	0.60			98	<3	nd	nd	nd	nd												
6/25/93	2				3.50	570		19.63	72	0	0.64			1.21			300	0.3	nd	nd	nd	nd												
9/30/93	2				3.65	370		14.46	38	0	0.54			1.04			137	0.8	nd	nd	nd	nd												
12/7/93	2				3.82	300		9.87	32	0	0.62			0.38			96	0.4	nd	nd	nd	nd												
12/28/93	2	4305051			3.60			52.28	56	0	0.76		6.39	1.21			127	16.0	nd	nd	nd	nd												
3/28/94	2				4.60	188		2.57	38	6	0.18			0.46			86	8.3	nd	nd	nd	nd												
6/8/94	2	4346228			3.70			41.92	62	0	0.39		5.22	1.06			127		nd	nd	nd	nd												
6/30/94	2				3.60	496		15.86	22	0	0.38			1.30			281	0.3	nd	nd	nd	nd												
9/19/94	2	4346353			3.60			48.97	50	0	0.61		5.86	1.24			188	<3	nd	nd	nd	nd												
9/29/94	2				3.70	389		14.11	56	0	0.58			1.45			155	0.3	nd	nd	nd	nd												
12/13/94	2				3.86	255		8.67	24	0	0.23			0.66			100	0.4	nd	nd	nd	nd												
3/6/95	2	4346073			4.70			11.32	13	8	<.3		1.64	0.44			64	18.0	nd	nd	nd	nd												
3/31/95	2				3.47	420		21.64	54	0	1.06			1.08			179	1.2	nd	nd	nd	nd												
6/30/95	2				3.27	510		30.91	64	0	0.57			1.49			189	1.2	nd	nd	nd	nd												
12/1/95	2	4346449			4.20			22.98	30	4	<.3		3.20	0.90			107	<.3	nd	nd	nd	nd												
4/2/96	2	4328132			4.30			18.73	24	6	<.3		2.66	0.57			104	<.3	nd	nd	nd	nd												
3/4/97	2	4328123			4.70			12.29	15	9	<.3		1.82	0.42			99	16.0	nd	nd	nd	nd												
12/12/97	2	4305689			4.80			9.66	14	8	<.3		1.38	0.44			62	<.3	nd	nd	nd	nd												
6/18/98	2	4305948			4.10			24.29	30	3	<.3		3.24	1.05			169	<.3	nd	nd	nd	nd												

WATER QUALITY DATA SUMMARY																									
T.J. Mining										SMP 11890102										Fig. 4 MP#		10			
Blacklick Township										Cambria County															
Description-L.K. deep mine discharge										Latitude	40-29-57		Longitude	78-51-23											
Sample	Monitoring	Sample	Flow	pH	pH	Specific	Temp.	Total Acidity	Net Acidity	Total	Total	Ferrous	Total	Total	Total	Total	Total	Susp.	Acid	Fe	Mn	Al			
Date	Point	Number	(gpm)	(field)	(lab)	Conduct.	(deg. C)	(calculated)	(lab)	Alkalinity	Fe	Fe	Al	Mn	Mg	Ca	Sulfates	Hardness	Solids	Loading	Loading	Loading	Loading		
						(umhos/cm)		(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)		
9/30/88	3		1.0		2.64	640	nd	121.01	141	0	1.58			1.66			242		10.4	1.69	0.02	0.02	nd		
10/25/88	3		2.2		3.12	598		44.35	108	0	1.32			1.72			242		7.6	2.86	0.03	0.05	nd		
1/23/89	3		2.5		2.89	652		71.65	121	0	1.68			1.74			225		9.7	3.64	0.05	0.05	nd		
2/9/89	3		2.0		2.69	606		160.13	156	0	20.50			2.00			239		454.0	3.75	0.49	0.05	nd		
3/31/89	3		2.2		2.90	600		69.32	132	0	1.45			1.60			186		0.8	3.49	0.04	0.04	nd		
4/20/89	3		1.0		2.70	680		108.40	134	0	2.32			1.70			258		36.4	1.61	0.03	0.02	nd		
12/27/89	3		1.0		2.80	497		85.51	92	0	1.52			1.50			189		68.4	1.11	0.02	0.02	nd		
6/26/90	3		1.0		2.66	600		131.77	52	0	7.66			1.40			165		158.4	0.63	0.09	0.02	nd		
12/19/90	3		2.0		2.85	540		76.00	106	0	1.30			1.30			209		3.2	2.55	0.03	0.03	nd		
3/26/91	3		1.0		3.21	460		37.18	92	0	1.80			0.95			162		13.2	1.11	0.02	0.01	nd		
9/24/91	3		1.0		3.11	540		63.48	124	0	7.04			3.30			248		23.2	1.49	0.08	0.04	nd		
12/3/91	3		2.0		2.68	690		113.43	176	0	2.36			1.84			229		5.6	4.23	0.06	0.04	nd		
3/31/92	3		2.0		3.84	352		18.85	38	0	3.38			1.42			111		0.91	0.08	0.03	0.03	nd		
12/8/92	3		1.0		3.05	580		53.53	136	0	2.40			1.55			220		1.2	1.63	0.03	0.02	nd		
3/19/93	3		24.0		3.13	680		77.84	95	0	0.61		6.71	1.13			205		<2	27.46	0.18	0.33	1.94		
3/29/93	3		302.0		3.59	462		29.63	53	0	0.33		2.64	0.71			136		16.0	190.94	1.20	2.58	9.58		
4/15/93	3		28.6		3.33	513		46.62	56	0	0.31		3.78	0.84			132		<2	19.32	0.11	0.29	1.30		
4/26/93	3		23.4		3.33	451		40.67	50	0	0.22		2.82	0.64			137		<2	13.95	0.06	0.18	0.79		
5/5/93	3		8.1		3.32	463		41.35	52	0	0.21		2.84	0.67			139		2.0	5.06	0.02	0.07	0.28		
5/17/93	3		3.8		3.32	505		48.37	58	0	0.27		3.99	0.92			143		<2	2.64	0.01	0.04	0.18		
6/1/93	3		0.5		3.39	489		45.07	60	0	0.35		4.02	0.84			148		8.0	0.36	0.00	0.01	0.02		
6/17/93	3		2.6		3.39	513		43.12	67	0	0.30		3.71	0.79			161		4.0	2.10	0.01	0.02	0.12		
9/30/93	3		0.5		3.12	500		43.23	80	0	1.34			1.08			167		1.2	0.48	0.01	0.01	0.00		
10/13/93	3		0.1		3.44	630		60.90	88	0	0.46		7.07	1.26			233		<2	0.05	0.00	0.00	0.00		
11/10/93	3		0.1		3.28	706		81.48	101	0	0.56		9.16	1.62			271		<2	0.12	0.00	0.00	0.01		
11/23/93	3		1.7		3.20	636		70.12	85	0	0.57		6.33	1.12			221		<2	1.74	0.01	0.02	0.13		
12/13/93	3		14.5		3.27	517		46.91	150	0	0.31		3.22	0.82			173		<2	26.06	0.05	0.14	0.56		
12/28/93	3		0.1		3.35	545		57.85	68	0	0.31		5.93	1.01			208		<2	0.08	0.00	0.00	0.01		
6/8/94	3	4346229			3.00			137.99	166	0	4.19		13.00	2.60			230			nd	nd	nd	nd		
3/6/95	3	4346074			3.30			63.90	74	0	<.3		6.35	1.80			245		14.0	nd	nd	nd	nd		
9/6/95	3	4346339			3.40			96.55	106	0	1.47		12.30	2.41			290		<3	nd	nd	nd	nd		
4/2/96	3	4328131			3.20			106.37	124	0	2.47		11.50	2.42			294		<3	nd	nd	nd	nd		
5/1/96	3		12.4		3.30	744		67.06	84	0	0.28		6.74	2.15			236		2.3	12.52	0.04	0.32	1.00		
3/4/97	3	4328122			3.40			47.50	66	0	<.3		4.29	1.90			190		<3	nd	nd	nd	nd		
4/2/97	3	4328-219			3.40			51.08	64	0	<.3		4.87	2.09			286		<3	nd	nd	nd	nd		

WATER QUALITY DATA SUMMARY																																						
T.J. Mining																			SMP 11890102			Fig. 4 MP#		11														
Blacklick Township																			Cambria County																			
Description-L.K. deep mine discharge, northern permit area																			Latitude		40-29-57	Longitude		78-50-41														
Sample	Monitoring	Sample	Flow	pH	pH	Specific	Temp.	Total Acidity	Net Acidity	Total	Total	Total	Total	Total	Total	Total	Total	Susp.	Acid	Fe	Mn	Al																
Date	Point	Number	(gpm)	(field)	(lab)	Conduct.	(deg. C)	(calculated)	(lab)	Alkalinity	Fe	Fe	Al	Mn	Mg	Ca	Sulfates	Hardness	Solids	Loading	Loading	Loading	Loading															
						(umhos/cm)		(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)															
9/30/88	4		8.0	2.69	880		nd	127.67	168	0	8.92								1.27				397	0.4	16.15	0.86	0.12	nd										
10/25/88	4		8.0	2.92	102			77.71	192	0	5.78								1.36				497	1.2	18.46	0.56	0.13	nd										
1/23/89	4		10.0	2.87	652			79.02	147	0	3.70								1.15				320	0.8	17.67	0.44	0.14	nd										
2/9/89	4		12.0	2.67	725			111.28	126	0	1.40								0.75				270	0.4	18.17	0.20	0.11	nd										
3/31/89	4		22.0	3.00	502			52.26	68	0	0.70								0.40				151	0.8	17.98	0.19	0.11	nd										
4/20/89	4		24.0	2.70	548			103.65	98	0	1.25								0.67				253	2.0	28.27	0.36	0.19	nd										
9/27/89	4		20.0	2.70	715			106.35	132	0	2.10								0.90				287	83.0	31.73	0.50	0.22	nd										
12/27/89	4		30.0	2.71	758			103.64	123	0	2.01								0.78				392	6.4	44.35	0.72	0.28	nd										
3/21/90	4		45.0	2.69	615			106.13	92	0	1.39								0.56				229	0.4	49.76	0.75	0.30	nd										
6/26/90	4		40.0	2.75	625			92.07	92	0	1.02								0.57				208	1.6	44.23	0.49	0.27	nd										
9/20/90	4		35.0	2.60	710			130.61	120	0	1.65								0.80				279	2.0	50.48	0.69	0.34	nd										
12/19/90	4		60.0	2.81	445			80.85	64	0	1.20								0.40				158	2.8	46.16	0.87	0.29	nd										
3/26/91	4		60.0	3.24	460			31.14	60	0	0.69								0.39				164	0.4	43.27	0.50	0.28	nd										
6/20/91	4		20.0	2.84	580			79.06	96	0	2.24								0.70				244	2.4	23.08	0.54	0.17	nd										
6/26/91	4	4305921		3.60				52.83	66	0	2.25		5.06	3.38									198	<2	nd	nd	nd	nd										
9/24/91	4		15.0	2.82	759			85.16	144	0	2.98								1.10				345	7.6	25.96	0.54	0.20	nd										
12/3/91	4		45.0	2.68	760			110.58	136	0	2.06								0.72				259	1.6	73.56	1.11	0.39	nd										
3/31/92	4		70.0	3.14	562			39.92	90	0	1.18								0.43				195	2.8	75.73	0.99	0.36	nd										
6/23/92	4		35.0	3.00	885			57.24	169	0	2.20								0.92				374	0.8	71.10	0.93	0.39	nd										
9/18/92	4		40.0	2.97	830			61.65	150	0	2.60								0.80				266	0.4	72.12	1.25	0.38	nd										
12/8/92	4		50.0	2.92	890			67.60	146	0	2.40								0.80				309	0.4	87.75	1.44	0.48	nd										
3/19/93	4		140.0	3.03	739			101.88	114	0	2.00		8.79	0.69									245	<2	191.00	3.37	1.16	14.79										
3/29/93	4		350.0	3.32	390			26.46	52	0	0.80								0.30				62	5.2	218.76	3.37	1.26	nd										
3/29/93	4		604.8	3.61	445			34.98	55	0	0.86		3.56	0.37									156	10.0	400.56	6.25	2.69	25.88										
4/15/93	4		384.0	3.21	646			73.19	87	0	1.03		6.97	0.56									225	<2	399.26	4.75	2.58	32.17										
4/26/93	4		5.3	3.22	563			66.26	73	0	1.45		5.68	0.46									176	76.0	4.66	0.09	0.03	0.36										
5/5/93	4		42.6	3.17	618			74.67	81	0	1.91		6.29	0.53									192	32.0	41.58	0.98	0.27	3.22										
5/17/93	4		278.0	3.15	657			80.09	93	0	1.36		7.23	0.58									214	<2	312.10	4.54	1.94	24.16										
6/1/93	4		266.0	3.20	694			83.27	110	0	1.68		8.31	0.65									237	<2	350.43	5.37	2.08	26.57										
6/17/93	4		9.3	3.28	611			64.09	90	0	0.99		6.18	0.54									197	<2	10.07	0.11	0.06	0.69										
6/25/93	4		35.0	3.15	600			38.88	122	0	1.05			0.50									253	0.4	51.33	0.44	0.21	nd										
9/30/93	4		30.0	2.98	800			58.82	120	0	2.10			0.65									280	0.8	43.27	0.76	0.23	nd										
12/7/93	4		135.0	3.00	565			53.77	50	0	1.18			0.52									170	0.8	81.14	1.91	0.84	nd										
3/28/94	4		300.0	3.37	480			23.30	56	0	0.32			0.69									155	2.0	201.94	1.15	2.49	nd										
6/30/94	4		35.0	3.28	720			30.41	106	0	0.82			1.18									353	0.4	44.59	0.34	0.50	nd										
7/21/94	4	4346266		3.10				108.76	142	0	2.45		11.00	0.84									137	<3	0.00	0.00	0.00	nd										
9/29/94	4		30.0	3.09	700			45.37	126	0	0.95			1.35									318	1.2	45.44	0.34	0.49	nd										
12/13/94	4		135.0	3.18	470			35.59	74	0	0.69			0.51									181	0.4	120.08	1.12	0.83	nd										
3/31/95	4		30.0	3.01	710			54.45	128	0	1.34			1.28									295	1.2	46.16	0.48	0.46	nd										
6/30/95	4		30.0	2.89	800			70.75	134	0	1.48			1.54									251	0.8	48.32	0.53	0.56	nd										
9/6/95	4	4346338		3.40				54.15	60	0	4.65		3.64	0.90									183	<3	nd	nd	nd	nd										
4/2/96	4	4328128		3.20				68.52	90	0	1.24		5.93	0.48									211	<3	nd	nd	nd	nd										
3/4/97	4	4328121		3.30				49.85	64	0	0.62		4.06	0.39									160	<3	nd	nd	nd	nd										

WATER QUALITY DATA SUMMARY																						Fig. 4 MP#	12
T.J. Mining			SMP 11890102																				
Blacklick Township			Cambria County																				
Description-L.K. deep mine discharge			Latitude		40-29-56		Longitude		78-51-06		Total		Total		Total		Total		Total		Total		
Sample Date	Monitoring Point	Sample Number	Flow (gpm)	pH (field)	pH (lab)	Specific Conduct. (umhos/cm)	Temp. (deg. C)	Total Acidity (mg/l)	Net Acidity (mg/l)	Alkalinity (mg/l)	Total Fe (mg/l)	Ferrous Fe (mg/l)	Total Al (mg/l)	Total Mn (mg/l)	Total Mg (mg/l)	Total Ca (mg/l)	Total Sulfates (mg/l)	Hardness (mg/l)	Susp. Solids (mg/l)	Acid Loading (lbs/day)	Fe Loading (lbs/day)	Mn Loading (lbs/day)	Al Loading (lbs/day)
09/30/88	5		20.0	2.61	860	nd	129.92	178	0	1.76			1.82			403		0.2	42.79	0.42	0.44	nd	
10/25/88	5		25.0	2.94	930		67.94	190	0	2.82			1.84			436		0.2	57.10	0.85	0.55	nd	
11/16/88	5		25.0	2.70	670		108.61	152	0	2.52			1.52			258		37.6	45.68	0.76	0.46	nd	
12/16/88	5		18.0	2.57	870		138.21	180	0	1.20			0.74			351		1.6	38.94	0.26	0.16	nd	
01/23/89	5		15.0	2.75	620		94.30	145	0	1.40			1.23			243		7.3	26.14	0.25	0.22	nd	
02/09/89	5		20.0	2.66	740		114.17	134	0	1.35			1.05			268		0.4	32.21	0.32	0.25	nd	
09/27/89	5		20.0	2.70	730		105.32	134	0	1.42			1.34			283		7.6	32.21	0.34	0.32	nd	
12/27/89	5		20.0	2.66	850		115.05	149	0	1.47			1.36			278		6.0	35.82	0.35	0.33	nd	
03/21/90	5		30.0	2.66	650		112.82	110	0	1.08			0.71			241		0.4	39.67	0.39	0.26	nd	
06/26/90	5		25.0	2.68	700		108.18	116	0	0.99			0.98			245		0.4	34.86	0.30	0.29	nd	
09/20/90	5		25.0	2.55	760		144.85	140	0	1.05			1.15			327		1.6	42.07	0.32	0.35	nd	
12/19/90	5		50.0	2.83	620		78.22	99	0	1.10			1.00			208		2.8	59.50	0.66	0.60	nd	
03/26/91	5		50.0	3.16	560		37.81	81	0	0.82			0.69			213		0.4	48.68	0.49	0.41	nd	
06/20/91	5		20.0	2.81	680		81.02	118	0	0.91			0.92			262		2.4	28.37	0.22	0.22	nd	
09/24/91	5		15.0	2.97	700		58.51	128	0	1.08			1.32			265		13.2	23.08	0.19	0.24	nd	
12/03/91	5		35.0	2.70	820		106.39	178	0	1.52			1.78			314		12.4	74.88	0.64	0.75	nd	
03/31/92	5		6.0	3.11	642		43.63	114	0	1.12			1.14			208		3.2	8.22	0.08	0.08	nd	
06/30/92	5		8.0	3.00	825		57.10	174	0	1.74			1.52			320		0.8	16.73	0.17	0.15	nd	
08/03/92	5	4344251		3.10			101.36	114	0	1.26		10.20	0.98			167		<2	0.00	0.00	0.00	nd	
09/18/92	5		15.0	2.97	860		59.60	162	0	1.60			1.15			299		0.4	29.21	0.29	0.21	nd	
10/05/92	5	4344294		3.00			142.09	138	0	1.86		15.20	1.57			258		<2	0.00	0.00	0.00	nd	
12/08/92	5		32.0	2.85	900		78.87	190	0	2.30			1.40			337		0.4	73.08	0.88	0.54	nd	
3/19/93	5		215.0	2.99	854		123.95	145	0	1.79		11.89	1.19			288		2.0	374.47	4.63	3.08	30.73	
03/29/93	5		330.0	3.28	485		28.18	64	0	0.35			0.65			101		0.7	253.86	1.39	2.58	nd	
3/29/93	5		585.2	3.60	521		47.79	70	0	0.41		5.88	0.82			163		<2	490.28	2.88	5.77	41.36	
4/15/93	5		158.1	3.12	710		82.68	102	0	1.17		7.26	0.81			213		<2	193.65	2.22	1.54	13.80	
4/26/93	5		136.0	3.14	634		72.74	83	0	0.84		5.98	0.68			199		<2	136.34	1.37	1.11	9.78	
5/5/93	5		143.0	3.12	638		73.71	86	0	0.88		5.81	0.74			193		2.0	147.31	1.51	1.27	9.99	
5/17/93	5		108.0	3.11	694		83.04	95	0	0.93		7.28	0.82			231		<2	123.33	1.21	1.06	9.45	
6/1/93	5		118.0	3.16	738		84.80	109	0	0.97		8.30	0.91			240		6.0	154.32	1.38	1.29	11.77	
6/17/93	5		91.2	3.26	669		67.55	98	0	0.74		6.60	0.85			242		2.0	107.54	0.81	0.93	7.24	
06/25/93	5		15.0	3.12	650		41.06	106	0	0.75			0.76			257		0.4	19.11	0.14	0.14	nd	
09/30/93	5		15.0	3.07	800		47.13	118	0	1.10			1.05			304		0.4	21.28	0.20	0.19	nd	
12/07/93	5		200.0	3.13	590		39.57	78	0	0.60			0.63			173		0.4	187.51	1.44	1.51	nd	
12/28/93	5	4305052		3.70			35.84	42	0	0.37		4.19	0.89			136		14.0	nd	nd	nd	nd	
03/28/94	5		280.0	3.37	470		23.13	54	0	0.27			0.67			204		0.4	181.74	0.91	2.25	nd	
06/30/94	5		15.0	3.26	720		31.64	110	0	0.82			1.18			294		0.8	19.83	0.15	0.21	nd	
07/21/94	5	4346265		3.20			93.20	124	0	1.03		10.20	1.29			222		<3	0.00	0.00	0.00	nd	
09/29/94	5		20.0	3.12	730		42.81	128	0	1.00			1.35			349		0.4	30.77	0.24	0.32	nd	
12/13/94	5		250.0	3.14	580		39.49	94	0	0.62			1.02			248		0.4	282.47	1.86	3.07	nd	
03/31/95	5		210.0	3.04	730		51.16	126	0	1.28			1.34			322		1.2	318.05	3.23	3.38	nd	
06/30/95	5		60.0	2.93	820		64.89	128	0	1.40			1.53			254		0.4	92.31	1.01	1.10	nd	
09/06/95	5	4346337		3.10			135.82	154	0	1.60		15.90	1.98			325		<3	nd	nd	nd	nd	
04/02/96	5	4328129		3.20			74.92	94	0	1.00		6.93	1.29			244		<3	nd	nd	nd	nd	
03/04/97	5	4328120		3.20			69.68	82	0	0.72		6.18	1.11			189		<3	nd	nd	nd	nd	
12/12/97	5	4305690		3.20			76.11	94	0	0.95		7.26	1.01			224		<3	nd	nd	nd	nd	
03/04/98	5	4305804		3.80			35.84	48	0	<3		4.43	1.60			185		<3	nd	nd	nd	nd	
06/18/98	5	4305946		3.30			70.92	92	0	1.10		7.31	1.32			297		<3	nd	nd	nd	nd	

WATER QUALITY DATA SUMMARY																											
T.J. Mining					SMP 11890102																Fig. 4 MP#		13				
Blacklick Township					Cambria County																Fig. 4 MP#		13				
Description-L.K. deep mine discharge, northern permit area					Latitude		40-29-57		Longitude		78-51-13																
Sample	Monitoring	Sample	Flow	pH	pH	Specific	Temp.	Total Acidity	Net Acidity	Total	Total	Ferrous	Total	Total	Total	Total	Total	Total	Susp.	Acid	Fe	Mn	Al				
Date	Point	Number	(gpm)	(field)	(lab)	Conduct.	(deg. C)	(calculated)	(lab)	Alkalinity	Fe	Fe	Al	Mn	Mg	Ca	Sulfates	Hardness	Solids	Loading	Loading	Loading	Loading				
						(umhos/cm)		(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)				
9/30/88	6		12.5		2.92	415	nd	64.38	74	0	1.08						169		34.4	11.12	0.16	0.15	nd				
10/25/88	6		34.0		3.15	643		41.96	110	0	1.42						281		2.6	44.95	0.58	0.67	nd				
11/16/88	6		50.8		2.70	680		106.44	140	0	1.47						289		1.0	85.49	0.90	1.15	nd				
12/16/88	6		50.8		2.72	722		101.26	136	0	1.50						274		0.2	83.04	0.92	0.88	nd				
1/23/89	6		60.1		3.15	520		39.96	89	0	1.20						185		0.6	64.29	0.87	0.63	nd				
2/9/89	6		70.2		2.76	630		93.03	114	0	1.80						254		16.8	96.19	1.52	0.89	nd				
9/27/89	6		65.0		2.86	600		75.16	90	0	1.46						244		0.4	70.32	1.14	1.16	nd				
12/27/89	6		50.0		2.78	645		87.14	104	0	0.84						231		6.4	62.50	0.50	0.82	nd				
3/21/90	6		95.0		2.77	560		88.17	82	0	0.81						125		7.2	93.64	0.92	1.05	nd				
6/26/90	6		80.0		2.78	600		86.98	90	0	1.02						203		0.4	86.54	0.98	0.97	nd				
9/20/90	6		75.0		2.65	625		116.92	100	0	1.40						283		2.8	90.15	1.26	0.99	nd				
12/19/90	6		185.0		2.83	500		77.99	75	0	1.05						178		2.0	166.78	2.33	2.11	nd				
3/26/91	6		140.0		3.28	480		28.95	64	0	0.59						178		0.8	107.70	0.99	1.21	nd				
6/20/91	6		50.0		2.94	580		62.14	89	0	1.26						215		0.4	53.49	0.76	0.58	nd				
6/26/91	6	4305923			3.20			81.99	104	0	1.77		7.83				157		<2	nd	nd	nd	nd				
7/26/91	6	4305976			3.20			78.15	96	0	3.08		6.54				211		<2	nd	nd	nd	nd				
9/24/91	6		35.0		3.11	590		46.24	92	0	1.74						271		9.2	38.70	0.73	0.70	nd				
12/3/91	6		95.0		2.96	460		58.33	66	0	0.70						157		6.4	75.37	0.80	1.26	nd				
3/31/92	6		130.0		3.25	540		31.08	80	0	0.60						202		8.0	125.01	0.94	1.33	nd				
6/23/92	6		18.0		3.20	800		37.61	120	0	1.38						513		1.7	25.96	0.30	0.31	nd				
8/3/92	6	4344250			3.60			47.66	60	0	1.11		5.44				139		<2	nd	nd	nd	nd				
9/18/92	6		55.0		3.11	720		44.36	118	0	1.35						254		0.8	78.01	0.89	0.79	nd				
10/5/92	6	4344293			3.60			54.01	64	0	0.94		6.59				183		12.0	nd	nd	nd	nd				
12/8/92	6		50.0		3.03	730		51.99	126	0	1.25						310		0.4	75.73	0.75	0.76	nd				
3/29/93	6		490.0		3.44	385		21.85	48	0	1.05						82		20.8	282.71	6.18	3.24	nd				
6/25/93	6		40.0		3.17	600		36.98	84	0	0.76						229		0.8	40.39	0.37	0.36	nd				
9/30/93	6		30.0		3.23	620		32.17	78	0	0.55						218		0.8	28.13	0.20	0.29	nd				
12/7/93	6		300.0		3.30	495		27.34	66	0	0.54						163		0.4	238.00	1.95	1.98	nd				
3/28/94	6		450.0		3.48	390		18.72	46	0	0.48						159		2.8	248.81	2.60	2.92	nd				
6/8/94	6	4346230			3.10			108.53	136	0	2.39		10.50				228			nd	nd	nd	nd				
6/30/94	6		405.0		3.41	600		24.39	76	0	1.12						251		0.4	369.98	5.45	5.50	nd				
9/29/94	6		45.0		3.24	620		33.45	92	0	0.90						283		0.4	49.76	0.49	0.73	nd				
12/13/94	6		300.0		3.28	470		28.96	70	0	0.49						223		0.8	252.42	1.77	3.14	nd				
3/31/95	6		50.0		2.89	590		68.52	86	0	0.80						265		0.8	51.69	0.48	0.79	nd				
6/30/95	6		60.0		3.12	650		46.56	86	0	2.32						229		0.8	62.02	1.67	1.05	nd				
9/6/95	6	4346336			3.20			112.03	126	0	1.99		12.90				308		<3	nd	nd	nd	nd				
4/2/96	6	4328130			3.70			#VALUE!	42	0	<.3		4.08				168		<3	nd	nd	nd	nd				
3/4/97	6	4328119			3.80			#VALUE!	36	0	<.3		3.49				152		6.0	nd	nd	nd	nd				
12/12/97	6	4305691			3.70			#VALUE!	46	0	<.3		4.06				183		<3	nd	nd	nd	nd				
3/4/98	6	4305805			3.80			#VALUE!	36	0	<.3		3.13				179		<3	nd	nd	nd	nd				
6/18/98	6	4305947			3.70			32.04	42	0	0.84		3.08				190		<3	nd	nd	nd	nd				
3/19/93	6		55.0		3.54	492		45.50	54	0	0.30		5.16				162		2.0	35.50	0.20	0.60	3.41				
3/29/93	6		158.1		4.09	330		23.60	34	0	0.14		3.16				124		2.0	64.23	0.27	1.67	6.01				
4/15/93	6		44.9		3.72	398		33.48	41	0	0.28		3.91				154		<2	22.02	0.15	0.45	2.11				
4/26/93	6		217.0		3.75	320		26.54	33	0	0.18		2.88				114		<2	85.55	0.47	1.72	7.51				
5/5/93	6		52.6		3.68	380		32.83	39	0	0.25		3.66				147		<2	24.78	0.16	0.49	2.31				
5/17/93	6		17.5		3.66	414		35.87	42	0	0.34		4.16				159		<2	8.88	0.07	0.17	0.88				
6/1/93	6		5.2		3.75	424		34.50	51	0	0.43		4.14				160		<2	3.18	0.03	0.05	0.26				
6/17/93	6		1.5		3.72	423			48		0.49		3.81				159		2.0	0.87	0.01	0.01	0.07				

WATER QUALITY DATA SUMMARY																																						
T.J. Mining																						SMP 11890102	Fig. 4 MP#	14														
Blacklick Township			Cambria County																			Latitude		40-29-50	Longitude		78-50-10											
Description-Coalpit Run, upstream																																						
Sample	Monitoring	Sample	Flow	pH	pH	Specific	Temp.	Total Acidity	Net Acidity	Total	Total	Ferrous	Total	Total	Total	Total	Total	Susp.	Acid	Fe	Mn	Al																
Date	Point	Number	(gpm)	(field)	(lab)	Conduct.	(deg. C)	(calculated)	(lab)	Alkalinity	Fe	Fe	Al	Mn	Mg	Ca	Sulfates	Hardness	Solids	Loading	Loading	Loading	Loading															
						(umhos/cm)		(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)														
9/30/88	7		140.0		3.15	530	nd	46.12	56	0	1.71							247	0.2	94.24	2.88	5.89	nd															
10/25/88	7		190.0		4.44	313		3.37	23	0	0.25							134	1.2	51.61	0.57	1.12	nd															
11/16/88	7		220.0		3.60	480		16.80	46	0	0.68							179	1.2	121.64	1.80	3.62	nd															
12/16/88	7		415.0		3.21	610		35.48	80	0	0.74							277	0.2	399.06	3.69	7.88	nd															
1/23/89	7		415.0		3.64	320		15.94	42	0	0.58							180	0.4	209.51	2.89	8.23	nd															
2/9/89	7		530.0		3.37	485		27.21	46	0	0.86							220	0.4	295.60	5.48	13.00	nd															
9/27/89	7		480.0		3.46	500		31.53	50	0	3.70							217	21.6	288.48	21.35	13.85	nd															
11/6/89	7	4301271			4.20			26.62	32	4	1.42		2.90	1.94				108	<2	nd	nd	nd	nd															
12/27/89	7		620.0		4.14	301		7.33	35	0	0.78							107	18.0	260.83	5.81	6.71	nd															
1/22/90	7	4301318			5.00			11.69	18	8	0.62		1.53	0.55				63	10.0	nd	nd	nd	nd															
3/21/90	7		600.0		4.14	315		7.66	14	0	0.90							240	4.8	100.97	6.49	6.49	nd															
6/26/90	7		600.0		3.71	470		15.27	26	0	0.86							175	2.8	187.51	6.20	12.98	nd															
9/20/90	7		500.0		3.65	410		16.21	18	0	0.88							228	12.4	108.18	5.29	9.02	nd															
12/19/90	7		720.0		5.58	208		2.60	6	6	0.62							74	27.2	51.93	5.37	3.81	nd															
2/12/91	7	4301679			4.40			18.17	24	5	0.62		2.25	1.11				85	5.0	nd	nd	nd	nd															
3/26/91	7		650.0		5.03	260		3.06	9	1	0.64							97	11.6	70.32	5.00	3.75	nd															
6/20/91	7		450.0		3.37	575		30.20	47	0	1.20							265	3.6	254.22	6.49	17.20	nd															
7/26/91	7	4305974			3.70			44.85	58	0	2.67		3.86	3.45				229	<2	nd	nd	nd	nd															
9/24/91	7		150.0		3.50	642		85.18	44	0	23.00							262	95.6	79.33	41.47	7.57	nd															
12/12/91	7		500.0		4.29	410		6.03	36	0	0.13							141	5.6	216.36	0.78	10.34	nd															
1/15/92	7	4344980			4.50			12.20	36	6	0.42		1.46	0.76				82	<2	nd	nd	nd	nd															
3/31/92	7		700.0		4.59	292		3.14	22	0	0.18							95	2.4	185.11	1.51	6.39	nd															
6/30/92	7		35.0		3.57	660		20.10	61	0	0.23							256	0.8	25.66	0.10	1.41	nd															
8/3/92	7	4344252			4.10			28.18	34	3	0.96		3.29	1.84				149	<2	nd	nd	nd	nd															
9/18/92	7		40.0		3.71	640		17.89	46	0	0.75							229	3.6	22.12	0.36	1.63	nd															
9/23/92	7	4344285			4.40			18.31	34	5	1.07		2.01	1.25				105	5.0	nd	nd	nd	nd															
10/5/92	7	4344296			3.60			58.41	60	0	2.38		5.94	3.56				214	<2	nd	nd	nd	nd															
12/8/92	7		600.0		3.92	435		9.21	34	0	0.12							147	0.4	245.21	0.87	11.54	nd															
3/22/93	7		1162.0		4.42	296		4.51	22	0	0.40							93	4.0	311.47	5.59	11.87	nd															
3/25/93	7	4344436			5.40			7.44	11	8	0.33		1.01	0.41				55	<3	nd	nd	nd	nd															
3/29/93	7				5.07	195		2.82	8	2	0.62							38	17.6	nd	nd	nd	nd															
4/15/93	7		1488.0		4.35	317		#VALUE!	20	0	0.06							118	2.0	354.14	1.07	0.18	nd															
4/20/93	7	4344466			4.10			23.26	36	4	0.44		2.92	1.03				59	<3	nd	nd	nd	nd															
5/17/93	7		1084.0		3.90	364		10.14	33	0	0.58							126	2.0	433.89	7.56	16.68	nd															
6/1/93	7		817.0		4.40	319		5.45	26	0	0.52							107	2.0	255.33	5.11	11.20	nd															
6/25/93	7		60.0		3.92	435		9.44	30	0	0.22							162	0.4	21.64	0.16	1.14	nd															
9/30/93	7		50.0		4.76	310		2.72	10	2	0.15							108	0.8	6.01	0.09	0.48	nd															
12/7/93	7				4.79	258		2.68	12	4	0.40							77	33.2	nd	nd	nd	nd															
12/28/93	7	4305050			4.10			27.62	28	4	0.80		3.36	1.55				120	16.0	nd	nd	nd	nd															
3/8/94	7	4305080			4.80			9.98	28	8	0.35		1.34	0.43				60	<3	nd	nd	nd	nd															
3/28/94	7				5.97	160		2.00	4	4	0.48							55	10.4	nd	nd	nd	nd															
6/8/94	7	4346227			3.90			36.45	56	0	0.76		4.39	2.05				159		nd	nd	nd	nd															
6/30/94	7				3.89	485		11.79	38	0	0.34							202	0.4	nd	nd	nd	nd															
9/19/94	7	4346352			4.10			30.73	26	3	1.16		3.49	2.33				181	4.0	nd	nd	nd	nd															
9/29/94	7				4.32	370		5.97	0	0	0.17							138	1.2	nd	nd	nd	nd															
12/13/94	7				4.62	250		2.86	16	0	0.20							94	0.4	nd	nd	nd	nd															
3/6/95	7	4346072			4.80			12.50	15	8	<.3		1.84	0.59				65	<.3	nd	nd	nd	nd															
3/31/95	7				3.82	415		11.11	40	0	0.32							171	0.4	nd	nd	nd	nd															
6/30/95	7				3.58	500			48	0	0.72							189	2.0	nd	nd	nd	nd															
12/1/95	7	4346447			4.60				20	7	0.43		2.57	0.95				89	<.3	nd	nd	nd	nd															
4/2/96	7	4328134			4.70				17	8	<.3		2.23	0.61				81	<.3	nd	nd	nd	nd															
3/4/97	7	4328124			4.70				17	9	<.3		2.06	0.56				109	<.3	nd	nd	nd	nd															

WATER QUALITY DATA SUMMARY																														
T.J. Mining			SMP 11890102																											
Blacklick Township			Cambria County																											
Description-Coalpit Run, upstream			Latitude			40-29-50			Longitude			78-50-10																		
Sample	Monitoring	Sample	Flow	pH	pH	Specific	Temp.	Total Acidity	Net Acidity	Total	Total	Ferrous	Total	Total	Total	Total	Total	Total	Susp.	Acid	Fe	Mn	Al							
Date	Point	Number	(gpm)	(field)	(lab)	Conduct.	(deg. C)	(calculated)	(lab)	Alkalinity	Fe	Fe	Al	Mn	Mg	Ca	Sulfates	Hardness	Solids	Loading	Loading	Loading	Loading							
						(umhos/cm)		(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)						
12/12/97	7	4305687			4.70				15	8	0.37		1.73	0.54			70		<3	nd	nd	nd	nd							
3/4/98	7	4305808			4.70				20	8	0.33		2.03	0.60			100		<3	nd	nd	nd	nd							
6/18/98	7	4305949			4.30				28	6	0.88		3.15	1.32			170		<3	nd	nd	nd	nd							

Fig. 4 MP# 14