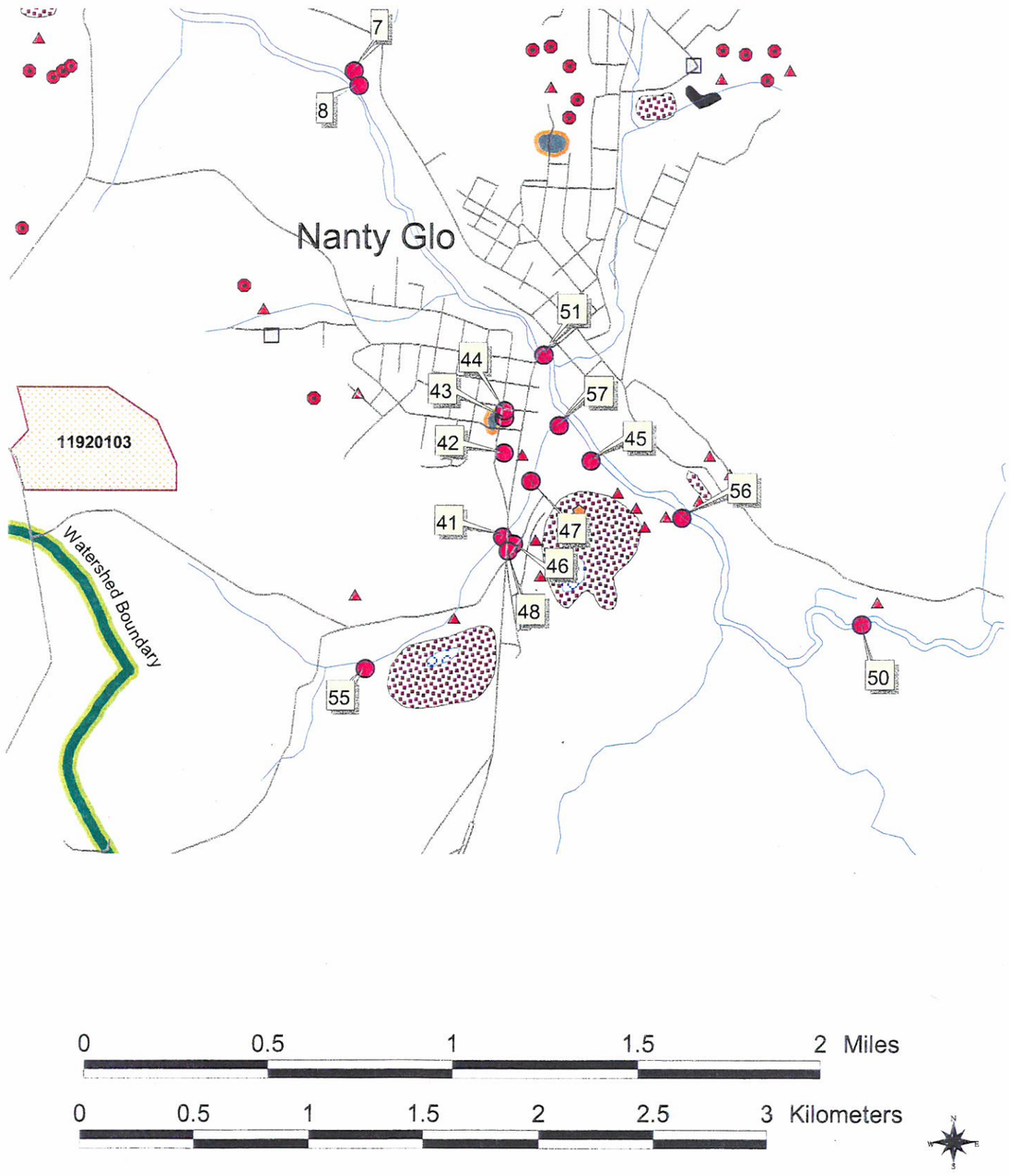
Smith Energy, Inc. S.M.P. 11960201
With U.S.A.C.E. Sample Data



WATER QUALITY DATA SUMMARY																								
Smith Energy				SMP 11960201																				
Nanty Glo Borough			Cambria County																					
Description-Pergrin Run above Webster discharge							Latitude	40-27-49	Longitude	78-50-15												Fig 4 MP#	41	
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)
2/3/95	1		nd		2.90		nd	924.79	956	0	117.00		97.90	1.65			983			nd	nd	nd	nd
10/7/95	1		nd		2.55	3700		2708.08	1925	1	310.00		310.00	5.40			3025		22.0	nd	nd	nd	nd
4/30/96	1		nd		3.00	620		229.23	33	0	23.00		20.90	0.80			240		59.0	nd	nd	nd	nd
5/23/96	1		nd		2.90			1657.94	504	0	504.00		42.90	1.00			1170		43.0	nd	nd	nd	nd
6/26/96	1		2300.0		3.00	1180		378.78	353	0	48.00		35.60	1.10			550		34.0	9745.22	1327.01	30.41	984.20
7/25/96	1		800.0		2.51	1808		1370.74	868	0	158.00		141.80	1.94			1290		30.0	8341.88	1519.33	18.66	1363.55
8/23/96	1		400.0		2.55	2243		1741.49	1155	0	224.00		178.00	4.90			2350		15.0	5553.24	1076.99	23.56	855.82
9/25/96	1		1200.0		2.80	1369		1102.36	543	0	159.00		106.40	2.30			860		38.0	7825.02	2293.42	33.18	1534.71
12/10/96	1		2300.0		2.83	1380		428.89	631	0	131.00			1.80			1050		8.0	17452.92	3621.63	49.76	nd
1/8/97	1		1000.0		2.84	1419		482.74	661	0	152.00			1.29			1280		27.0	7948.83	1827.04	15.51	nd
3/17/97	1	4328-156	nd		3.10			315.36	320	0	41.20		29.50	0.56			354		20.0	nd	nd	nd	nd
5/28/97	1		1100.0		2.92	1076		188.84	394	0	47.50			0.80			202		39.0	5206.82	628.05	10.58	nd
6/4/97	1	4328-644	nd		2.80			672.79	692	0	84.60		65.50	1.21			891		<3	nd	nd	nd	nd
8/7/97	1		250.0		2.50	4549		1976.57	3974	0	670.00			10.10			5580		2.0	11941.27	2013.35	30.35	nd
2/18/98	1		1250.0		2.96	615		136.67	254	0	30.20			0.57			252		56.0	3813.35	453.76	8.56	nd
6/3/98	1		400.0		2.30	2408		1010.65	1655	0	281.00			3.51			281		9.0	7957.24	1351.05	16.88	nd
11/6/98	1		400.0		2.83	1061		299.28	554	0	83.00			1.49			700		14.0	2662.67	399.06	7.16	nd

WATER QUALITY DATA SUMMARY

Smith Energy — SMP 11960201

Nanty Glo Borough — Cambria County

Description-Webster Mine discharge — Latitude 40-28-01 — Longitude 78-50-15 — Fig 4 MP# 42

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)
2/3/95	2		nd		3.00		nd	375.59	458	0	34.50		40.40	4.61			632			nd	nd	nd	nd
10/7/95	2		nd		2.80	2000		1048.81	1087	1	130.00		110.00	4.70			1375		12.0	nd	nd	nd	nd
4/30/96	2		nd		2.65	1220		379.31	720	0	25.00		24.00	37.00			641		0.8	nd	nd	nd	nd
5/23/96	2		784.0		2.90	1274		346.65	344	0	32.00		34.00	4.90			840		2.0	3241.75	301.56	46.18	320.41
6/26/96	2		400.0		2.91	1274		310.46	354	0	32.10		27.90	4.30			580		1.0	1703.96	154.34	20.67	134.14
7/25/96	2		300.0		2.84	1243		346.49	383		32.90		32.20	3.90			570		2.0	1381.46	118.64	14.06	116.11
8/23/96	2		250.0		2.80	1334		462.00	371	0	52.70		41.20	6.80			644		2.0	1113.65	158.36	20.43	123.81
9/25/96	2		350.0		2.81	1162		340.33	309	0	33.30		29.80	4.44			662		1.0	1299.12	140.09	18.68	125.37
12/10/96	2		500.0		2.82	1290		179.25	355	0	35.20			5.20			500		1.0	2133.55	211.55	31.25	nd
1/8/97	2		400.0		2.85	1316		182.52	361	0	39.00			4.14			680		8.0	1737.13	187.51	19.91	nd
3/17/97	2	4328-155	nd		3.00			223.18	274	0	15.70		22.70	2.75			484		20.0	nd	nd	nd	nd
5/28/97	2		424.0		2.91	1085		108.68	296	0	16.10			2.37			369		1.0	1510.09	82.05	12.08	nd
6/4/97	2	4328-643	nd		2.80			297.25	332	0	20.30		28.40	3.27			558		<3	nd	nd	nd	nd
8/7/97	2		224.0		2.96	1403		183.00	443	0	44.40			5.05			800		7.0	1191.42	119.55	13.60	nd
11/6/97	2		202.0		2.80	1061		173.44	363	0	32.40			4.20			588		5.0	880.16	78.67	10.20	nd
2/18/98	2		460.0		2.85	1006		138.53	375	0	22.80			3.90			533		2.0	2073.45	126.07	21.56	nd
6/3/98	2		397.0		2.55	1177		221.88	356	0	27.50			4.40			570		4.0	1700.24	131.23	21.00	nd

WATER QUALITY DATA SUMMARY

Smith Energy — SMP 11960201

Nanty Glo Borough — Cambria County

Description-Pergrin Run below Webster discharge — Latitude 40-28-06 — Longitude 78-50-15 — Fig 4 MP# 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)
2/3/95	3		nd		2.90		nd	488.19	712	0	7.76		71.70	3.22			832			nd	nd	nd	nd
10/7/95	3		nd		2.76	2200		1111.68	1154	1	130.00		120.00	4.50			1575		12.0	nd	nd	nd	nd
4/30/96	3		nd		2.90	660		262.75	385	0	24.00		24.00	1.20			286		84.0	nd	nd	nd	nd
5/23/96	3		nd		2.80	1300		471.48	419	0	49.00		46.00	2.80			810		18.0	nd	nd	nd	nd
6/26/96	3		4600.0		2.95	1109		333.03	371	0	38.40		30.60	2.10			570		7.0	20529.92	2123.21	116.11	1691.94
7/25/96	3		1900.0		2.68	1537		557.15	584	0	55.90		53.30	3.60			830		11.0	13332.82	1276.64	82.22	1217.27
8/23/96	3		750.0		2.65	1754		1147.61	678	0	124.00		124.20	6.60			1660		4.0	6107.66	1117.86	59.50	1119.66
9/25/96	3		1700.0		2.78	1265		559.57	456	0	81.00		45.80	2.51			820		16.0	9324.03	1655.15	51.29	935.88
12/10/96	3		3100.0		2.84	1355		325.65	503	0	92.00			3.60			650		9.0	18724.16	3428.10	134.14	nd
1/8/97	3		2000.0		2.86	1335		283.00	529	0	78.00			2.62			1060		12.0	12712.35	1875.12	62.98	nd
3/17/97	3	4328-154	nd		3.10			273.25	296	0	31.00		26.60	1.35			352		<3	nd	nd	nd	nd
5/28/97	3		1058.0		2.94	1058		126.61	351	0	25.10			1.17			354		18.0	4467.54	319.20	14.88	nd
6/4/97	3	4328-642	nd		2.80			509.16	528	0	55.00		50.10	2.11			669		<3	nd	nd	nd	nd
8/7/97	3		500.0		2.79	2013		437.70	961	0	129.00			5.70			1370		3.0	5777.41	775.29	34.26	nd
11/6/97	3		630.0		2.82	1049		275.55	481	0	73.00			2.28			600		13.0	3644.69	552.80	17.27	nd
12/23/97	3	4305-725	nd		3.20			324.37	334	0	36.30		34.60	1.61			391		6.0	nd	nd	nd	nd
2/18/98	3		1740.0		2.90	696		129.77	261	0	24.20			1.21			311		36.0	5465.04	506.14	25.31	nd
3/26/98	3	4305-841	nd		2.80			392.95	414	0	43.20		35.00	1.85			567		16.0	nd	nd	nd	nd
6/3/98	3		920.0		2.46	1541		432.89	721	0	94.00			4.41			1700		8.0	7976.42	1039.49	48.77	nd
6/25/98	3	4305-974			2.90			454.26	426	0	51.10		45.00	2.19			594		12.0	0.00	0.00	0.00	nd

WATER QUALITY DATA SUMMARY

Smith Energy — SMP 11960201

Nanty Glo Borough — Cambria County

Description-SBBS below Pergrin Run — Latitude 40-28-07 — Longitude 78-50-15 — Fig 4 MP# 44

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)
5/23/95	4		nd		6.10		nd	23.74	14	17	2.03		3.15	0.40			414			nd	nd	nd	nd
10/7/95	4		nd		3.18	1725		297.31	229	1	25.00		35.00	1.40			1075			nd	nd	nd	nd
4/30/96	4		nd		2.90	660		273.51	315	0	26.00		25.00	1.10			288			nd	nd	nd	nd
5/23/96	4		nd		3.10	871		201.29	153	0	20.00		19.00	1.30			351		25.0	nd	nd	nd	nd
6/26/96	4		26000		3.12	826		218.98	212	0	23.10		21.00	1.30			322		9.0	66223	7219	406	6563
7/25/96	4		23000		2.78	1356		375.56	398	0	32.10		36.50	2.07			500		22.0	109893	8874	572	10091
8/23/96	4		21000		2.82	1472		432.11	340	0	43.90		41.60	4.10			1350		34.0	85823	11081	1035	10501
9/25/96	4		25000		2.86	1139		449.25	358	0	64.00		36.80	2.14			555		17.0	107609	19232	643	11058
12/10/96	4		32000		2.92	1216		219.55	394	0	57.50			2.90			514		11.0	151548	22117	1115	nd
1/8/97	4		22000		2.88	1316		271.41	489	0	75.00			2.38			1100		14.0	129258	19833	629	nd
3/17/97	4	4328-153	nd		3.30			147.55	148	0	16.10		14.00	0.82			230		6.0	nd	nd	nd	nd
5/28/97	4		22000		2.99	978		141.21	303	0	32.70			1.37			310		21.0	79993	8647	362	0
6/4/97	4	4328-641	nd		2.90			380.92	394	0	39.50		37.60	1.65			564		<3	nd	nd	nd	nd
8/7/97	4		13000		6.00	1689		1.52	0	47	0.37			0.26			950		10.0	0	58	41	nd
11/6/97	4		nd		3.00	915		162.23	301	0	40.80			1.59			450		15.0	nd	nd	nd	nd
12/23/97	4	4305-724	nd		3.40			239.37	228	0	26.40		26.30	1.26			256		18.0	nd	nd	nd	nd
2/18/98	4		nd		2.95	663		114.85	235	0	21.20			1.18			273		30.0	nd	nd	nd	nd
3/26/98	4	4305-840	nd		2.80			424.75	448	0	48.10		38.30	2.00			553		16.0	nd	nd	nd	nd
6/3/98	4		nd		2.55	1466		311.32	526	0	61.40			3.47			1540		6.0	nd	nd	nd	nd
6/25/98	4	4305-975	nd		2.90			409.19	380	0	45.00		39.90	2.03			592		12.0	nd	nd	nd	nd

WATER QUALITY DATA SUMMARY																			
Smith Energy				SMP 11960201															
Nanty Glo Borough			Cambria County														Fig 4 MP#	45	
Description-SBBC above NantyGlo Mine 31 refuse							Latitude	40-28-00	Longitude	78-49-59									
Sample Date	Monitoring Point	Sample Number	Flow	pH	pH	Specific Conduct.	Temp. (field)	Total Acidity (calculated)	Net Acidity (lab)	Total Alkalinity	Total Fe	Ferrous Fe	Total Al	Total Mn	Total Mg	Acid Loading	Fe Loading	Mn Loading	Al Loading
			(gpm)	(field)	(lab)	(umhos/cm)	(deg. C)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)
2/3/95	5				6.60		nd	16.52	0	22	1.08		2.32	0.38		nd	nd	nd	nd
10/7/95	5				6.96			5.76	1	17	0.53		0.71	0.21		nd	nd	nd	nd
4/30/96	5				5.60	300		25.85	16	7	1.50		3.80	0.30		nd	nd	nd	nd
5/23/96	5				6.40	429		14.05	0	8	0.60		2.10	0.40		nd	nd	nd	nd
6/26/96	5		17000		6.03	389		3.57	16	12	0.19		0.47	0.22		3310.31	38.82	44.95	96.04
7/25/96	5		14000		5.37	746		4.09	8	10	0.19		0.50	0.32		1363.07	31.97	53.85	84.14
8/23/96	5		13000		6.75	888		5.88	0	15	0.36		0.76	0.37		nd	56.25	57.82	118.76
9/25/96	5		15000		6.07	621		12.52	0	15	0.61		1.83	0.36		nd	109.98	64.91	329.95
12/10/96	5		21000		6.24	613		2.13	1	8	0.57			0.31		126.21	143.88	78.25	nd
1/8/97	5		14000		5.63	613		2.37	6	11	0.60			0.35		959.20	100.97	58.90	nd
3/17/97	5	4328-158			5.90			9.48	4	11	0.51		1.38	0.20		nd	nd	nd	nd
5/28/97	5		19000		5.78	394		2.29	15	32	0.66			0.24		3425.70	150.73	54.81	nd
6/4/97	5	4328-645			6.40			15.44	4	26	1.03		2.19	0.26		nd	nd	nd	nd
8/7/97	5		12000		6.29	1689		1.55	0	48	0.39			0.26		nd	56.25	37.50	nd
11/6/97	5				6.44	598		2.36	0	28	0.64			0.34		nd	nd	nd	nd
12/23/97	5	4305-723			6.40			17.13	0	32	1.00		2.50	0.28		nd	nd	nd	nd
2/18/98	5				5.85	297		3.04	10	12	0.91			0.29		nd	nd	nd	nd
3/26/98	5	4305-842			5.30			18.15	4	9	1.15		2.56	0.31		nd	nd	nd	nd
6/3/98	5				5.98	1081		2.49	0	16	0.46			0.66		nd	nd	nd	nd
6/25/98	5	4305-977			6.20			11.77	0	34	0.71		1.65	0.37		nd	nd	nd	nd

WATER QUALITY DATA SUMMARY																								
Smith Energy				SMP 11960201																				
Nanty Glo Borough			Cambria County																					
Description-Seep flow into culvert, SE corner of site							Latitude	40-27-48	Longitude	78-50-13												Fig 4 MP#	46	
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)
5/23/96	7		0.8		2.89	2113	nd	1373.27	1128	0	11.60		226.00	11.30			2320		3.0	10.17	0.10	0.10	2.04
6/26/96	7		2.0		3.21	2006		1236.89	983	0	9.80		207.60	13.60			1790		3.0	23.63	0.24	0.33	4.99
7/25/96	7		0.1		3.53	1752		749.57	697	0	3.69		126.30	12.20			1620		52.0	0.42	0.00	0.01	0.08
8/23/96	7		1.0		3.26	2116		1668.22	1177	0	10.80		283.40	19.20			2790		5.0	14.15	0.13	0.23	3.41
9/25/96	7		2.0		3.10	1725		1447.80	820	0	7.40		243.90	17.20			1940		1.0	19.71	0.18	0.41	5.86
10/30/96	7		2.0		3.02	1800		997.39	961	0	4.67		165.00	10.60			1450		20.0	23.11	0.11	0.25	3.97
12/10/96	7		1.0		3.48	1548		49.33	547	0	5.39			10.10			1730		3.0	6.57	0.06	0.12	0.00
1/8/97	7		0.2		3.39	1883		79.00	1089	0	11.90			14.70			2110		12.0	2.62	0.03	0.04	0.00
3/17/97	7	4328-157			3.70			411.36	436	0	6.91		67.10	5.22			765		<3	0.00	0.00	0.00	0.00
5/28/97	7		13.0		3.19	1673		66.37	996	0	8.90			5.70			1170		3.0	155.68	1.39	0.89	0.00
8/7/97	7		0.0					nd												nd	nd	nd	nd
11/6/97	7		2.0		3.35	1440		53.76	814	0	4.70			10.40			1560		2.0	19.56	0.11	0.25	0.00
2/18/98	7		20.0		3.16	1295		69.88	650	0	10.10			4.60			700		12.0	156.26	2.43	1.11	0.00
6/3/98	7		1.0		2.80	2247		157.35	1616	0	21.60			11.30			2670		4.0	19.43	0.26	0.14	0.00

WATER QUALITY DATA SUMMARY

Webster Mine/Nanty Glo Acid Mine Drainage Reclamation Project

Nanty Glo Borough | Cambria County

Description-Webster mine discharge in Nanty Glo | Latitude 40-27-57 | Longitude 78-50-10 | Fig. 4 MP# 47

Sample Date	Monitoring Point	FLOW (gpm)	pH (field)	pH (lab)	Specific Conduct. (umhos/cm)	Temp. (field) (deg. F)	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)	Dis Al (mg/l)	Total Mn (mg/l)	Dis Mn (mg/l)	Total Mg (mg/l)	Dis 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)
6/4/97	WM-01			2.90			295.96	342	0	23.80	4.68	30.10	30.10	3.39	3.39	30.00		48.10	348	402.00		nd	nd	nd	nd
7/2/97	WM-01		3.22	3.00	130	61.7	293.24	390	0	26.90		29.40	31.40	4.22		33.6	37.5	49.8	430	82		nd	nd	nd	nd
8/5/97	WM-01		3.32	3.00	1430	57.6	348.54	426	0	39.60	13.86	35.50	35.10	4.02	3.96				412	457		nd	nd	nd	nd
10/18/97	WM-01		3.27	3.00	1677	48	1540.06	448	0	465.50	9.9	43.10		4.42	0.44					321		nd	nd	nd	nd
10/30/97	WM-01		3.35	3.00	1420	58	413.76	450	0	43.90	9.35	44.40	44.40	4.07	4.07	45.7		66.5	496	477		nd	nd	nd	nd
12/17/97	WM-01		3.34	3.34	1650	51	283.53	386	0	27.90	7.04	33.30	32.70	3.76		37.9	12.9	51.7	282	461		nd	nd	nd	nd

Sample Date	Monitoring Point	Total As (ug/l)	Total Ba (ug/l)	Total Cd (ug/l)	Total Cr (ug/l)	Total Cu (ug/l)	Total Pb (ug/l)	Total Hg (ug/l)	Total Ni (ug/l)	Total Se (ug/l)	Total Zn (ug/l)
6/4/97	WM-01										
7/2/97	WM-01										
8/5/97	WM-01	<4			9.5	24	3.8	<1	333	<7	643
10/18/97	WM-01										
10/30/97	WM-01	<4	<10	1.18	9.68	26	3.96	<1		<7	639
12/17/97	WM-01										

WATER QUALITY DATA SUMMARY

Webster Mine/Nanty Glo Acid Mine Drainage Reclamation Project

Nanty Glo Borough | **Cambria County** | **Fig. 4 MP#** | **48**

Description-Pergrin Run upstream of webster discharge | **Latitude** | **40-27-47** | **Longitude** | **78-50-14**

Sample Date	Monitoring Point	FLOW (gpm)	pH (field)	pH (lab)	Specific Conduct. (umhos/cm)	Temp. (field) (deg. F)	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)	Dis Al (mg/l)	Total Mn (mg/l)	Dis Mn (mg/l)	Total Mg (mg/l)	Dis 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)
6/4/97	WM-03			2.90			295.96	342	0	23.80	4.68	30.10	30.10	3.39	3.39	30.00		48.10	348	402.00		nd	nd	nd	nd
7/2/97	WM-03		3.22	3.00	130	65.6	293.24	390	0	26.90		29.40	31.40	4.22		33.6	37.5	49.8	430	82		nd	nd	nd	nd
8/5/97	WM-03		3.32	3.00	1430	60	348.54	426	0	39.60	13.86	35.50	35.10	4.02	3.96				412	457		nd	nd	nd	nd
10/18/97	WM-03	104.1	3.27	3.00	1677	43.9	1540.06	448	0	465.50	9.9	43.10		4.42	0.44					321		560.57	582.47	5.53	53.93
10/30/97	WM-03		3.35	3.00	1420	55.1	413.76	450	0	43.90	9.35	44.40	44.40	4.07	4.07	45.7		66.5	496	477		nd	nd	nd	nd
12/15/97	WM-03		3.34	3.34	1650	39.7	283.53	386	0	27.90	7.04	33.30	32.70	3.76		37.9	12.9	51.7	282	461		nd	nd	nd	nd

Sample Date	Monitoring Point	Total As (ug/l)	Total Ba (ug/l)	Total Cd (ug/l)	Total Cr (ug/l)	Total Cu (ug/l)	Total Pb (ug/l)	Total Hg (ug/l)	Total Ni (ug/l)	Total Se (ug/l)	Total Zn (ug/l)
6/4/97	WM-03										
7/2/97	WM-03										
8/5/97	WM-03	<4			9.5	24	3.8	<1	333	<7	643
10/18/97	WM-03										
10/30/97	WM-03	<4	<10	1.18	9.68	26	3.96	<1		<7	639
12/15/97	WM-03										

WATER QUALITY DATA SUMMARY

Webster Mine/Nanty Glo Acid Mine Drainage Reclamation Project

Blacklick Township — Cambria County

Description-SBBC at 1st bridge downstream of Williams Run — Latitude 40-28-34 — Longitude 78-46-32 — Fig. 4 MP# 49

Sample Date	Monitoring Point	FLOW (gpm)	pH (field)	pH (lab)	Specific Conduct. (umhos/cm)	Temp. (field) (deg. F)	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)	Dis Al (mg/l)	Total Mn (mg/l)	Dis Mn (mg/l)	Total Mg (mg/l)	Dis 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)
6/4/97	WM-05			6.10			14.23	8.4	7.2	0.56		2.20	<.135	0.24	0.23	4.01		12.00	66	30.00		nd	nd	nd	nd
7/2/97	WM-05	2945.0	4.8	4.80	336	74	37.57	26.0	2.6	0.91		5.90	2.73	0.83		8.02	8.02	27	84	82		920.37	32.32	29.20	208.85
8/5/97	WM-05	823.0	4.9	4.60	496	66.5	85.36	82.0	1.6	0.34		14.50	12.90	1.38	1.38			34.6	130	101		811.18	3.35	13.65	143.44
10/25/97	WM-05	1467.0	5.59	5.10	466	46	30.45	24.0	3.2	1.00		4.65	1.04	0.82		9.33		24.9	76			423.20	17.60	14.53	82.00
11/1/97	WM-05	1849.0	5.27	4.60	409	49.6	52.46	32.0	1.8	0.92		8.44		0.98					74	91		711.20	20.34	21.78	187.58
12/17/97	WM-05	12537.0	5.72	5.10	260	37.2	16.46	11.0	3.0	0.41		2.61	0.69	0.24		4.34	4.17	15.5	27	41		1657.64	61.94	36.02	393.31

Sample Date	Monitoring Point	Total As (ug/l)	Total Ba (ug/l)	Total Cd (ug/l)	Total Cr (ug/l)	Total Cu (ug/l)	Total Pb (ug/l)	Total Hg (ug/l)	Total Ni (ug/l)	Total Se (ug/l)	Total Zn (ug/l)
6/4/97	WM-05										
7/2/97	WM-05										
8/5/97	WM-05	<4			9.5	24	3.8	<1	333	<7	643
10/25/97	WM-05										
11/1/97	WM-05	<4	<10	1.18	9.68	26	3.96	<1		<7	639
12/17/97	WM-05										

WATER QUALITY DATA SUMMARY

Webster Mine/Nanty Glo Acid Mine Drainage Reclamation Project

Blacklick Township | Cambria County

Description-SBBC, upstream of treated Bethlehem mine discharges | Latitude 40-27-37 | Longitude 78-49-08 | Fig. 4 MP# 50

Sample Date	Monitoring Point	FLOW (gpm)	pH (field)	pH (lab)	Specific Conduct. (umhos/cm)	Temp. (field) (deg. F)	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)	Dis Al (mg/l)	Total Mn (mg/l)	Dis Mn (mg/l)	Total Mg (mg/l)	Dis 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)
6/4/97	WM-07			6.30			8.14	0	20	0.60		1.10	<.135	0.21	0.19	9.60		38.10	503	135.00		nd	nd	nd	nd
7/2/97	WM-07	10386	6.8	6.60	733	67	4.92	0	36	0.29		0.62	<.135	0.37		14.8	14.8	34.4	213	119		0.00	35.70	46.19	77.65
8/5/97	WM-07		7	6.80	1652	64.6	5.45	0	46	0.27		0.74	0.21	0.33	0.32			132	720	581		nd	nd	nd	nd
10/23/97	WM-07	8440	7.54	6.70	1675	49	0.01	0	44									136	657	413		nd	nd	nd	nd
10/30/97	WM-07	8929	6.87	6.90	1412	53.5	5.91	0	48	0.40		0.78	<.2	0.28	0.27	30.2		116	661	410		0.00	42.82	29.73	83.39
12/17/97	WM-07		6.79	6.60	795	43.8	8.72	0	24	0.47		1.27	<.2	0.21		10.3	10.3	56.5	190	167		nd	nd	nd	nd

Sample Date	Monitoring Point	Total As (ug/l)	Total Ba (ug/l)	Total Cd (ug/l)	Total Cr (ug/l)	Total Cu (ug/l)	Total Pb (ug/l)	Total Hg (ug/l)	Total Ni (ug/l)	Total Se (ug/l)	Total Zn (ug/l)
6/4/97	WM-07										
7/2/97	WM-07										
8/5/97	WM-07	<4			<4	<10	<1	<1	<25	<7	<10
10/23/97	WM-07	<4	13	0.24	<4	<10	<1		<50		<10
10/30/97	WM-07										
12/17/97	WM-07										

WATER QUALITY DATA SUMMARY

Webster Mine/Nanty Glo Acid Mine Drainage Reclamation Project

Nanty Glo Borough | Cambria County

Description-SBBC downstream of confluence with Pergrin Run | Latitude 40-28-15 | Longitude 78-50-08 | Fig. 4 MP# 51

Sample Date	Monitoring Point	FLOW (gpm)	pH (field)	pH (lab)	Specific Conduct. (umhos/cm)	Temp. (field) (deg. F)	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)	Dis Al (mg/l)	Total Mn (mg/l)	Dis Mn (mg/l)	Total Mg (mg/l)	Dis 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)
6/4/97	WM-09			5.40			25.66	15	5	2.58		2.80	0.47	0.275	0.27	9.73		37.30	198	139.00		nd	nd	nd	nd
7/2/97	WM-09		5	5.00	797	68	45.06	26	5	5.37		5.21	1.62	0.62		15.3	17.1	38.8	226	130		nd	nd	nd	nd
8/5/97	WM-09		6.5	5.80	1652	61.4	28.95	22	6	3.53		3.32	1.91	0.50	0.50			130	637	6.44		nd	nd	nd	nd
10/23/97	WM-09		6.75		1650	49.5	nd	18				3.06	<.2									nd	nd	nd	nd
10/30/97	WM-09		6.1	6.20	1563	53.4	24.12	9	6	2.76		2.88	<.2	0.35	0.35	30.2		113	591	398		nd	nd	nd	nd
12/17/97	WM-09	27270	5.7	5.20	107	41	22.01	16	5	2.97		2.35	3.35	0.35		11.2	11.7	49.8	287	200		5375.68	973.52	114.40	770.30

Sample Date	Monitoring Point	Total As (ug/l)	Total Ba (ug/l)	Total Cd (ug/l)	Total Cr (ug/l)	Total Cu (ug/l)	Total Pb (ug/l)	Total Hg (ug/l)	Total Ni (ug/l)	Total Se (ug/l)	Total Zn (ug/l)
6/4/97	WM-09										
7/2/97	WM-09										
8/5/97	WM-09	<4			<4	<10	<1	<1	<25	<7	49
10/23/97	WM-09										
10/30/97	WM-09										
12/17/97	WM-09										

WATER QUALITY DATA SUMMARY

Webster Mine/Nanty Glo Acid Mine Drainage Reclamation Project

Blacklick Township | Cambria County

Description-SBBC at bridge S.E. of Twin Rocks | Latitude 40-29-24 | Longitude 78-51-46 | Fig. 4 MP# 52

Sample Date	Monitoring Point	FLOW (gpm)	pH (field)	pH (lab)	Specific Conduct. (umhos/cm)	Temp. (field) (deg. F)	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)	Dis Al (mg/l)	Total Mn (mg/l)	Dis Mn (mg/l)	Total Mg (mg/l)	Dis 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)
6/4/97	WM-11			5.40			24.94	13	5	2.83		2.98	0.36	0.31	0.30	9.89		37.40	188	135.00		nd	nd	nd	nd
7/2/97	WM-11		5.3	5.30	908	71	38.33	15	4	4.81		4.29	0.62	0.71			16.8	55.8	345	251		nd	nd	nd	nd
8/5/97	WM-11	10574	6.1	6.30	1524	66.3	22.67	4	19	2.63		2.65	<.2	0.46	0.46			126	642	356		457.56	334.27	57.96	336.81
10/23/97	WM-11	7396	7.11	6.40	1725	48.3	23.41	5	28	2.78		2.75	<.2	0.34	0.34			133	612	404		480.06	247.14	30.14	244.47
11/1/97	WM-11	9579	6.36	6.40	1561		24.09	0	28	2.86		2.81		0.41					556	349		0.00	329.30	47.09	323.54
12/18/97	WM-11		5.35	5.20	815	39.9	32.17	15	4	3.63		3.84	0.86	0.40		13.8	12.9	57.8	280	169		nd	nd	nd	nd

Sample Date	Monitoring Point	Total As (ug/l)	Total Ba (ug/l)	Total Cd (ug/l)	Total Cr (ug/l)	Total Cu (ug/l)	Total Pb (ug/l)	Total Hg (ug/l)	Total Ni (ug/l)	Total Se (ug/l)	Total Zn (ug/l)
6/4/97	WM-11										
7/2/97	WM-11										
8/5/97	WM-11	<4			<4	<10	<1	<1	32	<7	33
10/23/97	WM-11	<4	18	<.2	<4	<10	<1	<1	<50	<7	29
11/1/97	WM-11										
12/18/97	WM-11										

WATER QUALITY DATA SUMMARY

Webster Mine/Nanty Glo Acid Mine Drainage Reclamation Project

Vintondale Borough | Cambria County

Description-SBBC upstream of confluence with Bracken Run in Vintondale | Latitude 40-28-50 | Longitude 74-58-25 | Fig. 4 MP# 53

Sample Date	Monitoring Point	FLOW (gpm)	pH (field)	pH (lab)	Specific Conduct. (umhos/cm)	Temp. (field) (deg. F)	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)	Dis Al (mg/l)	Total Mn (mg/l)	Dis Mn (mg/l)	Total Mg (mg/l)	Dis 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)
6/4/97	WM-13			4.10			63.37	74	0	3.63		8.76	6.29	0.51	0.51	9.38		33.20	191	137.00		nd	nd	nd	nd
7/2/97	WM-13		4.25	4.90	1108	72	40.96	24	3	4.12		5.03	2.02	0.70			19.8	70	361	282		nd	nd	nd	nd
8/5/97	WM-13	10008	5.9	4.50	1535	67.9	63.50	46	0	4.89		8.58	5.31	0.57	0.57			115	615	560		5533.62	588.25	69.05	1032.14
10/23/97	WM-13	10957	7.06	6.10	1658	45.7	20.91	10	16	2.37		2.47	<.2	0.41	0.44			129.8	586	384		1369.71	312.14	54.39	325.31
11/1/97	WM-13	10986		6.10	1425	50.2	23.01	5	14	2.46		2.77		0.52					526	331		607.44	324.85	68.40	365.78
12/17/97	WM-13	27662	4.83	4.90	787	37.3	34.39	24	3	3.52		4.19	1.71	0.54		13.5	12.8	51.5	256	152		7979.93	1170.4	180.88	1393.16

Sample Date	Monitoring Point	Total As (ug/l)	Total Ba (ug/l)	Total Cd (ug/l)	Total Cr (ug/l)	Total Cu (ug/l)	Total Pb (ug/l)	Total Hg (ug/l)	Total Ni (ug/l)	Total Se (ug/l)	Total Zn (ug/l)
6/4/97	WM-13										
7/2/97	WM-13										
8/5/97	WM-13	<4			<4	16	<1	1	48	<7	59
10/23/97	WM-13	<4	16	<.2	<4	<10	<1	<1	<50	<7	31
11/1/97	WM-13										
12/17/97	WM-13										

WATER QUALITY DATA SUMMARY

Webster Mine/Nanty Glo Acid Mine Drainage Reclamation Project

Blacklick Township | Cambria County

Description-Stewart Run at Rt. 22, east of Mundays Corner | Latitude 40-26-48 | Longitude 78-47-57 | Fig. 4 MP# 54

Sample Date	Monitoring Point	FLOW (gpm)	pH (field)	pH (lab)	Specific Conduct. (umhos/cm)	Temp. (field) (deg. F)	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)	Dis Al (mg/l)	Total Mn (mg/l)	Dis Mn (mg/l)	Total Mg (mg/l)	Dis 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)
6/4/97	WM-16			6.30			2.60	3	12	0.35		0.28	<.135	0.04	0.03	1.95		7.96	10	<10		nd	nd	nd	nd
7/2/97	WM-16	490.0	6.5	6.40	13	69	1.41	0	20	0.29		<.2	<.135	0.03		2.45	2.64	11	32	159		0.00	1.70	0.17	0.59
8/5/97	WM-16	40.0	6.9	6.50	146	65	0.85	0	34	0.08		<.2	<.2	0.04				15.1	15	45		0.00	0.04	0.02	0.05
10/18/97	WM-16	69.8	7.3	6.60	1	49.1	0.65	0	26	0.02		<.2		0.01					<10	41		0.00	0.02	0.01	0.08
10/25/97	WM-16	<1	7.3	6.60	164	45	1.13	0	24	0.18		<.2	<.2	0.04		3.03		12.4	45	37		0.00	0.00	0.00	0.00
12/15/97	WM-16	4091.5	6.41	6.40	171	35.1	0.81	0	11	0.07		<.2	<.2	0.03	0.03	2.64		10.4	87	33		0.00	3.34	1.43	4.92

Sample Date	Monitoring Point	Total As (ug/l)	Total Ba (ug/l)	Total Cd (ug/l)	Total Cr (ug/l)	Total Cu (ug/l)	Total Pb (ug/l)	Total Hg (ug/l)	Total Ni (ug/l)	Total Se (ug/l)	Total Zn (ug/l)
6/4/97	WM-16										
7/2/97	WM-16										
8/5/97	WM-16	<4			<4	<10	<1	<1	<25	<7	<10
10/18/97	WM-16										
10/25/97	WM-16	<4			<4	<10	<1	<1		<7	<10
12/15/97	WM-16										

WATER QUALITY DATA SUMMARY

Webster Mine/Nanty Glo Acid Mine Drainage Reclamation Project

Blacklick Township | Cambria County

Description-Pergrin Run upstream of Lorraine Refuse Pile | Latitude 40-27-30 | Longitude 78-50-40 | Fig. 4 MP# 55

Sample Date	Monitoring Point	FLOW (gpm)	pH (field)	pH (lab)	Specific Conduct. (umhos/cm)	Temp. (field) (deg. F)	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)	Dis Al (mg/l)	Total Mn (mg/l)	Dis Mn (mg/l)	Total Mg (mg/l)	Dis 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)
8/5/97	WM-18			6.60			121.84	0	314	43.50		0.43		1.36				72	545	297		nd	nd	nd	nd
10/18/97	WM-18	4.5	7.06	6.80	260	51	0.72	0	38	0.05		<.2		0.02					116	59		0.00	0.00	0.00	0.01
10/30/97	WM-18	20.0	6.68	6.70	198	48.5	1.49	0	36	0.08		0.2	0.44	0.09	0.02	4.91		13.9	107	55		0.00	0.02	0.02	0.05
12/6/97	WM-18		6.16	6.00	170	36.5	6.97	5	.10	1.60		0.437	<.2	0.11	0.10	3.12		8.28	40	341		nd	nd	nd	nd
12/16/97	WM-18	539.6	6.44	6.20	191	31.8	5.97	3	11	1.33		0.391	<.2	0.10		3.41	2.82	8.7	27	82		20.76	8.63	0.67	2.54

Sample Date	Monitoring Point	Total As (ug/l)	Total Ba (ug/l)	Total Cd (ug/l)	Total Cr (ug/l)	Total Cu (ug/l)	Total Pb (ug/l)	Total Hg (ug/l)	Total Ni (ug/l)	Total Se (ug/l)	Total Zn (ug/l)
8/5/97	WM-18	<4			<4	<10	<1	<1	<25	<7	15
10/18/97	WM-18										
10/30/97	WM-18	<4			<4	<10	<1	<1		<7	15
12/6/97	WM-18										
12/16/97	WM-18										

WATER QUALITY DATA SUMMARY

Webster Mine/Nanty Glo Acid Mine Drainage Reclamation Project

Blacklick Township | Cambria County

Description-SBBC upstream of Bethenergy Mines #31 refuse pile | Latitude 40-27-52 | Longitude 78-49-42 | Fig. 4 MP# 56

Sample Date	Monitoring Point	FLOW (gpm)	pH (field)	pH (lab)	Specific Conduct. (umhos/cm)	Temp. (field) (deg. F)	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)	Dis Al (mg/l)	Total Mn (mg/l)	Dis Mn (mg/l)	Total Mg (mg/l)	Dis 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)
10/18/97	WM-19	dry					0.00															0.00	0.00	0.00	0.00
10/25/97	WM-19	dry					0.00															0.00	0.00	0.00	0.00
12/17/97	WM-19	1394.0	3.39	3.00	1550	45	510.90	526	0	65.80		50.40	47.90	2.15		25.1	2.9	49.7	248	341		8813.59	1102.5	36.03	844.50

Sample Date	Monitoring Point	Total As (ug/l)	Total Ba (ug/l)	Total Cd (ug/l)	Total Cr (ug/l)	Total Cu (ug/l)	Total Pb (ug/l)	Total Hg (ug/l)	Total Ni (ug/l)	Total Se (ug/l)	Total Zn (ug/l)
10/18/97	WM-19										
10/25/97	WM-19										
12/17/97	WM-19	6.23									

WATER QUALITY DATA SUMMARY

Webster Mine/Nanty Glo Acid Mine Drainage Reclamation Project

Nanty Glo Borough | Cambria County

Description-Pergrin Run at confluence with SBBC | Latitude 40-27-05 | Longitude 78-50-05 | Fig. 4 MP# 57

Sample Date	Monitoring Point	FLOW (gpm)	pH (field)	pH (lab)	Specific Conduct. (umhos/cm)	Temp. (field) (deg. F)	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)	Dis Al (mg/l)	Total Mn (mg/l)	Dis Mn (mg/l)	Total Mg (mg/l)	Dis 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)
10/18/97	WM-20	167.3	3.15	2.80	2640	49	1219.62	1256	0	156.00		128.00		5.12					976	718		2525.30	313.65	10.29	257.35
10/30/97	WM-20	107.7	3.19	2.80	2190	62	1094.19	1102	0	135.00		116.00	115.00	3.91	3.91	40.7		89.4	509	594		1426.60	174.76	5.06	150.17
12/6/97	WM-20	1641.0	3.31	3.10	1520	40.5	1441.56	474	0	453.00		32.50	32.50	1.91	1.92	15.8		33.5	234	63		9349.56	8935.3	37.67	641.06

Sample Date	Monitoring Point	Total As (ug/l)	Total Ba (ug/l)	Total Cd (ug/l)	Total Cr (ug/l)	Total Cu (ug/l)	Total Pb (ug/l)	Total Hg (ug/l)	Total Ni (ug/l)	Total Se (ug/l)	Total Zn (ug/l)
10/18/97	WM-20										
10/30/97	WM-20	<4	14	2.54	51	301	3.03	<1		<7	786
12/6/97	WM-20										