

YELLOW BOY LABS

100 Mine Drainage Road
Patchtown, PA 10092

Mr. I. Ron Sulfide
Defunct Mines Inc.
220 Coal Road
Abandoned, PA 19049

Dear Mr. Sulfide,

Yellow Boy Labs has completed the analysis required for your determination of the best treatment option.

Sample Site: Lower Saxman Discharge

Date	Flow (GPM)	Dissolved Oxygen (mg/L)	pH	Alkalinity (mg/L as CaCO ₃)	Acidity (mg/L as CaCO ₃)	Sulfate (mg/L)	Total Fe (mg/L)	Total Mn (mg/L)	Total Al (mg/L)
1-10-02	1065	0.06	5.7	54.0	42.0	571	44.7	5.0	0.549
2-15-02	2061	0.10	5.7	58.0	42.0	172	51.4	5.3	0.524
3-24-02	1822	0.18	5.7	56.0	61.0	445	42.9	4.7	0.465
4-17-02	1756	0.23	5.6	52.0	79.8	439	46.3	4.5	0.436
5-20-02	1724	0.75	5.7	52.0	81.8	385	45.1	5.3	0.635
6-15-02	1692	0.75	5.6	48.0	96.6	535	43.2	5.1	0.616
7-19-02	1740	0.55	5.6	48.0	98.4	506	48.6	5.0	0.626
8-21-02	1812	0.34	5.6	46.0	102.2	509	50.3	5.7	0.724
9-10-02	1895	0.75	5.7	46.0	90.6	520	51.3	5.5	0.753
10-5-02	2060	0.18	5.6	52.0	93.8	495	52.2	5.9	0.662
11-9-02	2425	0.26	5.7	54.0	69.2	488	53.7	4.82	0.474
12-6-02	1812.5	0.35	5.6	54.0	95.6	529	48.2	4.79	0.451

The dissolved oxygen, pH and flow were completed in the field, and the remainder of the tests were completed in the lab.

Sincerely yours,

Sandra Gooding
Lab Manager/QA/QC Officer

YELLOW BOY LABS

100 Mine Drainage Road
Patchtown, PA 10092

Mr. I. Ron Sulfide
Defunct Mines Inc.
220 Coal Road
Abandoned, PA 19049

Dear Mr. Sulfide,

Yellow Boy Labs has completed the analysis required for your determination of the best treatment option.

Sample Site: Upper Saxman Discharge

Date	Flow (GPM)	Dissolved Oxygen (mg/L)	pH	Alkalinity (mg/L as CaCO ₃)	Acidity (mg/L as CaCO ₃)	Sulfate (mg/L)	Total Fe (mg/L)	Total Mn (mg/L)	Total Al (mg/L)
1-10-02	1025	0.6	5.4	38.0	66.0	473	47.1	4.9	1.91
2-15-02	920	1.26	5.3	32.0	68.0	599	45.6	5.4	2.38
3-24-02	3738	0.8	5.4	36.0	66.0	403	52.4	5.9	2.28
4-17-02	208	0.54	5.5	44.0	58.0	486	43.4	5.2	1.90
5-20-02	220	0.86	5.1	26.0	90.0	392	44.0	5.7	3.01
6-15-02	188	1.01	5.2	24.0	109.0	604	41.9	5.7	3.31
7-19-02	326	1.15	5.2	22.0	117.4	543	47.9	5.9	3.09
8-21-02	196	0.97	5.2	28.0	116.4	529	51.9	6.3	2.82
9-10-02	563	0.58	5.4	30.0	126.4	570	50.7	5.8	2.33
10-5-02	1812	0.39	5.4	34.0	116.6	495	50.2	5.9	1.98
11-9-02	1574	0.71	5.5	44.0	101.2	470	54.4	4.8	1.55
12-6-02	2695.2	0.92	5.6	44.0	85.6	575	51.0	5.2	1.60

The dissolved oxygen, pH and flow were completed in the field, and the remainder of the tests were completed in the lab.

Sincerely yours,

Sandra Gooding
Lab Manager/QA/QC Officer

YELLOW BOY LABS

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Mr. I. Ron Sulfide
Defunct Mines Inc.
220 Coal Road
Abandoned, PA 19049

Dear Mr. Sulfide,

Yellow Boy Labs has completed the analysis required for your determination of the best treatment option.

Sample Site: Getty Run Discharge

Date	Flow (GPM)	Dissolved Oxygen (mg/L)	pH	Alkalinity (mg/L as CaCO ₃)	Acidity (mg/L as CaCO ₃)	Sulfate (mg/L)	Total Fe (mg/L)	Total Mn (mg/L)	Total Al (mg/L)
1-10-02	16.51	6.42	2.8	0.0	455.6	800	27.8	6.84	40.4
2-15-02	22.66	8.81	2.8	0.0	460.4	785	28.3	7.02	39.5
3-24-02	28.62	6.10	2.8	0.0	429.4	796	23.8	7.77	42.0
4-17-02	121.96	4.50	2.8	0.0	445.8	696	24.0	6.05	38.0
5-20-02	362.70	3.62	2.8	0.0	673.6	1208	40.0	7.90	61.6
6-15-02	28.62	10.17	2.8	0.0	502.6	805	46.9	7.63	41.9
7-19-02	50.25	9.46	2.8	0.0	541.0	901	49.8	8.14	43.0
8-21-02	65.62	7.18	2.7	0.0	581.2	924	64.4	8.46	50.3
9-10-02	91.21	8.63	2.7	0.0	648.6	907	72.6	5.82	49.0
10-5-02	135.80	8.12	2.7	0.0	745.4	1168	83.8	7.18	59.1
11-9-02	91.21	7.85	2.8	0.0	735.5	1085	81.2	7.75	42.7
12-6-02	95.67	7.64	2.7	0.0	697.5	1107	85.9	8.10	52.9

The dissolved oxygen, pH and flow were completed in the field, and the remainder of the tests were completed in the lab.

Sincerely yours,

Sandra Gooding
Lab Manager/QA/QC Officer

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Dear Mr. Sulfide,

Yellow Boy Labs has completed the analysis required for your determination of the best treatment option.

Sample Site: Hawk Discharge

Date	Flow (GPM)	Dissolved Oxygen (mg/L)	pH	Alkalinity (mg/L as CaCO ₃)	Acidity (mg/L as CaCO ₃)	Sulfate (mg/L)	Total Fe (mg/L)	Total Mn (mg/L)	Total Al (mg/L)
1-10-02	15	0.66	3.4	0.0	307.4	1367	4.6	27.7	34.4
2-15-02	19	0.73	3.4	0.0	239.4	1087	3.5	30.1	33.6
3-24-02	10	1.47	3.4	0.0	251.6	1048	2.24	25.5	25.5
4-17-02	14	0.55	3.3	0.0	307.4	1036	4.5	26.7	29.3
5-20-02	11	0.67	3.4	0.0	308.2	1012	3.9	25.9	24.9
6-15-02	9	0.76	3.4	0.0	308.4	1048	2.98	25.1	28.3
7-19-02	2	0.46	3.3	0.0	249.4	1207	2.65	29.3	32.3
8-21-02	5	0.56	3.4	0.0	261.6	1284	3.78	25.7	31.7
9-10-02	18	0.46	3.4	0.0	310.2	1175	4.03	28.3	25.9
10-5-02	16	0.47	3.3	0.0	285.3	1076	4.08	30.2	33.4
11-9-02	10	0.59	3.3	0.0	245.9	1302	5.67	24.9	27.7
12-6-02	18	0.99	3.5	0.0	299.1	1258	5.24	30.0	30.1

The dissolved oxygen, pH and flow were completed in the field, the remainder of the tests were completed in the lab.

Sincerely yours,

Sandra Gooding
Lab Manager/QA/QC Officer

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Mr. I. Ron Sulfide
Defunct Mines Inc.
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Dear Mr. Sulfide,

Yellow Boy Labs has completed the analysis required for your determination of the best treatment option.

Sample Site: Freidline Mine Discharge

Date	Flow (GPM)	Dissolved Oxygen (mg/L)	pH	Alkalinity (mg/L as CaCO ₃)	Acidity (mg/L as CaCO ₃)	Sulfate (mg/L)	Total Fe (mg/L)	Total Mn (mg/L)	Total Al (mg/L)
1-10-02	16.51	1.12	3.0	0.0	532.0	234	145.0	2.74	28.4
2-15-02	22.66	0.94	2.9	0.0	258.0	351	115.0	2.60	25.9
3-24-02	28.62	3.08	2.9	0.0	532.0	422	112.0	3.06	31.0
4-17-02	15.99	1.11	2.9	0.0	492.0	289	105.0	2.56	25.4
5-20-02	19.70	1.29	3.0	0.0	680.0	679	188.5	3.42	35.2
6-15-02	28.62	1.27	2.7	0.0	656.0	698	202.0	4.19	42.7
7-19-02	30.25	1.25	2.9	0.0	538.0	475	162.0	3.16	33.8
8-21-02	22.62	1.25	3.0	0.0	762.0	386	263.0	4.18	43.7
9-10-02	28.21	1.29	2.9	0.0	724.0	604	238.0	3.62	42.7
10-5-02	19.80	1.02	2.9	0.0	997.2	275	266.0	3.99	56.8
11-9-02	20.21	1.15	3.1	0.0	1078.2	503	300.0	4.43	59.1
12-6-02	25.67	1.00	2.9	0.0	1059.6	690	365.0	5.12	66.5

The dissolved oxygen, pH and flow were completed in the field, and the remainder of the tests were completed in the lab.

Sincerely yours,

Sandra Gooding
Lab Manager/QA/QC Officer

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Defunct Mines Inc.
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Dear Mr. Sulfide,

Yellow Boy Labs has completed the analysis required for your determination of the best treatment option.

Sample Site: Crabtree Discharge

Date	Flow (GPM)	Dissolved Oxygen (mg/L)	pH	Alkalinity (mg/L as CaCO ₃)	Acidity (mg/L as CaCO ₃)	Sulfate (mg/L)	Total Fe (mg/L)	Total Mn (mg/L)	Total Al (mg/L)
1-10-02	1000	0.55	6.1	158.0	0.0	380	81.5	2.9	1.52
2-15-02	6348	0.34	6.1	146.0	1.8	732	71.1	2.8	1.78
3-24-02	3450	0.28	6.1	154.0	28.6	747	84.6	2.6	0.99
4-17-02	2435	0.45	6.0	166.0	19.0	902	80.4	2.4	0.66
5-20-02	2269	0.38	6.1	166.0	30.0	587	79.4	2.6	0.67
6-15-02	1845	0.60	6.2	170.0	33.0	842	77.3	2.4	0.54
7-19-02	1692	0.78	6.2	166.0	34.6	881	88.2	2.4	0.45
8-21-02	1813	0.16	6.1	164.0	42.0	840	84.5	2.8	0.69
9-10-02	1692	0.25	6.2	160.0	60.8	882	89.1	3.0	0.97
10-5-02	2319	0.39	6.3	162.0	24.4	766	85.6	3.4	1.24
11-9-02	3738	0.70	6.1	150.0	33.4	789	71.0	3.6	2.79
12-6-02	5680	0.94	6.0	142.0	32.8	711	64.8	3.0	2.14

The dissolved oxygen, pH and flow were completed in the field, and the remainder of the tests were completed in the lab.

Sincerely yours,

Sandra Gooding
Lab Manager/QA/QC Officer

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Mr. I. Ron Sulfide
Defunct Mines Inc.
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Dear Mr. Sulfide,

Yellow Boy Labs has completed the analysis required for your determination of the best treatment option.

Sample Site: Loyalhanna Borehole

Date	Flow (GPM)	Dissolved Oxygen (mg/L)	pH	Alkalinity (mg/L as CaCO ₃)	Acidity (mg/L as CaCO ₃)	Sulfate (mg/L)	Total Fe (mg/L)	Total Mn (mg/L)	Total Al (mg/L)
1-10-02	115	1.50	6.0	78.0	0.0	306	21.9	2.2	0.0
2-15-02	120	0.50	6.4	140.0	0.0	597	44.0	3.7	0.0
3-24-02	156	0.43	6.2	142.0	0.0	425	41.9	3.4	0.0
4-17-02	126	0.98	6.2	88.0	0.0	409	34.3	3.2	0.0
5-20-02	56	0.46	6.2	134.0	0.0	429	39.8	3.7	0.0
6-15-02	93	0.28	6.2	136.0	0.0	550	36.8	3.5	0.0
7-19-02	122	1.53	6.2	134.0	0.0	528	41.7	3.7	0.0
8-21-02	NA	NA	6.2	138.0	0.0	513	45.5	3.9	0.0
9-10-02	NA	NA	6.3	140.0	0.0	526	40.5	3.4	0.0
10-5-02	139	0.21	6.2	138.0	0.0	490	46.5	4.2	0.0
11-9-02	172	1.74	6.3	140.0	0.0	502	42.9	4.1	0.0
12-6-02	146	1.55	6.3	137.0	0.0	496	39.5	3.9	0.0

The dissolved oxygen, pH and flow were completed in the field, and the remainder of the tests were completed in the lab.

Sincerely yours,

Sandra Gooding
Lab Manager/QA/QC Officer

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Patchtown, PA 10092

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Defunct Mines Inc.
220 Coal Road
Abandoned, PA 19049

Dear Mr. Sulfide,

Yellow Boy Labs has completed the analysis required for your determination of the best treatment option.

Sample Site: AV Pipe

Date	Flow (GPM)	Dissolved Oxygen (mg/L)	pH	Alkalinity (mg/L as CaCO ₃)	Acidity (mg/L as CaCO ₃)	Sulfate (mg/L)	Total Fe (mg/L)	Total Mn (mg/L)	Total Al (mg/L)
1-10-02	171	0.20	6.2	128.0	48.0	483	36.9	3.0	0.0
2-15-02	144	0.09	6.2	126.0	16.0	390	38.3	2.9	0.0
3-24-02	90	0.15	6.0	90.0	0.0	413	48.9	2.8	29.0
4-17-02	152	0.19	6.2	152.0	0.0	364	46.7	3.3	0.0
5-20-02	122	0.25	6.2	160.0	0.0	418	46.0	3.7	0.0
6-15-02	135	0.30	6.3	162.0	0.0	491	41.9	3.5	0.0
7-19-02	134	0.09	6.3	158.0	0.0	462	45.1	3.6	0.0
8-21-02	134	0.20	6.2	152.0	0.0	482	50.3	4.0	0.0
9-10-02	149	0.23	6.2	150.0	0.0	530	48.9	4.1	0.0
10-5-02	161	0.20	6.2	146.0	0.0	504	49.1	4.4	0.0
11-9-02	160	0.16	6.2	152.0	0.0	524	51.4	4.1	0.0
12-6-02	161	1.25	6.2	164.0	0.0	428	46.9	3.9	0.0

The dissolved oxygen, pH and flow were completed in the field, the remainder of the tests were completed in the lab.

Sincerely yours,

Sandra Gooding
Lab Manager/QA/QC Officer