

EXHIBIT Q

Commonwealth of Pennsylvania
Department of Mines and Mineral Industries

**MD Pollution Abatement Measures
for the Beech Creek Watershed**

**CONSTITUENTS AND CHARACTERISTICS OF VARIOUS
WATERSHED STREAMS**

Stream Sampling Station(1)	pH			Total Iron (mg/l)			Alkalinity (as CaCO ₃) (mg/l)			Acidity (as CaCO ₃) (mg/l)			Sulfate (mg/l)			Aluminum (2) (mg/l)	Manganese(2) (mg/l)	Total Solids(2) (mg/l)
	Aver- age	Maxi- mum	Mini- mum	Aver- age	Maxi- mum	Mini- mum	Aver- age	Maxi- mum	Mini- mum	Aver- age	Maxi- mum	Mini- mum	Aver- age	Maxi- mum	Mini- mum			
BC1	4.2	4.5	3.9	0.3	0.6	0.1	0	0	0	44	70	26	91	152	50	2.2	2.0	167
BC2	4.1	4.4	3.7	0.3	0.4	<0.1	0	0	0	48	90	26	91	142	46	3.5	1.9	98
T1	6.4	6.9	5.6	0.1	0.2	<0.1	0	0	0	16	24	12	17	43	5	<0.1	<0.1	43
BC3(6)	4.1	4.5	3.8	0.4	0.5	<0.1	0	0	0	43	56	24	87	141	48	2.2	2.1	272
T2(5)	6.6	7.0	6.4	0.2	0.5	<0.1	0	0	0	21	36	2	16	51	9	<0.1	<0.1	46
T3	5.2	5.6	4.9	0.1	0.1	<0.1	0	0	0	23	36	8	32	67	14	<0.1	0.9	63
T4(5)	6.6	7.0	5.3	0.2	0.6	<0.1	0	0	0	17	32	2	11	25	6	<0.1	<0.1	23
T5	6.5	7.1	5.7	0.1	0.2	<0.1	0	0	0	13	28	0	27	48	15	<0.1	<0.1	59
T6	6.1	6.7	5.1	0.1	0.2	<0.1	0	0	0	18	32	6	23	53	9	<0.1	<0.1	39
T7	6.3	7.0	5.0	0.1	0.3	<0.1	0	0	0	15	28	2	22	45	6	<0.1	<0.1	40
T8(6)	3.3	4.5	2.9	12.0	24.2	6.0	0	0	0	312	442	116	886	1,130	624	31.5	32.8	1,751
T9(3)	6.5	6.9	6.0	0.1	0.3	<0.1	0	0	0	18	24	4	12	53	5	<0.1	<0.1	33
T10(3)	6.1	6.8	4.6	0.1	0.2	<0.1	0	0	0	19	28	4	13	47	6	<0.1	<0.1	16
T11	5.6	6.4	4.6	0.1	0.2	<0.1	0	0	0	20	36	4	23	53	7	<0.1	<0.1	51
T12(5)	5.3	6.1	4.4	0.1	0.2	<0.1	0	0	0	22	40	6	16	48	7	<0.1	<0.1	36
BC4	3.7	4.0	3.3	3.7	6.5	1.4	0	0	0	74	130	36	134	325	41	7.9	3.8	264
T13	3.4	3.8	3.2	8.3	13.8	2.1	0	0	0	148	247	76	309	594	130	17.6	8.4	606
T14	2.9	3.1	2.8	23.3	39.1	13.7	0	0	0	542	740	376	819	1,200	560	74.5	25.4	1,725
T15(6)	3.4	3.7	3.0	7.5	12.9	3.7	0	0	0	153	268	80	313	590	143	11.8	6.7	437
T16	3.3	3.6	3.1	7.9	12.2	4.6	0	0	0	114	220	44	258	550	127	8.7	6.2	421
T17	3.0	3.3	2.9	31.0	50.9	20.4	0	0	0	360	429	308	734	940	550	27.6	18.2	1,597
T18(6)	4.4	4.7	4.2	0.4	0.8	<0.1	0	0	0	41	64	24	100	350	37	2.2	0.9	63
T19(6)	4.6	4.9	4.2	0.2	0.4	<0.1	1(7)	5(7)	0	28	44	16	38	62	18	2.2	0.4	44
T20	4.1	4.7	3.1	0.8	3.9	<0.1	0	0	0	61	130	36	113	308	21	9.0	3.9	221
T21	3.7	4.1	3.0	1.8	5.2	0.2	0	0	0	43	60	32	86	142	45	1.0	2.3	80
T22(4)	6.2	6.5	5.7	0.3	1.0	0.1	0	0	0	21	31	4	18	48	6	<0.1	<0.1	60
BC5	3.8	4.1	3.4	2.2	4.4	0.4	0	0	0	59	80	36	134	220	44	6.6	3.5	271
SF1	4.8	5.5	4.7	0.2	1.1	<0.1	0	0	0	26	44	7	32	64	14	0.4	0.4	75
T27	3.7	3.8	3.5	1.0	1.7	0.3	0	0	0	164	188	139	207	218	196	—	—	—
T28(6)	4.1	4.6	3.5	2.0	3.3	0.6	0	0	0	125	204	46	249	450	48	—	—	—
SF2	4.9	6.8	3.4	0.9	2.5	<0.1	1(7)	9(7)	0	63	152	4	83	212	11	<0.1	0.3	21
SF3(3)	6.5	7.0	5.9	0.2	0.7	<0.1	0	0	0	19	48	4	8	12	5	<0.1	<0.1	15
NF1(6)	3.7	4.2	3.3	3.1	6.9	1.4	0	0	0	71	100	28	172	290	73	7.4	3.4	265
NF2	3.5	3.9	3.2	5.7	8.9	3.4	0	0	0	83	104	44	204	345	120	7.7	4.3	338
T23	4.5	4.6	4.3	1.7	4.0	0.8	0	0	0	65	92	28	149	206	90	7.4	4.0	253

Stream Sampling Station(1)	pH			Total Iron (mg/1)			Alkalinity (as CaCO ₃) (mg/1)			Acidity (as CaCO ₃) (mg/1)			Sulfate (mg/1)			Aluminum(2) (mg/1)	Manganese(2) (mg/1)	Total Solids(2) (mg/1)
	Average	Maximum	Minimum	Average	Maximum	Minimum	Average	Maximum	Minimum	Average	Maximum	Minimum	Average	Maximum	Minimum			
NF3	3.5	4.4	3.2	6.5	10.4	1.0	0	0	0	68	108	14	174	247	95	7.4	4.4	373
T24	3.5	3.8	3.2	5.5	7.9	2.3	0	0	0	70	104	40	192	270	103	2.1	1.8	289
T25	3.4	3.8	3.1	10.8	18.8	0.7	0	0	0	91	132	44	177	254	85	5.2	4.5	470
T26(5)	5.2	6.3	4.7	0.2	0.5	<0.1	0	0	0	20	32	1	25	91	8	<0.1	<0.1	21
NF4	3.2	3.5	2.9	10.3	21.5	2.7	0	0	0	170	256	64	386	550	190	13.9	8.0	767
NF5	3.0	3.4	2.7	35.3	51.5	7.1	0	0	0	370	508	108	647	810	256	27.5	13.6	1,597
NF6(6)	3.5	3.8	3.3	3.0	5.5	1.8	0	0	0	128	247	76	315	602	208	12.0	9.8	438

- (1) See Plates I, III-A and III-B for location of Stream Sampling Stations.
- (2) Results based on 1 sample.
- (3) No evidence of MD Discharges, mining, or the existence of coal measures in tributary watershed area.
- (4) No evidence of MD Discharges, nor of mining, although coal measures are present in tributary watershed area.
- (5) No evidence of MD Discharges, although mining has been accomplished in tributary watershed area.
- (6) Active mining and/or processing in tributary watershed area.
- (7) Analyses of samples obtained at these Stream Sampling Stations showed net alkalinities on some occasions and net acidities on others.