

Tabulation of Wadesville Mine Water Data - Daily Log Summary

Date	Daily Flow (MG)	Water Temp. (°C)	pH	Dissolved Oxygen (mg/l)	Conductivity (umho)	Mine Pool Level (Ft)
7/11/2003	6.78	14.8	6.7	7.4	2110	404.0
7/12/2003	11.76	15.0	6.8	8.3	2130	408.6
7/13/2003	11.82	15.0	6.6	8.4	2050	412.1
7/14/2003	11.82	15.0	6.7	8.1	2000	414.5
7/15/2003	11.85	14.9	6.7	7.9	2000	417.1
7/16/2003	11.73	14.9	6.5	7.4	1940	419.2
7/17/2003	10.30	14.4	6.9	7.6	1710	421.9
7/18/2003	9.50	14.4	6.9	7.6	1760	424.1
7/19/2003	10.41	14.4	6.9	7.7	1750	426.4
7/20/2003	10.47	14.4	6.9	7.7	1690	428.8
7/21/2003	9.88	14.4	6.9	7.4	1690	430.1
7/22/2003	9.75	14.4	6.9	7.3	1660	431.5
7/23/2003	10.48	14.4	6.9	6.8	1640	433.3
7/24/2003	10.60	14.4	6.9	6.5	1610	435.0
7/25/2003	7.79	14.4	7.0	9.5	1540	435.8
7/26/2003	10.10	14.5	6.9	9.7	1550	436.7
7/27/2003	8.26	14.5	6.9	8.9	1386	437.8
7/28/2003	5.06	14.4	7.0	9.0	1471	435.8
7/29/2003	6.43	14.5	6.9	8.9	1220	436.5
7/30/2003	7.07	14.4	7.0	8.6	1600	436.3
7/31/2003	10.68	14.5	7.0	8.5	1610	436.3
8/1/2003	10.73	14.5	7.0	8.1	1580	439.2
8/2/2003	10.69	14.4	7.0	7.8	1540	442.6
8/3/2003	10.49	14.4	7.0	7.7	1480	445.3
8/4/2003	10.69	14.4	7.0	7.7	1449	446.6
8/5/2003	7.06	14.4	7.0	7.6	1441	448.6
8/6/2003	7.65	14.4	7.0	7.0	1437	448.7
8/7/2003	10.70	14.4	6.6	6.5	1425	449.5
8/8/2003	7.84	14.4	7.0	7.3	1401	451.6
8/9/2003	9.57	14.4	6.90	7.0	1398	451.5
8/10/2003	6.93	15.5	7.12	8.4	800	453.2
8/11/2003	5.46	15.4	5.72	8.4	1630	450.8
8/12/2003	7.67	15.2	6.68	8.5	1220	450.1
8/13/2003	10.64	14.4	6.96	6.2	1424	453.6
8/14/2003	10.62	14.4	6.98	5.4	1392	455.8
8/15/2003	10.67	14.4	7.02	7.9	1368	457.5
8/16/2003	10.78	14.4	6.95	7.5	1359	459.1
8/17/2003	10.64	14.4	6.98	6.9	1353	461.0
8/18/2003	10.72	14.4	6.99	8.3	1351	462.4
8/19/2003	10.47	14.4	7.01	7.0	1357	464.1
8/20/2003	10.58	14.4	7.02	7.0	1347	465.7
8/21/2003	10.5*	14.4	7.01	6.6	1357	467.1
8/22/2003	10.5*	14.5	7.00	6.7	1348	468.4
8/23/2003	9.17*	15.3	7.13	8.2	638	469.5

Date	Daily Flow (MG)	Water Temp. (°C)	pH	Dissolved Oxygen (mg/l)	Conductivity (umho)	Mine Pool Level (Ft)
8/24/2003	6.62*	13.8	6.86	5.8	1430	469.6
8/25/2003	9.01*	13.7	6.86	6.0	1431	469.6
8/26/2003	10.47	14.4	6.98	9.4	1399	469.0
8/27/2003	10.41	14.5	6.97	8.0	1500	469.5
8/28/2003	10.39	14.6	6.97	9.4	1483	470.4
8/29/2003	10.34	14.6	6.99	8.0	1510	471.1
8/30/2003	10.15	14.6	6.99	8.1	1510	471.8
8/31/2003	10.04	14.7	7.04	8.0	1510	472.9
9/1/2003	9.72	14.8	7.03	8.0	1520	473.4
9/2/2003	9.73	14.7	7.03	7.8	1520	473.9
9/3/2003	9.68	14.7	7.05	8.6	1520	475.0
9/4/2003	9.39	14.8	7.02	7.6	1520	475.4
9/5/2003	9.11	15.1	7.09	7.9	1510	476.1
9/6/2003	8.35	15.7	7.16	8.1	1491	477.7
9/7/2003	7.12	13.9	6.99	5.8	1510	479.3
9/8/2003	8.61	13.9	7.00	5.0	1464	480.0
9/9/2003	8.77	14.9	7.12	8.0	1386	480.2
9/10/2003	6.78*	13.9	6.99	5.2	1428	480.7
9/11/2003	8.08*	13.9	7.02	5.2	1447	482.2
9/12/2003	8.24	15.1	7.14	8.3	1402	482.6
9/13/2003	7.67	15.1	7.12	7.6	1390	483.3
9/14/2003	6.79	14.6	7.01	4.9	1418	484.2
9/15/2003	7.01	14.6	7.02	4.7	1433	484.3
9/16/2003	6.59	13.9	6.99	5.1	1291	484.3
9/17/2003	6.65	13.9	6.99	5.0	1312	484.3
9/18/2003	3.45	14.0	7.00	5.0	1141	484.2
9/19/2003	0.00	13.9	6.97	5.2	1127	N/A
9/20/2003	4.69	13.9	6.94	5.1	1108	N/A
9/21/2003	6.87	14.0	6.96	5.2	1172	N/A
9/22/2003	6.88	13.9	7.00	5.1	1038	481.8
9/23/2003	6.81	13.9	6.86	6.2	1470	482.2
9/24/2003	6.92	13.9	6.87	5.9	1439	482.7
9/25/2003	6.94	13.9	6.87	5.4	1419	482.7
9/26/2003	6.87	14.0	6.89	5.7	1460	483.0
9/27/2003	6.87	14.0	6.91	5.7	1493	483.6
9/28/2003	7.15	14.0	6.92	5.4	1474	483.7
9/29/2003	7.30	14.0	6.91	5.1	1132	484.4
9/30/2003	7.36	13.9	6.93	5.0	993	485.3
10/1/2003	7.06	13.9	6.92	4.4	1346	485.8
10/2/2003	7.42	13.8	6.89	6.0	1448	486.2
10/3/2003	7.41	13.8	6.91	5.4	1365	487.0
10/4/2003	7.41	13.7	6.91	4.5	1153	487.4
10/5/2003	7.39	13.7	6.93	5.0	821	488.6
10/6/2003	7.40	13.7	6.91	##	1054	489.8
10/7/2003	5.08	13.8	6.86	5.8	1218	490.1
10/8/2003	5.25	13.7	7.19	5.8	1245	489.4
10/9/2003	3.79	13.6	6.87	5.7	1341	489.0
10/10/2003	2.82	13.6	6.88	6.0	1350	488.1
10/11/2003	**	**	**	**	**	**

Date	Daily Flow (MG)	Water Temp. (°C)	pH	Dissolved Oxygen (mg/l)	Conductivity (umho)	Mine Pool Level (Ft)
10/12/2003	**	**	**	**	**	**
10/13/2003	**	**	**	**	**	**
10/14/2003	**	**	**	**	**	**
10/15/2003	4.42	**	**	**	**	**
10/16/2003	2.48	13.6	6.97	4.5	1265	475.3
10/17/2003	**	**	**	**	**	**
10/18/2003	**	**	**	**	**	**
10/19/2003	**	**	**	**	**	**
10/20/2003	**	**	**	**	**	**
10/21/2003	**	**	**	**	**	**
10/22/2003	**	**	**	**	**	**
10/23/2003	**	**	**	**	**	**

*flow meter down; estimated values

Probe believed to be fouled

**pumps shutdown

Tabulation of Tamaqua Water Authority Data- Daily Log Summary
 (Reservoir Surface Level = Elevation above Mean Sea Level)

Date	Reservoir Release, Daily Flow (MG)	Weekly Dissolved Oxygen (mg/l)	Reservoir Surface Level (ft)
7/29/2003	5.70	-	1182.1
7/30/2003	8.20	-	1182.1
7/31/2003	8.00	-	1182.0
8/1/2003	8.00	7.6	1182.0
8/2/2003	7.90	-	1181.9
8/3/2003	8.20	-	1181.9
8/4/2003	8.20	-	1182.3
8/5/2003	8.00	-	1182.3
8/6/2003	8.00	-	1182.3
8/7/2000	8.00	-	1182.2
8/8/2003	8.00	7.0	1182.2
8/9/2003	8.30	-	1182.2
8/10/2003	8.00	-	1182.2
8/11/2003	8.00	-	1182.2
8/12/2003	8.10	-	1182.3
8/13/2003	8.20	-	1182.2
8/14/2003	8.00	-	1182.1
8/15/2003	8.00	6.9	1182.1
8/16/2003	8.20	-	1182.1
8/17/2003	8.10	-	1182.1
8/18/2003	8.00	-	1182.1
8/19/2003	-	-	1182.1
8/20/2003	-	-	-
8/21/2003	-	-	-
8/22/2003	-	-	-
8/23/2003	-	-	-
8/24/2003	-	-	-
8/25/2003	-	-	-
8/26/2003	-	-	-
8/27/2003	-	-	-
8/28/2003	-	-	-
8/29/2003	8.00	-	1182.1
8/30/2003	8.10	-	1182.1
8/31/2003	7.80	-	1182.1
9/1/2003	8.20	-	1182.0
9/2/2003	8.10	-	1182.0
9/3/2003	8.00	-	1182.0
9/4/2003	8.10	-	1182.0
9/5/2003	8.10	7.10	1182.0
9/6/2003	8.20	-	1182.0
9/7/2003	8.10	-	1182.0
9/8/2003	8.10	-	1181.9

Date	Reservoir Release, Daily Flow (MG)	Weekly Dissolved Oxygen (mg/l)	Reservoir Surface Level (ft)
9/9/2003	7.80	-	1181.8
9/10/2003	8.00	-	1181.8
9/11/2003	8.00	-	1181.8
9/12/2003	8.00	7.60	1181.7
9/13/2003	8.10	-	1181.6
9/14/2003	8.20	-	1181.5
9/15/2003	8.20	-	1181.5
9/16/2003	8.20	-	1181.5
9/17/2003	8.00	-	1181.4
9/18/2003	1.90	-	1181.4
9/19/2003	12.80	-	1181.5
9/20/2003	15.60	7.40	1181.4
9/21/2003	16.10	-	1181.4
9/22/2003	16.00	-	1181.2
9/23/2003	16.80	-	1181.5
9/24/2003	16.00	-	1181.8
9/25/2003	16.10	-	1181.9
9/26/2003	16.00	7.40	1181.9
9/27/2003	16.00	-	1181.8
9/28/2003	16.00	-	1181.8
9/29/2003	16.00	-	1181.7
9/30/2003	16.00	-	1181.7
10/1/2003	16.20	-	1181.6
10/2/2003	15.90	-	1181.6
10/3/2003	-	9.60	1181.6
10/4/2003	-	-	-
10/5/2003	-	-	-
10/6/2003	-	-	-
10/7/2003	-	-	-
10/8/2003	-	-	-
10/9/2003	-	-	-
10/10/2003	-	-	-
10/11/2003	-	-	-
10/12/2003	-	-	-
10/13/2003	-	-	-
10/14/2003	-	-	-
10/15/2003	-	-	-
10/16/2003	-	-	-
10/17/2003	-	-	-
10/18/2003	-	-	-
10/19/2003	-	-	-
10/20/2003	-	-	-
10/21/2003	-	-	-
10/22/2003	-	-	-
10/23/2003	-	-	-

Provisional Data Subject To Change By USGS
Tabulation of Schuylkill River Daily Average Flows at four USGS gages
and Rainfall Accumulation at Landingville, PA

(Note: There is no USGS rainfall gage at Pottsville; closest gage is Landingville)

Date	Flow (cubic feet/ second)				Rainfall (in.)
	Landingville	Berne	Reading	Pottstown	Landingville
7/10/2003	204	475	1250	1620	0.17
7/11/2003	245	507	1240	1640	0.14
7/12/2003	201	468	1200	1570	0.00
7/13/2003	182	410	1080	1440	0.00
7/14/2003	172	379	975	1340	0.00
7/15/2003	161	361	868	1200	0.00
7/16/2003	154	344	837	1150	0.03
7/17/2003	145	323	830	1120	0.00
7/18/2003	177	330	818	1070	0.41
7/19/2003	217	514	1130	1340	0.00
7/20/2003	146	347	946	1320	0.00
7/21/2003	307	427	912	1180	1.66
7/22/2003	552	2030	6210	5900	0.43
7/23/2003	587	1210	5110	7610	1.65
7/24/2003	841	2859	6450	6650	0.02
7/25/2003	437	1490	4300	5420	0.00
7/26/2003	339	1019	2890	3400	0.00
7/27/2003	294	820	2410	2770	0.41
7/28/2003	337	848	2150	2480	0.01
7/29/2003	251	663	1660	2030	0.00
7/30/2003	219	565	1419	1700	0.00
7/31/2003	206	512	1280	1550	0.00
8/1/2003	243	537	1230	1480	0.33
8/2/2003	238	585	1350	1550	0.16
8/3/2003	197	486	1210	1530	0.00
8/4/2003	549	1130	1340	1560	1.32
8/5/2003	454	1800	2849	2930	0.15
8/6/2003	755	1890	3410	4210	0.34
8/7/2003	668	1719	3120	3850	0.00
8/8/2003	543	1390	2400	2839	0.00
8/9/2003	481	1150	2090	2430	0.19
8/10/2003	484	1100	1980	3200	0.66
8/11/2003	660	1290	1960	2340	0.22
8/12/2003	651	1840	2930	3140	0.00
8/13/2003	709	1429	2230	2720	0.43
8/14/2003	670	1810	2580	2740	0.00
8/15/2003	498	1260	2039	2430	0.00
8/16/2003	444	1050	1800	2130	0.13
8/17/2003	437	1040	1750	2070	0.07
8/18/2003	356	836	1550	1850	0.00
8/19/2003	319	718	1409	1690	0.00
8/20/2003	292	634	1250	1510	0.00
8/21/2003	273	582	1140	1370	0.00
8/22/2003	264	548	1100	1310	0.06

Exelon Nuclear

Date	Flow (cubic feet/ second)				Rainfall (in.)
	Landingville	Berne	Reading	Pottstown	Landingville
8/23/2003	250	534	1060	1370	0.00
8/24/2003	222	472	949	1190	0.00
8/25/2003	209	440	886	1110	0.00
8/26/2003	202	418	850	1050	0.04
8/27/2003	198	414	881	1090	0.03
8/28/2003	186	396	835	1080	0.00
8/29/2003	182	368	781	997	0.46
8/30/2003	246	489	892	1010	0.47
8/31/2003	188	439	971	1210	0.00
9/1/2003	209	404	912	1090	0.42
9/2/2003	239	527	1310	2540	0.25
9/3/2003	383	788	1429	1930	1.35
9/4/2003	341	775	1620	2240	0.05
9/5/2003	258	618	1360	1870	0.00
9/6/2003	219	515	1100	1450	0.00
9/7/2003	199	456	969	1270	0.00
9/8/2003	186	420	886	1170	0.00
9/9/2003	178	395	821	1090	0.00
9/10/2003	166	370	722	989	0.00
9/11/2003	159	350	684	930	0.00
9/12/2003	156	340	663	904	0.00
9/13/2003	197	363	709	1150	0.86
9/14/2003	256	584	1090	1600	0.19
9/15/2003	247	639	2140	6100	1.22
9/16/2003	392	1300	3980	5370	0.00
9/17/2003	247	844	3469	4400	0.00
9/18/2003	222	671	2470	3360	0.08
9/19/2003	381	997	2440	4350	0.81
9/20/2003	291	860	2210	3110	0.01
9/21/2003	253	723	1870	2480	0.00
9/22/2003	242	656	1570	2140	0.48
9/23/2003	1590	4470	8990	10000	2.09
9/24/2003	987	3420	8800	12100	0.00
9/25/2003	704	2270	5260	6590	0.01
9/26/2003	572	1770	4200	5230	0.02
9/27/2003	491	1429	3360	4089	0.01
9/28/2003	649	1600	3310	4270	0.61
9/29/2003	474	1270	2910	3770	0.02
9/30/2003	407	1030	2370	2900	0.00
10/1/2003	381	931	2140	2560	0.11
10/2/2003	351	861	2020	2400	0.00
10/3/2003	323	775	1820	2210	0.00
10/4/2003	342	772	1729	2060	0.38
10/5/2003	314	746	1760	2120	0.01
10/6/2003	280	646	1560	1900	0.00
10/7/2003	257	583	1460	1750	0.00
10/8/2003	240	547	1380	1660	0.00
10/9/2003	224	520	1320	1580	0.00
10/10/2003	214	495	1270	1530	0.00

Date	Flow (cubic feet/ second)				Rainfall (in.)
	Landingville	Berne	Reading	Pottstown	Landingville
10/11/2003	199	465	1180	1440	0.00
10/12/2003	192	441	1130	1370	0.00
10/13/2003	187	417	1100	1310	0.00
10/14/2003	195	409	1150	1290	1.34
10/15/2003	604	1400	2890	3250	0.21
10/16/2003	329	897	2630	3360	0.00
10/17/2003	296	737	2000	2420	0.27
10/18/2003	301	748	1840	2250	0.01
10/19/2003	274	659	1690	2030	0.00
10/20/2003	253	602	1590	1860	0.00
10/21/2003	244	577	1470	1739	0.00
10/22/2003	238	566	1360	1640	0.02
10/23/2003	225	535	1270	1590	0.00

East Branch Perkiomen Creek Monitoring
Associated with the Exelon's Wadesville Mine Demonstration Project
(sampling frequency = 5 per month)

Sampling Date	200' Upstream of Bradshaw Outfall				Outfall from Bradshaw Reservoir				Downstream, Bucks Rd. USGS gage				EBPC at Rt. 73 Bridge			
	Diss. Oxygen	Temp	<i>E. coli</i> (mpn/100ml)	Fecal Coliforms (no./100ml)	Diss. Oxygen	Temp	<i>E. coli</i> (mpn/100ml)	Fecal Coliforms (no./100ml)	Diss. Oxygen	Temp	<i>E. coli</i> (mpn/100ml)	Fecal Coliforms (no./100ml)	Diss. Oxygen	Temp	<i>E. coli</i> (mpn/100ml)	Fecal Coliforms (no./100ml)
	(mg/l)	(°C)			(mg/l)	(°C)			(mg/l)	(°C)			(mg/l)	(°C)		
7/1/2003	8.9	22.4	330	400	13.2	21.6	1	2	12.4	22.0	6	10				
7/7/2003	9.7	25.6	39	60	12.2	25.0	2	9	10.8	24.6	39	40				
7/17/2003	6.5	20.7	1000	1100	11.9	23.7	1	2	9.0	24.0	7	7	9.6	26.0	17	44
7/22/2003	6.7	22.3	2400	6000	11.3	23.4	50	90	10.4	22.4	920	1800				
7/28/2003	9.1	23.5	730	1100	12.6	25	10	13	9.9	25.3	19	20				
8/5/2003	7.9	22.9	2000	2700	8.9	24.9	200	340	8.5	24.9	120	120				
8/12/2003	8.7	22.1	340	400	9.7	23.8	130	230	9.4	24.0	74	200	9.4	25.2	150	200
8/18/2003	11.0	21.2	290	300	11.4	23.6	19	19	9.1	24.2	36	40	9.7	24.9	130	200
8/19/2003	10.6	21.2	250	320	10.6	23.3	22	50	9.7	23.6	28	40	8.5	25.3	18	80
8/21/2003	7.3	22.2	180	330	9.3	24.1	10	16	8.9	24.7	28	50	9.3	26	17	62
9/8/2003	10.2	19.0	200	260	10.6	19.5	21	45	10.2	20.1	46	46	9.8	20.9	43	94
9/9/2003	9.0	18.8	160	170	9.9	20.1	9	27	9.4	20.5	19	20	9.8	21.9	30	90
9/10/2003	9.5	17.2	180	370	10.1	20.1	5	14	9.7	20.6	22	22	9.7	180	22	64
9/17/2003	9.1	16.6	1200	2000	9.6	21.3	120	240	9.0	20.9	120	200	9.2	18.8	260	400
9/18/2003	9.1	16.7	260	350	9.6	20.7	69	80	8.7	20.3	47	66	9.0	18.4	160	200
10/6/2003	12.7	9.0	130	300	11.6	12.7	40	64	12.0	12.8	44	60	10.4	12.3	64	120
10/9/2003	11.1	13.0	93	400	10.2	13.3	40	40	10.9	14.0	31	56	12.5	14.0	53	80
10/20/2003	11.0	9.5	180	180	10.8	12.3	88	90	11.3	12.4	70	70	11.9	11.0	80	80
10/22/2003	10.5	12.5	70	66	10.8	12.5	80	80	11.6	12.7	54	70	11.8	12.6	65	88
10/23/2003	9.3	8.6	114	250	9.2	11.6	64	80	9.7	11.3	66	100	11.3	9.5	66	90

Chemical Analyses of E. Norwegian Creek and Schuylkill River

TSS, TDS, Osmotic Pressure, Iron

(Concentration in mg/l unless otherwise indicated)

Station 109 = ~ 3 mi. downstream of Norwegian Creek

Station 106 = ~ 0.5 mi. upstream of Norwegian Creek

Sampling Date, Constituents	Schuylkill River at Station 109	E. Norwegian Creek	Schuylkill River at Station 106
7/9/2003			
Total Suspended Solids	7	11	9
Total Dissolved Solids	282	1496	266
Osmotic Pressure (milliosmoles/kg)	<10	22	<10
Iron, Dissolved	0.11	0.04	1.60
Iron, Total	1.42	1.32	2.75
Total Alkalinity	43	116	5
Dissolved Oxygen	8.6	9.2	8.7
Spec. Cond. (µmhos/cm)	498	1660	353
pH (SU)	7.06	7.78	6.95
Temp (°C)	17.2	16.5	15.9
7/30/2003			
Total Suspended Solids	16	11	6
Total Dissolved Solids	402	252	274
Osmotic Pressure (milliosmoles/kg)	<10	<10	<10
Iron, Dissolved	<0.02	0.06	1.26
Iron, Total	0.40	1.50	2.46
Total Alkalinity	38	78	16
Dissolved Oxygen	9.0	8.5	8.9
Spec. Cond. (µmhos/cm)	437	494	300
pH (SU)	7.14	7.40	6.22
Temp (°C)	15.4	17.5	16.0
8/21/2003			
Total Suspended Solids	7	6	14
Total Dissolved Solids	286	950	222
Osmotic Pressure (milliosmoles/kg)	<10	16	<10
Iron, Dissolved	<0.02	0.14	0.57
Iron, Total	1.77	2.00	2.99
Total Alkalinity	43	306	20
Dissolved Oxygen	9.0	8.7	9.1
Spec. Cond. (µmhos/cm)	383	1310	298
pH (SU)	7.05	7.97	6.52
Temp (°C)	16.3	16.7	17.0
10/10/2003			
Total Suspended Solids	10	5	12
Total Dissolved Solids	344	1066	310

Osmotic Pressure (milliosmoles/kg)	<10	14	<10
Iron, Dissolved	0.27	<0.02	1.72
Iron, Total	1.59	0.95	2.76
Total Alkalinity	53	192	19
Dissolved Oxygen	10.3	10.0	10.3
Spec. Cond. (μ mhos/cm)	437	1278	329
pH (SU)	7.40	7.84	7.30
Temp ($^{\circ}$ C)	11.3	13.0	11.6

**Chemical Analyses of Wadesville Mine Pool Water
Group 2 (NPDES) Metals**

(Total concentration in mg/l unless otherwise indicated)

Constituent	Sample	6/2/2003	7/24/2003	8/14/2003	9/11/2003	10/10/2003
	Dates>>					
Antimony		<0.075	<0.005	<0.005	<0.005	<0.005
Arsenic		<0.005	<0.001	0.002	0.001	<0.001
Beryllium		<0.005	<0.005	<0.005	<0.005	<0.005
Cadmium		<0.005	<0.005	<0.005	<0.005	<0.005
Chromium		<0.005	<0.005	<0.005	<0.005	<0.005
Chromium, Hexavalent		<0.01	<0.01	<0.01	<0.01	<0.01
Copper		<0.005	<0.005	<0.005	0.014	<0.005
Lead		<0.001	<0.05	<0.05	<0.001	<0.05
Mercury		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Nickel		0.010	0.023	<0.005	0.019	0.010
Selenium		0.005	<0.002	<0.002	<0.002	<0.002
Silver		<0.005	<0.005	<0.005	<0.005	<0.005
Thallium		<0.05	<0.001	<0.001	<0.001	<0.001
Zinc		0.02	0.084	<0.005	0.054	0.025
Cyanide		<0.01	<0.005	<0.005	<0.005	0.006
Cyanide, Free		<0.01	<0.005	<0.005	0.006	<0.005
Phenolics		<0.05	<0.01	0.024	0.028	<0.01
Aluminum		<0.020	<0.02	<0.02	0.06	<0.02
Barium		0.03	0.040	0.044	0.041	0.036
Boron		0.02	<0.1	<0.1	<0.1	<0.1
Cobalt		<0.020	<0.005	0.006	0.008	0.005
Iron		1.45	2.31	3.94	3.09	2.74
Iron, Dissolved		0.12	<0.02	3.23	1.42	2.09
Magnesium		117	122	100	126	115
Molybdenum		0.01	<0.01	<0.01	<0.01	<0.01
Manganese		2.67	2.77	2.87	2.17	2.71
Tin		<0.1	<0.1	<0.1	<0.1	<0.1
Titanium		<0.1	<0.025	<0.025	<0.025	<0.025

Chemical Analyses of Wadesville Mine Pool Water
TOC, Anions, Cations, Acidity, Alkalinity

(Total concentration in mg/l unless otherwise indicated)

Constituent	Sample	6/27/2003	7/16/2003	7/24/2003	7/29/2003	8/6/2003	8/14/2003	9/11/2003	10/10/2003
	Dates>>								
Total Organic Carbon		<0.5	-	<0.5	-	-	<0.5	<0.5	<0.5
Chloride		21	-	17	-	-	17	16	16
Bromide		<1	-	<1	-	-	<1	<1	<1
Nitrate Nitrogen		<1	-	<1	-	-	<1	<1	<1
Nitrite Nitrogen		<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1
Ammonia		-	-	-	-	-	0.8	0.6	0.5
Phosphorous, Ortho		<0.05	-	<0.05	-	-	<0.05	<0.05	<0.05
Sulfate		800	-	700	-	-	530	670	640
Sodium		72	-	61	-	-	62	74	58
Potassium		2.3	-	1.9	-	-	1.8	2.0	1.9
Calcium		200	-	220	-	-	230	250	240
Magnesium		140	-	122	-	-	100	126	115
Acidity		33	-	32	-	-	13	27	30
Alkalinity		250	-	306	-	-	336	340	296
Hardness		990	-	796	-	-	816	888	836
TDS		-	1520	1306	1326	1138	1190	1330	1308

Monthly Perkiomen Creek Monitoring

Associated with the Exelon's Wadesville Mine Demonstation Project

Perkiomen Creek upstream of East Branch confluence, Rt 73 Bridge Schwenksville

Sampling Date	Disolved			
	Oxygen (mg/l)	Temp (°C)	<i>E. coli</i> (mpn/100ml)	Fecal Coliforms (no./100ml)
17-Jul	8.7	26.4	18	60
12-Aug	8.7	24.8	1100	2000
10-Sep	9.8	22.0	110	120
9-Oct	11.8	15.4	48	56

Perkiomen Creek downstream of East Branch confluence, Grateford Intake Pumphouse

Sampling Date	Disolved			
	Oxygen (mg/l)	Temp (°C)	<i>E. coli</i> (mpn/100ml)	Fecal Coliforms (no./100ml)
17-Jul	9.4	25.9	21	60
12-Aug	8.1	24.6	1100	1500
10-Sep	9.8	21.1	39	100
9-Oct	12.7	15.3	59	80

**Pottstown Water Treatment Plant, Schuylkill River Monitoring
Associated with the Exelon's Wadesville Mine Demonstration Project**

Date	pH (SU) Range**		Spec. Cond. µmhos/cm
	Max	Min	
7/11/2003	7.5	7.4	
7/12/2003	7.6	7.3	
7/13/2003	7.6	7.4	
7/14/2003	7.8	7.4	
7/15/2003	7.9	7.4	370
7/16/2003	7.9	7.5	
7/17/2003	7.8	7.4	
7/18/2003	7.7	7.4	
7/19/2003	7.6	7.3	
7/20/2003	7.7	7.4	
7/21/2003	7.7	7.4	
7/22/2003	7.4	7.2	
7/23/2003	7.5	7.3	
7/24/2003	7.5	7.3	
7/25/2003	7.5	7.4	
7/26/2003	7.5	7.3	
7/27/2003	7.5	7.3	
7/28/2003	7.5	7.1	
7/29/2003	7.6	7.2	330
7/30/2003	7.5	7.3	360
7/31/2003	7.5	7.4	
8/1/2003	8.0	7.3	370
8/2/2003	7.5	7.4	
8/3/2003	7.6	7.3	
8/4/2003	7.5	7.4	
8/5/2003	7.6	7.4	370
8/6/2003	7.4	7.2	
8/7/2003	7.6	7.4	
8/8/2003	7.5	7.3	
8/9/2003	7.4	7.2	
8/10/2003	7.4	7.2	
8/11/2003	7.4	7.2	320
8/12/2003	7.5	7.2	
8/13/2003	7.3	7.2	310
8/14/2003	7.4	7.1	
8/15/2003	7.3	7.2	
8/16/2003	7.5	7.4	
8/17/2003	7.6	7.3	
8/18/2003	7.5	7.2	310
8/19/2003	7.6	7.4	300
8/20/2003	7.5	7.4	
8/21/2003	7.7	7.4	
8/22/2003	7.7	7.5	370
8/23/2003	7.8	7.4	
8/24/2003	7.6	7.4	

Date	pH (SU) Range**		Spec. Cond. µmhos/cm
	Max	Min	
8/25/2003	7.9	7.5	
8/26/2003	8.2	7.5	420
8/27/2003	8.0	7.6	
8/28/2003	8.1	7.6	
8/29/2003	8.2	7.7	440
8/30/2003	8.0	7.5	
8/31/2003	7.8	7.5	
9/1/2003	7.9	7.5	
9/2/2003	7.7	7.4	
9/3/2003	7.6	7.4	
9/4/2003	7.7	7.5	
9/5/2003	7.5	7.4	360
9/6/2003	7.6	7.4	
9/7/2003	7.6	7.5	
9/8/2003	7.6	7.4	
9/9/2003	7.7	7.5	400
9/10/2003	7.7	7.6	
9/11/2003	7.7	7.6	
9/12/2003	7.7	7.5	
9/13/2003	7.7	7.4	
9/14/2003	7.5	7.4	
9/15/2003	7.5	7.1	170
9/16/2003	7.6	7.1	
9/17/2003	7.7	7.4	
9/18/2003	7.7	7.5	330
9/19/2003	7.6	7.3	
9/20/2003	7.5	7.3	
9/21/2003	7.5	7.3	
9/22/2003	7.5	7.3	
9/23/2003	7.5	7.2	
9/24/2003	7.3	7.1	
9/25/2003	7.4	7.0	
9/26/2003	7.4	7.1	250
9/27/2003	7.4	7.3	
9/28/2003	7.4	7.1	
9/29/2003	7.6	7.2	
9/30/2003	7.6	7.2	300
10/1/2003	7.8	7.2	
10/2/2003	7.6	7.2	
10/3/2003	7.7	7.3	330
10/4/2003	7.5	7.3	
10/5/2003	7.5	7.4	
10/6/2003	7.6	7.3	
10/7/2003	7.6	7.2	
10/8/2003	7.6	7.4	
10/9/2003	7.6	7.4	380
10/10/2003	7.5	7.3	390
10/11/2003	7.7	7.2	
10/12/2003	7.9	7.4	

Date	pH (SU) Range**		Spec. Cond. µmhos/cm
	Max	Min	
10/13/2003	7.7	7.4	

** - pH is taken every 2 hours during the day

Table 1. Fish collected by pram electrofishing at Station 109 of the Schuylkill River in Schuylkill County, Pennsylvania during 2003.

Sampling Date:		1 July		30 July		21 August		10 October	
Scientific Name	Common Name	Total No.	Length Range (mm)	Total No.	Length Range (mm)	Total No.	Length Range (mm)	Total No.	Length Range (mm)
<i>Onchorynchus mykiss</i>	rainbow trout					1	276	2	315-335
<i>Salmo trutta</i>	brown trout (wild)	3	220-226						
<i>Salmo trutta</i>	brown trout (stock carryover)			5	240-301	2	244-262	3	305-325
<i>Salmo trutta</i>	brown trout (stocked fingerling)			3	69-100	2	88-101	1	135
<i>Salvelinus fontinalis</i>	brook trout (wild)	1	199	2	100-105	1	218	1	125
<i>Carassius auratus</i>	goldfish							1	100
<i>Rhinichthys atratulus</i>	blacknose dace	16	34-88	76	35-90	52	45-94	33	35-90
<i>Semotilus atromaculatus</i>	creek chub	3	62-134	8	55-95	7	58-114	5	64-84
<i>Catostomus commersoni</i>	white sucker	29	78-375	61	63-369	27	81-310	40	52-388
<i>Ictalurus punctatus</i>	channel catfish			1	405				
<i>Ameiurus natalis</i>	yellow bullhead							1	44
<i>Lepomis cyanellus</i>	green sunfish	7	58-112	7	44-119	9	28-102	10	35-86
<i>Lepomis gibbosus</i>	pumpkinseed	4	55-70			2	62-64		
<i>Lepomis macrochirus</i>	bluegill	7	35-115	3	45-69	6	44-92	1	70
<i>Micropterus salmoides</i>	largemouth bass	1	74	1	45	1	75		
Physicochemical data									
	Time:		0930		0800		0820		0925
	Water Temp (C):		14.8		15.4		16.5		12.5
	DO (mg/l):		9.64		9.01		8.95		10.2
	pH:		6.68		7.14		7.05		7.6
	Conductivity (µmhos/cm):		324		437		383		387
	Total Alkalinity (mg/l):		34		38		43		53

Table 2. Fish collected by pram electrofishing at Station 106 of the Schuylkill River in Schuylkill County, Pennsylvania during 2003.

Sampling Date:		1 July*		30 July		21 August		10 October			
Scientific Name	Common Name	Total No.	Length Range (mm)	Total No.	Length Range (mm)	Total No.	Length Range (mm)	Total No.	Length Range (mm)	Total No.	Length Range (mm)
<i>Salvelinus fontinalis</i>	brook trout (wild)					1	248				
<i>Cyprinus carpio</i>	carp					1	55				
<i>Rhinichthys atratulus</i>	blacknose dace	61	36-83	149	30-95	118	38-91	116	38-82		
<i>Semotilus atromaculatus</i>	creek chub	50	42-167	94	40-186	106	53-155	118	50-186		
<i>Catostomus commersoni</i>	white sucker	16	78-326	83	72-372	107	23-340	78	62-346		
<i>Ameiurus natalis</i>	yellow bullhead	1	158								
<i>Lepomis cyanellus</i>	green sunfish	17	31-120	29	40-105	42	21-92	60	32-110		
<i>Lepomis gibbosus</i>	pumpkinseed			4	33-64	1	6	6	46-83		
<i>Lepomis macrochirus</i>	bluegill					2	46-71	1	45		
Physicochemical data											
	Time:		1515		1555		1230		1230		
	Water Temp (C):		16.2		17.5		17.0		13.0		
	DO (mg/l):		8.19		8.50		9.10		9.5		
	pH:		6.32		7.40		6.52		6.4		
	Conductivity (µmhos/cm):		324		494		298		292		
	Total Alkalinity (mg/l):		15		78		20		19		

* Note that adjacent Station 107 was sampled on this date.

Table 3. Benthic macroinvertebrates collected at Station 106 in the Schuylkill River near Pottsville, Pennsylvania during 2003.

Taxon	Sample Date:	1 July*	30 July	21 August	10 October
Amphipoda (scuds)					
<i>Stygobromis</i>			8		
<i>Stygonectes</i>		1			
Coleoptera (beetles)					
Hydrophilidae		2			
Decapoda (crayfish)					
<i>Cambarus sp.</i>			1		
Diptera (flies)					
Chironomidae		2	50	69	
<i>Dicranota</i>			1	1	
<i>Ormosia</i>			2	1	
<i>Tipula</i>			1	1	
Isopoda (sowbugs)					
<i>Caecidotea</i>				1	
Megaloptera (dobson fly)					
<i>Nigronia</i>				2	
<i>Sialis</i>				3	
Oligochaeta (worms)					
Enchytraeidae			1		
Tubificidae			2	1	
Plecoptera (stoneflies)					
<i>Leuctra</i>			1		
<i>Allocapnia</i>				2	
Trichoptera (caddisflies)					
<i>Cheumatopsyche</i>				3	
<i>Hydropsyche</i>			1		
Total Taxa		3	10	10	
Total Individuals		5	68	83	

* Note that adjacent Station 107 was sampled on this date.

Table 4. Benthic macroinvertebrates collected at Station 109 in the Schuylkill River near Pottsville, Pennsylvania during 2003.

Taxon	Sample Date:	1 July	30 July	21 August	10 October
Amphipoda (scuds)					
<i>Crangonyx</i>		2	14	14	
Coleoptera (beetles)					
<i>Psephenus</i>		1			
Diptera (flies)					
Chironomidae		15	265	180	
<i>Chelifera</i>				6	
<i>Dicranota</i>				1	
<i>Hemerodromia</i>				16	
<i>Palpomyia gr.</i>			1		
<i>Psychoda</i>			2	2	
Ephemeroptera (mayflies)					
<i>Baetis</i>			1		
Isopoda (sowbugs)					
<i>Caecidotea</i>			21	19	
Megaloptera (dobsonflies)					
<i>Nigronia</i>				1	
<i>Sialis</i>				4	
Mollusca (clams)					
<i>Pisidium</i>			1		
Oligochaeta (worms)					
Enchytraeidae			3		
Lumbricidae		7	56	92	
<i>Mooreobdella</i>			1		
Tubificidae			16	5	
Plecoptera (stoneflies)					
<i>Allocapnia</i>				1	
Trichoptera (caddisflies)					
<i>Ceratopsyche</i>			12	22	
<i>Cheumatopsyche</i>			41	66	
<i>Hydropsyche</i>		2	4	16	
<i>Hydroptila</i>			1		
Total Taxa		5	15	15	
Total Individuals		27	439	445	

Wadesville Mine Water Demonstration Project
Average Daily Water Temperature (°F) of the Schuylkill River,
E. Norwegian Creek, and L. Schuylkill River near Tamaqua

Station 109 = ~ 3 mi. downstream of Norwegian Creek

Station 107 = immediately upstream of Norwegian Creek

DATE	Sch. R. St. 107	E. Norwegian Creek	Sch. R. St. 109	L. Sch. R., Tamaqua
7/31/2003	59	59	61	64
8/1/2003	59	59	62	63
8/2/2003	62	60	64	65
8/3/2003	61	59	63	66
8/4/2003	64	61	65	67
8/5/2003	62	60	63	69
8/6/2003	62	61	63	67
8/7/2003	61	59	62	65
8/8/2003	61	60	62	66
8/9/2003	61	59	62	65
8/10/2003	62	61	63	66
8/11/2003	62	62	64	65
8/12/2003	62	60	64	66
8/13/2003	62	60	63	67
8/14/2003	62	60	64	67
8/15/2003	62	60	64	67
8/16/2003	61	60	63	67
8/17/2003	62	60	64	66
8/18/2003	60	59	62	65
8/19/2003	59	59	61	65
8/20/2003	60	59	62	66
8/21/2003	63	60	64	67
8/22/2003	61	59	**	68
8/23/2003	60	59		72
8/24/2003	58	58		63
8/25/2003	59	59		64
8/26/2003	60	59		65
8/27/2003	60	59		65
8/28/2003	60	59		65
8/29/2003	60	59		64
8/30/2003	61	59		65
8/31/2003	59	59		62
9/1/2003	59	59		62
9/2/2003	59	59		62
9/3/2003	59	59		61
9/4/2003	60	59		62
9/5/2003	59	59		62
9/6/2003	58	58		60
9/7/2003	58	59		60
9/8/2003	58	58		61

DATE	Sch. R. St. 107	E. Norwegian Creek	Sch. R. St. 109	L. Sch. R., Tamaqua
9/9/2003	59	59		61
9/10/2003	57	58		59
9/11/2003	58	58		60
9/12/2003	58	58		60
9/13/2003	59	60		61
9/14/2003	62	60		64
9/15/2003	62	60		64
9/16/2003	61	59		64
9/17/2003	58	58		62
9/18/2003	58	58		61
9/19/2003	61	63		62
9/20/2003	60	60		63
9/21/2003	58	58		61
9/22/2003	59	59		62
9/23/2003	62	61		63
9/24/2003	57	58		61
9/25/2003	57	57		60
9/26/2003	58	58		60
9/27/2003	59	59		62

** Recorder malfunction after upload

**Chemical Analyses of Wadesville Mine Pool Water
Monthly NPDES Sampling**

(Total concentration in mg/l unless otherwise indicated)

Constituent	Sample	7/11/2003	8/1/2003	9/2/2003
	Dates>>			
pH (SU)		7.03	7.40	7.42
Spec. Cond. (µmhos/cm)		2109	1649	1829
Iron, Total		1.18	0.94	1.96
Manganese, Total		2.63	2.13	5.10
Sulfate		1170	791	648
Acidity		<0.40	<0.40	<0.40
Alkalinity		202	321	337
TSS		8	8	7