

Table 2. Contaminant Data for Upper and Lower St. Anthony Pools

Record #		1	419	2	3	420	4	421		
River Mile		857.6	857.5	857.5	857.5	857.3	856.9	856.8	856.7	
Location		BW S.STE.MRR	BW S.STE.MRR	BW S.STE.MRR	BW S.STE.MRR	Mpls turning basin	BW S.STE.MRR	BW S.STE.MRR	AB LOWERY BRIDGE	
Year		1980	1989	1974	1974	2002	1989	1980	1989	
System		1	1	1	1	1	1	1	1	
Habitat Type		1	1	1	1	1	1	1	1	
Pool		0	0	0	0	0	0	0	0	
Sam. Gear		1	1	1	1	1	1	1	1	
Sam. Depth		10	10	10	10	10	10	10	10	
Data Cit.		COE	COE	COE	COE	COE	COE	COE	COE	
C H C ' S	ug/kg	a-BHC	< 0.08			< 0.12	< 0.07		< 0.75	
	ug/kg	b-BHC	< 0.16			< 0.12	< 0.15		< 1.5	
	ug/kg	BHC	< 0.24			< 0.12	< 0.22		< 2.25	
	ug/kg	g-BHC (lindane)	< 0.11			< 0.12	< 0.1		< 1	
	ug/kg	Heptachlor	< 0.08			< 0.08	< 0.07		< 0.75	
	ug/kg	Aldrin	< 0.11				< 0.1		< 1	
	ug/kg	Heptachlorepoxyde	< 0.13			< 1.48	< 0.12		< 1.25	
	ug/kg	Endosulfan I	< 0.13				< 0.12		< 1.25	
	ug/kg	Dieldrin	0 < 0.13	< 10	< 10	< 0.12	< 0.12	0	< 1.25	
	ug/kg	4,4'-DDE	0 < 0.11	< 10	< 10	< 0.12	< 0.1	0	< 1	
	ug/kg	Endrin	0 < 0.24	< 10	< 10	< 0.12	< 0.22	0	< 2.25	
	ug/kg	Endosulfan II	< 0.26				< 0.25		< 2.5	
	ug/kg	4,4'-DDD	0 < 0.29	< 10	< 10	< 0.12	< 0.27	0	< 2.75	
	ug/kg	Endrin aldehyde	< 0.29				< 0.27		< 2.75	
	ug/kg	Sulfan sulfate	< 0.29				< 0.27		< 2.75	
	ug/kg	4,4'-DDT	0 < 0.34	< 10	< 10	< 0.24	< 0.32	0	< 3.25	
ug/kg	Methoxychlor	< 0.58				< 0.55		< 5.5		
ug/kg	Endrin ketone	< 0.29				< 0.27		< 2.75		
ug/kg	Chlorodane	0 < 1.58	< 10	< 10	< 0.36	< 1.49	0	< 15		
ug/kg	Toxaphene	< 1.58				< 1.49		< 15		
M E T A L S	mg/kg	Ag (silver)								
	mg/kg	Al (aluminum)								
	mg/kg	As (arsenic)	0	2.3	< 0.8	< 0.9	1.11	2.4	0	2.3
	mg/kg	B (boron)								
	mg/kg	Ba (barium)	10						10	
	mg/kg	Be (beryllium)								
	mg/kg	Cd (cadmium)	< 10	< 1.2	1	1	0.29	< 1.1	< 10	< 1.1
	mg/kg	Cr (chromium)	20	4.8	8	10	3.12	5.6	20	5.3
	mg/kg	Cu (copper)	< 10	3.1	6	5	2.1	2.1	< 10	1.8
	mg/kg	Fe (iron)	1800						2300	
	mg/kg	Hg (mercury)	0 < 0.01	0.7	0.7	< 0.0059	< 0.01	0	< 0.01	
	mg/kg	Mg (magnesium)								
	mg/kg	Mn (manganese)	210	305			250	312	210	252
	mg/kg	Mo (molybdenum)								
	mg/kg	Ni (nickel)	10 < 6.2	6	8	7.31	< 5.2	10	< 5.3	
	mg/kg	Pb (lead)	10	3	< 10	< 10	4.8	3.2	40	2.5
mg/kg	Sb (antimony)									
mg/kg	Se (selenium)	< 0.88				< 0.82		< 0.78		
mg/kg	Sn (tin)									
mg/kg	Sr (strontium)									
mg/kg	Ti (titanium)									
mg/kg	Zn (zinc)	8.9	13.6	15	33	11.2	23.2	25	16.1	
mg/kg	V (vanadium)									
P C B ' S	ug/kg	Aroclor-1006	< 1.58				< 1.49		< 15	
	ug/kg	Aroclor-1221	< 1.58				< 1.49		< 15	
	ug/kg	Aroclor-1232	< 1.58				< 1.49		< 15	
	ug/kg	Aroclor-1242	< 1.58				< 1.49		< 15	
	ug/kg	Aroclor-1248	< 1.58				< 1.49		< 15	
	ug/kg	Aroclor-1254	< 3.3				< 3.1		< 31.25	
	ug/kg	Aroclor-1260	< 3.3				< 3.1		< 31.25	
	ug/kg	Total PCB's	0		0	0	< 0.88		3	
P A R T I C L E S I Z E % F I N E R	D	C O A R S E	3 in	100					100	
			1 1/2	100					100	
			3/4	100					97	
			3/8	100	99.9			98.6	96	97.6
			4	100			98.4		94	
			8		99.6			92.6		92.5
			10	98	97.0		96.9	71.0	91	78.5
			16							
	S	M E D I U M F I N E	20		72.6			26.6		32.9
			30	31.0					37.0	
			40		72.6			26.6		32.9
			50				8.2			
			70		10.5		0.9	7.3		6.0
			80	1.0	1.6			0.8	2.0	0.4
			100		1.6		0.2	0.7		0.3
			140		1.2		0.1	0.7	0.0	
F I L T E R	C L A S S	200		0.9		0.1	0.6			
		270	0.0	0.9			0.5	0.0		
		0.20 mm	0.0	0.6			0.5	0.0		
		0.05 mm	100.0					100.0		
M I S C	%	Total Organic Carb	0.61			0.05	0.074		0.32	
	mg/kg	Chem Oxy Demand	2100	1705	2247			5700		
	mg/kg	Kjedahl Nitrogen	660	241	150			560		
	mg/kg	Total Phosph		139	173					
	mg/kg	Oil and Grease	0	238	190			0		
	mg/kg	Cyanide, Total	< 0.67			< 0.10	< 0.62		< 0.59	
	mg/kg	Ammonia	12.00			< 6	2.50		1.10	
	mg/l	Ammonia Elutriate								
%	Moisture		25.4		21.5	19.6		16.1		
%	Total Solids		74.6		78.5	80.4		83.9		
%	Volatile Solids		0.9		0.35	0.7		0.4		

Table 2. Contaminant Data for Upper and Lower St. Anthony Pools

Record #		422	5	6	423	424	7	425	8		
River Mile		856.5	856.2	856.2	855.9	855.8	855.6	855.5	855.4		
Location		AB LOWERY BRIDGE	AB LOWERY BRIDGE	AB LOWERY BRIDGE	AB & BLW NPRR BRIDGE	AB & BLW NPRR BRIDGE	AB & BLW NPRR BRIDGE	AB PLYMOUTH AVE BR.	AB PLYMOUTH AVE BR.		
Year		1989	1978	1978	1989	1989	1975	1989	1980		
System		1	1	1	1	1	1	1	1		
Habitat Type		1	1	1	1	1	1	1	1		
Pool		0	0	0	0	0	0	0	0		
Sam. Gear		1	1	1	1	1	1	1	1		
Sam. Depth		10	10	10	10	10	10	10	10		
Data Cit.		COE	COE	COE	COE	COE	COE	COE	COE		
C H C ' S	ug/kg	a-BHC	< 0.76		< 0.07	< 0.74		< 0.08			
	ug/kg	b-BHC	< 1.52		< 0.14	< 1.49		< 0.15			
	ug/kg	BHC	< 2.29		< 0.22	< 2.23		< 0.23			
	ug/kg	g-BHC (lindane)	< 1.02		< 0.1	< 0.99		< 0.1			
	ug/kg	Heptachlor	< 0.76		< 0.07	< 0.74		< 0.08			
	ug/kg	Aldrin	< 1.02		< 0.1	< 0.99		< 0.1			
	ug/kg	Heptachlorepoxyde	< 1.27		< 0.12	< 1.24		< 0.13			
	ug/kg	Endosulfan I	< 1.27		< 0.12	< 1.24		< 0.13			
	ug/kg	Dieldrin	< 1.27	0	< 0.12	< 1.24		< 0.13	0		
	ug/kg	4,4'-DDE	< 1.02	0	0.2	< 0.1	< 0.99		< 0.1	0	
	ug/kg	Endrin	< 2.29	0	0	< 0.22	< 2.23		< 0.23	0	
	ug/kg	Endosulfan II	< 2.54			< 0.24	< 2.48		< 0.25		
	ug/kg	4,4'-DDD	< 2.79	0	0	< 0.26	< 2.73		< 0.28	0	
	ug/kg	Endrinaldehyde	< 2.79			< 0.26	< 2.73		< 0.28		
	ug/kg	Sulfan sulfate	< 2.79			< 0.26	< 2.73		< 0.28		
	ug/kg	4,4'-DDT	< 3.3	0	0	< 0.31	< 3.22		< 0.33	0	
	ug/kg	Methoxychlor	< 5.59			< 0.53	< 5.46		< 0.55		
	ug/kg	Endrinetone	< 2.79			< 0.26	< 2.73		< 0.28		
ug/kg	Chlorodane	< 15.24	0	0	< 1.44	< 14.08		< 1.51	0		
ug/kg	Toxaphene	< 15.24			< 1.44	< 14.08		< 1.51			
M E T A L S	mg/kg	Ag (silver)									
	mg/kg	Al (aluminum)									
	mg/kg	As (arsenic)	2	0	0	1.8	2.2	0.55	1.9	0	
	mg/kg	B (boron)									
	mg/kg	Ba (barium)		10	10					10	
	mg/kg	Be (beryllium)									
	mg/kg	Cd (cadmium)	< 1.1	< 10	< 10	< 1.1	< 1.2	< 0.1	< 1.2	< 10	
	mg/kg	Cr (chromium)	6	< 10	< 10	5	5.8	7.4	5.3	20	
	mg/kg	Cu (copper)	7.2	< 10	< 10	1.9	1.8	6.3	1.8	< 10	
	mg/kg	Fe (iron)		2400	2100					2500	
	mg/kg	Hg (mercury)	< 0.01	0	0	< 0.01	< 0.01	0.12	< 0.01	0	
	mg/kg	Mg (magnesium)									
	mg/kg	Mn (manganese)	284	180	170	267	220		284	320	
	mg/kg	Mo (molybdenum)									
	mg/kg	Ni (nickel)	6	< 10	10	< 5.7	6.9		< 5.9	10	
mg/kg	Pb (lead)	3.7	< 10	< 10	2.2	2.1	< 0.1	2.5	10		
mg/kg	Sb (antimony)										
mg/kg	Se (selenium)	< 0.81			< 0.81	< 0.83		< 0.85			
mg/kg	Sn (tin)										
mg/kg	Sr (strontium)										
mg/kg	Ti (titanium)										
mg/kg	Zn (zinc)	14.9	10	10	13.6	13.7	19.9	15.5	9.8		
mg/kg	V (vanadium)										
P C B ' S	ug/kg	Aroclor-1006	< 15.24		< 1.44	< 14.08		< 1.51			
	ug/kg	Aroclor-1221	< 15.24		< 1.44	< 14.08		< 1.51			
	ug/kg	Aroclor-1232	< 15.24		< 1.44	< 14.08		< 1.51			
	ug/kg	Aroclor-1242	< 15.24		< 1.44	< 14.08		< 1.51			
	ug/kg	Aroclor-1248	< 15.24		< 1.44	< 14.08		< 1.51			
	ug/kg	Aroclor-1254	< 31.75		< 3	< 31		< 3.15			
	ug/kg	Aroclor-1260	< 31.75		< 3	< 31		< 3.15			
	ug/kg	Total PCB's		0	0			0		0	
P A R T I C L E S I Z E & F I N E R	D	C O A R S E	3 in		100	100				100	
			1 1/2		100	95				100	
			3/4		100	78				100	
			3/8	100	99	68	96.8	98.8		99.9	99
			4								96
			8	98.4	98	59	93.4	95.3		98.1	
	S	M E D I U M	10	91.2			87.4	88.8		90.1	89
			16		89.0	48.0					
			20	40.7			40.2	37.1		46.7	
			30		35.0	19.0					37.0
			40	40.7			40.2	37.1		46.7	
			50								
	F I N E	S I Z E	70	6.7	5.0	6.0	8.6	4.6		9.2	
			80	1.4			0.6	0.5		0.6	1.0
100			1.3			0.5	0.3		0.5		
140			1.0	3.0	4.0	0.5			0.4	0.0	
P A R T I C L E S I Z E & F I N E R	F I N E	200	0.8			0.4			0.3		
		270	0.7	0.5	0.0					0.0	
		0.20 mm	0.7	0.0	0.0					0.0	
		0.05 mm		100.0	100.0					100.0	
M I S C	%	Total Organic Car	0.24		0.32	0.61		0.4			
	mg/kg	Chem Oxy Demand		2200	22000		6860		2200		
	mg/kg	Kjedahl Nitrogen		240	400				400		
	mg/kg	Total Phosph		50	100						
	mg/kg	Oil and Grease		100	0		399		0		
	mg/kg	Cyanide, Total	< 0.61			< 0.62	< 0.63		< 0.64		
	mg/kg	Ammonia	3.10			2.40	1.60		3.10		
	mg/l	Ammonia Elutriate									
%	Moisture	18.1			19.2	20.4		22.2			
%	Total Solids	81.9			80.8	79.6		77.8			
%	Volatile Solids	0.6			0.6	0.5		0.7			

Table 2. Contaminant Data for Upper and Lower St. Anthony Pools

Record #		426	9		
River Mile		855.1	854.9	854.2	
Location		AB PLYMOUTH AVE BR.	AB PLYMOUTH AVE BR.	AB PLYMOUTH AVE BR.	
Year		2002	1989	1980	
System		1	1	1	
Habitat Type		1	1	1	
Pool		0	0	0	
Sam. Gear		1	1	1	
Sam. Depth		10	10	10	
Data Cit.		COE	COE	COE	
C H C ' S	ug/kg	a-BHC	< 0.12	< 0.08	
	ug/kg	b-BHC	< 0.12	< 0.17	
	ug/kg	BHC	< 0.12	< 0.25	
	ug/kg	g-BHC (lindane)	< 0.12	< 0.11	
	ug/kg	Heptachlor	< 0.08	< 0.08	
	ug/kg	Aldrin		< 0.11	
	ug/kg	Heptachlorepoxyde	< 1.48	< 0.14	
	ug/kg	Endosulfan I		< 0.14	
	ug/kg	Dieldrin	< 0.12	< 0.14	0
	ug/kg	4,4'-DDE	< 0.12	< 0.11	2.2
	ug/kg	Endrin	< 0.12	< 0.25	0
	ug/kg	Endosulfan II		< 0.28	
	ug/kg	4,4'-DDD	< 0.12	< 0.31	1.3
	ug/kg	Endrinaldehyde		< 0.31	
	ug/kg	Sulfan sulfate		< 0.31	
	ug/kg	4,4'-DDT	< 0.24	< 0.36	0
	ug/kg	Methoxychlor		< 0.61	
	ug/kg	Endrinetone		< 0.31	
ug/kg	Chlorodane	< 0.36	< 1.67	0	
ug/kg	Toxaphene		< 1.67		
M E T A L S	mg/kg	Ag (silver)			
	mg/kg	Al (aluminum)			
	mg/kg	As (arsenic)	1.17	1.8	0
	mg/kg	B (boron)			
	mg/kg	Ba (barium)			30
	mg/kg	Be (beryllium)			
	mg/kg	Cd (cadmium)	0.3	< 1.2	< 10
	mg/kg	Cr (chromium)	3.36	7.6	< 10
	mg/kg	Cu (copper)	3.01	5.7	< 10
	mg/kg	Fe (iron)			4100
	mg/kg	Hg (mercury)	< 0.0058	< 0.01	0
	mg/kg	Mg (magnesium)			
	mg/kg	Mn (manganese)	285	433	380
	mg/kg	Mo (molybdenum)			
	mg/kg	Ni (nickel)	12.7	< 6.1	10
	mg/kg	Pb (lead)	5.56	9	20
	mg/kg	Sb (antimony)			
	mg/kg	Se (selenium)		< 0.9	
mg/kg	Sn (tin)				
mg/kg	Sr (strontium)				
mg/kg	Ti (titanium)				
mg/kg	Zn (zinc)		42.4	14	
mg/kg	V (vanadium)				
P C B ' S	ug/kg	Aroclor-1006		< 1.67	
	ug/kg	Aroclor-1221		< 1.67	
	ug/kg	Aroclor-1232		< 1.67	
	ug/kg	Aroclor-1242		< 1.67	
	ug/kg	Aroclor-1248		< 1.67	
	ug/kg	Aroclor-1254		< 3.48	
	ug/kg	Aroclor-1260		< 3.48	
	ug/kg	Total PCB's	< 0.88		40
P A R T I C L E S I Z E % F I N E R	S I Z E	C O A R S E	3 in		100
			1 1/2		95
			3/4		77
			3/8	94.8	52.0
			4	99.2	32.0
			8		89.4
			10	93.4	82.3
			16		54.1
			20		
			30		4.0
			40		54.1
			50	6.8	
			70	2.9	19.2
			80		2.4
100	0.3	2.0			
140	0.1	1.5			
200	0	1.0			
270		0.8			
0.20 mm		0.5			
0.05 mm		100.0			
M I S C	%	Total Organic Carbon	0.1	0.74	
	mg/kg	Chem Oxy Demand			9000
	mg/kg	Kjedahl Nitrogen			800
	mg/kg	Total Phosph			
	mg/kg	Oil and Grease			0
	mg/kg	Cyanide, Total	< 0.10	< 0.68	
	mg/kg	Ammonia	8	7.60	
	mg/l	Ammonia Elutriate			
	%	Moisture	20.9	26.3	
	%	Total Solids	79.1	73.7	
%	Volatile Solids	0.54	1.2		