

Table 3. Contaminant Data for Pool 1 of the Upper Mississippi River

		Record #	10	427	11	428	12	429	13	14	15		
		River Mile	853.0	852.9	852.9	852.5	852.5	852.2	852.0	851.7	851.6	851.6	
		Location	AB&BW WASH AVE BR.	AB&BW WASH AVE BR.	AB&BW WASH AVE BR.	AB&BW WASH AVE BR.	AB&BW WASH AVE BR.	FRANK. AVE BRIDGE	FRANK. AVE BRIDGE	FRANK. AVE BRIDGE	FRANK. AVE BRIDGE	FRANK. AVE BRIDGE	
		Year	1980	2002	1989	1980	1989	1980	1989	1980	1974	1975	
		System	1	1	1	1	1	1	1	1	1	1	
		Habitat Type	1	1	1	1	1	1	1	1	1	1	
		Pool	1	1	1	1	1	1	1	1	1	1	
		Sam. Gear	1	1	1	1	1	1	1	1	1	1	
		Sam. Depth	10	10	10	10	10	10	10	10	10	10	
		Data Cit.	COE	COE	COE	COE	COE	COE	COE	COE	COE	COE	
C H C S	ug/kg	a-BHC	< 0.12		< 0.08		< 0.08		< 0.08				
	ug/kg	b-BHC	< 0.12		< 0.15		< 0.15		< 0.15				
	ug/kg	BHC	< 0.12		< 0.23		< 0.23		< 0.23				
	ug/kg	g-BHC (lindane)	< 0.12		< 0.1		< 0.1		< 0.1				
	ug/kg	Heptachlor	< 0.08		< 0.08		< 0.08		< 0.08				
	ug/kg	Aldrin	< 0.1		< 0.1		< 0.1		< 0.1				
	ug/kg	Heptachlorepoide	< 1.48		< 0.13		< 0.13		< 0.13				
	ug/kg	Endosulfan I	< 0.13		< 0.13		< 0.13		< 0.13				
	ug/kg	Dieldrin	0	< 0.12	< 0.13	0	< 0.13	0	< 0.13	0	< 10		
	ug/kg	4,4'-DDE	0	< 0.12	< 0.1	4.2	< 0.1	0	< 0.1	0	< 10		
	ug/kg	Endrin	0	0.29	< 0.23	0	< 0.23	0	< 0.23	0	< 10		
	ug/kg	Endosulfan II	< 0.26		< 0.25		< 0.25		< 0.25				
	ug/kg	4,4'-DDD	1.7	< 0.12	< 0.38	1.2	< 0.28	0.4	< 0.28	0.9	< 10		
	ug/kg	Endrinoldehyde	< 0.28		< 0.28		< 0.28		< 0.28				
	ug/kg	Sulfan sulfate	< 0.28		< 0.28		< 0.28		< 0.28				
ug/kg	4,4'-DDT	2.2	< 0.24	< 0.33	0	< 0.33	0.3	< 0.33	0.2	< 10			
ug/kg	Methoxychlor	< 0.56		< 0.55		< 0.56		< 0.56					
ug/kg	Endrinetone	< 0.28		< 0.28		< 0.28		< 0.28					
ug/kg	Chlorodane	3	< 0.36	< 1.54	1	< 1.51	0	< 1.52	1	< 10			
ug/kg	Oxychlorane	< 1.54		< 1.51		< 1.52		< 1.52					
ug/kg	Toxaphene	< 1.54		< 1.51		< 1.52		< 1.52					
M E T A L S	mg/kg	Ag (silver)											
	mg/kg	Al (aluminum)											
	mg/kg	As (arsenic)	0	1.52	1.4	0	1.4	0	1.4	0	< 0.8	0.46	
	mg/kg	B (boron)											
	mg/kg	Ba (barium)	10			10			30			10	
	mg/kg	Be (beryllium)											
	mg/kg	Cd (cadmium)	< 10	0.56	< 1.2	< 10	< 1.2	< 10	< 1.2	< 10	< 1	< 0.1	
	mg/kg	Cr (chromium)	20	6.2	6.6	30	6.2	< 10	6.5	< 10	8	8	
	mg/kg	Cu (copper)	< 10	4.23	8.1	< 10	6.2	< 10	4.3	< 10	5	4.3	
	mg/kg	Fe (iron)	2000			1900			4400			3300	
	mg/kg	Hg (mercury)	0	< 0.006	< 0.01	0	< 0.01	0	< 0.01	0	0.3	0.14	
	mg/kg	Mg (magnesium)											
	mg/kg	Mn (manganese)	160	248	148	190	221	240	195	190			
	mg/kg	Mo (molybdenum)											
	mg/kg	Ni (nickel)	10	13.7	< 5.8	10	< 5.8	< 10	< 6	10	5		
mg/kg	Pb (lead)	40	6.96	8.3	30	10.3	30	6.7	20	< 10	< 0.1		
mg/kg	Sb (antimony)												
mg/kg	Se (selenium)	< 0.83		< 0.84		< 0.86		< 0.86					
mg/kg	Sn (tin)												
mg/kg	Sr (strontium)												
mg/kg	Ti (titanium)												
mg/kg	Zn (zinc)	19	18.4	21.2	1.8	20.7	19	19.8	16	16	24		
mg/kg	V (vanadium)												
P C B ' S	ug/kg	Aroclor-1006	< 1.54		< 1.51		< 1.52		< 1.52				
	ug/kg	Aroclor-1221	< 1.54		< 1.51		< 1.52		< 1.52				
	ug/kg	Aroclor-1232	< 1.54		< 1.51		< 1.52		< 1.52				
	ug/kg	Aroclor-1242	< 1.54		< 1.51		< 1.52		< 1.52				
	ug/kg	Aroclor-1248	< 1.54		< 1.51		< 1.52		< 1.52				
	ug/kg	Aroclor-1254	< 3.2		< 3.15		< 3.18		< 3.18				
	ug/kg	Aroclor-1260	< 3.2		< 3.15		< 3.18		< 3.18				
	ug/kg	Total PCB's	< 0.88		< 0.88		< 0.88		< 0.88				
P A R T I C L E S I Z E % F I N E R	S I Z E	N D	3 in			100			100			100	
			1 1/2			100			100			100	
			3/4			100			100			100	
			3/8			100			100			100	
			4	99	90.9	99.7	100	99.3	99	100	100	100	99
		8	98			99			95			100	98
		10	77.9		98.6		96.4		100				
		16	83.0		91.1		94.0		92.7		88.0		99.9
		18									99.0		94.0
		20											99.0
	30			47.8		73.8		91.2					
	40	39.0		42.0		33.0		91.0		61.0		78.0	
	50	6.2		47.8		73.8		91.2					
	70	1.5											
	80			1.9		24.1		17.9					
100	2.0	0.2	0.4	3.0	1.3	1.0	1.2	3.0	1.0	4.0			
140	0.2		0.3		1.1		0.9						
S I L T	C L A Y	200	0.0	0.1	0.3	1.0	0.9	0.0	0.8	1.0	0.0	2.0	
		270			0.1		0.7						
		0.20 mm	0.0		0.0		0.5		0.0		0.0		
		0.0	0.0		0.3		0.0		0.0		0.0		
M I S C	%	Total Organic Carb	0.04		0.15		0.15		0.21				
	mg/kg	Chem Oxy Dema	5700		7500		17000		3800		4300		
	mg/kg	Kjedahl Nitrogen	48600		750		210		300		269		
	mg/kg	Total Phosph									135		
	mg/kg	Oil and Grease	1000		0		0		0		247		
	mg/kg	Cyanide, Total	0.14		< 0.63		< 0.63		< 0.65				
	mg/kg	Ammonia	< 6		0.63		3		4.7				
	mg/l	Ammonia Elutriate											
%	Moisture	16.4		20.3		21.1		23.3					
%	Total Solids	83.6		79.7		78.9		76.7					
%	Volatile Solids	0.48		0.5		0.5		0.5					

Table 3. Contaminant Data for Pool 1 of the Upper Mississippi River

		Record #	430		16		431	432	17	433		
		River Mile	851.6	851.6	851.6	851.5	851.4	851.3	850.9	850.7	850.3	850.3
		Location	FRANK. AVE BRIDGE	BELOW FRANKLIN BRIDGE	FRANKLIN BRIDGE dup	FRANK. AVE BRIDGE	ABOVE FRANKLIN BRIDGE	FRANK. AVE BRIDGE	FRANK. AVE BRIDGE	FRANK. AVE BRIDGE	AB LAKE ST. BRIDGE	ABOVE LAKE ST BRIDGE
		Year	1989	1994	1994	1980	1994	1989	1989	1980	1989	1994
		System	1	1	1	1	1	1	1	1	1	1
		Habitat Type	1	1	1	1	1	1	1	1	1	1
		Pool	1	1	1	1	1	1	1	1	1	1
		Sam. Gear	1	1	1	1	1	1	1	1	1	1
		Sam. Depth	10	10	10	10	10	10	10	10	10	10
		Data Cit.	COE	COE	COE	COE	COE	COE	COE	COE	COE	COE
C H C S	ug/kg	a-BHC	< 0.07	< 0.25	< 0.25		< 0.25	< 0.07	< 0.07		< 0.07	< 0.25
	ug/kg	b-BHC	< 0.15	0.57	< 0.25		1.1	< 0.14	< 0.14		< 0.15	3.1
	ug/kg	BHC	< 0.22	< 0.25	< 0.25		< 0.25	< 0.21	< 0.21		< 0.22	< 0.25
	ug/kg	g-BHC (lindane)	< 0.1	< 0.25	< 0.25		< 0.25	< 0.1	< 0.09		< 0.1	< 0.25
	ug/kg	Heptachlor	< 0.07	< 0.25	< 0.25		< 0.25	< 0.07	< 0.07		< 0.07	< 0.25
	ug/kg	Aldrin	0.12					< 0.1	< 0.09		< 0.1	
	ug/kg	Heptachlorepoxi	< 0.12					< 0.12	< 0.12		< 0.12	
	ug/kg	Endosulfan I	< 0.12					< 0.12	< 0.12		< 0.12	
	ug/kg	Dieldrin	< 0.12	< 0.5	< 0.49	0	0.58	< 0.12	< 0.12	0	< 0.12	1.2
	ug/kg	4,4'-DDE	< 0.1	< 0.5	< 0.49	0	< 0.5	< 0.1	< 0.09	0	< 0.1	0.52
	ug/kg	Endrin	< 0.22	< 0.5	< 0.49	0	< 0.5	< 0.21	< 0.21	0	< 0.22	< 0.49
	ug/kg	Endosulfan II	< 0.24					< 0.24	< 0.23		< 0.24	
	ug/kg	4,4'-DDD	< 0.27	< 0.5	< 0.49	1.7	< 0.5	< 0.26	< 0.26	0.3	< 0.27	< 0.49
	ug/kg	Endrin	< 0.27					< 0.26	< 0.26		< 0.27	
	ug/kg	Sulfan sulfate	< 0.27					< 0.26	< 0.26		< 0.27	
ug/kg	4,4'-DDT	< 0.32	< 0.5	< 0.49	1	< 0.5	< 0.31	< 0.3	0.3	< 0.31	< 0.49	
ug/kg	Methoxychlor	< 0.54					< 0.52	< 0.51		< 0.53		
ug/kg	Endrin	< 0.27					< 0.26	< 0.26		< 0.27		
ug/kg	Chlorodane	< 1.46	< 0.25	< 0.25	5	< 0.25	< 1.43	< 1.46	1	< 1.45	< 0.25	
ug/kg	Oxychlorane											
ug/kg	Toxaphene	< 1.46					< 1.43	< 1.46		< 1.45		
M E T A L S	mg/kg	Ag (silver)										
	mg/kg	Al (aluminum)										
	mg/kg	As (arsenic)	1.8	0.89		0	0.86	1.6	2.4	0	1.5	1
	mg/kg	B (boron)										
	mg/kg	Ba (barium)				10				20		
	mg/kg	Be (beryllium)										
	mg/kg	Cd (cadmium)	< 1.1	< 0.12		< 10	0.47	< 1.2	< 1.1	< 10	< 1.2	0.47
	mg/kg	Cr (chromium)	7	5.9		10	6.5	6.4	7.4	< 10	6.3	7.1
	mg/kg	Cu (copper)	5.2	1.7		< 10	2.4	2.6	< 1.5	< 10	2.6	3.5
	mg/kg	Fe (iron)				2900				3500		
	mg/kg	Hg (mercury)	< 0.01	< 0.05		0	< 0.05	< 0.01	< 0.01	0	< 0.01	< 0.05
	mg/kg	Mg (magnesium)										
	mg/kg	Mn (manganese)	267	171		150	257	190	183	160	219	198
	mg/kg	Mo (molybdenum)										
	mg/kg	Ni (nickel)	7.7	4.4		< 10	5.2	< 5.8	< 5.7	< 10	< 5.9	5
mg/kg	Pb (lead)	14.9	11.5		< 10	13.6	6.4	7.6	< 10	7.8	9.3	
mg/kg	Sb (antimony)											
mg/kg	Se (selenium)	< 0.82					< 0.83	< 0.82		< 0.85		
mg/kg	Sn (tin)											
mg/kg	Sr (strontium)											
mg/kg	Ti (titanium)											
mg/kg	Zn (zinc)	19.7	15.9		15	17.7	15.5	15	14	16.2	21.9	
mg/kg	V (vanadium)											
P C B S	ug/kg	Aroclor-1006	< 1.46	< 5	< 4.9		< 5	< 1.43	< 1.46		< 1.45	< 4.9
	ug/kg	Aroclor-1221	< 1.46	< 5	< 4.9		< 5	< 1.43	< 1.46		< 1.45	< 4.9
	ug/kg	Aroclor-1232	< 1.46	< 5	< 4.9		< 5	< 1.43	< 1.46		< 1.45	< 4.9
	ug/kg	Aroclor-1242	< 1.46	< 5	< 4.9		< 5	< 1.43	< 1.46		< 1.45	< 4.9
	ug/kg	Aroclor-1248	< 1.46	< 5	< 4.9		< 5	< 1.43	< 1.46		< 1.45	< 4.9
	ug/kg	Aroclor-1254	< 3.05	< 5	< 4.9		< 5	< 2.98	< 2.93		< 3.03	< 4.9
	ug/kg	Aroclor-1260	< 3.05	< 5	< 4.9		< 5	< 2.98	< 2.93		< 3.03	< 4.9
	ug/kg	Total PCB's										
P A R T I C L E S I Z E	% F I N E	N D	3 in			100				100		
			1 1/2			100				100		
			3/4			100				100		
			3/8			100				100		
			4	98.5	99.7	100	100	99.2	95.1	100	99.8	99.4
			8			97				100		
			10	86.8	99.0		99.1	94.7	89.4		99.4	96.5
			16	64.6		88.0		87.1	80.3	99.0	96.9	
			18									
			20		96.0		92.2					89.1
			30	25.6				54.6	47.1			69.0
			40		55.7	20.0	33.2			84.0		43.7
			50	25.6				54.6	47.1			69.0
			70									
			80	7.3				3.8	8.0			10.0
100	2.5	2.0	1.0	1.2	0.8	0.4	1.0	1.0	1.3			
140	2.2	1.7		0.8	0.6	0.3			0.6	0.7		
S I L T	C L A Y	200	1.6	1.7	0.0	0.6	0.5	0.2	0.0	0.5	0.5	
		270	1.0				0.4			0.3		
		0.20 mm	0.8		0.0		0.4		0.0			
		0.05 mm	0.5		0.0		0.2		0.0			
M I S C	%	Total Organic Car	0.77	0.064	0.063		0.035	0.11	0.034		0.22	0.112
	mg/kg	Chem Oxy Dema				6700				2900		
	mg/kg	Kjedahl Nitrogen				490				290		
	mg/kg	Total Phosph										
	mg/kg	Oil and Grease				100				0		
mg/kg	Cyanide, Total	< 0.62	< 0.06			0.06	< 0.63	< 0.62		< 0.65	< 0.06	
mg/kg	Ammonia	5.5					3.10	1.2		3.8		
mg/l	Ammonia Elutriat		< 0.06	< 0.06		< 0.06					< 0.06	
%	Moisture	19.4	20.3	21.5		22.1	20.1	19.7		22.6	18.4	
%	Total Solids	80.6	79.7	78.5		77.9	79.9	80.3		77.4	81.6	
%	Volatile Solids	1	1.17	1.45		1.21	0.7	0.5		0.7	1.64	

Table 3. Contaminant Data for Pool 1 of the Upper Mississippi River

		Record #	18	19	20	21	434	22	435	436			
		River Mile	850.2	850.2	850.11	850.0	850.0	850.0	849.9	849.7	849.3	849.2	
		Location	AB LAKE ST. BRIDGE	AB LAKE ST. BRIDGE	AB LAKE ST. BRIDGE	AB LAKE ST. BRIDGE	AB LAKE ST. BRIDGE	AB LAKE ST. BRIDGE	AB LAKE ST. BRIDGE	BLW LAKE ST. BRIDGE	BLW LAKE ST. BRIDGE	BELOW LAKE ST. BRIDGE	
		Year	1978	1978	1974	1982	1989	2002	1980	1989	1989	1994	
		System	1	1	1	1	1	1	1	1	1	1	
		Habitat Type	1	1	1	1	1	1	1	1	1	1	
		Pool	1	1	1	1	1	1	1	1	1	1	
		Sam. Gear	1	1	1	1	1	1	1	1	1	1	
		Sam. Depth	10	10	10	10	10	10	10	10	10	10	
		Data Cit.	COE	COE	COE	COE	COE	COE	COE	COE	COE	COE	
C H C S	ug/kg	a-BHC					< 0.07	< 0.12		< 0.07	< 0.08	< 0.25	
	ug/kg	b-BHC					< 0.14	< 0.12		< 0.15	< 0.16	1.2	
	ug/kg	BHC					< 0.22	< 0.12		< 0.22	< 0.24	< 0.25	
	ug/kg	g-BHC (lindane)					< 0.1	< 0.12		< 0.1	< 0.11	< 0.25	
	ug/kg	Heptachlor					< 0.07	< 0.08		< 0.07	< 0.08	< 0.25	
	ug/kg	Aldrin					< 0.1			< 0.1	< 0.11		
	ug/kg	Heptachlorepoxi					< 0.12	< 1.48		< 0.12	< 0.14		
	ug/kg	Endosulfan I					< 0.12			< 0.12	< 0.14		
	ug/kg	Dieldrin	0	0	< 10	< 0.1	< 0.12	< 0.12	0	< 0.12	< 0.14	< 0.5	
	ug/kg	4,4'-DDE	49	3.6	< 10	< 0.1	< 0.1	< 0.12	0	< 0.1	< 0.11	< 0.5	
	ug/kg	Endrin	0	0	< 10		< 0.22	< 0.12	0	< 0.22	< 0.24	< 0.5	
	ug/kg	Endosulfan II					< 0.24			< 0.24	< 0.27		
	ug/kg	4,4'-DDD	0	1.2	< 10	< 0.1	< 0.26	< 0.12	1.9	< 0.27	< 0.3	< 0.5	
	ug/kg	Endrin					< 0.26			< 0.27	< 0.3		
	ug/kg	Sulfan sulfate					< 0.26			< 0.27	< 0.3		
ug/kg	4,4'-DDT	0	0	< 10	< 0.1	< 0.31	< 0.24	0.7	< 0.32	< 0.35	< 0.5		
ug/kg	Methoxychlor					< 0.53			< 0.54	< 0.59			
ug/kg	Endrin					< 0.26			< 0.27	< 0.3			
ug/kg	Chlorodane	0	0	< 10	< 1	< 1.44	5.64	6	< 1.46	< 1.62	< 0.25		
ug/kg	Oxychlorane												
ug/kg	Toxaphene					< 1.44			< 1.46	< 1.62			
M E T A L S	mg/kg	Ag (silver)											
	mg/kg	Al (aluminum)											
	mg/kg	As (arsenic)	3	0	< 1	2	1.5	0.85	0	1.8	1.9	1	
	mg/kg	B (boron)											
	mg/kg	Ba (barium)	210	20					20				
	mg/kg	Be (beryllium)											
	mg/kg	Cd (cadmium)	< 10	< 10	2	0.56	< 1.2	0.31	< 10	< 1.2	< 1.3	0.38	
	mg/kg	Cr (chromium)	30	< 10	10	6.9	6.2	4.2	< 10	6.2	6.3	6.8	
	mg/kg	Cu (copper)	100	< 10	10	3.1	2	2.06	< 10	2.9	4	2.4	
	mg/kg	Fe (iron)	8000	3100						3900			
	mg/kg	Hg (mercury)	1.4	0	1.1	1.69	< 0.01	< 0.006	0	< 0.01	0.034	< 0.04	
	mg/kg	Mg (magnesium)											
mg/kg	Mn (manganese)	690	150			124	143	280	196	250	196		
mg/kg	Mo (molybdenum)												
mg/kg	Ni (nickel)	40	20	7	8	< 5.9	7.05	< 10	< 6.3	< 6.6	6		
mg/kg	Pb (lead)	320	20	19	11	5.4	5.64	50	32.4	12.5	6.7		
mg/kg	Sb (antimony)												
mg/kg	Se (selenium)					< 0.84			< 0.9	< 0.94			
mg/kg	Sn (tin)												
mg/kg	Sr (strontium)												
mg/kg	Ti (titanium)												
mg/kg	Zn (zinc)	400	20	29	37	24.1	19.3	33	24.2	23.7	14.9		
mg/kg	V (vanadium)												
P C B S	ug/kg	Aroclor-1006					< 1.44			< 1.46	< 1.62	< 5	
	ug/kg	Aroclor-1221					< 1.44			< 1.46	< 1.62	< 5	
	ug/kg	Aroclor-1232					< 1.44			< 1.46	< 1.62	< 5	
	ug/kg	Aroclor-1242					< 1.44			< 1.46	< 1.62	< 5	
	ug/kg	Aroclor-1248					< 1.44			< 1.46	< 1.62	< 5	
	ug/kg	Aroclor-1254					< 3			< 3.05	< 3.38	< 5	
	ug/kg	Aroclor-1260					< 3			< 3.05	< 3.38	< 5	
	ug/kg	Total PCB's						< 0.88					
P A R T I C L E S I Z E % F I N E R	S I L T	C L A Y	3 in							100			
			1 1/2							100			
			3/4								100		
			3/8								100		
			4	99	100	99		99.2	100	100	99.7	99.7	97.8
	S A N D	c o a r s e	8			99					98		
			10	97	98			98.7	98		98.2	99.1	93.4
			16			96.0		97.9		94.0	92.3	96.5	
			18										
			20	94.0	86.0								81.8
		m e d i u m	30					92.7			63.7	81.2	
			40	90.0	33.0	66.0				56.0			37.4
			50					92.7	16.3		63.7	81.2	
			70						2.3				
			80	79.0	3.0			16.2			14.6	25.5	
f i n e	100			2.0		0.7	0.2	4.0	2.7	16.2	0.7		
	140								2.0	13.1	0.6		
	200		2.0	0.0				2.0	1.6	10.7	0.5		
	270									8.5			
	0.20 mm	35.0	0.5	0.0				0.0					
0.05 mm	13.0	0.0	0.0				0.0						
M I S C	%	Total Organic Car					0.23	0.04		0.75	1.99	0.104	
	mg/kg	Chem Oxy Dema	26000	4900	5032	3130			9400				
	mg/kg	Kjedahl Nitrogen	9200	410	548	< 20.00			1900				
	mg/kg	Total Phosph	990	87	201								
	mg/kg	Oil and Grease	1000	0	354	230			0				
	mg/kg	Cyanide, Total					< 0.64	< 0.10		< 0.68	< 0.72	0.08	
	mg/kg	Ammonia					1.8	< 6		14	11.0		
mg/l	Ammonia Elutriat										< 0.06		
%	Moisture					21.9	23.4		26.6	30.1	21.4		
%	Total Solids					78.1	76.6		73.4	69.9	78.6		
%	Volatile Solids					0.5	0.26		1.3	2.6	1.33		

Table 3. Contaminant Data for Pool 1 of the Upper Mississippi River

Record #			23	24	437	25	26	27	438	28	29		
River Mile			848.9	848.8	848.8	848.8	848.8	848.7	848.7	848.6	848.23		
Location			BLW LAKE ST. BRIDGE	BW DAYMARK 849.1	BW DAYMARK 849.1	ST PAUL DAYMARK 2	BW DAYMARK 849.1	BW DAYMARK 849.1	BW DAYMARK 849.1	BW DAYMARK 849.1	UPPER APPROAC H L/D 1	UPPER APPROAC H L/D 1	
Year			1980	1982	1989	1994	1982	1978	1978	1989	1974	1974	
System			1	1	1	1	1	1	1	1	1	1	
Habitat Type			1	1	1	1	1	1	1	1	1	1	
Pool			1	1	1	1	1	1	1	1	1	1	
Sam. Gear			1	1	1	1	1	1	1	1	1	1	
Sam. Depth			10	10	10	10	10	10	10	10	10	10	
Data Cit.			COE	COE	COE	COE	COE	COE	COE	COE	COE	COE	
C H C S	ug/kg	a-BHC			< 0.07	< 0.25				< 0.07			
	ug/kg	b-BHC			< 0.15	0.48				< 0.15			
	ug/kg	BHC			< 0.22	< 0.25				< 0.22			
	ug/kg	g-BHC (lindane)			< 0.1	< 0.25				< 0.1			
	ug/kg	Heptachlor			< 0.07	< 0.25				< 0.07			
	ug/kg	Aldrin			< 0.1					< 0.1			
	ug/kg	Heptachlorepoxi			< 0.12					< 0.12			
	ug/kg	Endosulfan I			< 0.12					< 0.12			
	ug/kg	Dieldrin	0	< 0.1	< 0.12	< 0.51	< 0.1	0	0	< 0.12	< 10	< 10	
	ug/kg	4,4'-DDE	0	< 0.1	< 0.1	< 0.51	< 0.1	0	0	< 0.1	< 10	< 10	
	ug/kg	Endrin	0	< 0.1	< 0.22	< 0.51	< 0.1	0	0	< 0.22	< 10	< 10	
	ug/kg	Endosulfan II			< 0.25					< 0.25			
	ug/kg	4,4'-DDD	0	< 0.1	< 0.27	< 0.51	< 0.1	0.2	2.2	< 0.27	< 10	< 10	
	ug/kg	Endrin			< 0.27					< 0.27			
	ug/kg	Sulfan sulfate			< 0.27					< 0.27			
ug/kg	4,4'-DDT	0	< 0.1	< 0.32	< 0.51	1	0	0.5	< 0.32	< 10	< 10		
ug/kg	Methoxychlor			< 0.54					< 0.54				
ug/kg	Endrin			< 0.27					< 0.27				
ug/kg	Chlorodane	0	< 1	< 1.48	< 0.25	< 1	0	2	< 1.48	< 10	< 10		
ug/kg	Oxychlorane												
ug/kg	Toxaphene			< 1.48					< 1.48				
M E T A L S	mg/kg	Ag (silver)											
	mg/kg	Al (aluminum)											
	mg/kg	As (arsenic)	0	1.3	1.5	0.95	0.68	0	0	2.2	< 0.8	< 0.9	
	mg/kg	B (boron)											
	mg/kg	Ba (barium)	10					10	20				
	mg/kg	Be (beryllium)											
	mg/kg	Cd (cadmium)	< 10	< 0.2	< 1.2	0.45	< 0.2	< 10	< 10	< 1.3	1	< 1	
	mg/kg	Cr (chromium)	< 10	2.9	4.8	8.6	3.9	< 10	< 10	6.8	8	9	
	mg/kg	Cu (copper)	< 10	1.9	15.8	2.4	2	< 10	< 10	7.9	11	12	
	mg/kg	Fe (iron)	2800	3600			3900	1700	2300				
	mg/kg	Hg (mercury)	0	0.035	< 0.01	< 0.04	0.035	0	0	0.02	1.1	0.6	
	mg/kg	Mg (magnesium)											
	mg/kg	Mn (manganese)	150		136	212		100	130	222			
	mg/kg	Mo (molybdenum)											
	mg/kg	Ni (nickel)	< 10	4	< 5.9	5.3	5	< 10	< 10	< 6.3	6	3	
mg/kg	Pb (lead)	< 10	8	10.9	6.6	10	10	20	11.2	< 11	< 12		
mg/kg	Sb (antimony)												
mg/kg	Se (selenium)			< 0.85					< 0.91				
mg/kg	Sn (tin)												
mg/kg	Sr (strontium)												
mg/kg	Ti (titanium)												
mg/kg	Zn (zinc)	13	12	15.6	17.3	13	10	20	23.2	24	23		
mg/kg	V (vanadium)												
P C B S	ug/kg	Aroclor-1006			< 1.48	< 5.1				< 1.48			
	ug/kg	Aroclor-1221			< 1.48	< 5.1				< 1.48			
	ug/kg	Aroclor-1232			< 1.48	< 5.1				< 1.48			
	ug/kg	Aroclor-1242			< 1.48	< 5.1				< 1.48			
	ug/kg	Aroclor-1248			< 1.48	< 5.1				< 1.48			
	ug/kg	Aroclor-1254			< 3.08	< 5.1				< 3.08			
	ug/kg	Aroclor-1260			< 3.08	< 5.1				< 3.08			
	ug/kg	Total PCB's											
P A R T I C L E S I Z E % F I N E R	S I Z E	N D	3 in								100	100	
			1 1/2								100	100	
			3/4								100	100	
			3/8								100	100	
			4	99	100	100	100	100	100	100	100	100	
		8	98	100							86	86	
		10			99.9	99.6			100	99	99.8	78	78
		16	93.0	100.0	99.3		99.0			99.2	74.0	74.0	
		18											
		20				98.7		100.0	91.0				
	30		93.0	92.7		96.0			91.0				
	40	58.0	80.0		90.5	84.0	94.0	63.0		63.0	63.0		
	50		51.0	92.7		47.0			91.0				
	70		17.0			18.0							
	80			25.7			11.0	7.0	22.2				
100	0.0	4.0	0.8	4.4	5.0			3.8	4.0	4.0			
140			0.7	0.9				3.6					
S I L T	C L A Y	200	0.0	3.0	0.7	0.4	3.0	1.0	3.0	2.6	1.0	1.0	
		270		3.0	0.5		3.0			1.9			
		0.20 mm	0.0	1.0	0.4		1.0	0.0	0.0	1.4	0.0	0.0	
		0.05 mm	0.0	0.0	0.3		0.0	0.0	0.0	1.1	0.0	0.0	
M I S C	%	Total Organic Car			0.28	0.071				0.74			
	mg/kg	Chem Oxy Dema	2000	2360			2960	2300	3600		5243	8243	
	mg/kg	Kjedahl Nitrogen	600	170			150	250	380		156	145	
	mg/kg	Total Phosph		95			110	630	82		170	406	
	mg/kg	Oil and Grease	0	< 50			< 50	0	0		396	374	
	mg/kg	Cyanide, Total			< 0.64	< 0.07				< 0.69			
	mg/kg	Ammonia			3					10.5			
mg/l	Ammonia Elutriat				< 0.06								
%	Moisture			22.3	23.2				27.1				
%	Total Solids			77.7	76.8				73				
%	Volatile Solids			0.5	0.99				1.2				

Table 3. Contaminant Data for Pool 1 of the Upper Mississippi River

		Record #	30	31	439	32	33	34	35	1071			
		River Mile	848.2	848.2	848.1	848.1	848.1	848.03	848.02	848.01	848	848	
		Location	UPPER APPROAC H/L/D 1	ST PAUL DAYMARK 1	UPPER APPROAC H/L/D 1	UPPER APPROAC H/L/D 1	UPPER APPROAC H/L/D 1,1	UPPER APPROAC H/L/D 1	UPPER APPROAC H/L/D 1	UPPER APPROAC H/L/D 1	UPPER APPROAC H/L/D 1	Ab. L/D 1 - mid	
		Year	1975	1994	1975	1989	1994	1982	1982	1978	1978	1983	
		System	1	1	1	1	1	1	1	1	1	1	
		Habitat Type	1	1	1	1	1	1	1	1	1	1	
		Pool	1	1	1	1	1	1	1	1	1	1	
		Sam. Gear	1	1	1	1	1	1	1	1	1	3	
		Sam. Depth	10	10	10	10	10	10	10	10	10	10	
		Data Cit.	COE	COE	COE	COE	COE	COE	COE	COE	COE	MWCC	
C H C S	ug/kg	a-BHC		< 0.24		< 0.08		< 0.25					
	ug/kg	b-BHC		0.38		< 0.15		2.6					
	ug/kg	BHC		< 0.24		< 0.23		< 0.25					
	ug/kg	g-BHC (lindane)		< 0.24		< 0.1		< 0.25					
	ug/kg	Heptachlor		< 0.24		< 0.08		< 0.25					
	ug/kg	Aldrin				< 0.1							
	ug/kg	Heptachlorepoxi				< 0.13							
	ug/kg	Endosulfan I				< 0.13							
	ug/kg	Dieldrin		< 0.49		< 0.13	< 0.49	< 0.1	< 0.1	0	0		
	ug/kg	4,4'-DDE		< 0.49		< 0.1	< 0.49	< 0.1	< 0.1	1.2	1		
	ug/kg	Endrin		< 0.49		< 0.23	< 0.49	< 0.1	< 0.1	0	0		
	ug/kg	Endosulfan II				< 0.25							
	ug/kg	4,4'-DDD		< 0.49		< 0.28	< 0.49	< 0.1	< 0.1	0.9	3.6		
	ug/kg	Endrinaldehyde				< 0.28							
	ug/kg	Sulfan sulfate				< 0.28							
ug/kg	4,4'-DDT		< 0.49		< 0.33	< 0.49	< 0.1	< 0.1	0	0.5			
ug/kg	Methoxychlor				< 0.55								
ug/kg	Endrin ketone				< 0.28								
ug/kg	Chlorodane		< 0.24		< 1.5	< 0.25	< 1	< 1	0	0			
ug/kg	Oxychlorane												
ug/kg	Toxaphene				< 1.5								
M E T A L S	mg/kg	Ag (silver)										0.056	
	mg/kg	Al (aluminum)											
	mg/kg	As (arsenic)	1.6	0.91	2.2	1.6	0.69	0.57	0.66	0	0	1.01	
	mg/kg	B (boron)								10	10		
	mg/kg	Ba (barium)											
	mg/kg	Be (beryllium)										0.069	
	mg/kg	Cd (cadmium)	< 0.1	0.42	4.3	< 1.3	0.36	< 0.19	< 0.19	< 10	< 10	0.103	
	mg/kg	Cr (chromium)	9.6	8.2	37.5	5.5	11.2	2.9	3.8	< 10	< 10	13.3	
	mg/kg	Cu (copper)	24	1.8	39.7	4.2	11.9	2.9	1.9	< 10	< 10	2.9	
	mg/kg	Fe (iron)						3100	3800	2200	2200		
	mg/kg	Hg (mercury)	0.09	< 0.05	0.4	< 0.01	0.08	0.026	0.032	0	0	0.05	
	mg/kg	Mg (magnesium)											
	mg/kg	Mn (manganese)		150		196	171			140	140		
	mg/kg	Mo (molybdenum)											
	mg/kg	Ni (nickel)		4.1		< 6.4	4.9	4	5	< 10	10	6.5	
mg/kg	Pb (lead)	< 0.1	10.8	118	5.3	14.6	10	9	10	10	6.5		
mg/kg	Sb (antimony)												
mg/kg	Se (selenium)				< 0.92						0.05		
mg/kg	Sn (tin)												
mg/kg	Sr (strontium)												
mg/kg	Ti (titanium)										0.6		
mg/kg	Zn (zinc)	40.9	16.9	158	17.5	13.9	11	17	20	20	14		
mg/kg	V (vanadium)												
P C B ' S	ug/kg	Aroclor-1006		< 4.9		< 1.5		< 4.9					
	ug/kg	Aroclor-1221		< 4.9		< 1.5		< 4.9					
	ug/kg	Aroclor-1232		< 4.9		< 1.5		< 4.9					
	ug/kg	Aroclor-1242		< 4.9		< 1.5		< 4.9					
	ug/kg	Aroclor-1248		< 4.9		< 1.5		< 4.9					
	ug/kg	Aroclor-1254		< 4.9		< 3.13		< 4.9					
	ug/kg	Aroclor-1260		< 4.9		< 3.13		< 4.9					
	ug/kg	Total PCB's											
P A R T I C L E S I Z E % F I N E R	S I L T	C L A Y	3 in							100	100		
			1 1/2					100	100	100	100		
			3/4					100	100	100	100		
			3/8					100	100	100	100		
			4		100		100	100	97	100	100	100	
	S A N D	c o a r s e	8										
			10		99.9		99.7	99.8			100	99	
			16				99.6		92.0	100.0			
			18										
			20		99.3			98.8			100.0	98.0	
			30				98.0		89.0	100.0			
			40		84.4			91.5	83.0	99.0	100.0	93.0	
			50				98.0		61.0	83.0			
			70						24.0	34.0			
			80				36.8				20.0	25.0	
100		3.3		3.7	3.0	9.0	5.0						
140		0.9		3.8	1.2								
S I L T	C L A Y	200		0.7		2.6	0.8	4.0	3.0	3.0	5.0		
		270				1.9		3.0	2.0				
		0.20 mm				1.8		1.0	1.0	0.0	1.0		
		0.05 mm				1.3		0.0	0.0	0.0	0.0		
M I S C	%	Total Organic Car		0.045		0.15	0.049						
	mg/kg	Chem Oxy Dema	26334		91600			4120	3710	4900	5200		
	mg/kg	Kjedahl Nitrogen						190	140	490	630		
	mg/kg	Total Phosph						100	190	150	88		
	mg/kg	Oil and Grease	1147		3160			65	75	0	0		
	mg/kg	Cyanide, Total		< 0.06		< 0.69	< 0.06						
	mg/kg	Ammonia				8.1							
mg/l	Ammonia Elutriat		< 0.06			< 0.06							
%	Moisture		20.2		28	22							
%	Total Solids		79.8		72	78							
%	Volatile Solids		1.1		1.4	1.04							

Table 3. Contaminant Data for Pool 1 of the Upper Mississippi River

		Record #	1075	1076	1088	1080	1084	440		
		River Mile	848	848	848	848	848	847.9		
		Location	Ab. L/D 1 - west	Ab. L/D 1 - mean	Ab. L/D 1 - west	Ab. L/D 1 - east	Ab. L/D 1 - mid	UPPER APPROACH L/D 1		
		Year	1983	1983	1985	1985	1985	1989		
		System	1	1	1	1	1	1		
		Habitat Type	1	1	1	1	1	1		
		Pool	1	1	1	1	1	1		
		Sam. Gear	3	3	3	3	3	1		
		Sam. Depth	10	10	10	10	10	10		
		Data Cit.	MWCC	MWCC	MWCC	MWCC	MWCC	COE		
CHCS	ug/kg	a-BHC	< 0.53					< 0.08		
	ug/kg	b-BHC	< 1.1					< 0.15		
	ug/kg	BHC						< 0.23		
	ug/kg	g-BHC (lindane)	< 0.53					< 0.1		
	ug/kg	Heptachlor	< 0.53					< 0.08		
	ug/kg	Aldrin						< 0.1		
	ug/kg	Heptachlorepoxid						< 0.13		
	ug/kg	Endosulfan I						< 0.13		
	ug/kg	Dieldrin	< 1.6					< 0.13		
	ug/kg	4,4'-DDE	< 1.6					< 0.1		
	ug/kg	Endrin	< 2.1					< 0.23		
	ug/kg	Endosulfan II						< 0.25		
	ug/kg	4,4'-DDD	< 3.2					< 0.28		
	ug/kg	Endrinoldehyde						< 0.28		
	ug/kg	Sulfan sulfate						< 0.28		
	ug/kg	4,4'-DDT	< 4.2					< 0.33		
	ug/kg	Methoxychlor						< 0.56		
	ug/kg	Endrinetone						< 0.28		
ug/kg	Chlorodane	< 11					< 1.52			
ug/kg	Oxychlorodane						< 1.52			
ug/kg	Toxaphene						< 1.52			
METALS	mg/kg	Ag (silver)	0.09	0.083	0.013	0.027	0.078			
	mg/kg	Al (aluminum)								
	mg/kg	As (arsenic)	0.7	1	1.41	2.36	1.47	2.1		
	mg/kg	B (boron)								
	mg/kg	Ba (barium)								
	mg/kg	Be (beryllium)	0.068	0.091	0.081	0.074	0.073			
	mg/kg	Cd (cadmium)	0.109	0.165	0.042	0.166	0.052	< 1.2		
	mg/kg	Cr (chromium)	13	9	6.5	6.1	7.5	7		
	mg/kg	Cu (copper)	3.3	5.4	2	2.7	2	5.3		
	mg/kg	Fe (iron)								
	mg/kg	Hg (mercury)	0.05	0.05	0.05	0.05	0.05	0.019		
	mg/kg	Mg (magnesium)								
	mg/kg	Mn (manganese)	118					192.6	120.8	242
	mg/kg	Mo (molybdenum)								
	mg/kg	Ni (nickel)	6.3	5.4	3.7	4	3.7	< 6.2		
mg/kg	Pb (lead)	6.7	8.3	4.6	15.6	7.8	13.9			
mg/kg	Sb (antimony)	4.4					4.5	5		
mg/kg	Se (selenium)	0.05	0.05	0.12	0.12	0.12	< 0.89			
mg/kg	Sn (tin)									
mg/kg	Sr (strontium)									
mg/kg	Ti (titanium)	0.6	0.6	1.7	1.4	1.9				
mg/kg	Zn (zinc)	11.7	14.6	12.5	24.4	12.7	24.3			
mg/kg	V (vanadium)									
PCB'S	ug/kg	Aroclor-1006	16					< 1.52		
	ug/kg	Aroclor-1221						< 1.52		
	ug/kg	Aroclor-1232						< 1.52		
	ug/kg	Aroclor-1242						< 1.52		
	ug/kg	Aroclor-1248						< 1.52		
	ug/kg	Aroclor-1254	22					< 3.18		
	ug/kg	Aroclor-1260	< 5.3					< 3.18		
	ug/kg	Total PCB's								
PARTICLE SIZE %FINER	SAND	coarse	3 in							
			1 1/2							
			3/4							
			3/8							
			4						99.8504	
			8							
			10						99.7	
	SILT	medium	16						99.3	
			18							
			20							
			30						98.3	
			40							
			50						98.3	
			70							
CLAY	fine	80						60.6		
		100						2.8		
		140						2.3		
		200						1.8		
		270						1.3		
		0.20 mm						1.3		
		0.05 mm						0.8		
MISC	%	Total Organic Carbon						0.64		
	mg/kg	Chem Oxy Demand								
	mg/kg	Kjedahl Nitrogen								
	mg/kg	Total Phosphorus								
	mg/kg	Oil and Grease								
	mg/kg	Cyanide, Total						< 0.68		
	mg/kg	Ammonia						13		
mg/l	Ammonia Elutriate									
%	Moisture						26.2			
%	Total Solids						73.8			
%	Volatile Solids						1.6			