Appendix B

Sediment Contaminant Datasheet

Pool 5 Dredged Material Management Plan

Upper Mississippi River

Wabasha and Winona Counties, Minnesota

Buffalo County, Wisconsin

US Army Corps of Engineers
St. Paul District

This Page is Intentionally Left Blank.

				MPCA SQT I	MPCA SQT II	MPCA Res/Rec Soil Reference Value (SRV) Aug 2016	MPCA Comm/Ind Soil Reference Value (SRV) Aug 2016	Below Mt Vernon	Below Mt Vernon	Above Mt. Vernon Light	Above Mt. Vernon Light	Minneiska	Minneiska	Lower Zumbro	Lower Zumbro	Below West Newton	Below West Newton	Fisher Island	Fisher Island	West Newton	West Newton	Mule Bend	Mule Bend	Upper Zumbro	Upper Zumbro
River Mile								740.23	740.25	741.4	741.6	742.1	742.5	744	744.5	746.2	746.6	746.5	746.6	747.7	748.1	748.5	748.8	749.6	749.5
Pool								5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Northing UTM 15N								4892784	4892787	4893789.3	4893986.7	4894329	4894756	4896762	4897536	4900143	4900590	4900498.2	4900603.1	4902240	4902742	4903373	4903728	4904158.6	4904071.7
Easting UTM 15N								592878	592841	591279.4	591054.6	590361	589927	589177	588788	588814	588757	588817.2	588811.4	588027	588071	587744	587488	586313.7	586507.7
Lab								ADRL, INC	ADRL, INC	ADRL, INC	ADRL, INC	ADRL, INC	ADRL, INC	ADRL, INC	ADRL, INC	ADRL, INC	ADRL, INC	ADRL, INC	ADRL, INC	ADRL, INC	ADRL, INC	ADRL, INC	ADRL, INC	ADRL, INC	ADRL, INC
database ID								P5-09-2016	P5-08-2016	P5-06-2013	P5-05-2013	P5-07-2016	P5-12-2016	P5-11-2016	P5-10-2016	P5-18-2016	P5-17-2016	P5-04-2013	P5-03-2013	P5-16-2016	P5-15-2016	P5-14-2016	P5-13-2016	P5-01-2013	P5-02-2013
Lab ID								008251-19	008251-18	8966-04	8966-03	008251-17	008251-16	008251-15	008251-14	008250-19	008250-18	8966-06	8966-05	008250-17	008250-16	008250-15	008250-14	8966-08	8966-07
Corps ID								POOL 5-12	POOL 5-11	2B	2A	POOL 5-10	POOL 5-9	POOL 5-8	POOL 5-7	POOL 5-6	POOL 5-5	3B	3A	POOL 5-4	POOL 5-3	POOL 5-2	POOL 5-1	4B	4A
Date Collected								9/28/2016	9/28/2016	9/9/2013	9/9/2013	9/28/2016	9/28/2016	9/28/2016	9/28/2016	9/28/2016	9/28/2016	9/9/2013	9/9/2013	9/28/2016	9/28/2016	9/28/2016	9/28/2016	9/9/2013	9/9/2013
Organics	ug/kg		Acenaphthylene	5.9	130			<0.84	<0.85	ND	ND	<0.86	<0.85	<0.86	<0.85	<0.8	<0.8	ND	ND	<0.8	<0.81	<0.8	<0.81	ND	ND
	ug/kg		Acenaphthene	6.7	89	1300000	19000000	<0.84	<0.85	ND	ND	<0.86	<0.85	<0.86	<0.85	<0.8	<0.8	ND	ND	<0.8	<0.81	<0.8	<0.81	ND	ND
	ug/kg		Anthracene	57	850	6500000	97000000	<0.84	<0.85	ND	ND	<0.86	<0.85	<0.86	<0.85	<0.8	<0.8	ND	ND	<0.8	<0.81	<0.8	<0.81	ND	ND
	ug/kg		Fluoranthene	420	2200	510000	6700000	<0.84	<0.85	ND	ND	<0.86	.95 J	<0.86	<0.85	<0.8	<0.8	ND	ND	<0.8	<0.81	<0.8	<0.81	ND	1.22 J
	ug/kg		Pyrene	200	1500	44000	44000	<0.84	<0.85	ND	ND	<0.86	.85 J	<0.86	<0.85	<0.8	<0.8	ND	ND	<0.8	<0.81	<0.8	<0.81	ND	ND
	ug/kg		Benzo(a) anthracene	110	1100			<0.84	<0.85	ND	ND	<0.86	<0.85	<0.86	<0.85	<0.8	<0.8	ND	ND	<0.8	<0.81	<0.8	<0.81	ND	ND
	ug/kg		Benzo(b)fluoranthene					<0.84	<0.85	ND	ND	<0.86	<0.85	<0.86	<0.85	<0.8	<0.8	ND	ND	<0.8	<0.81	<0.8	<0.81	ND	ND
	ug/kg		Benzo(k)fluoranthene					<0.84	<0.85	ND	ND	<0.86	<0.85	<0.86	<0.85	<0.8	<0.8	ND	ND	<0.8	<0.81	<0.8	<0.81	ND	ND
	ug/kg		Benzo(a)pyrene	150	1500	1000 ***	14000***	<0.84	<0.85	ND	ND	<0.86	<0.85	<0.86	<0.85	<0.8	<0.8	ND	ND	<0.8	<0.81	<0.8	<0.81	ND	ND
	ug/kg		Benzo(g,h,i)perylene					<0.84	<0.85	ND	ND	<0.86	<0.85	<0.86	<0.85	<0.8	<0.8	ND	ND	<0.8	<0.81	<0.8	<0.81	ND	ND
	ug/kg		Hexachlorobenzene					<4.2	<4.3	ND	ND	<4.2	<4.2	<4.3	<4.2	<4	<4	ND	ND	<4	<4	<4	<4	ND	ND
	ug/kg		Chlordane trans isomer					<4.2	<4.3	ND	ND	<4.2	<4.2	<4.3	<4.2	<4	<4	ND	ND	<4	<4	<4	<4	ND	ND
	ug/kg		Chlordane cis isomer	3.2*	18*	9500*	11000*	<4.2	<4.3	ND	ND	<4.2	<4.2	<4.3	<4.2	<4	<4	ND	ND	<4	<4	<4	<4	ND	ND
	ug/kg		P, P' -DDE	3.2	31	22000	28000	<4.2	<4.3	ND	ND	<4.2	<4.2	<4.3	<4.2	<4	<4	ND	ND	<4	<4	<4	<4	ND	ND
	ug/kg		O, P' -DDD					<4.2	<4.3	ND	ND	<4.2	<4.2	<4.3	<4.2	<4	<4	ND	ND	<4	<4	<4	<4	ND	ND
	ug/kg		Dieldrin	1.9	62			<4.2	<4.3	ND	ND	<4.2	<4.2	<4.3	<4.2	<4	<4	ND	ND	<4	<4	<4	<4	ND	ND
	ug/kg		O, P'-DDE			110	1500	<4.2	<4.3	ND	ND	<4.2	<4.2	<4.3	<4.2	<4	<4	ND	ND	<4	<4	<4	<4	ND	ND
	ug/kg		O, P' -DDT					<4.2	<4.3	ND	ND	<4.2	<4.2	<4.3	<4.2	<4	<4	ND	ND	<4	<4	<4	<4	ND	ND
	ug/kg		P, P' -DDD	4.9	28	19000	100000	<4.2	<4.3	ND	ND	<4.2	<4.2	<4.3	<4.2	<4	<4	ND	ND	<4	<4	<4	<4	ND	ND
	ug/kg		P, P' -DDT	4.2	63	7300	86000	<4.2	<4.3	ND	ND	<4.2	<4.2	<4.3	<4.2	<4	<4	ND	ND	<4	<4	<4	<4	ND	ND
	ug/kg		PCB 1016					<6.2	<6.4	ND	ND	<6.4	<6.3	<6.4	<6.4	<6	<6	ND	ND	<6	<6	<6	<6	ND	ND
	ug/kg		PCB 1248					<12.5	<12.8	ND	ND	<12.7	<12.6	<12.8	<12.8	<12	<11.9	ND	ND	<12	<11.9	<12	<12	ND	ND
	ug/kg		PCB 1254					<12.5	<12.8	ND	ND	<12.7	<12.6	<12.8	<12.8	<12	<11.9	ND	ND	<12	<11.9	<12	<12	ND	ND
	ug/kg		PCB 1260					<6.2	<6.4	ND	ND	<6.4	<6.3	<6.4	<6.4	<6	<6	ND	ND	<6	<6	<6	<6	ND	ND
	ug/kg		Total PCBs	60	680	810	10000	<62.4	<64.1	ND	ND	<63.5	<63	<63.9	<63.9	<59.8	<59.7	ND	ND	<60.2	<59.6	<59.8	<59.9	ND	ND
Metals	mg/kg		Arsenic	9.8	33	9	9	0.44	0.45	0.94	1. 6	0.46	2.4	0.50	0.70	0.61	0.50	1.3	1.1	0.78	0.94	1.4	0.74	1. 6	1.2
	mg/kg		Cadmium	0.99	5	1.6	23	<0.24	<0.24	0 .18	0.25	<0.25	0.25	<0.23	<0.23	<0.23	<0.24	0.09	0.2	<0.24	0.23	<0.24	<0.23	0.27	0.24
	mg/kg		Chromium	43	110	23000	100000	5.7	4.7	5.5	7.3	4.0	4.6	3.7	3.6	3.9	3.1	5.5	6.1	4.5	7.5	4.6	4.7	8.3	7.3
	mg/kg		Copper	32	150	2200	33000	2.4	2.5	2.5	4.2	1.8	3.7	3.0	1.4	2.1	1.4	3.1	3.3	1.8	3.7	2.4	2.4	5.5	4.3
	mg/kg		Lead	36	130	300	700	1.0	1.1	1.2	2	1.1	1.1	0.88	1.0	0.71	0.83	1. 3	1.3	0.94	1.0	0.90	0.97	1.4	1. 6
	mg/kg		Manganese			2100	21000	192	155	201	308	140	280	246	132	153	121	202	226	185	291	278	229	353	276
	mg/kg		Mercury	0.18	1.1	3.1 **	3.1	<0.098	<0.099	ND	ND	<0.097	<0.1	<0.095	<0.1	<0.092	<0.089	ND	ND	<0.09	<0.092	<0.09	<0.094	ND	ND
	mg/kg		Nickel	23	49	170	2600	5.2	8.2	4.4	7.9	3.1	7.2	4.7	3.5	4.2	2.7	5.1	4.9	3.5	6.7	3.9	4.6	8.4	5.5
	mg/kg		Zinc	120	460	4600	70000	17.1 B	16.6 B	12.7	24.7	15.9 B	23.9 B	17 B	18.1 B	23.8 B	22.1 B	11. 6	12.5	24.1 B	28.6 B	27.1 B	27 B	22.6	16.2
	mg/kg		Ammonia Nitrogen					4.6	6.3	4.1	4.2	<3.6	<3.7	4.1	3.9	4.1	4.6	3.8	ND	4.6	5.7	5.5	3.3	ND	13.4
	mg/kg		Chromium (VI)			11	57	<1.3	<1.3	ND	ND	<1.3	<1.3	<1.3	<1.3	<1.2	<1.1	ND	ND	<1.2	<1.2	<1.2	<1.2	ND	ND
Inorganics	mg/kg		Cyanide, Total			13	190	<0.24	<0.25	ND	ND	<0.25	<0.25	<0.25	<0.25	<0.23	<0.23	ND	ND	<0.24	<0.23	<0.22	<0.22	ND	ND
	%		Moisture					19.9	22.3	15.2	12.4	22.6	21.2	22.0	21.7	16.7	17.6	12	14.5	17.7	17.8	16.7	17.4	15.5	14.2
	mg/kg		Phenol			3500	24000	<1.2	<1.2	ND	ND	<1.3	<1.3	<1.2	<1.2	<1.3	<1.2	ND	0.77	<1.3	<1.2	<1.3	<1.2	ND	ND
	mg/kg		Phosphorus					156	166	104	282	141	140	123	99.4	101	128	158	193	153	154	167	289	326	133
	%		Solids, Percent					80.1	77.7	84.8	87.6	77.4	78.8	78.0	78.3	83.3	82.4	88	85.5	82.3	82.2	83.3	82.6	84.5	85.8
	%		Solids,Total Volatile					0.51	0.40	ND	ND	0.37	0.36	0.23	0.26	0.19	0.21	ND	ND	0.19	0.21	0.19	0.18	ND	ND
	mg/kg		Total Kjeldahl Nitrogen					36.7	30.2	47.3	91. 5	58.1	47.8	36.9	40.2	27.8	28.7	38.4	42.9	38.0	36.4	29.9	<24.2	ND	294
	mg/kg		Total Organic Carbon					<600	<600	350	370	<600	<600	<600	<600	<600	<600	200	200	<600	<600	<600	<600	310	390
PARTICLE SIZE % FINER	SAND	coarse	4					99.7	99.6	99.5	98	100	99.9	96.4	100.0	99.7	99.4	99.4	88.1	100	98.2	93.5	100	99.2	78.2
			10					98.1	98.8	97.2	88.6	99.7	98.7	85.9	99.7	98.7	99.2	97.2	83	99.6	92.1	87.9	99.9	91.1	71.1
		medium	20					87.8	92.5	85.7	53.8	98.5	92.6	72.2	98.2	83.3	96.5	72.7	65.1	89.5	57.7	57.5	94	73	61.5
			40					37.4	42.9	32.6	11.9	86.3	70	30.8	80.2	15.1	34.1	13.6	20.6	24	11.5	9.7	32	23.4	24.2
		fine	60					3	7.7	3.4	3.2	20.4	17.7	2.1	10.3	0.6	2.5	1.9	2.2	3	1	0.7	2.4	3.6	5.1
			140					0.8	1.1	2.1	2.7	0.4	0.7	0.3	0.5	0.3	0.6	1.3	1	0.7	0.6	0.4	0	1.4	1.6
	SILT	clay	200					0.8	0.9	2.1	2.6	0.4	0.6	0.3	0.5	0.3	0.6	1.2	1	0.7	0.6	0.4	0	1.4	1.6

* Chlordane
Level I SQT – Chemical concentrations which will provide a high level of protection for benthic invertebrates.
Level II SQT – Chemical concentration which will provide a moderate level of protection for benthic invertebrates.

J - Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the mass spectral data indicate the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero.

< or ND - Not detected