Table 1

Summary Data - Field Samples
Fox River Deposit N Removal Project

Sample	Total PCBs (Fg/kg)	Mercury (Fg/kg)	TOC (%)	Particle Size Distribution (%)				Percent Solids	Specific Gravity	Atterberg Limit Results		
				Gravel	Sand	Silt	Clay			LL	PL	PI
N-PD01(3)/N-PE01(4)	68,000	5,000	2.5	0	19.8	41.9	38.3	18.3	2.15	222	63	159
N-PD02(3)	550	98	0.4	3.2	95.5	1.3	0	71.7	2.54	NT	NT	NT
N-PD03(3)/N-PD03(4)	82,000	3,900	3.4	0	23.8	48.2	28	20.3	2.37	169	48	121
N-PD04(3)/N-PD04(4)	300	<57	0.34	1.7	95	2.1	1.2	70.3	2.59	NT	NT	NT
N-PD05(3)/N-PD05(4)	66,000	4,700	3.6	0	38.9	38.3	22.8	22	2.24	164	58	106
N-PD06(3)/N-PD06(4)	40,000	1,700	3.8	0	51.8	29.6	18.6	27.2	2.41	82	37	45

NT = Not Tested

Prepared by: JBH1
Checked by: BLA

Table 2

Deposit N Physical Characteristics
Pre-Design Sampling Data

Sample	TOC (%)	Gravel (%)	Sand (%)	Silt (%)	Clay (%)	Solids (%)
Pre-Design (1997)						
N-PD01(2)	2.4[1]	0	8	42.1	49.9	22.1
N-PD01(3)/N-PD01(4)	2.5[1]	0	19.8	41.9	38.3	18.3
N-PD02(1)	0.54[1]	1.5	94.6	3.9		76.7
N-PD02(2)						
N-PD02(3)	0.4[1]	3.2	95.5	1.3		71.7
N-PD03-02(1)	3[1]					21
N-PD03-02(2)		0	4.8	72.5	22.7	
N-PD03(3)/N-PD03(4)	3.4[1]	0	23.8	48.2	28	20.3
N-PD04(3)/N-PD04(4)	0.34[1]	1.7	95	2.1	1.2	70.3
N-PD05-02(1)	3.1[1]					22.8
N-PD05-02(2)		0	41.7	39.8	18.5	
N-PD05-02(2)FD						
N-PD05(3)/N-PD05(4)	3.6[1]	0	38.9	38.3	22.8	22
N-PD06-02(1)	2.9[1]					22.1
N-PD06-02(1)FD	3.2[1]					21.8
N-PD06-02(2)		0	14.8	60.7	24.5	
N-PD06-02(2)FD		0	7.1	59.8	33.1	
N-PD06(3)/N-PD06(4)	3.8[1]	0	51.8	29.6	18.6	27.2

[1]Reported total organic carbon (TOC) value is the average of four replicate analyses.

Prepared by: JJA1
Checked by: SJL1

Table 3

Deposit N Chemical Characteristics
Pre-Design Sampling Data

Sample	Total PCBs (Fg/kg)	Mercury (Fg/kg)	TOC (%)
Pre-Design (1997)			
N-PD01(2)	66,000	8,000	2.4[1]
N-PD01(3)/N-PD01(4)	68,000	5,000	2.5[1]
N-PD02(1)	3,400	110	0.54[1]
N-PD02(2)			
N-PD02(3)	550	98	0.4[1]
N-PD03-02(1)	130,000	4,700	3[1]
N-PD03-02(2)			
N-PD03(3)/N-PD03(4)	82,000	3,900	3.4[1]
N-PD04(3)/N-PD04(4)	300	<57	0.34[1]
N-PD05-02(1)	130,000	4,400	3.1[1]
N-PD05-02(2)			
N-PD05-02(2)FD			
N-PD05(3)/N-PD05(4)	66,000	4,700	3.6[1]
N-PD06-02(1)	110,000	5,300	2.9[1]
N-PD06-02(1)FD	94,000	4,100	3.2[1]
N-PD06-02(2)			
N-PD06-02(2)FD			
N-PD06(3)/N-PD06(4)	40,000	1,700	3.8[1]

[1]Reported total organic carbon (TOC) value is the average of four replicate analyses.

Prepared by: JJA1
Checked by: SJL1

Table 4

Velocity Data
Fox River Deposit N Removal Project

Measurement Location	Water Depth (ft)	20% of Depth Velocity (ft/sec)	80% of Depth Velocity (ft/sec)	Average Velocity (ft/sec)
V1	10.9	0.78	0.96	0.87
V2	9.4	0.63	0.59	0.61
V3	9.2	0.64	0.78	0.71
V4	10.0	0.30	0.51	0.40
V5	11.5	0.48	0.61	0.54
V6	12.3	0.40	0.52	0.46
V7	8.7	0.04	0.14	0.09

Velocity measurements of 12/23/97.

Prepared by: JBH1
Checked by: BLA

Table 5

Summary of Carriage Water Treatment Results
Fox River Deposit N Removal Project

Treatment Sequence	TSS (mg/l)	PCBs (Fg/l)	Mercury (ng/l)
Untreated Carriage Water [1]	4.4	0.79	<9.7
Dual Media	1.0	0.5	<9.7
Dual Media, Carbon	1.2	<0.02	<9.7
Dual Media, 5 Fm Microfilt., Carbon	0.82	<0.02	<9.7
Dual Media, Carbon, 1 Fm Microfilt.	0.96	<0.02	<9.7
Enhanced Draining Effluent	16	NT	NT
Belt Filter Press Effluent	23	NT	NT

[1]Untreated carriage water is water drained from dredge slurry settling column at 24 hrs.
NT = Not Tested.

Prepared by: JJA1
Checked by: JBH1

Table 6

Sediment Resuspension and Settling
(Summary TSS and Turbidity Data)
Fox River Deposit N Removal Project

Time (days)	Height from Sediment[1] (ft)	TSS (mg/l)	Turbidity (NTU)
Pre-Test	composite	22	7.9
Pre-Test	composite	10	8.9
Pre-Test	composite	14	9.9
1 minute	1	6,600	10,000
1 minute	2.5	3,200	6,200
1 minute	4	2,400	5,400
2 hours	1	1,100	720
2 hours	2.5	560	430
2 hours	4	610	450
8 hours	1	410	420
8 hours	2.5	360	620
8 hours	4	380	750
1 day	1	230	420
1 day	2.5	270	320
1 day	4	160	320
2 days	1	160	530
2 days	2.5	150	450
2 days	4	120	390
5 days	1	51	190
5 days	2.5	25	110
5 days	4	18	75
7 days	1	8	52
7 days	2.5	8	33
7 days	4	5	30

[1]Height measured from surface of sediment, water column was 5 ft in height at beginning of experiment.

Prepared by: JJA1
Checked by: JBH1

Table 7

Analytical Test Results
WPDES Test Effluent Sample
Fox River Deposit N Removal Project

Parameter	Concentration	
	Result	Unit
Purgeable Organics (8260B)		
1,1-Dichloroethane	<0.41	Fg/l
1,1-Dichloroethene	<0.56	Fg/l
1,1-Dichloropropene	<0.35	Fg/l
1,1,1-Trichloroethane	<0.43	Fg/l
1,1,2-Trichloroethane	<0.55	Fg/l
1,1,2,2-Tetrachloroethane	<0.48	Fg/l
1,2-Dichloroethane	<0.47	Fg/l
1,2-Dichloroethene, total	<1	Fg/l
1,2-Dichloropropane	<0.74	Fg/l
2,3-Dichloropropene	<0.52	Fg/l
Acrolein	<5.7	Fg/l
Acrylonitrile	<2.6	Fg/l
Benzene	<0.4	Fg/l
Bromodichloromethane	<0.39	Fg/l
Bromoform	<0.28	Fg/l
Bromomethane	<0.96	Fg/l
Carbon tetrachloride	<0.43	Fg/l
Chlorobenzene	<0.29	Fg/l
Chlorodibromomethane	<0.25	Fg/l
Chloroethane	<1.1	Fg/l
Chloroform	<0.5	Fg/l
Chloromethane	<0.68	Fg/l
cis-1,2-Dichloroethene	<0.47	Fg/l
cis-1,3-Dichloropropene	<0.47	Fg/l
Ethylbenzene	<0.4	Fg/l
Trichlorofuoromethane	<0.51	Fg/l
Methylene chloride	<0.42	Fg/l
Tetrachloroethene	<0.44	Fg/l
Toluene	<0.32	Fg/l

Table 7 *(Continued)*

Parameter	Concentration	
	Result	Unit
trans-1,3-Dichloropropene	<0.49	Fg/l
Trichloroethene	<0.38	Fg/l
Vinyl chloride	<0.63	Fg/l
Semivolatile Organics (8270C)		
1,2-Dichlorobenzene	<2.2	Fg/l
1,2-Diphenylhydrazine	<1.3	Fg/l
1,2,4-Trichlorobenzene	<2.7	Fg/l
1,3-Dichlorobenzene	<2.6	Fg/l
1,4-Dichlorobenzene	<2.4	Fg/l
2-Chloronaphthalene	<1.8	Fg/l
2-Chlorophenol	<0.89	Fg/l
2-Nitrophenol	<0.85	Fg/l
2,4-Dichlorophenol	<0.95	Fg/l
2,4-Dimethylphenol	<1.1	Fg/l
2,4-Dinitrophenol	<1.9	Fg/l
2,4-Dinitrotoluene	<0.74	Fg/l
2,4,6-Trichlorophenol	<0.75	Fg/l
2,6-Dinitrotoluene	<0.96	Fg/l
3,3N-Dichlorobenzidine	<0.67	Fg/l
4-Bromophenyl-phenylether	<1.8	Fg/l
4-Chloro-3-methylphenol	<0.99	Fg/l
4-Chlorophenyl-phenylether	<2.1	Fg/l
4-Nitrophenol	<2.6	Fg/l
4,6-Dinitro-2-methylphenol	<0.83	Fg/l
Acenaphthene	<1.4	Fg/l
Acenaphthylene	<1.5	Fg/l
Anthracene	<1.2	Fg/l
Benzidine	<1.5	Fg/l
Benzo(a)anthracene	<0.6	Fg/l
Benzo(a)pyrene	<1.4	Fg/l
Benzo(b)fluoranthene	<2.3	Fg/l
Benzo(g,h,i)perylene	<2.0	Fg/l
Benzo(k)fluoranthene	<2.4	Fg/l
bis(2-Chloroethoxy)methane	<0.97	Fg/l

Table 7 *(Continued)*

Parameter	Concentration	
	Result	Unit
bis(2-Chloroethyl)ether	<1.3	Fg/l
bis(2-Ethylhexyl)phthalate	12	Fg/l
bis(2-Chloroisopropyl)ether[(a)]	<2.1	Fg/l
Butylbenzylphthalate	<0.57	Fg/l
Chrysene	<0.46	Fg/l
Di-n-butylphthalate	<0.82	Fg/l
Di-n-octylphthalate	<2.4	Fg/l
Dibenzo(a,h)anthracene	<2.3	Fg/l
Diethylphthalate	<0.69	Fg/l
Dimethylphthalate	<0.64	Fg/l
Fluoranthene	<0.92	Fg/l
Fluorene	<1.6	Fg/l
Hexachlorobenzene	<1.7	Fg/l
Hexachlorobutadiene	<2.8	Fg/l
Hexachlorocyclopentadiene	<3.7	Fg/l
Hexachloroethane	<2.6	Fg/l
Indeno(1,2,3-cd)pyrene	<2.2	Fg/l
Isophorone	<1.0	Fg/l
3-Chlorophenol	<0.71	Fg/l
4-Chlorophenol	<0.71	Fg/l
2,3-Dichlorophenol	<0.33	Fg/l
2,5-Dichlorophenol	<1.7	Fg/l
2,6-Dichlorophenol	<0.79	Fg/l
3,4-Dichlorophenol	<0.83	Fg/l
2,5-Dinitrophenol	<2.1	Fg/l
2-Methyl-4-chlorophenol	<0.87	Fg/l
3-Methyl-4-chlorophenol	<0.99	Fg/l
3-Methyl-6-chlorophenol	<0.88	Fg/l
2,3,4,6-Tetrachlorophenol	<2.9	Fg/l
2,4,5-Trichlorophenol	<1.2	Fg/l
N-Nitrosodiethylamine	<1.5	Fg/l
N-Nitrosodi-n-butylamine	<0.86	Fg/l
N-Nitrosopyrrolidine	<2.0	Fg/l
Pentachlorobenzene	<1.3	Fg/l

Table 7 *(Continued)*

Parameter	Concentration	
	Result	Unit
1,2,4,5-Tetrachlorobenzene	<1.1	Fg/l
N-Nitrosodi-n-propylamine	<0.37	Fg/l
N-Nitrosodimethylamine	<1.4	Fg/l
N-Nitrosodiphenylamine	<1.2	Fg/l
Naphthalene	<2.1	Fg/l
Nitrobenzene	<0.99	Fg/l
Pentachlorophenol	<2.4	Fg/l
Phenanthrene	<0.73	Fg/l
Phenol	<0.51	Fg/l
Pyrene	<0.69	Fg/l
PAHs (8310)		
Anthracene	<0.0016	Fg/l
Benzo(a)anthracene	<0.0045	Fg/l
Benzo(a)pyrene	<0.0039	Fg/l
Benzo(b)fluoranthene	<0.011	Fg/l
Benzo(g,h,i)perylene	<0.047	Fg/l
Benzo(k)fluoranthene	<0.0028	Fg/l
Chrysene	<0.0032	Fg/l
Dibenzo(a,h)anthracene	<0.041	Fg/l
Fluoranthene	<0.023	Fg/l
Fluorene	<0.014	Fg/l
Indeno(1,2,3-cd)pyrene	<0.022	Fg/l
Phenanthrene	<0.015	Fg/l
Pyrene	<0.0085	Fg/l
Chlorinated Hydrocarbons (8121)		
Hexachlorobenzene	<0.04	Fg/l
Hexachlorobutadiene	<0.4	Fg/l
Hexachlorocyclopentadiene	<0.41	Fg/l
Organochlorine Pesticides (8081A)		
alpha BHC	<0.0019	Fg/l
gamma-BHC (Lindane)	<0.0028	Fg/l
beta BHC	<0.0046	Fg/l
Heptachlor	<0.0056	Fg/l
delta-BHC	<0.0082	Fg/l

Table 7 *(Continued)*

Parameter	Concentration		
	Result	Unit	
Aldrin	<0.006	Fg/l	
Heptachlor epoxide	<0.0024	Fg/l	
Chlordane, technical	<0.0039	Fg/l	
Endosulfan I	<0.0017	Fg/l	
BHC-Technical Grade	<1.1	Fg/l	
4,4N-DDE	<0.011	Fg/l	
Dieldrin	<0.0049	Fg/l	
Endrin	<0.006	Fg/l	
4,4N-DDD	<0.0067	Fg/l	
Endosulfan II	<0.0057	Fg/l	
4,4N-DDT	<0.013	Fg/l	
Endrin aldehyde	<0.014	Fg/l	
Endosulfan sulfate	<0.011	Fg/l	
Toxaphene	<0.88	Fg/l	
Aroclor 1016	<0.29	Fg/l	
Aroclor 1221	<0.42	Fg/l	
Aroclor 1232	<0.19	Fg/l	
Aroclor 1242	<0.48	Fg/l	
Aroclor 1248	<0.072	Fg/l	
Aroclor 1254	<0.052	Fg/l	
Aroclor 1260	<0.09	Fg/l	
Organophosphorous Pesticides (8141)			
Chlorpyrifos	<0.078	Fg/l	
Parathion-ethyl	<0.033	Fg/l	
Parathion-methyl	<0.056	Fg/l	
Metals by ICP (6010B)			
Aluminum	360	Fg/l	
Antimony	8.5	Fg/l	Q
Arsenic	5.5	Fg/l	Q
Beryllium	0.59	Fg/l	
Cadmium	2.4	Fg/l	
Calcium	41,000	Fg/l	
Chromium	<0.64	Fg/l	
Copper	16	Fg/l	

Table 7 *(Continued)*

Parameter	Concentration		
	Result	Unit	
Lead	3.3	Fg/l	Q
Magnesium	19,000	Fg/l	
Nickel	12	Fg/l	Q
Selenium	<0.33	Fg/l	
Silver	<2.4	Fg/l	
Thallium	<5.6	Fg/l	
Zinc	10	Fg/l	Q
Mercury (low level)	<9.7	ng/l	
Hexavalent Chromium	<6.7	Fg/l	
Total Phenols	<0.0085	mg/l	X
Total Cyanide	<0.0034	mg/l	
Cyanide Amenable to Chlorination	<0.0034	mg/l	
TCDD	<0.0008	ng/l	
BOD	<2	mg/l	BB
COD	<4.7	mg/l	
Hardness	180	mg/l	
Total Organic Carbon	0.89	mg/l	
Total Solids	270	mg/l	
Total Dissolved Solids	210	mg/l	
Total Suspended Solids	2	mg/l	Q
Turbidity	1.1	NTU	
Organic Nitrogen	0.33	mg/l	
Nitrate + Nitrite	0.064	mg/l	Q
Ammonia	6.1	mg/l	
Phosphorous	0.15	mg/l	Q
Total Kjeldahl Nitrogen	6.4	mg/l	
Chloride	21	mg/l	
pH	9.4	s.u.	

[a]The proper chemical name is 2,2N-oxybis(1-chloropropane).
Q = Analyte detected between LOD and LOQ.
X = Sample was submitted in plastic rather than glass bottle as prescribed in QAPP.
BB = BOD result estimated due to BOD blank exceeding the allowable oxygen depletion.

Prepared by: JBH1
Checked by: BLA

Table 8

TSS/Turbidity Correlation Results
Fox River Deposit N Removal Project

TSS (mg/l)	Turbidity (NTU)	Mercury (ng/l)	PCBs (Fg/l)
6	2.9	--	--
11	7.7	--	--
15	8.4	19	0.36
16	13	--	
21	13	--	
22	16	--	
26	18		
27	22		
25	24	79	1.4
37	26		
42	30		
35	28		
39	30		
42	37		
45	35		
46	44		
54	45		
63	48		
70	56	210	3.1
67	58		
76	58		
82	66		
98	72		
92	70		
89	73		
120	92		
130	100		
180	130		

-- = Not Tested

Prepared by: JBH1
Checked by: BLA

Table 9

Fox River Deposit N Removal Project
Pilot Test Data
Treated Water (Effluent)

Sample ID Number	Sample Date	Arochlor 1016 (Fg/l)	Arochlor 1221 (Fg/l)	Arochlor 1232 (Fg/l)	Arochlor 1242 (Fg/l)	Arochlor 1248 (Fg/l)	Arochlor 1254 (Fg/l)	Arochlor 1260 (Fg/l)	Total Suspended Solids (mg/l)	Mercury, Low Level as Hg (ng/l)
N-RWO1-01	11/23/98	<1.0	< 1.4	< 0.68	< 0.70E	< 0.25	< 0.19	< 0.32	< 8.8	< 9.7
N-RWO1-02	11/23/98	< 0.96	< 1.3	< 0.64	0.23*E	< 0.24	< 0.18	< 0.30	< 8.8	< 9.7
N-RWO1-03	11/23/98	< 0.96	< 1.3	< 0.64	0.25*E	< 0.24	< 0.18	< 0.30	< 8.8	< 9.7
N-RWO1-04	11/23/98	< 1.0	< 1.4	< 0.67	0.4*E	< 0.25	< 0.18	< 0.31	< 8.8	< 9.7
N-RWO1-05	11/23/98	< 1.1	< 1.5	< 0.73	0.37*E	< 0.27	< 0.20	< 0.34	< 8.8	< 9.7

*Sample results quantitated between the Method Detection Limit and the Practical Quantitation Limit.
E = Aroclor 1242 data were qualified by Makuehl Co. as estimated based on non-compliant initial calibration.

Pilot Test Data
Dewatered Sediment

Sample ID Number	Sample Date	Arochlor 1016 (Fg/kg)	Arochlor 1221 (Fg/kg)	Arochlor 1232 (Fg/kg)	Arochlor 1242 (Fg/kg)	Arochlor 1248 (Fg/kg)	Arochlor 1254 (Fg/kg)	Arochlor 1260 (Fg/kg)	Free Liquids - Paint Filter (%)	Solids (%)
NR01-01 SED	11/23/98	NA	NA	NA	NA	NA	NA	NA	0	51.5
NR02-01 SED	11/23/98	< 13,000*	< 13,000*	< 13,000*	110,000*	< 13,000*	< 13,000*	< 13,000*	0	38.0
NR03-01 SED	11/23/98	NA	NA	NA	NA	NA	NA	NA	0	42.9

*Sample Results based on dilution.
NA = Not Analyzed

Prepared by: JBH1
Checked by: BLA

Table 10

Deposit N - Phase I
Mass of Sediment and PCBs Removed

Pile No.	Material Type	Date of Drops	Approximate Tons	Percent Solids	PCBs (ppm) Sonication	PCBs (ppm) Soxhlet	Pounds PCBs Removed[B]
1	Filter Cake	start ÷ 11/27/98	235.49	42.1	43	90	17.85
2	Filter Cake	11/28 ÷ 11/29/98	240.47	41.7	45	88	17.65
3	Filter Cake	11/30 ÷ 12/4/98	229.17	46	55	74	15.60
4	Filter Cake	12/5 ÷ 12/8/98	256.9	45.2	52	91	21.13
5	Filter Cake	12/9 ÷ 12/14//98	359.37	54.4	31	54	21.11
6	Filter Cake	12/15 ÷ 12/19/98	378.86	64.5	0.9	1.04	0.51
7	Filter Cake	12/20 ÷ 12/30/98	209.42	62.2	1.6	0.62	0.16
Non-TSCA #1	Sand	start ÷ 11/26/98	34.36	67.2	6.8	5.2	0.24
Non-TSCA #2	Sand	11/28 ÷ 12/31/98	81.71	69.3	<7.2	1.5	0.17
Sand Pile #3	Sand	11/27 ÷ 12/31/98	380.41	72.5	1.5	0.89	0.49
Filter Media	Sand/ Carbon	start ÷ end	88.53	72	1[A]	1[A]	0.13
Coal	Debris	start ÷ 12/8/98	42.29	76	6	4.2	0.27
						Sum Total	95.31

[A] Filter media PCB concentration assumed to be 1 ppm.
[B] Note: Soxhlet extraction results used to compute pounds of PCBs removed.

Prepared by: JBH1
Checked by: BLA

Sample Calculation:

lbs PCB = (approx. Tons) x (percent solids) x (PCB concentration) x 2000 lb/ton x $1/10^6$

Table 11

Fox River Deposit N Removal Project
Water Treatment (Influent)

Parameter Date	TSS mg/l daily	O&G mg/l daily	Hg ng/l weekly	PCB ug/l weekly	Field pH std units daily	Lab pH std units daily
23-Nov-98						
24-Nov-98						
25-Nov-98						
26-Nov-98		< 5.0 b				
27-Nov-98	< 18	< 6.5 b			6.88	
28-Nov-98	< 8.8 a	i			8.86	
29-Nov-98	< 18.0	< 6.7 b	53.66		7.46	
30-Nov-98	< 8.8	< 7.7 b			7.75	
01-Dec-98	5	7.2			6.38	7.9
02-Dec-98	3.0	8.0 e			7.38	
03-Dec-98	2.0	4.0 d			7.40	7.9
04-Dec-98	< 1.0	5.9			7.20	7.9
05-Dec-98	< 1.0	4.9 d			7.56	7.9
06-Dec-98	1.0	2.7 d	9.84 h	1.3		
07-Dec-98	< 1.0	4.4 d			7.54	
08-Dec-98	< 1.0	< 1.4			7.43	7.7
09-Dec-98	< 1.0	1.6 d			8.03	7.8
10-Dec-98	5.0	1.5 d			9.55	7.8
11-Dec-98	<1.0	5.7			7.66	7.9
12-Dec-98	< 1.0	5.0			7.66	8.0
13-Dec-98	< 1.0	4.1 d	1.34			7.9
14-Dec-98	2.0	5.2				7.7
15-Dec-98	< 1.0	5.3				7.2
16-Dec-98	< 1.0	8.1				NA
17-Dec-98	5.0	< 1.4				7.5
18-Dec-98	3.0	3.7 d		<1.5		7.6

Table 11 *(Continued)*

Parameter Date	TSS mg/l daily	O&G mg/l daily	Hg ng/l weekly	PCB ug/l weekly	Field pH std units daily	Lab pH std units daily
19-Dec-98	2.0	7.3				7.6
20-Dec-98	2.0	5.1				7.8
21-Dec-98	6.0	5.7	0.35 g	< 1.4		8.0
22-Dec-98	no water	no water	no water	no water	no water	
23-Dec-98						
24-Dec-98						
25-Dec-98			Project shut-down holiday period			
26-Dec-98						
27-Dec-98						
28-Dec-98	no water	no water	no water	no water	no water	no water
29-Dec-98	<1.0	11 f				7.5
30-Dec-98	1.0	9.9 f				7.2
31-Dec-98	6.0	26 f		<1.0		7.7

Footnotes:

Prepared by: JBH1
Checked by: BLA

a. Other samples collected on this day were < 18 and 110 mg/l.
b. The ongoing precision and recovery standard was high at 122%.
d. Result was greater than limit of detection but less than limit of quantitation.
e. Blank value was 1.9 mg/l.
f. Method blank was 7.6 mg/l. Both ongoing precision and recovery standards were within QC limits. Sample volume insufficient for repeat analysis.
g. QC exceeded, method blank - 0.11 ng/l.
h. Trip blank exceeded LOD.
i. Sample vessel broke during analysis.

Table 12

Fox River Deposit N Removal Project
Water Treatment (Effluent)

Parameter	FLOW	BOD5	TSS	NH3	O&G	Hg	PCB	TCDD	pH
Date	gal daily	mg/l weekly	mg/l daily	mg/l daily	mg/l daily	ng/l weekly	ug/l weekly	ug/l weekly	std unitsdaily
Limit		<2 mg/l weekly ave	5 mg/l monthly ave10 mg/l daily max	n/a	n/a	1700 ng/l daily max	1.2 ug/l 3.6E-3 lb/day	3.0E-9 ug/l month ave9.0E-9 lb/day	6-9 std units j
23-Nov-98	180,000 d		< 8.8 a			< 9.7 b	c		
24-Nov-98									
25-Nov-98									
26-Nov-98	300,000 d		< 8.8	22	< 5.0 f				
27-Nov-98	300,000 d		< 10	22	6.5 f				9.23
28-Nov-98	210,000 d		< 10	24	< 5.0 f	1.59			7.84
29-Nov-98	300,000 d		< 8.8	29	< 5.0 f		0.64	<0.0000025	7.27
30-Nov-98	413,900		< 8.8	11	< 5.0 f				7.89
01-Dec-98	314,850		< 1.0	5.2	8.7 g		1.6		6.84
02-Dec-98	200,300		2.0	13	8.7 g				7.93
03-Dec-98	429,700	3.0 h	< 1.0	15	7.1				7.80
04-Dec-98	328,760		< 1.0	16	3.5 e				7.41
05-Dec-98	363,996		3.0	10	2.4 e				7.72
06-Dec-98	446,400	<3.0	< 3.5	10	4.8 e	< 0.1 k	1.3	<0.0000030	7.76
07-Dec-98	391,200		< 1.0	7.8	1.8 e				7.92
08-Dec-98	395,700		< 1.0	13	< 1.4				7.75
09-Dec-98	562,484		< 1.0	12	3.8 e				7.72
10-Dec-98	582,340		< 1.0	6.0	< 1.4				7.11
11-Dec-98	612,746		< 1.0	4.3	< 1.4				7.74
12-Dec-98	717,012		< 1.0	1.8	4.1 e				7.90
13-Dec-98	421,904		3.0	0.64	5.3	0.49	<1.3	<0.0000009	8.1
14-Dec-98	391,218	< 2.0	< 1.0	1.7	4.6 e				7.1
15-Dec-98	511,397		8.0	1.5	2.8 e				7.1
16-Dec-98	322,622		< 1.0	3.1	< 1.4				7.5
17-Dec-98	378,483		3.0	3.1	4.9 e				7.5
18-Dec-98	367,550		< 1.0	4.8	3.6 e				7.8
19-Dec-98	36,810		4.0	4.1	< 1.4				7.7
20-Dec-98	242,474		2.0	4.6	2.8 e				7.8

Table 12 *(Continued)*

Parameter	FLOW	BOD5	TSS	NH3	O&G	Hg	PCB	TCDD	pH
Date	gal daily	mg/l weekly	mg/l daily	mg/l daily	mg/l daily	ng/l weekly	ug/l weekly	ug/l weekly	std unitsdaily
Limit		<2 mg/l weekly ave	5 mg/l monthly ave10 mg/l daily max	n/a	n/a	1700 ng/l daily max	1.2 ug/l 3.6E-3 lb/day	3.0E-9 ug/l month ave9.0E-9 lb/day	6-9 std units j
21-Dec-98	520,000	2.0 h	3.0	5	4.0 e	0.20 m	< 1.3	<0.0000010	7.8
22-Dec-98	0								
23-Dec-98	0								
24-Dec-98	0								
25-Dec-98	0				Project shut-down holiday period.				
26-Dec-98	0								
27-Dec-98	0								
28-Dec-98	0								
29-Dec-98	71,000		< 1.0	2.5	7.9 i				7.5
30-Dec-98	210,000		< 1.0	3.0	11 i				7.6
31-Dec-98	82,000	363,000	< 1.0	4.6	7.3 i		<1.4		7.7

Footnotes:

Prepared by: JBH1
Checked by: BLA

a. Five samples less than 8.8 mg/l (pilot test).
b. Five samples less than 9.7 ng/l (pilot test).
c Five samples collected during pilot test were <0.70, 0.23, 0.25, 0.40, 0.37 mg/l.
d. Not available from ISCO sampler/magmeter; equipment malfunction. These approximate flow values are mgd based on dredge flow calculations
e. Result was greater than LOD but less than LOQ and are within a region defined as "Less-Certain Quantitation".
f. The ongoing precision and recovery standard was high at 122%.
g. Blank value was 1.9 mg/l.
h. Results were corrected for background depletion.
i. Method blank was 7.6 mg/l. Both ongoing precision and recovery standards were within QC limits. Sample volume insufficient for repeat analysis.
j. From 11/27/98, ph values are field pH. After 12/12/98, pH values are laboratory pH.
k. Trip blank exceed LOD.
m. QC exceeded, method blank - 0.11 ng/l.

Table 13

Deposit N - Phase I
Air Monitoring Data

All results are in units of Fg/cubic meter. The site standard is 96 Fg/cubic meter total particulates.

Monitoring Location	South			Northwest			Northeast			East		
Sample Date	Average	Maximum	Minimum	Average	Maximum	Minimum	Average	Maximum	Minimum	Average	Maximum	Minimum
19-Nov-98				1.6	6.1	1.0	333.3	518.1	1.0			
20-Nov-98				1.2	1.2	1.2	334.1	336.9	331.3			
21-Nov-98				1.2	1.2	1.0	342.4	349.1	331.1			
22-Nov-98				1.1	1.2	1.0	349.3	355.7	341.3			
23-Nov-98				1.0	1.2	1.0	352.4	358.4	346.7			
24-Nov-98				1.1	1.2	1.0	348.0	358.9	339.6			
25-Nov-98				1.1	1.2	1.0	349.9	359.1	286.9			
26-Nov-98				1.4	2.0	1.2	1.3	1.7	1.0			
27-Nov-98				2.9	6.1	2.0	2.2	2.9	1.7			
28-Nov-98				5.0	9.0	2.4	3.4	5.1	2.0			
29-Nov-98				7.4	10.7	4.4	7.4	11.0	4.6			
30-Nov-98	0.3 c	1.7 c	0.0 c	4.3	7.3	1.5	4.2	7.1	1.5	1 c,d	2 c,d	1 c,d
01-Dec-98	0.8	1.2	0.5	2.7	3.7	2.2	2.5	3.9	2.0	1.9	2.7	1.5
02-Dec-98	1.2	2.2	0.2	3 d	4 d	2 d	3.2	5.9	2.2	2.3	3.7	1.5
03-Dec-98	3.3	4.6	1.7	5.3	6.8	3.7	5.1	7.3	3.4	5.0	9.5	3.4
04-Dec-98	23.2	200.4	2.9	21.3	142.6	1.5	25.0	224.6	1.2	31.0	322.5	0.7
05-Dec-98	20.3	179.9	3.7	23.5	173.1	3.9	21.1	122.6	3.4	20.3	124.3	2.9
06-Dec-98	1.3	6.8	0.0	3.0	9.5	1.2	2.8	9.5	1.0	2.3	8.5	0.7
07-Dec-98	0.4	2.7	0.0	2.0	3.9	1.2	1.9	3.4	1.0	1.2	2.9	0.7
08-Dec-98	0.6	2.0	0.0	2.7	4.2	1.7	2.8	4.4	2.0	2.1	3.2	1.2
09-Dec-98	0.9	2.0	0.0	3.0	4.2	2.0	2.8	3.9	2.0	2.2	3.9	1.2
10-Dec-98	0.1	0.2	0.0	2.0	3.2	1.5	2.0	7.6	1.2	1.7	2.2	0.7
11-Dec-98	0.0	0.0	0.0	1.6	2.0	1.5	1.4	1.7	1.2	1.1	2.0	0.7
12-Dec-98	0.4	2.4	0.0	2.2	3.9	1.5	2.1	4.4	1.0	1.4	3.2	0.7
13-Dec-98	1.4	4.4	0.2	2.3	3.7	1.2	2.1	3.4	1.0	1.5	2.7	0.7

Table 13 *(Continued)*

Monitoring Location	South			Northwest			Northeast			East		
Sample Date	Average	Maximum	Minimum	Average	Maximum	Minimum	Average	Maximum	Minimum	Average	Maximum	Minimum
14-Dec-98	0.9 c	2.0 c	0.5 c	2.7 c	3.7 c	2.2 c	2.7 c	3.7 c	2.0 c	1.5 c	2.9 c	1.0 c
15-Dec-98	0.1 a	0.2 a	0.0 a	a	a	a	1.6 a	2.0 a	1.2 a	1.1	2.0	0.7
16-Dec-98	3.2	8.5	0.0	0.7	0.8	0.4	5.3	10.3	1.5	3.3	7.6	1.0
17-Dec-98	6.8	16.8	3.9	0.9	2.6	0.4	8.9	15.4	6.3	7.0	12.7	3.9
18-Dec-98	14.1	27.3	4.9	1.9	3.1	1.2	22.4	43.2	10.0	15.6	31.0	5.4
19-Dec-98	7.8	23.9	2.2	0.7	2.6	0.3	8.6	27.1	4.6	6.3	24.4	2.2
20-Dec-98	13.5	23.7	2.4	1.0	2.2	0.3	9.8	25.1	4.6	6.8	21.0	2.9
21-Dec-98	7.0	19.8	4.2	0.8	1.1	0.7	10.2	13.2	7.8	8.3	11.7	6.1
22-Dec-98	5.8	8.1	3.9	0.8	1.8	0.7	10.6	18.1	8.8	10.5	19.0	7.3
23-Dec-98	5.6	7.3	4.4	0.8	0.9	0.7	9.7	11.2	8.8	7.4	9.3	5.4
24-Dec-98	4.9	6.8	3.7	0.7	0.8	0.5	8.8	10.5	7.1	6.9	8.3	4.6
25-Dec-98	6.7	9.8	4.6	0.9	1.1	0.7	10.4	12.9	9.0	8.0	10.5	6.6
26-Dec-98	7.2	12.7	3.2	0.9	1.5	0.5	10.8	16.8	6.8	9.8	35.9	4.6
27-Dec-98	15.2	24.4	7.6	1.7	2.6	0.9	18.3	27.1	11.0	15.5	23.9	7.8
28-Dec-98	19.4	25.9	11.7	2.2	3.1	1.4	24.4	34.2	15.9	20.6	29.8	12.2
29-Dec-98	10.5	30.3	2.7	1.3	4.0	0.4	18.4	98.4	6.6	12.6	33.2	3.9
30-Dec-98	10.4	16.1	5.6	1.4	2.2	0.8	16.0	37.6	10.3	15.2	22.5	7.8
31-Dec-98	8.5	11.2	6.1	1.1	1.4	0.8	12.2	16.1	8.8	11.4	14.4	8.8
01-Jan-99	7.7	11.7	4.2	1.0	1.3	0.8	9.5 b	11.2 b	8.5 b	8.0	11.2	3.4
02-Jan-99	14.0	38.1	4.2	0.9 c	1.0 c	0.8 c	15.2	36.9	7.6	26.1	129.9	3.4
03-Jan-99	3.4	5.9	2.0	0.7	1.5	0.5	7.3	14.6	5.1	4.6	6.6	2.9
04-Jan-99	4.7	11.2	1.7	0.9	2.1	0.5	8.8	20.5	5.1	7.7	13.2	5.1
05-Jan-99	17.8	27.1	13.4	2.0	3.3	1.4	20.2	33.4	14.4	17.5	28.8	12.2
06-Jan-99	14.4	22.9	8.3	1.4	2.3	0.8	14.4	22.9	8.3	13.3	22.5	6.3
07-Jan-99	10.1 c	13.9 c	7.8 c	1.0 c	1.4 c	0.8 c	10.1 c	13.9 c	7.8 c	9.3 c	14.4 c	6.1 c

Footnotes:

a. Meter maintenance was being performed during the day, so some or all hourly readings were not available.

b. Screen was blank so download did not finish.

c. Some or all of the hourly readings for these days were invalid.

d. Meter was set to read mg/m^3; results reported are original result in mg/m^3 x 1,000 Fg/mg.

Prepared by: JBH1
Checked by: BLA

Table 14

Deposit N – Phase II
Mass of Sediment and PCBs Removed

Sample ID	Type	Sample Date	Lab Result Receipt	Sonication ΣPCBs mg/kg	Soxhlet ΣPCBs mg/kg	Hg mg/kg	PFT % Liq	Sand % Sol	Filter Cake % Sol	S Pile Mass (tons)	Sonication Σ Mass PCBs (lbs.)	Soxhlet S Mass PCBs (lbs.)
NR201F	Pilot Cake	08/20/99	08/23/99	NA	NA	NA	0	--	46.5	--	--	--
NR202D	Pilot Debris	08/20/99	08/23/99	NA	NA	NA	0	96.8	--	--	--	--
NR203F	Cake Pile	08/30/99	09/02/99	8.3	6.1	1.4	0	--	74[b]	59.59	0.73	0.54
NR204S	Sand Pile	08/30/99	09/02/99	<7	0.34	0.15	0	71.1	–	168.26	0.08[e]	0.08
NR205D	Sump Matl	08/30/99	09/02/99	13	11	1.1	0	68.7	--	61.56	1.10	0.93
NR206S NR206S-FD	Sand P4	09/03/99	09/08/99	0.50	0.86	0.1	0.99 0	76	--	135.40	0.10	0.18
NR207S	Sand P5	09/07/99	09/09/99	0.85	1.1	0.19	0	76.3	--	117.67	0.15	0.20
NR208F	Cake 6	09/07/99	09/09/99	5.4	17	1.4	0	--	68.7%	82.63	0.61	1.93
NR209S	Sand P7	09/09/99	09/13/99	1.1	2.2	0.24	0	73.6	--	150.78	0.24	0.49
NR210F	Cake 8	09/13/99	09/15/99	5.9	6.7*	1.5	0	--	50.9%	90.60	0.54	0.62
NR211S	Sand P9	09/13/99	09/15/99	2.1	1.74*	0.19	0	80.3	--	256.61	0.87	0.72
NR212S	Sand P10	09/15/99	09/17/99	1.1	1.2	0.20	0	81.9	--	207.52	0.37	0.41
NR213S	Sand P12	09/17/99	09/21/99	0.65	0.92	0.16	0	84.1	--	250.14	0.27	0.39
NR214S	Sand P13	09/20/99	09/22/99	0.20	0.85	0.16	0	80.1	--	97.54	0.03	0.13
NR217F	Cake 11	09/24/99	09/28/99	9.42	29	2.6	0	--	54.8%	102.71	1.06	3.26

Table 14 *(Continued)*

Sample ID	Type	Sample Date	Lab Result Receipt	Sonication ΣPCBs mg/kg	Soxhlet ΣPCBs mg/kg	Hg mg/kg	PFT % Liq	Sand % Sol	Filter Cake % Sol	S Pile Mass (tons)	Sonication Σ Mass PCBs (lbs.)	Soxhlet S Mass PCBs (lbs.)
NR215S	Sand 14	09/22/99	09/24/99	0.92	1.84	0.21	0	81.7	--	218.52	0.33	0.66
NR215S-FD	Field Dup.	09/22/99	09/24/99				0	82.5	--	--	–	--
NR216S	Sand P15	09/24/99	09/28/99	2.1	0.97	0.19	0	84.9	–	269.98	0.96	0.44
NR218S	Sand P17	09/27/99	09/29/99	0.81	1.30	0.17	0	77.4	--	235.12	0.29	0.47
NR219S	Sand P18	09/29/99	10/01/99	0.89	1.00	0.22	0	82.1	–	174.17	0.25	0.29
NR220F	Cake 16	10/04/99	10/07/99	0.93	23	2.1	0	--	56.0%	58.96	0.06	1.52
NR221S	Sand P19	10/05/99	10/07/99	3.1	0.66	0.15	0[c]	77.0	–	147.95	0.71	0.15
RD221S[d]	Redredge									4.50		
RD220F [d]	Redredge									16.81		
								Total	Filter Cake	411.30		
								Total	Sand	2434.16		
								Total	Sump	61.56		
									Total	**2907.02**	**8.80**	**13.41**

NR = Data not requested by Koester
NA = Data not available from Koester

Prepared by: JBH1
Checked by: BLA

[b] The original lab results for NR203F reported a 48.3 % solids. A duplicate sample was sent in and re-tested for the value presented above.
[c] The original lab results for NR221S reported 1.5% free liquids. The replicate sample reported 0.49%. Another sample was resubmitted and was reported as 0% free liquids.
[d] The material produced on 10/13 and 10/14 was from surveyed sites that did not meet contract specifications. The material was shipped to Winnebago Landfill as part of NR220F and NR221S.
*Data averaged between sample and field duplicate

Table 15

Fox River Deposit N Removal Project
Water Treatment (Influent)
Phase II

Parameter Date	TSS mg/L Daily	O&G mg/L Daily	Hg ng/L Weekly	PCB ug/L Weekly	pH SU Daily
20-Aug-99	28	11	--	--	N/A
21-Aug-99	2.0*	3.0*	--	--	8.1
22-Aug-99	--	--	--	--	--
23-Aug-99	62	9.3	--	--	8.1
24-Aug-99	25.0	11	--	--	8.4
25-Aug-99	17	11	5.95	<0.33	8.3
26-Aug-99	3.8	7.0	--	--	N/A
27-Aug-99	1.0*	9.4	--	--	8.4
28-Aug-99	1.1*	13	--	--	8.2
29-Aug-99	--	--	--	--	--
30-Aug-99	<0.98	18	--	--	8.4
31-Aug-99	<0.97	11	6.77	<0.33	8.1
01-Sep-99	<0.96	7.0	--	--	8.3
02-Sep-99	<0.96	8.5	--	--	N/A
03-Sep-99	1.1	12	--	--	8.3
04-Sep-99	1.0*	12	--	--	8.3
05-Sep-99	--	--	--	--	--
06-Sep-99	3.7	13	--	--	8.3
07-Sep-99	3.9	16	4.51	<0.33	7.8
08-Sep-99	2.1	<1.4	--	--	N/A
09-Sep-99	<0.99	<1.4	--	--	N/A
10-Sep-99	<1.0	<1.4	--	--	8.5
11-Sep-99	<0.98	<1.4	--	--	8.5

Table 15 *(Continued)*

Parameter Date	TSS mg/L Daily	O&G mg/L Daily	Hg ng/L Weekly	PCB ug/L Weekly	pH SU Daily
12-Sep-99	--	--	--	--	--
13-Sep-99	<0.98	2.9*	--	--	8.6
14-Sep-99	<8.8	4.8	1.23	0.22	8.5
15-Sep-99	<0.91	D	--	--	8.5
16-Sep-99	<0.91	D	--	--	8.3
17-Sep-99	<0.93	D	--	--	8.0
18-Sep-99	12	3.4*	--	--	8.1
19-Sep-99	--	--	--	--	--
20-Sep-99	1.0*	5.9	--	--	8.2
21-Sep-99	110	5.0	238.7	2.9	8.1
22-Sep-99	18	7.4	--	--	8.0
23-Sep-99	<0.88	21	--	--	8.0
24-Sep-99	1.1	3.8*	--	--	8.3
25-Sep-99	2.8	7.5	--	--	8.3
26-Sep-99	--	--	--	--	--
27-Sep-99	<0.88	2.7*	--	--	8.4
28-Sep-99	1.5	4.5*	N/A	0.44	8.2
29-Sep-99	6.4	5.7	--	--	8.2
30-Sep-99	<0.91	<1.4	--	--	8.1
01-Oct-99	1.7	3.7*	--	--	8.1
02-Oct-99	--	--	--	--	--
03-Oct-99	--	--	--	--	--
04-Oct-99	<0.88	5.1	--	--	8.3

*Sample results quantitated between Method Detection Limit and Practical Quantitation Limit.
D = Samples inadvertently destroyed prior to lab analysis.
N/A = Not analyzed

Prepared by: JBH1
Checked by: BLA

Table 16

Fox River Deposit N Removal Project
Water Treatment (Effluent)
Phase II

Parameter	Flow	BOD_5	TSS	NH_3	O&G	Hg	PCB	TCDD	pH
Date	MGD	mg/l Daily	mg/l Daily	mg/l daily	mg/l Daily	ng/l Weekly	ng/l Weekly	pg/l Weekly	SU/Daily
Limit		<2 mg/l weekly ave	5 mg/l monthly ave10 mg/l daily max		N/A	1700 ng/l daily max	1.2 ug/l 3.6E-3 lb/day	3.0E-9 ug/l month ave 9.0E-9 lb/day	6-9 std units
20-Aug-99	0.100	--	1.0*	1.1	9.1	--			N/A
21-Aug-99	0.150	--	4.6	1.5	4.2	–			8.8
22-Aug-99	--	--	--	--	--	--			--
23-Aug-99	0.150	--	1.6*	1.6	2.8*	--			8.8
24-Aug-99	0.150	--	2.1*	1.5	8.9	--			8.7
25-Aug-99	0.144	<2.0	0.94*	0.87	11.0	4.98	<0.33	<1.3	8.9
26-Aug-99	0.200	--	2.3*	<0.062	6.2	--			N/A
27-Aug-99	0.166	--	1.4*	0.64	8.2	--			N/A
28-Aug-99	0.160	--	1.2*	0.65	12.0	--			8.4
29-Aug-99	--	--	--	--	--	--			--
30-Aug-99	0.190	<3.0	1.5*	1.0	8.0	3.85	--	<1.5	8.4
31-Aug-99			1.2*	1.5	16.0		<0.33	--	8.3
01-Sep-99	0.190	--	1.3*	0.52	5.9	--			8.5
02-Sep-99	0.180	--	<0.97	0.68	7.0	--			N/A
03-Sep-99	0.180	--	2.3*	0.4	2.3*	--			8.4
04-Sep-99	0.200	--	2.1*	0.57	13.0*	--			8.1
05-Sep-99	--	--	--	--	--	--			--
06-Sep-99	0.075	--	2.9	<0.87	18.0	--			8.3
07-Sep-99	0.110	<2.0	<0.95	0.062	12.0	0.63	<0.33	--	8.1
08-Sep-99	0.185	--	1.2*	0.35	<1.4	--			8.4
09-Sep-99	0.209	--	<0.89	0.53	<1.4	--			8.6
10-Sep-99	0.180	--	<1.1	0.85	3.6*	--			8.5

Table 16 *(Continued)*

Parameter	Flow	BOD_5	TSS	NH_3	O&G	Hg	PCB	TCDD	pH
Date	MGD	mg/l Daily	mg/l Daily	mg/l daily	mg/l Daily	ng/l Weekly	ng/l Weekly	pg/l Weekly	SU/Daily
Limit		<2 mg/l weekly ave	5 mg/l monthly ave10 mg/l daily max		N/A	1700 ng/l daily max	1.2 ug/l 3.6E-3 lb/day	3.0E-9 ug/l month ave 9.0E-9 lb/day	6-9 std units
11-Sep-99	0.200	–	1.1*	0.86	1.7*	--			8.6
12-Sep-99	--	--	--	--	--	--			--
13-Sep-99	0.200	--	<0.88	0.5	3.9*	--			8.4
14-Sep-99	0.220	<2.0	11*	0.13*	4.3*	<1.0	<0.33	<1.8	8.5
15-Sep-99	0.200	–	<0.88	--	D	--			N/A
16-Sep-99	0.180	--	<0.88	<0.062	D	--			8.4
17-Sep-99	0.180	--	<0.92	0.12*	D	--			8.5
18-Sep-99	0.180	--	<0.93	0.31*	2.2*	--			8.4
19-Sep-99	--	--	--	--	--	--			--
20-Sep-99	0.175	--	<0.88	0.14	6.0	--			8.3
21-Sep-99	0.180	<2.0	1.6*	0.073*	3.8*	0.43	<0.33	<1.5	8.5
22-Sep-99	0.180	--	<0.88	0.16*	4.1*	--			8.4
23-Sep-99	0.160	--	<0.88	0.11*	9.8	--			8.0
24-Sep-99	0.180	--	<0.88	<0.062	6.2	--			8.2
25-Sep-99	0.180	--	<0.88	0.19*	1.8*	--			8.2
26-Sep-99	--	--	--	--	--	--			--
27-Sep-99	0.160	--	1.5*	0.39	4.3*	--			8.3
28-Sep-99	0.06	--	<0.88	0.12	4.1*	--			8.3
29-Sep-99	0.160	<2.0	<0.88	0.058	<1.4	--	<0.33	<1.5	8.2
30-Sep-99		--	<0.91	<0.062	<1.4	--			8.1
01-Oct-99		--	2.3	<0.062	5.9	--			8.1
02-Oct-99	--	--	--	--	--	--			--
03-Oct-99	--	--	--	--	--	--			--
04-Oct-99		--	<0.88	0.11*	6.7	--			8.5

D - Sample destroyed by lab prior to analysis.
*Result quantitated between Method Limit of Detection and Practical Quantitation Limit.

Prepared by: JBH1
Checked by: BLA

Table 17

Deposit N – Phase III
Mass of Sediment and PCBs Removed

Sample ID	Type	Sample Date	Lab Result Receipt	**SON** S PCBs mg/kg	**SOX** S PCBs mg/kg	Hg mg/kg	PFT % Liq	Sand % Sol	Filter Cake % Sol	S Pile Mass (tons)	**SON** S Mass PCBs (lbs.)	**SOX** S Mass PCBs (lbs.)
NR301F	Cake	10/13/99	10/13/99	10	42	2.1	0	--	60.6	106.9	1.08	5.44
NR302S	Sand	10/13/99	10/13/99	2.9	3.4	0.3	0	76.2	--	18.70	0.08	0.10
								Total	Filter Cake	106.90		
								Total	Sand	18.70		
									Total	**125.60**	**1.16**	**5.44**

Prepared by: JBH1
Checked by: BLA

Table 18

Deposit N
Water Treatment (Influent)
Phase III

Parameter Date	TSS mg/L Daily	O&G mg/L Daily	Hg ng/L Weekly	PCB ug/L Weekly	pH SU Daily
05-Oct-99	<1.1	2.6*	0.35	0.50*	8.3
06-Oct-99	<1.0	2.2*	--	--	7.8
07-Oct-99	<0.98	NA	--	--	7.8
08-Oct-99	29	4.1*	--	--	7.9
09-Oct-99	<0.95	2.1*	--	--	7.8
10-Oct-99	--	--	--	--	--
11-Oct-99	1.5*	3.4*	--	--	7.8
12-Oct-99	<0.4	3.8*	<0.1	<0.49*	N/A
13-Oct-99	1.3	5.6	--	--	8.3
14-Oct-99	<0.52	3.1*	--	--	7.9

*Sample results quantitated between Method Detection Limit and Practical Quantitation Limit.
NA = Not Analyzed.

Prepared by: JBH1
Checked by: BLA

Deposit N
Water Treatment (Effluent)
Phase III

Parameter	Flow	BOD_5	TSS	NH_3	O&G	Hg	PCB	TCDD	pH
Date	MGD	mg/L Daily	mg/L Daily	mg/L Daily	mg/L Daily	ng/L Weekly	ng/L Weekly	pg/L Weekly	SU/Daily
Limit		<2 mg/l weekly ave	5 mg/l monthly ave10 mg/l daily max		N/A	1700 ng/l daily max	1.2 ug/l 3.6E- 3 lb/day	3.0E-9 ug/l month ave9.0E-9 lb/day	6-9 std units
05-Oct-99		<2.0	<0.93	0.15	<1.4	0.88	<0.33	<2.6	8.3
06-Oct-99		--	<0.96	0.38	<1.4	--			8.0
07-Oct-99		--	1.2*	5.0	1.9*	--			7.8

Table 18 *(Continued)*

Parameter	Flow	BOD_5	TSS	NH_3	O&G	Hg	PCB	TCDD	pH
Date	MGD	mg/L Daily	mg/L Daily	mg/L Daily	mg/L Daily	ng/L Weekly	ng/L Weekly	pg/L Weekly	SU/Daily
Limit		<2 mg/l weekly ave	5 mg/l monthly ave10 mg/l daily max		N/A	1700 ng/l daily max	1.2 ug/l 3.6E-3 lb/day	3.0E-9 ug/l month ave9.0E-9 lb/day	6-9 std units
08-Oct-99		--	1.4*	6.3	3.0*	--			7.9
09-Oct-99		--	<1.0	--	<1.4	--	--	--	8.4
10-Oct-99	--	--	<0.94	2.4	<1.4	--	--	--	7.7
11-Oct-99		--	--	--	--	--	--	--	--
12-Oct-99		<2.0	<0.33	1.0	1.6*	0.71	<0.33	<1.2	7.7
13-Oct-99		--	<0.21	1.2	5.7	--	--	--	8.3
14-Oct-99		--	<0.43	0.4	4.4*	--	--	--	7.8

*Results quantitated between Method Detection Limit and Practical Quantitation Limit.

Prepared by: JBH1
Checked by: BLA

Table 19

Phase IV - Deposit O
Mass of Sediment and PCBs Removed

Sample ID	Type	Sample Date	Lab Result Receipt	Sonication ΣPCBs mg/kg	Soxhlet ΣPCBs mg/kg	Hg mg/kg	PFT % Liq	Sand % Sol	Filter Cake % Sol	S Pile Mass (tons)	Sonication Σ Mass PCBs (lbs.)	Soxhlet S Mass PCBs (lbs.)
7-Day Unit												
401F	Filter Cake	10/25/99	10/27/99	0.560	0.640	1.5	0		58.8	144.13	0.10	0.11
402S	Sand	10/25/99	10/27/99	0.262	0.260[A]	0.21	0	82.0		38.00	0.02	0.02
1st 5-Day Unit												
403F	Filter Cake	10/29/99	11/02/99	0.375[B]	0.096[A]	1.8	0		66.3	289.39	0.14[B]	0.04
404S	Sand	01/29/99	11/02/99	0.130	0.110[A]	0.27	0	83.6		79.66	0.02	0.01
2nd 5-Day Unit												
405F	Filter Cake	11/04/99	11/08/99	0.200	0.600	2.1	0		60.3	234.24	0.06	0.17
406S	Sand	11/04/99	11/08/99	0.270	0.510	0.20	0	77.3		20.15	0.01	0.01
								Totals		**805.57**	**0.34**	**0.36**

[A] Result is qualified by analytical laboratory - estimated value.
[B] Based on ½ reported detection limit.

Prepared by: JBH1
Checked by: BLA

Table 20

Fox River Deposit N Removal Project
Phase IV - Deposit O
Water Treatment (Influent)

Parameter Date	TSS mg/L Daily	O&G mg/L Daily	Hg ng/L Weekly	PCB ug/L Weekly	pH SU Daily
15-Oct-99	28	<1.4	--	--	7.5(F)
16-Oct-99	4.5	2.3*	--	--	7.3(F)
17-Oct-99	--	--	--	--	--
18-Oct-99	21	<1.4	--	--	7.3(F)
19-Oct-99	<0.21	5.3	1.32	<0.33	7.4(F)
20-Oct-99	--	--	--	--	--
21-Oct-99	9.3	5.8	--	--	7.4(F)
22-Oct-99	0.43*		--	--	7.9(F)
23-Oct-99	<0.43	2.6*	--	--	7.5(F)
24-Oct-99	--	--	--	--	--
25-Oct-99	<4.0	1.8*	--	--	7.4(F)
26-Oct-99	0.90*	<1.4	9.3	<0.33	7.5(F)
27-Oct-99	0.40*	4.4*	--	--	7.5(F)
28-Oct-99	<0.40	3.5*	--	--	7.3(F)
29-Oct-99	<0.41	2.8*	--	--	7.3(F)
30-Oct-99	0.42*	1.6*	--	--	7.4(F)
31-Oct-99	--	--	--	--	--
01-Nov-99	1.6	1.5*	--	--	7.5(F)
02-Nov-99	<0.40	3.0*	0.70	<0.33	7.5(F)
03-Nov-99	<0.41	<1.4	--	--	7.4(F)
04-Nov-99	29	3.6*	--	--	8.5(F)
05-Nov-99			--	--	
06-Nov-99			--	--	
09-Nov-99	0.60*		--	--	7.6(F)

*Results quantitated between Method Detection Limit and Practical Quantitation Limit
(F) - Field Measurement

Prepared by: JBH1
Checked by: BLA

Table 21

Fox River Deposit N Removal Project
Water Treatment (Effluent)
Phase IV

Parameter	Flow	BOD_5	TSS	NH_3	O&G	Hg	PCB	TCDD	pH
Date	MGD	mg/L Daily	mg/L Daily	mg/L Daily	mg/L Daily	ng/L Weekly	ng/L Weekly	pg/L Weekly	SU/ Daily
Limit		<2 mg/l weekly ave	5 mg/l monthly ave10 mg/l daily max		N/A	1700 ng/l daily max	1.2 ug/l 3.6E-3 lb/day	3.0E-9 ug/l month ave9.0E-9 lb/day	6-9 std units
15-Oct-99		--	<0.20	0.57	4.3	--			7.5
16-Oct-99		--	<0.21	5.8	2.5*	--			7.2
17-Oct-99	--	--	--	--	--	--			--
18-Oct-99		--	0.50*	6.9	3.4*	–			7.2
19-Oct-99		<2.0	<0.20	10	3.4*		<0.33	<4.8	7.5
20-Oct-99	--	--	--	--	--	--			--
21-Oct-99		--	<0.40	9.8	1.9*	0.58			7.5
22-Oct-99		--	0.5*	12	NA	--			7.3
23-Oct-99		--	<0.41	1.2	1.4*	--			7.2
24-Oct-99	--	--	--	--	--	--			--
25-Oct-99		--	<0.40	1.5	1.4*	--			7.6
26-Oct-99		5.0	5.4	1.4	2.0*	3.37	<0.33	<2.1	7.0
27-Oct-99		--	0.50*	12	4.2*	--			7.5
28-Oct-99		--	0.53*	1.3	2.8*	--			7.5
29-Oct-99		--	0.40*	1.4	1.9*	--			7.5
30-Oct-99		--	0.60*	17	<1.4	--			7.5
31-Oct-99	--	--	--	--	--	--			--
01-Nov-99		--	<0.40	15	<1.4	--			7.5
02-Nov-99		<2.0	<0.40	8.7	<1.4	0.68	<0.33	<4.6	7.5
03-Nov-99		--	<0.40	10	<1.4	--			7.5
04-Nov-99		--	<0.40	11	<1.4	--			7.4
05-Nov-99		--	<0.40	--		--			7.7
06-Nov-99		--				0.63			
07-Nov-99		--				--			
10-Nov-99			<0.40						7.7

* Results quantified between Method Detection Limit and Practical Quantitation Limit.

Prepared by: JBH1
Checked by: BLA

Table 22

Deposit N
Removal Summary Metrics[a]

Phase	Sediment Removed (cubic yards)	Dewatered Sediment (tons)	PCBs Removed (pounds)	Days Dredged
I	3,788	2,537	95.3	30
II	2,983	2,983	13.4	45
III	135	125	5.4	12
IV	1,026	806	0.4	17
Total	[b]7,932 (8,175)	6,451	114.5	104

[a] As a result of additional analyses, removal summary metrics have changed (i.e., plus or minus two percent) since publication of the April 2000 Deposit N Summary Report.

[b] Overall Deposit N removal volume Phases I, II and III was estimated as 7,149 cubic yards and 1,026 cubic yards from Phase IV or Deposit O for a total volume of 8,175 cubic yards. The small variance between the sum of individual phases and the total removal volume is due to the location and timing of the several sediment volume or poling surveys.

Prepared by: SGL
Checked by: JBH1

Table 23
Fox River Deposit N Removal Project
Project Cost Summary[a]

Work Activity	Unit	Unit Rate	Project Units	Project Cost
Contractor				
Site Preparation	Lump Sum	381,000.00	1	$ 381,000
Turbidity Barrier	Lump Sum	525,000.00	1	525,000
Environmental Monitoring	Lump Sum	210,000.00	1	210,000
Dredging Phases 1 & 2	Cubic Yard	20.73	7,014	145,000
Dewatering Phases 1 & 2	Cubic Yard	41.52	7,014	291,000
Water Treatment Phases 1 & 2	Cubic Yard	6.69	7,014	47,000
Winterization	Lump Sum	411,000.00	1	411,000
Restoration	Lump Sum	55,000.00	1	55,000
ILP Turbidity Units	Lump Sum	17,000.00	1	17,000
Water Treatment (Interim Period)	Lump Sum	27,000.00	1	27,000
Phase III Removal		98,000.00	1	98,000
Phase IV Removal [c]		163,000.00	1	163,000
			Subtotal	$2,370,000
Transport & Disposal				
TSCA	Lump Sum	251,000.00	1	$ 251,000
Non-TSCA[c,d]	Ton	81.00	4,812	366,000
			Subtotal	$617,000
Engineering[b]				
Phase I	Lump Sum	763,000	1	$ 763,000
Phase II/III	Lump Sum	111,000	1	111,000
Phase IV[c]	Lump Sum	65,000	1	65,000
Post Construction	Lump Sum	83,000	1	83,000
			Subtotal	$1,022,000
Other				
Access/Lease	Lump Sum	28,000	1	$ 28,000
Insurance	Lump Sum	78,000	1	78,000
DFD	Lump Sum	117,000	1	117,000
			Subtotal	$ 223,000
			Total	**$4,232,000**

[a] Deposit O work accounted for an additional 1,026 cubic yards of sediment removed. Combined with Deposit N, sediment removal for all four phases totals 8,175 cubic yards.
[b] Engineering costs include bench tests, permitting, field surveys, design, bid documents, project management, construction oversight and public relations.
[c] Contains Deposit O costs.
[d] Some transport and disposal costs were paid under above line items for Phase III and Phase IV Removal, the costs not covered by these items are represented here.