ORIGINAL

Wisconsin Electric
A WISCONSIN ENERGY COMPANY

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FEDERAL ENERGY
REGULATORY COMMISSION

April 7, 1999

Mr. David Boergers, Secretary
Federal Energy Regulatory Commission
888 First Street, N.E.
Washington, D.C. 20426

Art. 406
Art. 405 033 + 034
032 + 033 Art. 406
Art. 405

RE: Chalk Hill Hydroelectric Project - FERC No. 2394-~~017~~
White Rapids Hydroelectric Project - FERC No. 2357-~~003~~
Article 405- Water Quality Monitoring Report
Article 406 - Water/Sediment/Fish Monitoring Report

Dear Mr. Boergers:

Wisconsin Electric is hereby filing one original and eight additional copies of the following data:

1. Flowage water quality monitoring for the Chalk Hill and White Rapids Projects performed during the months of December , 1998; January, February and March, 1999;

2. Voluntary flowage water quality monitoring for the same projects performed during the months of June, July, August and September, 1998;

3. Quarterly water chemistry monitoring in partial fulfillment of Article 406;

4. Sediment chemistry monitoring for both flowages in partial fulfillment of Article 406.

Article 405 - The water quality monitoring plan as approved by FERC order dated January 21, 1998 included the following component:

Flowage Monitoring Plan
- Measurements to be made at 1.0 meter intervals in the deepest part of each flowage;
- Measurements to be taken during December, January, February and March of each year monitored;
- According to the approved plan, monitoring results are to be filed no later than May 1 of each year.

In early spring of 1998, Wisconsin Electric became aware of the fact that there would be little spring runoff, the result of a very mild winter. In addition to anticipated low flows, May was very warm and dry. Thus, Wisconsin Electric anticipated the possibility of "worst case" conditions on the river during the summer and used this opportunity to take extra vertical profile measurements in the Chalk Hill and White Rapids flowages.

As the attached tables indicate, in spite of warm temperatures and lower than average flow conditions in the river, neither flowage developed intense stratification. Good water

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quality conditions prevailed during the entire summer. Winter measurements similarly documented the near absence of any sags in DO levels during the entire winter.

Article 406[1] - The water chemistry/sediment/fish monitoring plan as approved by FERCorder dated December 30, 1997 included the following components:

- Quarterly water chemistry sampling once every five years;
- Replicate sediment sampling once every five years.

The results of these measurements are contained in enclosed Tables one through four, and contract laboratory reports (for sediment analyses).

Neither the water chemistry nor sediment analyses differ appreciably from baseline measurements made in 1989-90, contained in Appendix 11 and 10 in the final license applications for the White Rapids and Chalk Hill Projects, respectively.

Enclosed is a proof of service to the agencies listed on the copy list.

Please call me at (414) 221-2413, if you have any questions regarding this matter.

Sincerely,

Rita L. Hayen, P.E.
Project Manager, Hydro Licensing

Encl.

CC: Tom Thuemler, WDNR
Jan Fenske, MDNR
Jim Fossum, USFWS
James Grant, MDEQ
Ronald Lesniak, FERC - Chicago Regional Office

[1] Article 406 also specified the collection and chemical analyses of fish tissue. The fish samples will be collected during the spring/summer of 1999 with the results to be submitted to FERC in the fall of 1999.

Certificate of Service

I hereby certify that I have this day served the foregoing document upon all entities specified in the order to issue license to be consulted on matters related to the Commission filing. Service was done pursuant to Rule 2010 of FERC's Rules of Practice and Procedure 18 CFR, Section 385.2010

Dated this day Wednesday, April 07, 1999.

Annie M. Salmona

Annie Salmona
Hydro Licensing
Wisconsin Electric Power Co.

Annie Salmona
Wisconsin Electric Power Co.
333 W. Everett Street
Milwaukee, WI 53203
(414) 221-4151

Wisconsin Electric Power Company
Chalk Hill winter 98-99 Hydroelectric Project
Vertical Profile Data - Winter 1998-1999

Vertical Profile was taken in the deepest available area of flowage.
at the navigation warning buoy float line, near the dam.

	Approximate air temp: 5.5 C				*Approximate air temp: -15.6 C*				*Approximate air temp: -1.7 C*				*Approximate air temp: -11.1 C*			
	Secci Depth: 9.0 ft.		*Time:1030*		*Secci Depth: 3.0 ft.*		*Time:1520*		*Secci Depth: 5.0 ft.*		*Time:1600*		*Secci Depth: 4.5 ft.*		*Time:0900*	
Depth	Temp. (C)	D.O. (mg/l)	Cond. (uS/cm)	pH (S.U.)	Temp. (C)	D.O. (mg/l)	Cond. (uS/cm)	pH (S.U.)	Temp. (C)	D.O. (mg/l)	Cond. (uS/cm)	pH (S.U.)	Temp. (C)	D.O. (mg/l)	Cond. (uS/cm)	pH (S.U.)
0.0	1.5	14.4	269	8.2	0.0	14.5	278	7.6	0.0	14.0	277	7.7	0.0	14.5	244	7.6
0.5	1.4	14.4	268	8.2	0.0	14.4	276	7.6	0.0	13.8	272	7.8	0.0	14.5	243	7.6
1.0	1.5	14.3	270	8.2	0.0	14.3	279	7.6	0.0	13.8	276	7.8	0.0	14.4	239	7.7
1.5	1.5	14.3	268	8.2	0.0	14.2	276	7.6	0.0	13.7	281	7.8	0.0	14.3	238	7.7
2.0	1.5	14.3	269	8.2	0.0	14.2	270	7.7	0.0	13.7	279	7.9	0.0	14.3	242	7.8
2.5	1.5	14.3	273	8.2	0.0	14.1	270	7.7	0.0	13.6	272	7.9	0.0	14.2	240	7.8
3.0	1.5	14.3	273	8.2	0.0	14.1	281	7.7	0.0	13.6	273	7.9	0.0	14.2	245	7.8
3.5	1.6	14.3	264	8.2	0.0	14.1	277	7.7	0.0	13.6	285	7.9	0.0	14.1	241	7.8
4.0	1.6	14.3	275	8.2	0.0	14.1	270	7.7	0.0	13.5	277	7.9	0.0	14.1	234	7.9
4.5	1.6	14.2	279	8.2	0.0	14.0	277	7.7	0.0	13.5	290	7.9	0.0	14.0	249	7.9
5.0	1.6	14.3	263	8.2	0.0	14.0	284	7.7	0.0	13.4	269	7.9	0.0	14.0	232	7.9
5.5	1.6	14.2	275	8.2	0.0	14.0	275	7.7	0.0	13.4	290	7.9	0.0	14.0	247	7.9
6.0	1.6	14.3	270	8.2	0.0	14.0	291	7.7	0.0	13.4	281	7.9	0.0	14.0	242	7.9
6.5	1.6	14.2	271	8.2	0.0	14.0	289	7.7	0.0	13.3	282	7.9	0.0	14.0	238	7.9
7.0	1.6	14.2	266	8.2	0.0	13.9	289	7.7	0.0	13.3	292	7.9	0.0	14.0	252	7.9
7.5	1.6	14.2	260	8.2	0.0	13.9	298	7.7	0.0	13.3	289	7.9	0.0	13.9	240	7.9
8.0	1.6	14.2	282	8.2	0.0	13.9	304	7.7	0.0	13.3	282	7.9	0.0	13.9	230	7.9
8.5	1.9	14.2	269	8.2	0.0	13.7	275	7.7	0.0	13.2	288	7.9	0.0	13.9	260	7.9
8.8	-	-	-	-	-	-	-	-	0	13.2	277	7.9	0	13.9	245	8.0

Wisconsin Electric Power Company
White Rapids winter 98-99 Hydroelectric Project
Vertical Profile Data - Winter 1998- 1999

Vertical Profile was taken in the deepest available area of flowage,
at the navigation warning buoy float line, near the dam

	Approximate air temp: 5.5 C				*Approximate air temp:-17 8C*				*Approximate air temp:-1.1 C*				*Approximate air temp:-11.1 C*			
	Secci Depth: 9.0 ft.		*Time:1145*		*Secci Depth: 2.5 ft.*		*Time:1600*		*Secci Depth:6.5 ft.*		*Time:1400*		*Secci Depth: 4.0 ft.*		*Time:0800*	
Depth	Temp. (C)	D.O. (mg/l)	Cond. (uS/cm)	pH (S.U.)	Temp. (C)	D.O. (mg/l)	Cond. (uS/cm)	pH (S.U.)	Temp. (C)	D.O. (mg/l)	Cond. (uS/cm)	pH (S.U.)	Temp. (C)	D.O. (mg/l)	Cond. (uS/cm)	pH (S.U.)
0.0	2.1	14.6	268	8.2	0.0	14.7	276	7.8	0.0	14.1	275	7.6	0.0	14.7	255	7.4
0.5	2.1	14.3	268	8.2	0.0	14.5	278	7.8	0.0	14.1	268	7.7	0.0	14.5	246	7.4
1.0	2.1	14.5	267	8.2	0.0	14.4	278	7.8	0.0	13.9	269	7.7	0.0	14.3	243	7.6
1.5	2.0	14.5	268	8.2	0.0	14.4	279	7.8	0.0	13.8	267	7.8	0.0	14.2	247	7.6
2.0	2.0	14.5	271	8.2	0.0	14.3	275	7.8	0.0	13.7	274	7.8	0.0	14.2	244	7.7
2.5	2.1	14.5	269	8.2	0.0	14.2	268	7.8	0.0	13.7	263	7.8	0.0	14.2	242	7.7
3.0	2.0	14.4	271	8.2	0.0	14.2	270	7.8	0.0	13.6	267	7.8	0.0	14.2	246	7.8
3.5	2.1	14.4	264	8.2	0.0	14.1	268	7.8	0.0	13.6	278	7.8	0.0	14.2	248	7.8
4.0	2.1	14.4	262	8.2	0.0	14.0	278	7.8	0.0	13.6	264	7.8	0.0	14.1	242	7.8
4.5	2.1	14.4	266	8.2	0.0	14.0	263	7.8	0.0	13.6	276	7.8	0.0	14.1	242	7.8
5.0	2.1	14.4	269	8.2	0.0	14.0	271	7.8	0.0	13.5	281	7.8	0.0	14.1	238	7.8
5.5	2.1	14.3	263	8.2	0.0	13.9	284	7.8	0.0	13.5	265	7.8	0.0	14.1	234	7.8
6.0	2.1	14.3	273	8.2	0.0	13.9	267	7.8	0.0	13.5	273	7.8	0.0	14.1	251	7.8
6.5	2.1	14.3	277	8.2	0.0	13.9	287	7.8	0.0	13.4	286	7.8	0.0	14.1	254	7.9
7.0	2.1	14.3	269	8.2	0.0	13.8	262	7.8	0.0	13.4	290	7.8	0.0	14.0	245	7.9
7.5	2.1	14.3	267	8.2	0.0	13.8	262	7.8	0.0	13.3	269	7.8	0.0	14.0	244	7.9
8.0	2.1	14.3	270	8.2	0.0	13.7	284	7.8	0.0	13.3	272	7.8	0.0	14.0	246	7.9
8.5	2.1	14.2	269	8.2	0.0	13.7	283	7.8	0.0	13.3	280	7.8	0.0	14.0	232	7.9

Wisconsin Electric Power Company
Chalk Hill Summer 98 Hydroelectric Project
Vertical Profile Data - Summer 1998

Vertical Profile was taken in the deepest available area of flowage, at the navigation warning buoy float line, near the dam.

	Approximate air temp: 15.6 C				*Approximate air temp: 26.7 C*				*Approximate air temp: 15.6 C*				*Approximate air temp: 12.8 C*			
	Secci Depth : 3.5 ft.		*Time: 1130*		*Secci Depth : 4.5 ft.*		*Time: 1455*		*Secci Depth : 3.5 ft.*		*Time: 1030*		*Secci Depth : 3.5 ft.*		*Time:1015*	
Depth	Temp. (M)	D.O. (mg/l)	Cond. (uS/cm)	pH (S.U.)	Temp. (M)	D.O. (mg/l)	Cond. (uS/cm)	pH (S.U.)	Temp. (M)	D.O. (mg/l)	Cond. (uS/cm)	pH (S.U.)	Temp. (M)	D.O. (mg/l)	Cond. (uS/cm)	pH (S.U.)
0.0	17.0	10.5	267	8.5	26.8	8.5	273	8.3	22.7	8.4	294	8.1	20.7	7.2	288	7.9
0.5	17.0	10.5	269	8.5	26.8	8.4	271	8.3	22.7	8.3	295	8.2	20.7	7.2	288	7.9
1.0	17.0	10.4	270	8.5	26.8	8.4	273	8.3	22.7	8.3	294	8.2	20.5	7.2	288	7.9
1.5	17.0	10.4	270	8.4	26.8	8.4	274	8.3	22.7	8.2	293	8.2	20.4	7.1	287	7.9
2.0	17.0	10.3	265	8.4	26.8	8.4	274	8.3	22.6	8.2	291	8.2	20.4	7.2	290	7.9
2.5	17.0	10.3	270	8.4	26.8	8.3	270	8.3	22.6	8.4	296	8.2	20.4	7.2	293	7.9
3.0	17.0	10.0	269	8.4	26.8	8.3	275	8.3	22.6	8.2	293	8.2	20.4	7.2	288	7.9
3.5	16.9	9.6	265	8.3	26.8	8.2	269	8.3	22.6	8.1	294	8.2	20.4	7.1	294	7.9
4.0	16.9	9.6	268	8.3	26.5	8.0	274	8.3	22.6	8.1	294	8.2	20.4	7.2	285	7.9
4.5	16.9	9.6	275	8.6	26.0	7.3	276	8.1	22.6	8.1	299	8.2	20.4	7.2	285	7.9
5.0	16.9	9.6	268	8.6	26.0	7.2	271	8.0	22.6	8.1	295	8.2	20.4	7.2	293	7.9
5.5	16.9	9.6	264	8.3	26.0	7.1	274	8.0	22.6	8.1	293	8.2	20.4	7.2	290	7.9
6.0	16.9	9.6	273	8.3	25.9	7.0	274	8.0	22.6	8.1	293	8.2	20.4	7.2	293	7.9
6.5	16.9	9.8	276	8.3	25.9	7.0	276	8.0	22.6	8.1	293	8.2	20.4	7.2	291	7.9
7.0	16.9	9.9	274	8.4	25.9	7.0	272	8.0	22.6	8.0	295	8.2	20.4	7.2	293	7.9
7.5	16.8	9.6	265	8.3	25.9	6.9	271	8.0	22.6	8.1	303	8.2	20.4	7.2	294	7.9
8.0	16.8	9.5	270	8.3	25.9	6.9	274	8.0	22.6	8.1	302	8.2	20.4	7.2	282	7.9
8.5	16.7	9.4	263	8.3	25.7	5.7	276	7.9	22.5	8.0	303	8.2	20.3	7.2	289	7.9
9.0	-	-	-	-	25.2	4.1	286	7.6	22.5	7.9	301	8.2	20.3	7.1	295	7.9

Wisconsin Electric Power Company
White Rapids Summer 98 Hydroelectric Project
Vertical Profile Data - Summer 1998

Vertical Profile was taken in the deepest available area of flowage, at the navigation warning buoy float line, near the dam

	Approximate air temp: 15.6 C				*Approximate air temp: 26.7 C*				*Approximate air temp: 15.6 C*				*Approximate air temp: 12.8 C*			
	Secci Depth: 3.5 ft.		*Time: 0950*		*Secci Depth: 4.0 ft.*		*Time: 1300*		*Secci Depth: 3.5 ft.*		*Time: 0912*		*Secci Depth: 3.5 ft*		*Time: 0850*	
Depth	Temp. (C)	D.O. (mg/l)	Cond. (uS/cm)	pH (S.U.)	Temp. (C)	D.O. (mg/l)	Cond. (uS/cm)	pH (S.U.)	Temp. (C)	D.O. (mg/l)	Cond. (uS/cm)	pH (S.U.)	Temp. (C)	D.O. (mg/l)	Cond. (uS/cm)	pH (S.U.)
0.0	16.6	10.0	264	8.4	26.6	8.3	271	8.3	22.8	8.6	295	8.4	21.0	7.6	290	8.1
0.5	16.6	10.0	264	8.4	26.6	8.3	271	8.3	22.9	8.6	293	8.4	20.9	7.5	290	8.1
1.0	16.6	9.9	269	8.4	26.6	8.3	271	8.3	22.8	8.5	298	8.3	20.9	7.4	290	8.1
1.5	16.6	9.9	262	8.4	26.3	7.9	273	8.2	22.8	8.5	295	8.3	20.9	7.4	289	8.1
2.0	16.6	9.9	268	8.4	26.0	7.6	276	8.2	22.8	8.6	296	8.4	20.9	7.4	289	8.1
2.5	16.6	9.9	267	8.4	26.0	7.5	278	8.2	22.8	8.5	294	8.3	20.9	7.4	292	8.1
3.0	16.6	9.9	270	8.4	26.0	7.4	277	8.1	22.8	8.2	296	8.3	20.9	7.4	286	8.1
3.5	16.6	9.9	264	8.4	26.0	7.3	274	8.1	22.8	8.2	291	8.3	20.9	7.4	293	8.1
4.0	16.6	9.9	264	8.4	25.9	7.2	276	8.1	22.7	8.1	294	8.3	20.9	7.4	287	8.1
4.5	16.6	9.8	261	8.4	25.9	7.2	272	8.1	22.7	7.6	298	8.2	20.9	7.3	295	8.1
5.0	16.6	9.8	269	8.4	25.9	7.1	275	8.0	22.7	7.4	297	8.1	20.9	7.3	291	8.0
5.5	16.6	9.8	270	8.4	25.9	7.1	277	8.0	22.6	7.5	299	8.1	20.9	7.3	290	8.0
6.0	16.6	9.8	277	8.4	25.9	7.1	273	8.0	22.6	7.5	296	8.1	20.9	7.2	285	8.0
6.5	16.6	9.0	260	8.3	25.8	7.0	276	8.0	22.6	7.2	310	8.1	20.9	7.2	286	8.0
7.0	16.6	8.2	251	8.1	25.7	6.7	271	8.0	22.5	6.4	301	8.0	20.9	7.2	293	8.0
7.5	16.6	8.2	264	8.1	25.5	5.9	274	7.9	22.5	6.5	300	8.0	20.9	7.2	283	8.0
8.0	16.6	8.3	266	8.1	25.4	5.7	260	7.8	22.5	6.6	305	8.0	20.9	7.2	294	8.0
8.3	16.6	7.7	261	8.0	25.2	5.2	279	7.7	22.5	6.6	301	8.0	20.9	7.2	285	8.0

May - 1998

Parameter	Units	Upstream Station [1]- Sturgeon Falls Tailrace	Chalk Hill Tailrace	White Rapids Tailrace	Chalk Hill - Replicate
Field pH	Units	7.9	7.9	7.7	
Field Conductivity	umhos	284	273	267	
Total Suspended Solids	ppm	2	5	3	4
Total Dissolved Solids	ppm	184	172	173	192
Alkalinity	ppm	110	110	110	110
Sulfate	ppm	25	22	21	22
Color	color units	4.0	6.0	5.0	8.0
Ammonia-N	ppm	< 0.06	< 0.06	< 0.06	< 0.06
Total K-N	ppm	0.40	0.31	0.50	0.50
Nitrite - N	ppm	< 0.006	< 0.006	< 0.006	< 0.006
Nitrate - N	ppm	0.31	0.29	0.24	0.26
Total Organic - C	ppm	54	46	39	55
Chlorophyll a	mg/m^3	1.9	4.2	3.2	4.0
Total Hardness	ppm	110	120	120	120
Total Phosphorus	ppm	0.04	0.06	0.06	0.06

Note 1:
Upstream sampling for May, June-July, October occurred in the City of Norway's Sturgeon Falls Project tailrace while in December, it also occurred at the Highway Z Bridge.

Table 2: Water Chemistry Data for Chalk Hill, White Rapids Projects- June 1998

June - 1998

Parameter	Units	Upstream Station [1]- Sturgeon Falls Tailrace	Chalk Hill Tailrace	White Rapids Tailrace	White Rapids - Replicate
Field pH	Units	8.1	8.1	7.6	
Field Conductivity	umhos	245	239	238	
Total Suspended Solids	ppm	3	7	8	6
Total Dissolved Solids	ppm	157	138	156	158
Alkalinity	ppm	94	94	93	101
Sulfate	ppm	19	17	16	16
Color	color units	39	37	33	42
Ammonia-N	ppm	0.072	0.083	0.092	0.070
Total K-N	ppm	1.50	0.55	0.46	0.19
Total Organic - C	ppm	11	11	10	10
Chlorophyll a	mg/m^3	3.5	9.7	7.6	7.2
Total Hardness	ppm	110	110	110	110
Total Phosphorus	ppm	0.091	0.053	0.051	0.054
Nitrate Nitrite as N	ppm	0.18	0.053	0.041	0.060

Note 1:
Upstream sampling for May, June-July, October occurred in the City of Norway's Sturgeon Falls Project tailrace while in December, it also occurred at the Highway Z Bridge.

Table 3: Water Chemistry Data for Chalk Hill, White Rapids Projects - October 1998

October - 1998

Parameter	Units	Upstream Station [1]- Sturgeon Falls Tailrace	Chalk Hill Tailrace	White Rapids Tailrace	Replicate
Field pH	Units	8.0	8.1	8.1	-
Field Conductivity	umhos	260	267	265	-
Total Suspended Solids	ppm	2	4	6	4
Total Dissolved Solids	ppm	164	148	153	150
Alkalinity	ppm	98	100	110	99
Sulfate	ppm	20	19	19	19
Color	color units	180	190	140	150
Ammonia-N	ppm	< 0.06	<0.06	<0.06	<0.06
Total K-N	ppm	0.37	0.47	0.44	0.37
Total Organic - C	ppm	4.2	3.9	4.1	4.2
Chlorophyll a	mg/m^3	1.4	1.2	3.6	2.5
Total Hardness	ppm	110	120	120	120
Total Phosphorus	ppm	0.036	0.030	0.034	0.052
Nitrate Nitrite as N	ppm	0.16	0.15	0.16	0.37

Note 1:
Upstream sampling for May, June-July, October occurred in the City of Norway's Sturgeon Falls Project tailrace while in December, it also occurred at the Highway Z Bridge.

Table 4: Water Chemistry Data for Chalk Hill, White Rapids Projects- December 1998

December - 1998

Parameter	Units	Upstream Station [1]- Sturgeon Falls Tailrace	Chalk Hill Highway Z	Chalk Hill Tailrace	White Rapids Tailrace	Replicate
Field pH	Units	8.0	8.6	8.3	8.3	
Field Conductivity	umhos	266	277	269	265	
Total Suspended Solids	ppm	1	< 1	< 1	<1	< 1
Total Dissolved Solids	ppm	146	143	172	140	138
Alkalinity	ppm	110	110	110	110	110
Sulfate	ppm	25	25	25	25	25
Color	color units	25	25	25	20	25
Ammonia-N	ppm	-	< 0.01	< 0.01	< 0.01	< 0.01
Total K-N	ppm	0.28	0.32	0.37	0.42	0.31
Nitrite - N	ppm	< 0.003	< 0.003	0.006	0.004	< 0.003
Nitrate - N	ppm	0.24	0.17	0.18	0.18	0.17
Total Organic - C	ppm	15	14	13	15	13
Chlorophyll a	mg/m^3	1.6	3.3	0.8	2.1	1.9
Total Hardness	ppm	120	130	120	120	130
Total Phosphorus	ppm	0.12	0.17	0.041	0.025	0.056
Nitrate Nitrite as N	ppm	0.24	0.17	0.18	0.18	0.17

Note 1:
Upstream sampling for May, June-July, October occurred in the City of Norway's Sturgeon Falls Project tailrace while in December, it also occurred at the Highway Z Bridge.

From: Laboratory Services Division
PSB Annex A070

July 20, 1998

To: David Michaud
PSB Annex A146

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

Sample I.D. AB64363 Requestor Code: DMICH
Project Specialist: DWK Activity Code: NOCODE
Sample Description: WHITE RAPIDS SEDIMENT - REP 1
Sample collector: J.R/R.R.
Sample collection date: 06/10/98 Time: 09:30
Lab submittal date: 06/16/98 Time: 12:09
ORDER NUMBER: F537WHIT

Parameter	**Result**	**Units**	**MDL**
Sendout Analysis	see below	---	---

Data for Sendout Analysis:

See attached report for analysis results.

If there are any questions regarding this data, please call.

D.W. KOLLAKOWSKY
221-2835

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1-800-7-ENCHEM

- Analytical Report -

Project Name : HYDRO SEDIMENTS
Project Number :
Station ID : AB64363
Lab Sample Number : 982530-001
Lab Project Number : 982530

Submitter : WISCONSIN ELECTRIC POWER CO
Report Date : 7/12/98
Collection Date : 6/10/98
Matrix Type : SOIL
WI DNR LAB ID : 113172950

Inorganic Results

Test	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Prep Method	Analysis Method
Arsenic	8.5	1.1	3.5		mg/kg		7/7/98	SW846 3051	SW846 6010B
Barium	71	0.13	0.41		mg/kg		7/7/98	SW846 3051	SW846 6010B
Cadmium	0.42	0.090	0.29		mg/kg		7/7/98	SW846 3051	SW846 6010B
Chromium	23	0.16	0.51		mg/kg		7/7/98	SW846 3051	SW846 6010B
Copper	10	0.13	0.41		mg/kg		7/7/98	SW846 3051	SW846 6010B
Lead	15	0.60	1.9		mg/kg		7/7/98	SW846 3051	SW846 6010B
Manganese	1500	0.11	0.35		mg/kg		7/7/98	SW846 3051	SW846 6010B
Mercury	0.22	0.11	0.35		mg/kg	Q	7/7/98	SW846 7471A	SW846 7471A
Nickel	11	0.98	3.1		mg/kg		7/7/98	SW846 3051	SW846 6010B
Selenium	< 1.2	1.2	3.8		mg/kg		7/7/98	SW846 3051	SW846 6010B
Silver	< 0.60	0.60	1.9		mg/kg		7/7/98	SW846 3051	SW846 6010B
Zinc	110	0.95	3.0		mg/kg		7/7/98	SW846 3051	SW846 6010B
Acid Volatile Sulfide	160			22	mg/kg		6/24/98	EPA DRAFT	EPA DRAFT
Nitrogen, total Kjeldahl	3700	36	110		mg/kg		6/27/98	EPA 351.4	EPA 351.4
Oil & Grease, total recoverable	0.077	0.0027	0.0086		%		7/1/98	SW846 9071A	SW846 9071A
Phosphorus, total	590	50	160		mg/kg		6/29/98	EPA 365.1	EPA 365.1
Solids, percent	36.8				%		6/18/98	SM 2540G	SM 2540G
Solids, total volatile	19	1.0	3.2		%	H(7)	6/24/98	EPA 160.4	EPA 160.4
TOC as NPOC	34000	120	380		mg/kg		6/30/98	SW846 9060	SW846 9060

All soil results are reported on a dry weight basis unless otherwise noted.

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- Analytical Report -

Project Name : HYDRO SEDIMENTS
Project Number :
Field ID : AB64363
Lab Sample Number : 982530-001
Lab Project Number : 982530

Submitter : WISCONSIN ELECTRIC POWER CO
Report Date : 7/12/98
Collection Date : 6/10/98
Matrix Type : SOIL
WI DNR LAB ID : 113172950

Semivolatile Organic Results

PCB LIST — Prep Method: SW846 3550 — Prep Date: 6/19/98

Analyte	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis Method
Aroclor 1016	< 38	38	120		ug/kg		6/25/98	SW846 8080
Aroclor 1221	< 38	38	120		ug/kg		6/25/98	SW846 8080
Aroclor 1232	< 38	38	120		ug/kg		6/25/98	SW846 8080
Aroclor 1242	< 38	38	120		ug/kg		6/25/98	SW846 8080
Aroclor 1248	< 38	38	120		ug/kg		6/25/98	SW846 8080
Aroclor 1254	< 38	38	120		ug/kg		6/25/98	SW846 8080
Aroclor 1260	< 38	38	120		ug/kg		6/25/98	SW846 8080
Decachlorobiphenyl	110				%Recov		6/25/98	SW846 8080
Tetrachloro-m-xylene	110				%Recov		6/25/98	SW846 8080

All soil results are reported on a dry weight basis unless otherwise noted.
Units of %Recov(ery) denote surrogate spike recovery. All recoveries pass in-house control limits unless otherwise noted.

From: Laboratory Services Division
PSB Annex A070

July 20, 1998

To: David Michaud
PSB Annex A146

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

Sample I.D. AB64364 Requestor Code: DMICH
Project Specialist: DWK Activity Code: NOCODE
Sample Description: WHITE RAPIDS SEDIMENT - REP 2
Sample collector: J.R/R.R.
Sample collection date: 06/10/98 Time: 09:30
Lab submittal date: 06/16/98 Time: 12:09
ORDER NUMBER: F537WHIT

Parameter	**Result**	**Units**	**MDL**
Sendout Analysis	see below	---	---

Data for Sendout Analysis:

See attached report for analysis results.

If there are any questions regarding this data, please call.

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- Analytical Report -

Project Name : HYDRO SEDIMENTS
Project Number :
Station ID : AB64364
Lab Sample Number : 982530-002
Lab Project Number : 982530

Submitter : WISCONSIN ELECTRIC POWER CO
Report Date : 7/12/98
Collection Date : 6/10/98
Matrix Type : SOIL
WI DNR LAB ID : 113172950

Inorganic Results

Test	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Prep Method	Analysis Method
Arsenic	4.8	1.1	3.5		mg/kg		7/7/98	SW846 3051	SW846 6010B
Barium	65	0.12	0.38		mg/kg		7/7/98	SW846 3051	SW846 6010B
Cadmium	0.33	0.084	0.27		mg/kg		7/7/98	SW846 3051	SW846 6010B
Chromium	18	0.15	0.48		mg/kg		7/7/98	SW846 3051	SW846 6010B
Copper	11	0.15	0.48		mg/kg		7/7/98	SW846 3051	SW846 6010B
Lead	14	0.56	1.8		mg/kg		7/7/98	SW846 3051	SW846 6010B
Manganese	1500	0.099	0.32		mg/kg		7/7/98	SW846 3051	SW846 6010B
Mercury	0.28	0.10	0.32		mg/kg	Q	7/7/98	SW846 7471A	SW846 7471A
Nickel	9.6	0.91	2.9		mg/kg		7/7/98	SW846 3051	SW846 6010B
Selenium	1.2	1.1	3.5		mg/kg	Q	7/7/98	SW846 3051	SW846 6010B
Silver	< 0.56	0.56	1.8		mg/kg		7/7/98	SW846 3051	SW846 6010B
Zinc	66	0.89	2.8		mg/kg		7/7/98	SW846 3051	SW846 6010B
Acid Volatile Sulfide	150			20	mg/kg		6/24/98	EPA DRAFT	EPA DRAFT
Nitrogen, total Kjeldahl	2800	34	110		mg/kg		6/27/98	EPA 351.4	EPA 351.4
Oil & Grease, total recoverable	0.075	0.0025	0.0080		%		7/1/98	SW846 9071A	SW846 9071A
Phosphorus, total	610	46	150		mg/kg		6/29/98	EPA 365.1	EPA 365.1
Solids, percent	39.4				%		6/18/98	SM 2540G	SM 2540G
Solids, total volatile	16	1.0	3.2		%	H(7)	6/24/98	EPA 160.4	EPA 160.4
TOC as NPOC	28000	120	380		mg/kg		6/30/98	SW846 9060	SW846 9060

All soil results are reported on a dry weight basis unless otherwise noted.

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- Analytical Report -

Project Name : HYDRO SEDIMENTS
Project Number :
Field ID : AB64364
Lab Sample Number : 982530-002
Lab Project Number : 982530

Submitter : WISCONSIN ELECTRIC POWER CO
Report Date : 7/12/98
Collection Date : 6/10/98
Matrix Type : SOIL
WI DNR LAB ID : 113172950

Semivolatile Organic Results

PCB LIST **Prep Method: SW846 3550** **Prep Date: 6/19/98**

Analyte	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis Method
Aroclor 1016	< 36	36	110		ug/kg		6/25/98	SW846 8080
Aroclor 1221	< 36	36	110		ug/kg		6/25/98	SW846 8080
Aroclor 1232	< 36	36	110		ug/kg		6/25/98	SW846 8080
Aroclor 1242	< 36	36	110		ug/kg		6/25/98	SW846 8080
Aroclor 1248	< 36	36	110		ug/kg		6/25/98	SW846 8080
Aroclor 1254	< 36	36	110		ug/kg		6/25/98	SW846 8080
Aroclor 1260	< 36	36	110		ug/kg		6/25/98	SW846 8080
Decachlorobiphenyl	110				%Recov		6/25/98	SW846 8080
Tetrachloro-m-xylene	110				%Recov		6/25/98	SW846 8080

All soil results are reported on a dry weight basis unless otherwise noted.
Units of %Recov(ery) denote surrogate spike recovery. All recoveries pass in-house control limits unless otherwise noted.

From: Laboratory Services Division
PSB Annex A070

July 20, 1998

To: David Michaud
PSB Annex A146

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

Sample I.D. AB64365 Requestor Code: DMICH
Project Specialist: DWK Activity Code: NOCODE
Sample Description: CHALK HILL SEDIMENT - REP 1
Sample collector: J.R/R.R.
Sample collection date: 06/10/98 Time: 11:30
Lab submittal date: 06/16/98 Time: 12:09
ORDER NUMBER: F537CHAL

Parameter	**Result**	**Units**	**MDL**
Sendout Analysis	see below	---	---

Data for Sendout Analysis:

See attached report for analysis results.

If there are any questions regarding this data, please call.

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- Analytical Report -

Project Name : HYDRO SEDIMENTS
Project Number :
Station ID : AB64365
Lab Sample Number : 982530-003
Lab Project Number : 982530

Submitter : WISCONSIN ELECTRIC POWER CO
Report Date : 7/12/98
Collection Date : 6/10/98
Matrix Type : SOIL
WI DNR LAB ID : 113172950

Inorganic Results

Test	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Prep Method	Analysis Method
Arsenic	2.7	0.60	1.9		mg/kg		7/7/98	SW846 3051	SW846 6010B
Barium	27	0.070	0.22		mg/kg		7/7/98	SW846 3051	SW846 6010B
Cadmium	< 0.047	0.047	0.15		mg/kg		7/7/98	SW846 3051	SW846 6010B
Chromium	6.4	0.083	0.26		mg/kg		7/7/98	SW846 3051	SW846 6010B
Copper	16	0.27	0.86		mg/kg		7/7/98	SW846 3051	SW846 6010B
Lead	4.2	0.31	0.99		mg/kg		7/7/98	SW846 3051	SW846 6010B
Manganese	440	0.054	0.17		mg/kg		7/7/98	SW846 3051	SW846 6010B
Mercury	< 0.056	0.056	0.18		mg/kg		7/7/98	SW846 7471A	SW846 7471A
Nickel	4.9	0.50	1.6		mg/kg		7/7/98	SW846 3051	SW846 6010B
Selenium	0.84	0.62	2.0		mg/kg	Q	7/7/98	SW846 3051	SW846 6010B
Silver	< 0.31	0.31	0.99		mg/kg		7/7/98	SW846 3051	SW846 6010B
Zinc	23	0.50	1.6		mg/kg		7/7/98	SW846 3051	SW846 6010B
Acid Volatile Sulfide	6.2			2.2	mg/kg		6/24/98	EPA DRAFT	EPA DRAFT
Nitrogen, total Kjeldahl	950	18	57		mg/kg		6/27/98	EPA 351.4	EPA 351.4
Oil & Grease, total recoverable	0.022	0.0014	0.0045		%		7/1/98	SW846 9071A	SW846 9071A
Phosphorus, total	290	25	80		mg/kg		6/29/98	EPA 365.1	EPA 365.1
Solids, percent	71.9				%		6/18/98	SM 2540G	SM 2540G
Solids, total volatile	3.8	1.0	3.2		%	H(7)	6/24/98	EPA 160.4	EPA 160.4
TOC as NPOC	9000	120	380		mg/kg		6/30/98	SW846 9060	SW846 9060

All soil results are reported on a dry weight basis unless otherwise noted.

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- Analytical Report -

Project Name : HYDRO SEDIMENTS
Project Number :
Field ID : AB64365
Lab Sample Number : 982530-003
Lab Project Number : 982530

Submitter : WISCONSIN ELECTRIC POWER CO
Report Date : 7/12/98
Collection Date : 6/10/98
Matrix Type : SOIL
WI DNR LAB ID : 113172950

Semivolatile Organic Results

PCB LIST — **Prep Method:** SW846 3550 — **Prep Date:** 6/19/98

Analyte	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis Method
Aroclor 1016	< 19	19	61		ug/kg		6/25/98	SW846 8080
Aroclor 1221	< 19	19	61		ug/kg		6/25/98	SW846 8080
Aroclor 1232	< 19	19	61		ug/kg		6/25/98	SW846 8080
Aroclor 1242	< 19	19	61		ug/kg		6/25/98	SW846 8080
Aroclor 1248	< 19	19	61		ug/kg		6/25/98	SW846 8080
Aroclor 1254	< 19	19	61		ug/kg		6/25/98	SW846 8080
Aroclor 1260	< 19	19	61		ug/kg		6/25/98	SW846 8080
Decachlorobiphenyl	110				%Recov		6/25/98	SW846 8080
Tetrachloro-m-xylene	120				%Recov		6/25/98	SW846 8080

All soil results are reported on a dry weight basis unless otherwise noted.
Units of %Recov(ery) denote surrogate spike recovery. All recoveries pass in-house control limits unless otherwise noted.

From: Laboratory Services Division
PSB Annex A070

July 20, 1998

To: David Michaud
PSB Annex A146

The following analytical results have been obtained for the indicated sample which was submitted to this laboratory:

Sample I.D. AB64366 Requestor Code: DMICH
Project Specialist: DWK Activity Code: NOCODE
Sample Description: CHALK HILL SEDIMENT - REP 2
Sample collector: J.R/R.R.
Sample collection date: 06/10/98 Time: 11:30
Lab submittal date: 06/16/98 Time: 12:09
ORDER NUMBER: F537

Parameter	**Result**	**Units**	**MDL**
Sendout Analysis	see below	---	---

Data for Sendout Analysis:

See attached report for analysis results.

If there are any questions regarding this data, please call.

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- Analytical Report -

Project Name : HYDRO SEDIMENTS
Project Number :
Station ID : AB64366
Lab Sample Number : 982530-004
Lab Project Number : 982530

Submitter : WISCONSIN ELECTRIC POWER CO
Report Date : 7/12/98
Collection Date : 6/10/98
Matrix Type : SOIL
WI DNR LAB ID : 113172950

Inorganic Results

Test	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Prep Method	Analysis Method
Arsenic	6.7	1.1	3.5		mg/kg		7/7/98	SW846 3051	SW846 6010B
Barium	46	0.13	0.41		mg/kg		7/7/98	SW846 3051	SW846 6010B
Cadmium	0.33	0.090	0.29		mg/kg		7/7/98	SW846 3051	SW846 6010B
Chromium	12	0.16	0.51		mg/kg		7/7/98	SW846 3051	SW846 6010B
Copper	7.1	0.14	0.45		mg/kg		7/7/98	SW846 3051	SW846 6010B
Lead	8.7	0.60	1.9		mg/kg		7/7/98	SW846 3051	SW846 6010B
Manganese	930	0.11	0.35		mg/kg		7/7/98	SW846 3051	SW846 6010B
Mercury	< 0.11	0.11	0.35		mg/kg		7/7/98	SW846 7471A	SW846 7471A
Nickel	7.1	0.98	3.1		mg/kg		7/7/98	SW846 3051	SW846 6010B
Selenium	1.9	1.2	3.8		mg/kg	Q	7/7/98	SW846 3051	SW846 6010B
Silver	< 0.60	0.60	1.9		mg/kg		7/7/98	SW846 3051	SW846 6010B
Zinc	49	0.95	3.0		mg/kg		7/7/98	SW846 3051	SW846 6010B
Acid Volatile Sulfide	22			4.3	mg/kg		6/24/98	EPA DRAFT	EPA DRAFT
Nitrogen, total Kjeldahl	3200	36	110		mg/kg		6/27/98	EPA 351.4	EPA 351.4
Oil & Grease, total recoverable	0.11	0.0027	0.0086		%		7/1/98	SW846 9071A	SW846 9071A
Phosphorus, total	560	50	160		mg/kg		6/29/98	EPA 365.1	EPA 365.1
Solids, percent	36.8				%		6/18/98	SM 2540G	SM 2540G
Solids, total volatile	14	1.0	3.2		%	H(7)	6/24/98	EPA 160.4	EPA 160.4
TOC as NPOC	28000	120	380		mg/kg		6/30/98	SW846 9060	SW846 9060

All soil results are reported on a dry weight basis unless otherwise noted.

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- Analytical Report -

Project Name : HYDRO SEDIMENTS
Project Number :
Field ID : AB64366
Lab Sample Number : 982530-004
Lab Project Number : 982530

Submitter : WISCONSIN ELECTRIC POWER CO
Report Date : 7/12/98
Collection Date : 6/10/98
Matrix Type : SOIL
WI DNR LAB ID : 113172950

Semivolatile Organic Results

PCB LIST Prep Method: SW846 3550 Prep Date: 6/19/98

Analyte	Result	LOD	LOQ	EQL	Units	Code	Analysis Date	Analysis Method
Aroclor 1016	< 38	38	120		ug/kg		6/25/98	SW846 8080
Aroclor 1221	< 38	38	120		ug/kg		6/25/98	SW846 8080
Aroclor 1232	< 38	38	120		ug/kg		6/25/98	SW846 8080
Aroclor 1242	< 38	38	120		ug/kg		6/25/98	SW846 8080
Aroclor 1248	< 38	38	120		ug/kg		6/25/98	SW846 8080
Aroclor 1254	< 38	38	120		ug/kg		6/25/98	SW846 8080
Aroclor 1260	< 38	38	120		ug/kg		6/25/98	SW846 8080
Decachlorobiphenyl	110				%Recov		6/25/98	SW846 8080
Tetrachloro-m-xylene	120				%Recov		6/25/98	SW846 8080

All soil results are reported on a dry weight basis unless otherwise noted.
Units of %Recov(ery) denote surrogate spike recovery. All recoveries pass in-house control limits unless otherwise noted.