



Upper Peninsula Power Company
(a subsidiary of WPS Resources Corporation)
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ORIGINAL

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2005 SEP -7 P 2:24

**FEDERAL ENERGY
REGULATORY COMMISSION
FERC Project No. 1864**

September 2, 2005

Ms. Magalie R. Salas, Secretary
Federal Energy Regulatory Commission
Mail Code: DTCA, HL 21.3
888 First Street, N.E.
Washington, DC 20426

Dear Secretary Salas:

Bond Falls Hydroelectric Project Water Quality Monitoring Data

As per the Order Modifying and Approving Water Quality Monitoring Plan Under Article 409, dated February 16, 2005, Upper Peninsula Power Company (UPPCO) is submitting a notice of deviations observed from the water quality standards.

Per the Water Quality Monitoring Plan for the Bond Falls Hydroelectric Project, dissolved oxygen (D.O.) and temperature are being monitored below the Cisco Dam on the Cisco Branch of the Ontonagon River, and below the Victoria Powerhouse on the West Branch of the Ontonagon River. The water quality standard in the Ontonagon River below the Cisco Dam is 5.0 mg/l D.O. The water quality standard in the Ontonagon River below the Victoria Powerhouse is 7.0 mg/l D.O. Between August 3rd and September 1st, 2005, hourly readings have been observed below the water quality standard at both water quality monitoring locations. UPPCO believes the deviations observed at the Cisco Dam monitoring location are due to low water flow and warm temperatures that have been observed throughout the Upper Peninsula of Michigan. Deviations observed at the Victoria Powerhouse tailrace are likely due to equipment malfunctions.

Copies of the D.O. and temperature data from the Cisco Dam monitoring location during the periods when deviations have been observed are included in Appendix A. USGS gauge height information from a station near the Cisco Dam is also included. Dissolved oxygen data has been corrected for any loss of instrument calibration greater than 0.10 mg/l.

Copies of the D.O., temperature, and generation output data during the periods when deviations have been observed below the water quality standard at the Victoria Powerhouse monitoring location are included in Appendix B. Dissolved oxygen data has been corrected for any loss of instrument calibration greater than 0.10 mg/l. Water quality data collected at the Victoria Powerhouse Tailrace has been above the

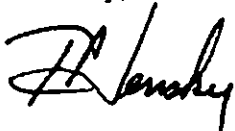
Ms. Magalie R. Salas, Secretary
September 2, 2005
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water quality standards for all but 2 hourly readings. UPPCO feels these readings are anomalies, and are possibly due to equipment errors. Please note that water quality monitoring data was lost between August 24th and September 1st due to an equipment malfunction. A dissolved oxygen profile conducted on September 1st shows that the Victoria reservoir is no longer stratified, and high D.O. water was observed throughout the water column. Given that data collected up to the point when the equipment failed was above the water quality standard, it is likely that the data collected reflects what was discharged from the Victoria Powerhouse during the period of the equipment malfunction. Copies of the last two D.O. profiles conducted at the Victoria Reservoir are included in Appendix C

Upper Peninsula Power Company (UPPCO) has consulted with the Bond Falls Implementation Team about the water quality monitoring data. Documentation of Agency Consultation is included in Appendix D.

If you have any questions, please do not hesitate to call Mr. Mark Metcalf at (920) 433-1833.

Sincerely,



Terry P. Jensky
Assistant Vice President - Energy Supply Operations
for Wisconsin Public Service Corporation
Telephone: (715) 355-2047

Enc.

cc: Mr. Gil Snyder, WPSC - D2
Mr. Shawn Puzen, WPSC - D2
Ms. Peggy Harding, FERC - Chicago
Ms. Joan Johaneck, WPSC - D2 (file)
Mr. Bob Meyers, UPPCO - UIS (cover only)
Bond Falls Implementation Team (cover only)

Appendix A

Water Quality Monitoring Data: Below Cisco Dam

Cisco Branch of Ontonogan River 08/03/05 - 08/31/05

Date	Time	Temp	pH	SpCond	DO%	Corrected	USGS
MMDDYY	HHMMSS	°C	Units	mS/cm	Sat	DO mg/l	Gauge Height
8/3/2005	0:00:00	26.72	7.4	0.0985	65	5.91	3.91
8/3/2005	1:00:00	26.38	7.35	0.0989	62.1	5.72	3.9
8/3/2005	2:00:00	26.06	7.31	0.0991	59.9	5.61	3.91
8/3/2005	3:00:00	25.76	7.27	0.0991	57.2	5.41	3.91
8/3/2005	4:00:00	25.44	7.24	0.0994	54.8	5.25	3.92
8/3/2005	5:00:00	25.16	7.21	0.0992	52	5.07	3.92
8/3/2005	6:00:00	24.87	7.17	0.0992	49.6	4.90	3.92
8/3/2005	7:00:00	24.66	7.19	0.0993	52.2	5.12	3.91
8/3/2005	8:00:00	24.65	7.26	0.0989	61.2	5.82	3.91
8/3/2005	9:00:00	24.99	7.43	0.0976	77.2	7.04	3.91
8/3/2005	10:00:00	25.78	7.74	0.0958	96.6	8.44	3.91
8/3/2005	11:00:00	26.71	8.26	0.0939	113.1	9.55	3.91
8/3/2005	12:00:00	28.21	8.7	0.0928	129	10.50	3.91
8/3/2005	13:00:00	28.79	8.85	0.093	133.8	10.76	3.91
8/3/2005	14:00:00	28.60	8.96	0.0931	111.6	8.08	3.90
8/3/2005	15:00:00	28.44	9.00	0.0916	113.0	8.21	3.91
8/3/2005	16:00:00	28.05	8.92	0.0921	107.6	7.87	3.92
8/3/2005	17:00:00	27.70	8.86	0.0922	105.3	7.76	3.92
8/3/2005	18:00:00	27.46	8.83	0.0920	105.1	7.78	3.92
8/3/2005	19:00:00	27.23	8.78	0.0935	100.6	7.48	3.91
8/3/2005	20:00:00	26.96	8.68	0.0959	96.9	7.25	3.91
8/3/2005	21:00:00	26.64	8.35	0.0978	86.0	6.48	3.90
8/3/2005	22:00:00	26.26	7.88	0.1003	69.9	5.32	3.90
8/3/2005	23:00:00	25.89	7.59	0.1021	54.9	4.21	3.90
8/4/2005	0:00:00	25.50	7.43	0.1031	44.6	3.46	3.90
8/4/2005	1:00:00	25.23	7.35	0.1031	39.2	3.06	3.90
8/4/2005	2:00:00	24.89	7.31	0.1035	36.9	2.90	3.91
8/4/2005	3:00:00	24.68	7.27	0.1039	34.0	2.70	3.90
8/4/2005	4:00:00	24.46	7.24	0.1040	33.2	2.65	3.90
8/4/2005	5:00:00	24.28	7.22	0.1037	31.4	2.52	3.89
8/4/2005	6:00:00	23.86	7.24	0.1039	32.7	2.65	3.87
8/4/2005	7:00:00	23.30	7.25	0.1038	36.6	2.99	3.89
8/4/2005	8:00:00	22.95	7.30	0.1031	40.1	3.30	3.90
8/4/2005	9:00:00	22.72	7.37	0.1021	48.1	3.96	3.89
8/4/2005	10:00:00	22.97	7.48	0.1009	56.0	4.58	3.88
8/4/2005	11:00:00	23.90	7.68	0.0997	68.1	5.46	3.88
8/4/2005	12:00:00	25.70	8.19	0.0970	88.4	6.83	3.86
8/4/2005	13:00:00	27.74	8.72	0.0954	101.4	7.55	3.87
8/4/2005	14:00:00	29.70	9.00	0.0935	115.3	8.29	3.87
8/4/2005	15:00:00	30.56	9.15	0.0941	119.6	8.48	3.88
8/4/2005	16:00:00	30.35	9.22	0.0945	120.7	8.58	3.89
8/4/2005	17:00:00	29.46	9.22	0.0957	111.3	8.05	3.88
8/4/2005	18:00:00	28.34	9.19	0.0968	103.5	7.65	3.88
8/4/2005	19:00:00	27.37	9.14	0.0977	95.7	7.20	3.88
8/4/2005	20:00:00	26.57	9.05	0.0986	87.1	6.66	3.89
8/4/2005	21:00:00	25.59	8.93	0.0997	96.6	7.51	3.90
8/4/2005	22:00:00	24.57	8.67	0.1025	66.8	5.33	3.89
8/4/2005	23:00:00	23.62	8.32	0.1034	61.3	5.00	3.89
8/5/2005	0:00:00	22.73	7.94	0.1054	53.3	4.43	3.89

Cisco Branch of Ontonogan River 08/03/05 - 08/31/05

Date	Time	Temp	pH	SpCond	DO%	Corrected	USGS
MMDDYY	HHMMSS	°C	Units	mS/cm	Sat	DO mg/l	Gauge Height
8/5/2005	1:00:00	22.00	7.70	0.1074	45.9	3.90	3.90
8/5/2005	2:00:00	21.30	7.53	0.1093	37.7	3.28	3.89
8/5/2005	3:00:00	20.63	7.40	0.1099	34.7	3.07	3.90
8/5/2005	4:00:00	20.01	7.37	0.1108	33.2	2.98	3.90
8/5/2005	5:00:00	19.42	7.32	0.1111	31.3	2.85	3.90
8/5/2005	6:00:00	18.94	7.30	0.1105	30.9	2.86	3.89
8/5/2005	7:00:00	18.59	7.28	0.1100	31.8	2.95	3.89
8/5/2005	8:00:00	18.39	7.30	0.1095	33.6	3.12	3.89
8/5/2005	9:00:00	18.39	7.33	0.1090	37.9	3.51	3.89
8/5/2005	10:00:00	18.85	7.42	0.1093	47.0	4.26	3.89
8/5/2005	11:00:00	19.99	7.53	0.1076	58.9	5.19	3.88
8/5/2005	12:00:00	22.51	7.69	0.1061	72.1	6.02	3.89
8/5/2005	13:00:00	24.76	8.05	0.1049	88.4	7.04	3.89
8/5/2005	14:00:00	27.00	8.46	0.1035	99.6	7.62	3.89
8/5/2005	15:00:00	28.87	8.85	0.1013	113.0	8.34	3.89
8/5/2005	16:00:00	28.89	9.01	0.0991	114.1	8.42	3.89
8/5/2005	17:00:00	27.16	8.91	0.1061	99.3	7.59	3.89
8/5/2005	18:00:00	24.31	8.84	0.1149	95.1	7.66	3.89
8/5/2005	19:00:00	22.92	8.67	0.1163	83.7	6.94	3.89
8/5/2005	20:00:00	21.81	8.34	0.1260	73.6	6.26	3.89
8/5/2005	21:00:00	22.13	8.52	0.1170	66.4	5.64	3.89
8/5/2005	22:00:00	19.64	8.18	0.1368	48.0	4.34	3.89
8/5/2005	23:00:00	18.50	8.06	0.1459	42.5	3.96	3.89
8/6/2005	0:00:00	18.04	7.99	0.1389	43.6	4.09	3.89
8/6/2005	1:00:00	18.07	7.94	0.1398	42.3	3.98	3.90
8/6/2005	2:00:00	18.69	8.00	0.1315	43.2	4.01	3.90
8/6/2005	3:00:00	18.50	7.81	0.1256	41.0	3.84	3.90
8/6/2005	4:00:00	18.67	7.65	0.1229	34.5	3.27	3.90
8/6/2005	5:00:00	18.84	7.54	0.1277	28.6	2.75	3.90
8/6/2005	6:00:00	18.58	7.44	0.1233	26.1	2.55	3.90
8/6/2005	7:00:00	18.13	7.40	0.1251	24.9	2.46	3.90
8/6/2005	8:00:00	17.80	7.38	0.1241	26.2	2.60	3.90
8/6/2005	9:00:00	17.51	7.40	0.1283	30.4	3.00	3.90
8/6/2005	10:00:00	16.68	7.48	0.1419	36.3	3.58	3.89
8/6/2005	11:00:00	16.63	7.67	0.1399	41.5	4.06	3.90
8/6/2005	12:00:00	15.91	7.96	0.1545	50.7	4.98	3.90
8/6/2005	13:00:00	15.87	8.06	0.2010	57.8	5.64	3.90
8/6/2005	14:00:00	16.19	8.12	0.2460	51.9	5.07	3.90
8/6/2005	15:00:00	16.91	8.26	0.2570	69.5	5.68	3.89
8/6/2005	16:00:00	17.04	8.31	0.2530	52.4	5.03	3.89
8/6/2005	17:00:00	15.92	8.25	0.2530	43.6	4.34	3.89
8/6/2005	18:00:00	14.42	8.13	0.2610	27.0	2.89	3.89
8/6/2005	19:00:00	13.10	8.05	0.2680	23.8	2.66	3.89
8/6/2005	20:00:00	12.48	8.02	0.2700	16.4	1.95	3.89
8/6/2005	21:00:00	11.82	8.02	0.2720	12.1	1.54	3.89
8/6/2005	22:00:00	10.97	8.01	0.2750	6.1	0.96	3.89
8/6/2005	23:00:00	10.48	8.02	0.2770	3.9	0.73	3.89
8/7/2005	0:00:00	10.22	8.03	0.2610	2.8	0.64	3.89
8/7/2005	1:00:00	9.93	8.05	0.2750	3.0	0.66	3.89

Cisco Branch of Ontonogan River 08/03/05 - 08/31/05

Date	Time	Temp	pH	SpCond	DO%	Corrected	USGS
MMDDYY	HHMMSS	°C	Units	mS/cm	Sat	DO mg/l	Gauge Height
8/7/2005	2:00:00	9.81	8.05	0.2720	2.1	0.58	3.89
8/7/2005	3:00:00	9.81	8.05	0.2690	2.8	0.65	3.89
8/7/2005	4:00:00	9.57	8.07	0.2710	1.7	0.53	3.89
8/7/2005	5:00:00	9.62	8.06	0.2730	1.8	0.55	3.89
8/7/2005	6:00:00	10.94	8.06	0.2500	5.2	0.90	3.89
8/7/2005	7:00:00	10.07	8.01	0.2550	7.3	1.14	3.89
8/7/2005	8:00:00	10.02	8.04	0.2640	8.2	1.24	3.89
8/7/2005	9:00:00	9.52	8.06	0.2650	8.6	1.29	3.89
8/7/2005	10:00:00	9.70	8.10	0.2740	11.1	1.56	3.89
8/7/2005	11:00:00	9.94	8.13	0.2720	13.5	1.81	3.88
8/7/2005	12:00:00	10.52	8.14	0.2740	18.1	2.28	3.88
8/7/2005	13:00:00	11.59	8.21	0.2760	29.6	3.40	3.88
8/7/2005	14:00:00	12.95	8.20	0.2820	34.7	3.81	3.88
8/7/2005	15:00:00	14.29	8.25	0.2820	43.3	4.54	3.89
8/7/2005	16:00:00	14.74	8.26	0.2840	44.3	4.60	3.89
8/7/2005	17:00:00	13.92	8.25	0.2850	29.4	3.25	3.88
8/7/2005	18:00:00	12.21	8.18	0.2890	20.6	2.47	3.88
8/7/2005	19:00:00	11.36	8.12	0.2810	11.5	1.59	3.88
8/7/2005	20:00:00	11.32	8.10	0.2710	7.7	1.21	3.88
8/7/2005	21:00:00	11.19	8.09	0.2800	3.8	0.81	3.88
8/7/2005	22:00:00	10.29	8.08	0.2790	1.1	0.54	3.88
8/7/2005	23:00:00	10.16	8.07	0.2740	0.9	0.52	3.88
8/8/2005	0:00:00	9.96	8.08	0.2770	0.5	0.49	3.89
8/8/2005	1:00:00	9.63	8.08	0.2790	1.0	0.54	3.88
8/8/2005	2:00:00	9.50	8.09	0.2790	1.9	0.64	3.88
8/8/2005	3:00:00	9.30	8.10	0.2810	0.2	0.47	3.89
8/8/2005	4:00:00	9.60	8.10	0.2770	1.1	0.56	3.89
8/8/2005	5:00:00	9.49	8.09	0.2710	2.6	0.73	3.89
8/8/2005	6:00:00	9.98	8.09	0.2660	3.4	0.82	3.89
8/8/2005	7:00:00	12.25	8.03	0.2220	11.1	1.57	3.89
8/8/2005	8:00:00	10.92	8.03	0.2650	8.5	1.35	3.89
8/8/2005	9:00:00	10.68	8.06	0.2680	12.3	1.75	3.89
8/8/2005	10:00:00	10.96	8.07	0.2680	13.7	1.88	3.90
8/8/2005	11:00:00	10.91	8.10	0.2670	14.0	1.93	3.89
8/8/2005	12:00:00	11.44	8.15	0.2710	19.1	2.43	3.89
8/8/2005	13:00:00	12.41	8.20	0.2690	36.4	4.12	3.90
8/8/2005	14:00:00	14.12	8.26	0.2720	49.7	5.26	3.90
8/8/2005	15:00:00	14.57	8.28	0.2700	50.9	5.34	3.89
8/8/2005	16:00:00	15.25	8.29	0.2750	55.5	5.70	3.89
8/8/2005	17:00:00	14.08	8.28	0.2740	35.4	3.90	3.90
8/8/2005	18:00:00	12.80	8.19	0.2740	24.7	2.95	3.89
8/8/2005	19:00:00	11.82	8.13	0.2700	14.2	1.95	3.89
8/8/2005	20:00:00	11.28	8.10	0.2710	6.6	1.19	3.88
8/8/2005	21:00:00	11.18	8.07	0.2770	5.0	1.04	3.89
8/8/2005	22:00:00	10.85	8.05	0.2720	3.8	0.92	3.88
8/8/2005	23:00:00	10.38	8.05	0.2730	0.7	0.60	3.88
8/9/2005	0:00:00	9.88	8.06	0.2760	0.5	0.59	3.88
8/9/2005	1:00:00	9.65	8.07	0.2780	0.7	0.62	3.87
8/9/2005	2:00:00	9.56	8.08	0.2780	0.4	0.59	3.87

Cisco Branch of Ontonogan River 08/03/05 - 08/31/05

Date	Time	Temp	pH	SpCond	DO%	Corrected DO	USGS Gauge Height
MMDDYY	HHMMSS	°C	Units	mS/cm	Sat	mg/l	
8/9/2005	3:00:00	9.58	8.09	0.2780	0.7	0.62	3.87
8/9/2005	4:00:00	9.45	8.09	0.2760	0.9	0.65	3.87
8/9/2005	5:00:00	9.46	8.10	0.2790	0.3	0.58	3.87
8/9/2005	6:00:00	9.53	8.11	0.2800	0.3	0.59	3.88
8/9/2005	7:00:00	9.50	8.11	0.2790	0.7	0.64	3.87
8/9/2005	8:00:00	9.49	8.12	0.2800	0.5	0.62	3.88
8/9/2005	9:00:00	13.97	8.12	0.2280	10.9	1.62	3.87
8/9/2005	10:00:00	19.87	7.68	0.1321	28.7	3.02	3.89
8/9/2005	11:00:00	21.49	7.56	0.1082	37.6	3.69	3.91
8/9/2005	12:00:00	21.51	7.57	0.1105	37.5	3.68	3.90
8/9/2005	13:00:00	21.87	7.63	0.1159	45.1	4.28	3.91
8/9/2005	14:00:00	22.04	7.75	0.1166	50.3	4.70	3.92
8/9/2005	15:00:00	22.17	7.75	0.1116	52.7	4.89	3.93
8/9/2005	16:00:00	22.13	7.73	0.1045	60.7	5.55	3.94
8/9/2005	17:00:00	22.35	7.81	0.1017	62.8	5.70	3.93
8/9/2005	18:00:00	22.52	7.77	0.1013	59.6	5.42	3.93
8/9/2005	19:00:00	22.52	7.65	0.1017	55.1	5.07	3.93
8/9/2005	20:00:00	22.47	7.56	0.1026	49.4	4.61	3.93
8/9/2005	21:00:00	22.37	7.46	0.1040	44.0	4.19	3.93
8/9/2005	22:00:00	22.20	7.36	0.1054	37.9	3.70	3.93
8/9/2005	23:00:00	22.01	7.29	0.1065	34.5	3.44	3.93
8/10/2005	0:00:00	21.74	7.26	0.1069	33.7	3.40	3.93
8/10/2005	1:00:00	21.50	7.24	0.1071	34.0	3.44	3.93
8/10/2005	2:00:00	21.28	7.23	0.1073	31.4	3.24	3.93
8/10/2005	3:00:00	21.01	7.22	0.1076	31.3	3.24	3.93
8/10/2005	4:00:00	20.80	7.21	0.1074	32.3	3.36	3.92
8/10/2005	5:00:00	20.58	7.21	0.1076	32.3	3.36	3.92
8/10/2005	6:00:00	20.39	7.20	0.1083	34.2	3.53	3.93
8/10/2005	7:00:00	20.19	7.21	0.1084	32.7	3.43	3.93
8/10/2005	8:00:00	20.13	7.23	0.1083	36.7	3.77	3.92
8/10/2005	9:00:00	20.38	7.28	0.1078	43.3	4.32	3.92
8/10/2005	10:00:00	21.09	7.37	0.1077	52.1	5.01	3.91
8/10/2005	11:00:00	22.56	7.52	0.1052	65.0	5.93	3.91
8/10/2005	12:00:00	24.87	7.82	0.1033	85.4	7.29	3.91
8/10/2005	13:00:00	27.10	8.26	0.1026	94.1	7.68	3.91
8/10/2005	14:00:00	28.74	8.60	0.1029	99.9	7.90	3.90
8/10/2005	15:00:00	29.56	8.74	0.1032	108.5	8.41	3.91
8/10/2005	16:00:00	29.38	8.78	0.1048	107.6	8.38	3.90
8/10/2005	17:00:00	28.54	8.78	0.1055	96.0	7.66	3.91
8/10/2005	18:00:00	27.70	8.71	0.1074	88.8	7.23	3.91
8/10/2005	19:00:00	26.85	8.60	0.1076	85.4	7.08	3.91
8/10/2005	20:00:00	25.79	8.35	0.1096	76.4	6.52	3.91
8/10/2005	21:00:00	24.67	7.96	0.1116	62.6	5.58	3.92
8/10/2005	22:00:00	23.67	7.65	0.1133	51.3	4.78	3.92
8/10/2005	23:00:00	22.91	7.46	0.1140	43.9	4.24	3.92
8/11/2005	0:00:00	22.33	7.36	0.1147	35.9	3.64	3.92
8/11/2005	1:00:00	21.97	7.31	0.1151	36.0	3.67	3.92
8/11/2005	2:00:00	21.72	7.28	0.1147	34.3	3.55	3.92
8/11/2005	3:00:00	21.53	7.26	0.1145	33.3	3.49	3.92

Cisco Branch of Ontonogan River 08/03/05 - 08/31/05

Date	Time	Temp	pH	SpCond	DO%	Corrected DO	USGS Gauge Height
MMDDYY	HHMMSS	°C	Units	mS/cm	Sat	mg/l	
8/11/2005	4:00:00	21.37	7.25	0.1136	33.3	3.50	3.92
8/11/2005	5:00:00	21.14	7.22	0.1141	32.8	3.48	3.92
8/11/2005	6:00:00	20.80	7.20	0.1147	32.3	3.46	3.92
8/11/2005	7:00:00	20.63	7.21	0.1147	33.1	3.54	3.92
8/11/2005	8:00:00	20.63	7.24	0.1147	37.7	3.92	3.93
8/11/2005	9:00:00	20.82	7.30	0.1134	44.8	4.51	3.93
8/11/2005	10:00:00	21.16	7.42	0.1121	56.3	5.44	3.93
8/11/2005	11:00:00	21.73	7.61	0.1102	69.6	6.49	3.95
8/11/2005	12:00:00	22.44	7.92	0.1074	82.3	7.45	3.93
8/11/2005	13:00:00	22.92	8.30	0.1042	92.4	8.20	3.93
8/11/2005	14:00:00	23.12	8.56	0.1029	93.7	8.28	3.93
8/11/2005	15:00:00	23.00	8.64	0.1036	98.1	8.65	3.92
8/11/2005	16:00:00	22.96	8.69	0.1044	93.5	8.29	3.93
8/11/2005	17:00:00	22.89	8.70	0.1050	94.6	8.39	3.93
8/11/2005	18:00:00	22.63	8.57	0.1067	88.9	7.98	3.94
8/11/2005	19:00:00	22.40	8.48	0.1071	83.8	7.59	3.93
8/11/2005	20:00:00	22.15	8.34	0.1083	77.5	7.12	3.93
8/11/2005	21:00:00	21.81	8.06	0.1104	67.0	6.31	3.93
8/11/2005	22:00:00	21.51	7.78	0.1118	57.0	5.52	3.93
8/11/2005	23:00:00	21.26	7.55	0.1138	51.9	5.12	3.93
8/12/2005	0:00:00	21.05	7.41	0.1142	43.1	4.41	3.93
8/12/2005	1:00:00	20.90	7.33	0.1149	38.7	4.06	3.92
8/12/2005	2:00:00	20.74	7.29	0.1150	36.9	3.92	3.92
8/12/2005	3:00:00	20.51	7.27	0.1155	35.7	3.85	3.92
8/12/2005	4:00:00	20.26	7.25	0.1159	34.4	3.74	3.92
8/12/2005	5:00:00	20.19	7.25	0.1158	34.7	3.78	3.92
8/12/2005	6:00:00	20.13	7.23	0.1159	34.3	3.76	3.91
8/12/2005	7:00:00	20.07	7.24	0.1153	36.0	3.90	3.91
8/12/2005	8:00:00	20.13	7.25	0.1157	38.6	4.13	3.91
8/12/2005	9:00:00	20.33	7.32	0.1148	46.5	4.79	3.91
8/12/2005	10:00:00	20.72	7.45	0.1144	58.5	5.76	3.89
8/12/2005	11:00:00	21.82	7.65	0.1116	75.6	7.07	3.89
8/12/2005	12:00:00	22.95	8.01	0.1095	89.5	8.05	3.89
8/12/2005	13:00:00	24.26	8.53	0.1063	105.3	9.13	3.89
8/12/2005	14:00:00	25.40	8.85	0.1052	115.6	9.74	3.89
8/12/2005	15:00:00	26.23	9.03	0.1052	120.8	10.01	3.89
8/12/2005	16:00:00	26.29	9.04	0.1058	116.2	9.58	3.89
8/12/2005	17:00:00	25.83	9.13	0.1078	109.3	9.21	3.89
8/12/2005	18:00:00	25.22	9.14	0.1084	102.1	8.75	3.90
8/12/2005	19:00:00	24.76	9.11	0.1094	95.6	8.32	3.90
8/12/2005	20:00:00	24.30	9.04	0.1111	90.5	7.99	3.91
8/12/2005	21:00:00	23.58	8.87	0.1120	81.3	7.36	3.91
8/12/2005	22:00:00	22.72	8.61	0.1141	67.8	6.37	3.91
8/12/2005	23:00:00	22.00	8.29	0.1164	61.1	5.91	3.90
8/13/2005	0:00:00	21.37	7.95	0.1190	51.7	5.20	3.90
8/13/2005	1:00:00	20.66	7.69	0.1216	43.0	4.54	3.90
8/13/2005	2:00:00	19.96	7.52	0.1215	37.9	4.15	3.90
8/13/2005	3:00:00	19.36	7.43	0.1220	34.0	3.86	3.90
8/13/2005	4:00:00	18.87	7.39	0.1219	34.0	3.89	3.90

Cisco Branch of Ontonogan River 08/03/05 - 08/31/05

Date	Time	Temp	pH	SpCond	DO%	Corrected	USGS
MMDDYY	HHMMSS	°C	Units	mS/cm	Sat	DO mg/l	Gauge Height
8/13/2005	5:00:00	18.41	7.36	0.1219	33.1	3.84	3.90
8/13/2005	6:00:00	17.93	7.34	0.1220	33.0	3.87	3.90
8/13/2005	7:00:00	17.58	7.33	0.1228	32.7	3.86	3.90
8/13/2005	8:00:00	17.39	7.34	0.1211	34.7	4.05	3.90
8/13/2005	9:00:00	17.46	7.38	0.1203	39.7	4.51	3.89
8/13/2005	10:00:00	18.12	7.47	0.1201	50.4	5.41	3.89
8/13/2005	11:00:00	19.07	7.60	0.1181	60.9	6.24	3.89
8/13/2005	12:00:00	20.97	7.84	0.1162	75.0	7.22	3.89
8/13/2005	13:00:00	23.18	8.27	0.1112	91.5	8.28	3.89
8/13/2005	14:00:00	24.31	8.71	0.1085	105.1	9.20	3.88
8/13/2005	15:00:00	25.49	9.02	0.1084	113.9	9.69	3.89
8/13/2005	16:00:00	26.05	9.16	0.1067	116.3	9.80	3.89
8/13/2005	17:00:00	25.64	9.21	0.1075	106.9	9.15	3.88
8/13/2005	18:00:00	24.87	9.22	0.1088	98.0	8.58	3.89
8/13/2005	19:00:00	24.24	9.19	0.1117	92.1	8.21	3.89
8/13/2005	20:00:00	23.59	9.13	0.1124	78.2	7.20	3.89
8/13/2005	21:00:00	23.12	9.07	0.1123	71.6	6.73	3.89
8/13/2005	22:00:00	22.31	8.90	0.1147	67.2	6.47	3.89
8/13/2005	23:00:00	21.55	8.65	0.1171	58.1	5.80	3.89
8/14/2005	0:00:00	20.79	8.31	0.1200	52.3	5.40	3.89
8/14/2005	1:00:00	20.04	7.92	0.1227	44.2	4.78	3.89
8/14/2005	2:00:00	19.27	7.67	0.1250	37.3	4.25	3.89
8/14/2005	3:00:00	18.62	7.54	0.1251	33.5	3.96	3.89
8/14/2005	4:00:00	18.09	7.46	0.1259	32.6	3.92	3.89
8/14/2005	5:00:00	17.62	7.41	0.1256	31.0	3.81	3.89
8/14/2005	6:00:00	17.20	7.36	0.1259	29.9	3.73	3.89
8/14/2005	7:00:00	16.86	7.35	0.1257	31.3	3.89	3.89
8/14/2005	8:00:00	16.65	7.35	0.1248	32.4	4.00	3.89
8/14/2005	9:00:00	16.61	7.37	0.1247	34.9	4.24	3.88
8/14/2005	10:00:00	16.93	7.41	0.1245	39.8	4.66	3.89
8/14/2005	11:00:00	18.09	7.50	0.1238	48.1	5.30	3.88
8/14/2005	12:00:00	20.06	7.59	0.1235	60.6	6.21	3.88
8/14/2005	13:00:00	22.13	7.73	0.1215	68.8	6.68	3.88
8/14/2005	14:00:00	24.68	8.17	0.1184	84.5	7.65	3.88
8/14/2005	15:00:00	26.00	8.53	0.1151	93.5	8.17	3.87
8/14/2005	16:00:00	25.87	8.72	0.1141	100.6	8.72	3.88
8/14/2005	17:00:00	25.07	8.77	0.1170	86.1	7.73	3.88
8/14/2005	18:00:00	23.87	8.79	0.1180	80.5	7.44	3.87
8/14/2005	19:00:00	23.01	8.77	0.1184	76.7	7.25	3.88
8/14/2005	20:00:00	22.44	8.85	0.1200	70.2	6.78	3.89
8/14/2005	21:00:00	21.75	8.88	0.1199	64.3	6.38	3.89
8/14/2005	22:00:00	21.10	8.66	0.1202	59.3	6.04	3.89
8/14/2005	23:00:00	20.42	8.79	0.1218	54.3	5.68	3.89
8/15/2005	0:00:00	19.78	8.60	0.1222	51.1	5.48	3.89
8/15/2005	1:00:00	19.29	8.43	0.1246	45.0	5.00	3.89
8/15/2005	2:00:00	18.72	8.17	0.1257	42.1	4.79	3.89
8/15/2005	3:00:00	18.24	7.91	0.1280	38.3	4.50	3.89
8/15/2005	4:00:00	17.66	7.72	0.1302	33.6	4.12	3.89
8/15/2005	5:00:00	17.21	7.60	0.1318	30.7	3.90	3.89

Cisco Branch of Ontonogan River 08/03/05 - 08/31/05

Date	Time	Temp	pH	SpCond	DO%	Corrected	USGS
MMDDYY	HMMSS	°C	Units	mS/cm	Sat	DO mg/l	Gauge Height
8/15/2005	6:00:00	16.65	7.52	0.1338	29.5	3.83	3.89
8/15/2005	7:00:00	16.30	7.48	0.1316	28.7	3.77	3.89
8/15/2005	8:00:00	16.10	7.45	0.1300	30.8	3.99	3.89
8/15/2005	9:00:00	16.00	7.46	0.1297	33.5	4.24	3.89
8/15/2005	10:00:00	16.21	7.50	0.1284	38.5	4.69	3.89
8/15/2005	11:00:00	17.31	7.58	0.1272	44.5	5.15	3.88
8/15/2005	12:00:00	19.13	7.69	0.1281	55.2	5.94	3.88
8/15/2005	13:00:00	21.48	7.86	0.1344	64.0	6.45	3.88
8/15/2005	14:00:00	23.66	8.22	0.1284	84.5	7.86	3.88
8/15/2005	15:00:00	24.48	8.53	0.1326	91.5	8.32	3.88
8/15/2005	16:00:00	23.35	8.62	0.1365	87.6	8.16	3.88
8/15/2005	17:00:00	21.81	8.45	0.1393	66.0	6.60	3.88
8/15/2005	18:00:00	21.23	8.50	0.1409	68.1	6.84	3.88
8/15/2005	19:00:00	21.16	8.62	0.1314	63.0	6.43	3.88
8/15/2005	20:00:00	21.36	8.70	0.1309	62.1	6.34	3.88
8/15/2005	21:00:00	19.85	8.49	0.1354	54.2	5.82	3.88
8/15/2005	22:00:00	19.43	8.51	0.1342	46.3	5.19	3.88
8/15/2005	23:00:00	18.56	8.28	0.1358	50.2	5.60	3.88
8/16/2005	0:00:00	18.18	8.24	0.1365	45.0	5.18	3.89
8/16/2005	1:00:00	18.02	8.37	0.1353	44.1	5.12	3.88
8/16/2005	2:00:00	18.32	8.23	0.1366	43.2	5.02	3.88
8/16/2005	3:00:00	18.48	8.02	0.1327	39.5	4.69	3.88
8/16/2005	4:00:00	18.18	7.83	0.1371	34.0	4.23	3.88
8/16/2005	5:00:00	17.97	7.70	0.1346	31.5	4.02	3.88
8/16/2005	6:00:00	17.59	7.59	0.1408	28.5	3.79	3.88
8/16/2005	7:00:00	17.34	7.52	0.1386	27.3	3.69	3.88
8/16/2005	8:00:00	17.22	7.48	0.1381	28.0	3.77	3.88
8/16/2005	9:00:00	17.22	7.47	0.1373	30.9	4.03	3.87
8/16/2005	10:00:00	17.50	7.51	0.1355	36.6	4.53	3.87
8/16/2005	11:00:00	18.20	7.62	0.1369	45.4	5.26	3.87
8/16/2005	12:00:00	19.25	7.73	0.1400	52.6	5.80	3.86
8/16/2005	13:00:00	20.80	7.99	0.1488	64.2	6.64	3.86
8/16/2005	14:00:00	20.26	8.13	0.1544	69.4	7.14	3.85
8/16/2005	15:00:00	22.61	8.44	0.1439	91.9	8.69	3.85
8/16/2005	16:00:00	21.18	8.33	0.1543	84.9	8.33	3.86
8/16/2005	17:00:00	19.16	8.22	0.1619	65.8	6.96	3.86
8/16/2005	18:00:00	19.38	8.22	0.1645	58.2	6.30	3.86
8/16/2005	19:00:00	17.52	8.11	0.1642	53.1	6.04	3.87
8/16/2005	20:00:00	16.71	8.04	0.1714	45.9	5.47	3.87
8/16/2005	21:00:00	17.35	8.07	0.1664	43.5	5.21	3.87
8/16/2005	22:00:00	15.78	7.96	0.1734	37.2	4.74	3.87
8/16/2005	23:00:00	15.50	7.93	0.1767	32.7	4.36	3.87
8/17/2005	0:00:00	15.11	7.90	0.1845	29.6	4.09	3.88
8/17/2005	1:00:00	15.14	7.92	0.1818	27.5	3.90	3.88
8/17/2005	2:00:00	15.17	7.93	0.1769	25.0	3.67	3.88
8/17/2005	3:00:00	15.10	7.92	0.1836	22.4	3.42	3.88
8/17/2005	4:00:00	15.39	7.90	0.1712	26.9	3.84	3.88
8/17/2005	5:00:00	15.68	7.93	0.1616	31.1	4.22	3.88
8/17/2005	6:00:00	16.76	7.85	0.1589	28.3	3.91	3.89

Cisco Branch of Ontonogan River 08/03/05 - 08/31/05

Date	Time	Temp	pH	SpCond	DO%	Corrected DO	USGS Gauge Height
MMDDYY	HHMMSS	°C	Units	mS/cm	Sat	mg/l	
8/17/2005	7:00:00	16.08	7.77	0.1631	24.3	3.57	3.89
8/17/2005	8:00:00	14.83	7.74	0.1731	23.4	3.55	3.90
8/17/2005	9:00:00	14.87	7.78	0.1820	22.2	3.44	3.89
8/17/2005	10:00:00	14.58	7.82	0.1833	32.4	4.43	3.89
8/17/2005	11:00:00	14.84	7.91	0.1795	39.9	5.13	3.89
8/17/2005	12:00:00	14.82	8.02	0.1854	49.7	6.06	3.89
8/17/2005	13:00:00	14.97	8.31	0.1958	60.4	5.74	3.89
8/17/2005	14:00:00	12.58	8.26	0.2390	48.3	4.85	3.89
8/17/2005	15:00:00	12.10	8.15	0.2280	39.8	4.04	3.88
8/17/2005	16:00:00	11.96	8.11	0.2310	34.7	3.55	3.88
8/17/2005	17:00:00	11.63	8.10	0.2450	28.3	2.92	3.88
8/17/2005	18:00:00	11.31	8.07	0.2510	26.4	2.75	3.88
8/17/2005	19:00:00	11.14	8.10	0.2540	22.1	2.32	3.88
8/17/2005	20:00:00	10.81	8.11	0.2550	21.1	2.24	3.88
8/17/2005	21:00:00	10.66	8.07	0.2500	19.2	2.05	3.89
8/17/2005	22:00:00	10.36	8.02	0.2490	12.1	1.32	3.89
8/17/2005	23:00:00	10.11	8.00	0.2510	9.2	1.03	3.89
8/18/2005	0:00:00	9.94	8.00	0.2520	8.2	0.92	3.89
8/18/2005	1:00:00	9.86	8.00	0.2520	8.2	0.93	3.89
8/18/2005	2:00:00	9.77	7.99	0.2510	7.7	0.89	3.88
8/18/2005	3:00:00	9.80	8.01	0.2550	11.4	1.29	3.88
8/18/2005	4:00:00	9.91	7.99	0.2480	11.2	1.27	3.87
8/18/2005	5:00:00	9.80	8.00	0.2480	11.1	1.26	3.87
8/18/2005	6:00:00	9.99	7.99	0.2330	12.7	1.43	3.87
8/18/2005	7:00:00	10.08	7.96	0.2320	19.0	2.11	3.87
8/18/2005	8:00:00	10.12	7.95	0.2330	16.4	1.82	3.88
8/18/2005	9:00:00	10.23	7.95	0.2310	18.9	2.09	3.87
8/18/2005	10:00:00	10.31	7.96	0.2340	18.4	2.04	3.87
8/18/2005	11:00:00	10.51	7.96	0.2380	23.8	2.60	3.87
8/18/2005	12:00:00	10.54	7.99	0.2440	21.6	2.38	3.88
8/18/2005	13:00:00	11.25	8.01	0.2190	37.7	4.00	3.88
8/18/2005	14:00:00	11.39	8.09	0.2510	35.1	3.74	3.89
8/18/2005	15:00:00	11.81	8.13	0.2440	32.0	3.38	3.89
8/18/2005	16:00:00	11.42	8.14	0.2520	32.5	3.47	3.88
8/18/2005	17:00:00	17.12	8.73	0.1408	64.4	5.98	3.94
8/18/2005	18:00:00	20.83	8.82	0.1119	76.4	6.58	3.94
8/18/2005	19:00:00	21.27	8.90	0.1001	76.2	6.52	3.93
8/18/2005	20:00:00	21.47	9.10	0.0977	74.7	6.36	3.94
8/18/2005	21:00:00	21.30	8.86	0.0991	65.8	5.64	3.93
8/18/2005	22:00:00	20.93	8.17	0.1043	57.3	4.96	3.93
8/18/2005	23:00:00	20.64	7.71	0.1087	51.4	4.51	3.93
8/19/2005	0:00:00	20.46	7.51	0.1108	46.0	4.07	3.93
8/19/2005	1:00:00	20.29	7.41	0.1125	42.9	3.83	3.93
8/19/2005	2:00:00	20.15	7.36	0.1130	40.8	3.66	3.93
8/19/2005	3:00:00	20.03	7.33	0.1135	39.3	3.55	3.93
8/19/2005	4:00:00	19.93	7.30	0.1139	38.3	3.47	3.93
8/19/2005	5:00:00	19.81	7.28	0.1139	37.4	3.40	3.93
8/19/2005	6:00:00	19.70	7.28	0.1144	36.5	3.34	3.93
8/19/2005	7:00:00	19.62	7.21	0.1148	35.2	3.23	3.93

Cisco Branch of Ontonogan River 08/03/05 - 08/31/05

Date	Time	Temp	pH	SpCond	DO%	Corrected DO	USGS Gauge Height
MMDDYY	HHMMSS	°C	Units	mS/cm	Sat	mg/l	
8/19/2005	8:00:00	19.59	7.22	0.1147	35.5	3.27	3.93
8/19/2005	9:00:00	19.66	7.29	0.1144	38.9	3.55	3.93
8/19/2005	10:00:00	19.79	7.33	0.1139	44.2	4.01	3.93
8/19/2005	11:00:00	19.95	7.38	0.1136	49.0	4.42	3.93
8/19/2005	12:00:00	20.16	7.45	0.1124	55.9	4.99	3.93
8/19/2005	13:00:00	20.67	7.65	0.1100	66.8	5.87	3.93
8/19/2005	14:00:00	20.96	7.88	0.1086	74.1	6.46	3.93
8/19/2005	15:00:00	21.89	8.23	0.1063	82.6	7.08	3.95
8/19/2005	16:00:00	22.67	8.64	0.1037	94.1	7.89	3.94
8/19/2005	17:00:00	22.76	8.78	0.1075	94.9	7.95	3.94
8/19/2005	18:00:00	22.90	8.89	0.1043	94.9	7.93	3.94
8/19/2005	19:00:00	23.07	8.95	0.1046	95.0	7.93	3.94
8/19/2005	20:00:00	23.12	8.98	0.1049	90.8	7.57	3.94
8/19/2005	21:00:00	22.94	8.95	0.1057	84.3	7.09	3.94
8/19/2005	22:00:00	22.61	8.83	0.1073	90.8	7.66	3.94
8/19/2005	23:00:00	22.22	8.66	0.1094	83.9	7.16	3.94
8/20/2005	0:00:00	21.78	8.32	0.1122	74.6	6.45	3.94
8/20/2005	1:00:00	21.39	7.88	0.1151	64.7	5.67	3.94
8/20/2005	2:00:00	21.07	7.59	0.1176	53.9	4.80	3.93
8/20/2005	3:00:00	20.73	7.42	0.1184	45.5	4.13	3.93
8/20/2005	4:00:00	20.49	7.33	0.1191	40.2	3.70	3.93
8/20/2005	5:00:00	20.26	7.29	0.1194	38.3	3.55	3.93
8/20/2005	6:00:00	19.93	7.18	0.1188	35.1	3.32	3.93
8/20/2005	7:00:00	19.51	7.25	0.1195	30.4	2.93	3.94
8/20/2005	8:00:00	19.06	7.26	0.1205	31.8	3.08	3.93
8/20/2005	9:00:00	18.58	7.30	0.1222	33.2	3.24	3.93
8/20/2005	10:00:00	18.32	7.34	0.1217	38.7	3.75	3.93
8/20/2005	11:00:00	18.33	7.52	0.1253	47.0	4.48	3.93
8/20/2005	12:00:00	18.48	7.66	0.1247	57.5	5.40	3.91
8/20/2005	13:00:00	18.51	7.96	0.1349	69.3	6.44	3.92
8/20/2005	14:00:00	18.98	8.25	0.1315	78.4	7.19	3.94
8/20/2005	15:00:00	19.03	8.57	0.1296	86.6	7.91	3.91
8/20/2005	16:00:00	19.80	8.70	0.1307	85.2	7.87	3.91
8/20/2005	17:00:00	18.36	8.55	0.1601	70.8	6.61	3.91
8/20/2005	18:00:00	15.95	8.53	0.1607	65.9	6.49	3.91
8/20/2005	19:00:00	14.15	8.43	0.1861	67.4	6.88	3.91
8/20/2005	20:00:00	13.29	8.21	0.1888	58.0	6.09	3.92
8/20/2005	21:00:00	12.51	8.05	0.1936	44.4	4.83	3.92
8/20/2005	22:00:00	11.57	7.97	0.2180	42.1	4.69	3.92
8/20/2005	23:00:00	11.23	7.96	0.2200	35.8	4.07	3.92
8/21/2005	0:00:00	11.00	7.96	0.2180	35.6	4.08	3.92
8/21/2005	1:00:00	10.91	7.96	0.1822	38.8	4.42	3.92
8/21/2005	2:00:00	11.03	8.01	0.1707	39.2	4.47	3.92
8/21/2005	3:00:00	11.08	7.96	0.1791	41.7	4.72	3.92
8/21/2005	4:00:00	11.94	7.99	0.1659	35.2	3.98	3.92
8/21/2005	5:00:00	12.32	8.01	0.1494	34.2	3.85	3.92
8/21/2005	6:00:00	12.75	7.92	0.1622	29.5	3.35	3.92
8/21/2005	7:00:00	13.80	7.88	0.1489	29.3	3.26	3.92
8/21/2005	8:00:00	13.81	7.80	0.1435	34.0	3.74	3.91

Cisco Branch of Ontonogan River 08/03/05 - 08/31/05

Date	Time	Temp	pH	SpCond	DO%	Corrected DO	USGS Gauge Height
MMDDYY	HHMMSS	°C	Units	mS/cm	Sat	mg/l	
8/21/2005	9:00:00	14.36	7.74	0.1365	35.2	3.82	3.91
8/21/2005	10:00:00	14.78	7.76	0.1451	34.7	3.74	3.91
8/21/2005	11:00:00	15.51	7.80	0.1295	47.1	4.86	3.90
8/21/2005	12:00:00	15.87	7.96	0.1302	57.7	5.81	3.90
8/21/2005	13:00:00	14.91	8.22	0.1394	60.6	6.21	3.90
8/21/2005	14:00:00	14.44	8.26	0.1493	61.0	6.31	3.90
8/21/2005	15:00:00	15.63	8.41	0.1397	62.9	6.35	3.89
8/21/2005	16:00:00	15.22	8.46	0.1413	68.8	6.96	3.90
8/21/2005	17:00:00	15.00	8.57	0.1401	69.1	7.02	3.90
8/21/2005	18:00:00	14.96	8.62	0.1480	62.3	6.38	3.91
8/21/2005	19:00:00	13.82	8.60	0.1498	64.6	6.76	3.91
8/21/2005	20:00:00	13.64	8.74	0.1426	63.6	6.70	3.91
8/21/2005	21:00:00	13.00	8.70	0.1469	58.1	6.24	3.92
8/21/2005	22:00:00	12.70	8.54	0.1561	50.7	5.55	3.92
8/21/2005	23:00:00	12.79	8.58	0.1445	51.5	5.62	3.91
8/22/2005	0:00:00	13.69	8.91	0.1262	55.2	5.89	3.91
8/22/2005	1:00:00	14.03	8.91	0.1144	56.8	6.01	3.91
8/22/2005	2:00:00	13.65	8.76	0.1258	51.6	5.55	3.91
8/22/2005	3:00:00	13.96	8.64	0.1208	47.5	5.12	3.91
8/22/2005	4:00:00	13.70	8.53	0.1198	49.8	5.38	3.91
8/22/2005	5:00:00	13.98	8.33	0.1197	47.5	5.13	3.92
8/22/2005	6:00:00	14.19	8.09	0.1246	44.0	4.76	3.92
8/22/2005	7:00:00	13.89	7.92	0.1239	40.5	4.46	3.92
8/22/2005	8:00:00	13.88	7.87	0.1263	43.8	4.78	3.91
8/22/2005	9:00:00	14.33	7.82	0.1267	43.6	4.73	3.91
8/22/2005	10:00:00	14.27	7.78	0.1259	44.7	4.85	3.91
8/22/2005	11:00:00	14.75	7.87	0.1268	49.1	5.24	3.90
8/22/2005	12:00:00	15.07	8.02	0.1268	55.7	5.82	3.90
8/22/2005	13:00:00	13.58	7.99	0.1504	64.0	6.83	3.89
8/22/2005	14:00:00	13.39	7.98	0.1635	64.8	6.93	3.90
8/22/2005	15:00:00	14.86	8.13	0.1597	87.1	8.86	3.89
8/22/2005	16:00:00	18.58	8.62	0.1526	67.8	6.54	3.90
8/22/2005	17:00:00	18.01	8.54	0.1488	60.4	5.95	3.90
8/22/2005	18:00:00	15.44	8.32	0.1679	55.5	5.79	3.90
8/22/2005	19:00:00	13.39	8.14	0.1803	49.0	5.40	3.90
8/22/2005	20:00:00	12.23	8.01	0.1766	51.3	5.76	3.91
8/22/2005	21:00:00	11.60	7.95	0.1777	47.4	5.44	3.91
8/22/2005	22:00:00	11.05	7.92	0.2210	37.8	4.51	3.91
8/22/2005	23:00:00	10.89	7.91	0.1912	41.9	4.96	3.91
8/23/2005	0:00:00	10.75	7.91	0.1871	39.1	4.69	3.91
8/23/2005	1:00:00	10.78	7.90	0.1628	43.3	5.13	3.91
8/23/2005	2:00:00	10.92	7.92	0.1786	38.4	4.60	3.91
8/23/2005	3:00:00	11.17	8.00	0.1987	27.1	3.41	3.91
8/23/2005	4:00:00	11.27	8.08	0.1729	31.2	3.83	3.91
8/23/2005	5:00:00	11.87	8.15	0.1468	34.7	4.15	3.92
8/23/2005	6:00:00	12.06	8.13	0.1407	34.8	4.15	3.91
8/23/2005	7:00:00	12.27	8.12	0.1317	37.1	4.38	3.92
8/23/2005	8:00:00	12.27	8.01	0.1286	39.6	4.63	3.91
8/23/2005	9:00:00	12.35	7.91	0.1286	38.7	4.54	3.92

Cisco Branch of Ontonogan River 08/03/05 - 08/31/05

Date	Time	Temp	pH	SpCond	DO%	Corrected DO	USGS Gauge Height
MMDDYY	HHMMSS	°C	Units	mS/cm	Sat	mg/l	
8/23/2005	10:00:00	12.80	7.87	0.1296	39.7	4.80	3.93
8/23/2005	11:00:00	13.77	7.85	0.1284	43.7	4.92	3.92
8/23/2005	12:00:00	13.67	7.99	0.1297	54.1	5.94	3.92
8/23/2005	13:00:00	12.55	7.91	0.1796	42.6	4.92	3.92
8/23/2005	14:00:00	12.64	7.96	0.1906	54.3	6.10	3.93
8/23/2005	15:00:00	14.38	8.08	0.1739	70.4	7.44	3.93
8/23/2005	16:00:00	16.08	8.32	0.1904	63.5	6.57	3.93
8/23/2005	17:00:00	16.15	8.24	0.1976	41.8	4.55	3.92
8/23/2005	18:00:00	13.75	8.13	0.2090	51.1	5.67	3.92
8/23/2005	19:00:00	13.00	8.06	0.2050	35.9	4.24	3.92
8/23/2005	20:00:00	11.97	7.97	0.1888	44.7	5.24	3.91
8/23/2005	21:00:00	11.26	7.93	0.2030	37.1	4.52	3.91
8/23/2005	22:00:00	10.86	7.92	0.2100	30.2	3.85	3.91
8/23/2005	23:00:00	10.54	7.91	0.2180	22.7	3.09	3.91
8/24/2005	0:00:00	10.30	7.91	0.2380	16.2	2.41	3.92
8/24/2005	1:00:00	10.15	7.92	0.2440	12.1	1.99	3.92
8/24/2005	2:00:00	10.15	7.91	0.2190	19.5	2.78	3.91
8/24/2005	3:00:00	10.27	7.91	0.2040	24.0	3.25	3.91
8/24/2005	4:00:00	10.46	7.88	0.1806	36.6	4.57	3.91
8/24/2005	5:00:00	10.50	7.86	0.1735	35.6	4.47	3.91
8/24/2005	6:00:00	10.95	7.93	0.1940	26.1	3.44	3.91
8/24/2005	7:00:00	11.35	7.92	0.1711	27.1	3.53	3.91
8/24/2005	8:00:00	11.87	7.88	0.1595	27.6	3.55	3.92
8/24/2005	9:00:00	13.40	7.84	0.1303	36.5	4.33	3.92
8/24/2005	10:00:00	14.20	7.78	0.1315	36.4	4.27	3.93
8/24/2005	11:00:00	14.85	7.82	0.1296	44.4	4.98	3.93
8/24/2005	12:00:00	14.45	8.02	0.1376	56.1	6.16	3.93
8/24/2005	13:00:00	14.01	8.18	0.1457	63.2	6.90	3.93
8/24/2005	14:00:00	13.85	8.23	0.1563	64.9	7.10	3.93
8/24/2005	15:00:00	14.82	8.41	0.1597	65.1	6.98	3.94
8/24/2005	16:00:00	14.60	8.52	0.1543	69.6	7.45	3.93
8/24/2005	17:00:00	13.88	8.70	0.1518	72.1	7.80	3.92
8/24/2005	18:00:00	13.32	8.82	0.1418	71.3	7.83	3.92
8/24/2005	19:00:00	12.74	8.79	0.1495	65.7	7.35	3.91
8/24/2005	20:00:00	12.48	8.85	0.1464	63.9	7.21	3.91
8/24/2005	21:00:00	11.95	8.40	0.1436	67.9	7.71	3.91
8/24/2005	22:00:00	11.43	8.24	0.1465	62.2	7.20	3.92
8/24/2005	23:00:00	11.10	8.12	0.1427	56.6	6.68	3.93
8/25/2005	0:00:00	11.11	8.12	0.1438	53.9	6.40	3.93
8/25/2005	1:00:00	11.37	8.22	0.1440	52.6	6.24	3.92
8/25/2005	2:00:00	11.33	8.19	0.1352	47.5	5.72	3.92
8/25/2005	3:00:00	11.38	8.31	0.1396	43.8	5.34	3.91
8/25/2005	4:00:00	11.60	8.08	0.1604	40.4	4.97	3.92
8/25/2005	5:00:00	11.97	8.07	0.1556	34.9	4.37	3.92
8/25/2005	6:00:00	13.21	8.00	0.1406	33.0	4.11	3.92
8/25/2005	7:00:00	13.18	7.86	0.1503	29.7	3.77	3.92
8/25/2005	8:00:00	13.32	7.78	0.1489	30.8	3.89	3.92
8/25/2005	9:00:00	13.83	7.74	0.1409	34.4	4.21	3.91
8/25/2005	10:00:00	13.48	7.73	0.1450	36.5	4.45	3.92

Cisco Branch of Ontonogan River 08/03/05 - 08/31/05

Date	Time	Temp	pH	SpCond	DO%	Corrected DO	USGS Gauge Height
MMDDYY	HHMMSS	°C	Units	mS/cm	Sat	mg/l	
8/25/2005	11:00:00	14.09	7.74	0.1439	40.2	4.75	3.91
8/25/2005	12:00:00	14.34	7.80	0.1399	43.5	5.06	3.91
8/25/2005	13:00:00	13.42	7.88	0.1507	50.6	5.85	3.92
8/25/2005	14:00:00	13.72	7.98	0.1654	52.0	5.97	3.93
8/25/2005	15:00:00	13.72	8.08	0.1646	62.0	6.94	3.93
8/25/2005	16:00:00	14.48	8.24	0.1850	71.8	7.78	3.93
8/25/2005	17:00:00	14.23	8.28	0.1785	65.3	7.20	3.94
8/25/2005	18:00:00	13.18	8.33	0.1600	69.6	7.77	3.92
8/25/2005	19:00:00	12.61	8.33	0.1567	65.3	7.44	3.91
8/25/2005	20:00:00	12.29	8.24	0.1637	63.1	7.27	3.91
8/25/2005	21:00:00	11.57	8.03	0.1532	57.2	6.78	3.91
8/25/2005	22:00:00	10.89	7.97	0.1955	42.7	5.36	3.92
8/25/2005	23:00:00	10.53	7.94	0.2330	27.9	3.85	3.92
8/26/2005	0:00:00	10.28	7.94	0.2360	21.9	3.23	3.92
8/26/2005	1:00:00	10.40	7.94	0.2270	15.9	2.61	3.92
8/26/2005	2:00:00	10.42	7.93	0.2170	25.4	3.60	3.92
8/26/2005	3:00:00	10.45	7.93	0.2020	28.3	3.91	3.91
8/26/2005	4:00:00	10.36	7.92	0.2060	24.8	3.55	3.92
8/26/2005	5:00:00	10.34	7.92	0.2000	25.4	3.62	3.91
8/26/2005	6:00:00	10.65	7.89	0.1798	32.4	4.34	3.92
8/26/2005	7:00:00	10.93	7.85	0.1888	22.9	3.33	3.92
8/26/2005	8:00:00	10.94	7.81	0.1966	28.0	3.88	3.92
8/26/2005	9:00:00	11.17	7.81	0.1867	27.5	3.81	3.93
8/26/2005	10:00:00	11.41	7.81	0.1919	31.1	4.18	3.94
8/26/2005	11:00:00	12.20	7.93	0.1944	35.9	4.60	3.94
8/26/2005	12:00:00	11.99	7.92	0.2000	49.9	6.04	3.93
8/26/2005	13:00:00	11.70	7.99	0.2120	52.6	6.36	3.93
8/26/2005	14:00:00	11.45	8.01	0.2290	57.2	6.86	3.93
8/26/2005	15:00:00	11.27	8.14	0.2380	39.3	5.05	3.92
8/26/2005	16:00:00	11.17	8.12	0.2370	43.1	5.45	3.91
8/26/2005	17:00:00	12.92	8.13	0.2130	30.8	4.06	3.92
8/26/2005	18:00:00	12.27	8.07	0.2100	36.9	4.73	3.91
8/26/2005	19:00:00	11.52	8.07	0.2010	38.2	4.93	3.91
8/26/2005	20:00:00	11.00	7.96	0.2130	42.0	5.38	3.91
8/26/2005	21:00:00	10.78	7.96	0.2020	41.8	5.39	3.90
8/26/2005	22:00:00	10.71	7.94	0.2330	22.9	3.42	3.90
8/26/2005	23:00:00	10.31	7.92	0.2330	16.5	2.76	3.90
8/27/2005	0:00:00	10.10	7.92	0.2290	12.8	2.39	3.90
8/27/2005	1:00:00	10.15	7.92	0.2250	16.7	2.80	3.90
8/27/2005	2:00:00	10.13	7.91	0.2100	16.3	2.76	3.90
8/27/2005	3:00:00	11.06	7.94	0.1736	22.1	3.33	3.90
8/27/2005	4:00:00	11.12	7.90	0.1533	34.7	4.64	3.90
8/27/2005	5:00:00	11.72	7.88	0.1488	27.5	3.86	3.90
8/27/2005	6:00:00	12.17	7.82	0.1504	25.5	3.64	3.90
8/27/2005	7:00:00	13.71	7.73	0.1447	27.4	3.74	3.90
8/27/2005	8:00:00	14.56	7.65	0.1294	32.7	4.21	3.90
8/27/2005	9:00:00	15.24	7.57	0.1295	30.5	3.95	3.91
8/27/2005	10:00:00	15.91	7.55	0.1246	33.7	4.22	3.90
8/27/2005	11:00:00	16.56	7.67	0.1213	46.2	5.33	3.90

Cisco Branch of Ontonogan River 08/03/05 - 08/31/05

Date	Time	Temp	pH	SpCond	DO%	Corrected	USGS
MMDDYY	HHMMSS	°C	Units	mS/cm	Sat	DO mg/l	Gauge Height
8/27/2005	12:00:00	16.86	7.82	0.1245	50.5	5.70	3.90
8/27/2005	13:00:00	14.44	7.89	0.1360	71.7	7.99	3.90
8/27/2005	14:00:00	14.57	8.18	0.1413	66.5	7.47	3.90
8/27/2005	15:00:00	15.84	8.29	0.1470	73.4	7.96	3.91
8/27/2005	16:00:00	15.79	8.63	0.1449	78.3	8.41	3.90
8/27/2005	17:00:00	16.69	8.52	0.1589	53.9	6.05	3.89
8/27/2005	18:00:00	16.02	8.75	0.1316	68.5	7.48	3.90
8/27/2005	19:00:00	14.67	8.88	0.1267	67.2	7.54	3.90
8/27/2005	20:00:00	13.96	8.87	0.1279	59.0	6.86	3.90
8/27/2005	21:00:00	12.98	8.79	0.1268	60.3	7.11	3.90
8/27/2005	22:00:00	12.29	8.55	0.1240	57.3	6.91	3.90
8/27/2005	23:00:00	11.83	8.24	0.1339	52.1	6.45	3.90
8/28/2005	0:00:00	11.79	8.28	0.1312	49.7	6.21	3.90
8/28/2005	1:00:00	11.87	8.30	0.1288	46.9	5.92	3.90
8/28/2005	2:00:00	11.82	8.24	0.1323	33.6	4.58	3.90
8/28/2005	3:00:00	11.60	8.12	0.1381	39.5	5.20	3.90
8/28/2005	4:00:00	11.50	7.98	0.1393	36.7	4.93	3.90
8/28/2005	5:00:00	11.83	7.95	0.1332	31.9	4.41	3.90
8/28/2005	6:00:00	11.99	7.82	0.1467	23.2	3.51	3.90
8/28/2005	7:00:00	12.41	7.76	0.1600	22.0	3.38	3.90
8/28/2005	8:00:00	12.19	7.73	0.1590	27.4	3.94	3.90
8/28/2005	9:00:00	13.21	7.70	0.1443	28.9	4.03	3.89
8/28/2005	10:00:00	13.58	7.67	0.1379	38.7	4.97	3.88
8/28/2005	11:00:00	13.71	7.75	0.1408	44.7	5.56	3.88
8/28/2005	12:00:00	12.92	7.85	0.1543	54.6	6.62	3.88
8/28/2005	13:00:00	12.11	7.84	0.1662	60.7	7.34	3.88
8/28/2005	14:00:00	11.91	7.94	0.2280	48.7	6.16	3.88
8/28/2005	15:00:00	12.08	7.97	0.2440	49.1	6.18	3.88
8/28/2005	16:00:00	12.74	8.10	0.2560	62.2	7.42	3.88
8/28/2005	17:00:00	12.88	8.12	0.1963	63.4	7.52	3.88
8/28/2005	18:00:00	12.03	8.09	0.2130	54.1	6.71	3.89
8/28/2005	19:00:00	12.78	8.17	0.1869	49.9	6.20	3.89
8/28/2005	20:00:00	11.96	8.04	0.1896	43.2	5.62	3.89
8/28/2005	21:00:00	11.12	7.93	0.2270	31.7	4.52	3.89
8/28/2005	22:00:00	10.61	7.89	0.2510	16.3	2.95	3.89
8/28/2005	23:00:00	10.36	7.93	0.2570	9.0	2.19	3.89
8/29/2005	0:00:00	10.14	7.91	0.2540	7.4	2.04	3.89
8/29/2005	1:00:00	10.03	7.92	0.2410	7.5	2.05	3.89
8/29/2005	2:00:00	10.05	7.94	0.2260	13.5	2.68	3.89
8/29/2005	3:00:00	10.03	7.92	0.2100	17.4	3.11	3.89
8/29/2005	4:00:00	10.46	7.95	0.1630	34.1	4.85	3.89
8/29/2005	5:00:00	11.27	8.32	0.1329	37.2	5.12	3.89
8/29/2005	6:00:00	12.00	8.16	0.1447	29.9	4.31	3.89
8/29/2005	7:00:00	11.48	7.94	0.1658	25.4	3.89	3.89
8/29/2005	8:00:00	11.48	7.86	0.1733	23.0	3.65	3.89
8/29/2005	9:00:00	10.79	7.78	0.1996	25.3	3.93	3.89
8/29/2005	10:00:00	10.69	7.75	0.2240	29.5	4.37	3.88
8/29/2005	11:00:00	10.68	7.79	0.2490	29.0	4.34	3.88
8/29/2005	12:00:00	10.65	7.88	0.2420	31.0	4.55	3.88

Cisco Branch of Ontonogan River 08/03/05 - 08/31/05

Date	Time	Temp	pH	SpCond	DO%	Corrected	USGS
MMDDYY	HHMMSS	°C	Units	mS/cm	Sat	DO mg/l	Gauge Height
8/29/2005	13:00:00	10.71	7.88	0.2410	24.9	3.91	3.88
8/29/2005	14:00:00	10.97	7.95	0.2430	23.8	3.79	3.88
8/29/2005	15:00:00	11.07	7.97	0.2510	29.9	4.41	3.87
8/29/2005	16:00:00	10.99	8.00	0.2490	30.6	4.50	3.87
8/29/2005	17:00:00	11.01	8.03	0.2390	31.2	4.56	3.88
8/29/2005	18:00:00	10.72	8.00	0.2470	16.1	3.02	3.88
8/29/2005	19:00:00	10.45	7.96	0.2470	8.2	2.19	3.88
8/29/2005	20:00:00	10.93	8.06	0.2200	26.3	4.08	3.88
8/29/2005	21:00:00	10.78	7.96	0.2100	42.9	5.82	3.88
8/29/2005	22:00:00	10.29	7.90	0.2530	20.4	3.49	3.89
8/29/2005	23:00:00	9.86	7.90	0.2490	4.4	1.81	3.88
8/30/2005	0:00:00	9.64	7.92	0.2520	0.6	1.42	3.89
8/30/2005	1:00:00	9.61	7.94	0.2530	0.4	1.40	3.89
8/30/2005	2:00:00	9.46	7.95	0.2570	0.2	1.38	3.88
8/30/2005	3:00:00	9.49	7.94	0.2500	0.0	1.37	3.88
8/30/2005	4:00:00	9.52	7.94	0.2550	0.5	1.42	3.88
8/30/2005	5:00:00	9.49	7.92	0.2580	0.5	1.44	3.89
8/30/2005	6:00:00	9.63	7.90	0.2430	3.0	1.70	3.88
8/30/2005	7:00:00	10.01	7.85	0.2420	12.3	2.70	3.88
8/30/2005	8:00:00	10.26	7.86	0.2040	18.7	3.36	3.88
8/30/2005	9:00:00	11.06	7.87	0.1929	27.1	4.20	3.88
8/30/2005	10:00:00	12.77	7.99	0.1586	32.6	4.65	3.88
8/30/2005	11:00:00	11.92	7.96	0.1621	45.5	6.03	3.89
8/30/2005	12:00:00	11.70	7.82	0.2060	41.9	5.69	3.88
8/30/2005	13:00:00	12.36	8.05	0.1720	56.2	7.07	3.88
8/30/2005	14:00:00	12.10	7.99	0.2060	61.6	7.66	3.88
8/30/2005	15:00:00	12.66	8.12	0.1933	62.5	7.67	3.88
8/30/2005	16:00:00	12.01	8.01	0.2370	42.1	5.70	3.88
8/30/2005	17:00:00	12.02	7.97	0.2460	48.5	6.35	3.87
8/30/2005	18:00:00	12.65	8.13	0.2340	30.7	4.51	3.87
8/30/2005	19:00:00	11.52	8.02	0.2480	28.4	4.36	3.88
8/30/2005	20:00:00	11.04	7.95	0.2390	28.3	4.37	3.88
8/30/2005	21:00:00	10.42	7.93	0.2490	19.3	3.48	3.88
8/30/2005	22:00:00	10.37	7.92	0.2460	14.0	2.93	3.88
8/30/2005	23:00:00	10.13	7.93	0.2430	15.7	3.13	3.88
8/31/2005	0:00:00	10.03	7.89	0.2490	17.0	3.27	3.88
8/31/2005	1:00:00	9.86	7.92	0.2580	4.4	1.94	3.88
8/31/2005	2:00:00	9.96	7.91	0.2340	20.2	3.62	3.88
8/31/2005	3:00:00	9.87	7.90	0.2440	14.2	3.00	3.88
8/31/2005	4:00:00	10.27	7.88	0.2240	21.8	3.79	3.88
8/31/2005	5:00:00	9.93	7.86	0.2240	24.9	4.13	3.88
8/31/2005	6:00:00	9.66	7.91	0.2360	9.9	2.55	3.88
8/31/2005	7:00:00	10.47	7.95	0.2220	9.6	2.50	3.88
8/31/2005	8:00:00	10.81	7.95	0.2040	20.2	3.61	3.88
8/31/2005	9:00:00	10.32	7.82	0.2100	26.9	4.33	3.89
8/31/2005	10:00:00	10.67	7.84	0.1930	29.7	4.62	3.89
8/31/2005	11:00:00	11.25	7.87	0.2000	26.7	4.27	3.89
8/31/2005	12:00:00	10.49	7.84	0.2460	14.3	3.02	3.89
8/31/2005	13:00:00	10.54	7.89	0.2490	12.0	2.78	3.89

Appendix B

Water Quality Monitoring Data: Victoria Powerhouse Tailrace

Bond Falls Hydroelectric Project - Victoria Tailrace

08-04-2005 to 08-24-2005

Date MMDDYY	Time HHMMSS	Temp °C	pH Units	SpCond mS/cm	DO% Sat	DO mg/l	Total Generation MWH
High Resolution Data - Period 8/4/2005 to 8/6/2005							
** All data between 8/24/05 at 01:00 and 090105 has been lost due to an equipment malfunction.							
8/4/2005	10:00:00	23.51	7.65	0.1405	89.7	7.36	4.18
8/4/2005	11:00:00	23.57	7.69	0.1405	92.2	7.57	4.18
8/4/2005	12:00:00	23.68	7.72	0.1407	90.1	7.38	4.18
8/4/2005	13:00:00	23.74	7.69	0.1409	99.3	8.12	4.18
8/4/2005	14:00:00	23.67	7.65	0.1403	79.8	7.38	4.17
8/4/2005	15:00:00	23.45	7.67	0.1406	92.6	7.63	3.14
8/4/2005	16:00:00	23.55	7.70	0.1406	92.5	7.61	3.09
8/4/2005	17:00:00	23.63	7.72	0.1408	90.8	7.47	3.09
8/4/2005	18:00:00	23.44	7.61	0.1408	89.6	7.39	3.09
8/4/2005	19:00:00	23.51	7.60	0.1406	89.5	7.38	3.09
8/4/2005	20:00:00	23.22	7.55	0.1406	88.4	7.34	3.09
8/4/2005	21:00:00	23.27	7.55	0.1405	88.5	7.34	3.09
8/4/2005	22:00:00	23.30	7.57	0.1408	88.8	7.36	3.09
8/4/2005	23:00:00	23.27	7.56	0.1408	88.7	7.36	3.09
8/5/2005	0:00:00	23.37	7.58	0.1407	88.7	7.35	3.09
8/5/2005	1:00:00	23.36	7.57	0.1410	88.5	7.33	3.09
8/5/2005	2:00:00	23.45	7.59	0.1407	88.9	7.36	3.09
8/5/2005	3:00:00	23.37	7.59	0.1407	89.0	7.38	3.09
8/5/2005	4:00:00	23.41	7.37	0.1411	89.2	7.39	3.09
8/5/2005	5:00:00	23.47	7.41	0.1412	89.2	7.40	3.09
8/5/2005	6:00:00	23.43	7.42	0.1409	88.9	7.38	3.09
8/5/2005	7:00:00	23.51	7.43	0.1409	89.7	7.43	3.09
8/5/2005	8:00:00	23.56	7.23	0.1408	90.5	7.50	3.09
8/5/2005	9:00:00	23.70	7.25	0.1406	91.0	7.52	3.09
8/5/2005	10:00:00	23.71	7.29	0.1405	91.7	7.57	3.09
8/5/2005	11:00:00	23.75	7.32	0.1411	91.8	7.59	3.09
8/5/2005	12:00:00	23.77	7.26	0.1414	104.1	8.59	3.09
8/5/2005	13:00:00	23.75	7.27	0.1416	91.2	7.54	3.09
8/5/2005	14:00:00	23.68	7.22	0.1410	84.3	7.00	3.09
8/5/2005	15:00:00	23.75	7.22	0.1411	90.5	7.49	3.09
8/5/2005	16:00:00	23.75	7.20	0.1407	89.3	7.40	3.09
8/5/2005	17:00:00	23.64	7.17	0.1403	89.7	7.46	3.09
8/5/2005	18:00:00	23.58	7.19	0.1407	86.3	7.18	3.09
8/5/2005	19:00:00	23.45	7.17	0.1404	87.3	7.28	3.09
8/5/2005	20:00:00	23.45	7.16	0.1404	87.5	7.31	3.09
8/5/2005	21:00:00	23.46	7.16	0.1406	87.4	7.30	3.09
8/5/2005	22:00:00	23.46	7.15	0.1407	87.3	7.29	3.09
8/5/2005	23:00:00	23.43	7.15	0.1409	87.1	7.29	3.09
8/6/2005	0:00:00	23.45	7.14	0.1410	86.8	7.26	3.09
8/6/2005	1:00:00	23.47	7.14	0.1404	87.0	7.27	3.09
8/6/2005	2:00:00	23.48	7.15	0.1403	87.5	7.33	3.09
8/6/2005	3:00:00	23.57	7.19	0.1406	87.8	7.33	3.09
8/6/2005	4:00:00	23.58	7.17	0.1408	87.9	7.35	3.09
8/6/2005	5:00:00	23.62	7.19	0.1411	87.8	7.34	3.09
8/6/2005	6:00:00	23.61	7.20	0.1411	88.1	7.36	3.09
8/6/2005	7:00:00	23.65	7.22	0.1409	88.8	7.42	3.09
8/6/2005	8:00:00	23.70	7.23	0.1413	89.1	7.45	2.91
8/6/2005	9:00:00	23.80	7.24	0.1411	89.5	7.47	2.89
8/6/2005	10:00:00	23.84	7.24	0.1412	88.1	7.35	2.89
8/6/2005	11:00:00	23.90	7.25	0.1409	87.8	7.32	2.89
8/6/2005	12:00:00	24.16	7.31	0.1416	96.1	7.96	2.89

Bond Falls Hydroelectric Project - Victoria Tailrace

08-04-2005 to 08-24-2005

Date	Time	Temp	pH	SpCond	DO%	DO	Total
MMDDYY	HHMMSS	°C	Units	mS/cm	Sat	mg/l	Generation
8/6/2005	13:00:00	24.24	7.34	0.1413	84.0	8.09	2.89
8/6/2005	14:00:00	24.24	7.34	0.1413	97.7	8.09	2.89
8/6/2005	15:00:00	24.30	7.32	0.1415	94.0	7.78	2.89
8/6/2005	16:00:00	24.13	7.28	0.1413	90.5	7.52	2.89
8/6/2005	17:00:00	24.05	7.27	0.1412	89.1	7.43	2.89
8/6/2005	18:00:00	23.92	7.28	0.1412	87.8	7.34	2.89
8/6/2005	19:00:00	23.94	7.26	0.1413	89.0	7.44	2.89
8/6/2005	20:00:00	23.92	7.27	0.1416	88.4	7.40	2.89
8/6/2005	21:00:00	23.91	7.26	0.1415	88.3	7.39	2.89
8/6/2005	22:00:00	23.80	7.23	0.1410	87.7	7.36	2.89
8/6/2005	23:00:00	23.83	7.23	0.1413	87.7	7.37	2.89
8/7/2005	0:00:00	23.81	7.24	0.1413	87.5	7.35	2.89
8/7/2005	1:00:00	23.85	7.23	0.1410	87.9	7.37	2.89
8/7/2005	2:00:00	23.85	7.24	0.1410	87.8	7.38	2.89
8/7/2005	3:00:00	23.84	7.26	0.1414	88.2	7.41	2.89
8/7/2005	4:00:00	23.77	7.22	0.1411	87.4	7.36	2.89
8/7/2005	5:00:00	23.77	7.21	0.1411	87.2	7.35	2.89
8/7/2005	6:00:00	23.72	7.24	0.1408	87.2	7.36	2.89
8/7/2005	7:00:00	23.80	7.26	0.1414	87.6	7.38	2.89
8/7/2005	8:00:00	23.86	7.28	0.1415	88.0	7.42	2.89
8/7/2005	9:00:00	23.95	7.26	0.1414	88.2	7.42	2.89
8/7/2005	10:00:00	23.98	7.28	0.1412	88.9	7.48	2.89
8/7/2005	11:00:00	24.11	7.30	0.1413	88.1	7.40	2.89
8/7/2005	12:00:00	24.13	7.32	0.1414	94.5	7.92	2.89
8/7/2005	13:00:00	24.15	7.23	0.1413	87.5	7.34	2.89
8/7/2005	14:00:00	24.14	7.22	0.1413	88.3	7.42	2.89
8/7/2005	15:00:00	23.98	7.17	0.1413	85.9	7.25	2.89
8/7/2005	16:00:00	24.00	7.20	0.1412	85.7	7.23	2.89
8/7/2005	17:00:00	23.95	7.23	0.1410	86.5	7.31	2.89
8/7/2005	18:00:00	23.77	7.24	0.1412	84.1	7.13	2.89
8/7/2005	19:00:00	23.76	7.17	0.1419	84.9	7.20	2.89
8/7/2005	20:00:00	23.79	7.19	0.1419	84.4	7.17	2.89
8/7/2005	21:00:00	23.72	7.16	0.1413	84.5	7.19	2.89
8/7/2005	22:00:00	23.75	7.19	0.1414	85.0	7.23	2.89
8/7/2005	23:00:00	23.75	7.15	0.1414	84.5	7.20	2.89
8/8/2005	0:00:00	23.69	7.17	0.1412	84.1	7.17	2.89
8/8/2005	1:00:00	23.68	7.16	0.1418	83.8	7.15	2.89
8/8/2005	2:00:00	23.71	7.17	0.1419	84.1	7.18	2.89
8/8/2005	3:00:00	23.64	7.14	0.1418	84.1	7.19	2.89
8/8/2005	4:00:00	23.76	7.15	0.1418	84.1	7.17	2.89
8/8/2005	5:00:00	23.78	7.16	0.1419	84.2	7.19	2.89
8/8/2005	6:00:00	23.77	7.17	0.1421	84.3	7.19	2.89
8/8/2005	7:00:00	23.79	7.19	0.1418	84.9	7.24	2.89
8/8/2005	8:00:00	23.88	7.19	0.1417	84.6	7.22	2.65
8/8/2005	9:00:00	23.88	7.21	0.1416	83.9	7.16	2.74
8/8/2005	10:00:00	24.03	7.24	0.1419	84.8	7.21	2.74
8/8/2005	11:00:00	24.23	7.31	0.1421	87.0	7.37	2.74
8/8/2005	12:00:00	24.44	7.36	0.1420	86.7	7.32	2.74
8/8/2005	13:00:00	24.64	7.41	0.1423	94.2	7.90	2.74
8/8/2005	14:00:00	24.69	7.39	0.1421	89.3	7.51	2.74
8/8/2005	15:00:00	24.45	7.31	0.1424	86.3	7.30	2.74
8/8/2005	16:00:00	24.47	7.34	0.1422	87.7	7.41	2.74
8/8/2005	17:00:00	24.41	7.35	0.1420	87.8	7.43	2.74
8/8/2005	18:00:00	24.43	7.39	0.1420	88.2	7.47	2.74
8/8/2005	19:00:00	24.14	7.30	0.1421	85.6	7.30	2.74

Bond Falls Hydroelectric Project - Victoria Tailrace

08-04-2005 to 08-24-2005

Date	Time	Temp	pH	SpCond	DO%	DO	Total
MMDDYY	HHMMSS	°C	Units	mS/cm	Sat	mg/l	Generation
8/8/2005	20:00:00	24.31	7.32	0.1423	86.0	7.31	2.74
8/8/2005	21:00:00	24.18	7.31	0.1423	85.2	7.27	2.74
8/8/2005	22:00:00	24.41	7.36	0.1422	87.1	7.39	2.74
8/8/2005	23:00:00	24.27	7.34	0.1427	86.1	7.33	2.74
8/9/2005	0:00:00	24.40	7.37	0.1428	87.1	7.40	2.74
8/9/2005	1:00:00	24.37	7.34	0.1425	86.7	7.38	2.74
8/9/2005	2:00:00	24.32	7.35	0.1423	85.9	7.32	2.74
8/9/2005	3:00:00	24.25	7.33	0.1422	85.8	7.32	2.74
8/9/2005	4:00:00	24.29	7.33	0.1421	85.9	7.32	2.74
8/9/2005	5:00:00	24.27	7.31	0.1427	85.5	7.30	2.74
8/9/2005	6:00:00	24.32	7.33	0.1428	85.7	7.32	2.74
8/9/2005	7:00:00	24.34	7.36	0.1429	86.6	7.39	2.74
8/9/2005	8:00:00	24.33	7.34	0.1426	86.3	7.37	2.74
8/9/2005	9:00:00	24.27	7.32	0.1424	85.1	7.29	2.74
8/9/2005	10:00:00	24.31	7.34	0.1424	85.7	7.33	2.74
8/9/2005	11:00:00	24.27	7.35	0.1422	86.9	7.44	2.74
8/9/2005	12:00:00	24.11	7.32	0.1425	85.1	7.32	2.74
8/9/2005	13:00:00	24.39	7.39	0.1428	87.7	7.49	2.74
8/9/2005	14:00:00	24.27	7.37	0.1427	87.0	7.46	2.74
8/9/2005	15:00:00	24.43	7.40	0.1427	87.4	7.47	2.74
8/9/2005	16:00:00	24.37	7.40	0.1429	87.7	7.50	2.74
8/9/2005	17:00:00	24.45	7.43	0.1428	88.9	7.59	2.74
8/9/2005	18:00:00	24.32	7.38	0.1428	87.0	7.46	2.74
8/9/2005	19:00:00	24.31	7.36	0.1427	86.0	7.39	2.74
8/9/2005	20:00:00	24.23	7.32	0.1428	85.4	7.35	2.74
8/9/2005	21:00:00	24.33	7.34	0.1428	85.7	7.37	2.74
8/9/2005	22:00:00	24.24	7.32	0.1426	84.7	7.30	2.74
8/9/2005	23:00:00	24.37	7.36	0.1430	85.8	7.38	2.74
8/10/2005	0:00:00	24.33	7.35	0.1431	85.5	7.36	2.74
8/10/2005	1:00:00	24.35	7.35	0.1429	85.7	7.37	2.74
8/10/2005	2:00:00	24.30	7.32	0.1430	85.0	7.33	2.74
8/10/2005	3:00:00	24.30	7.34	0.1431	85.3	7.36	2.74
8/10/2005	4:00:00	24.28	7.34	0.1432	85.4	7.37	2.74
8/10/2005	5:00:00	24.26	7.33	0.1431	85.2	7.36	2.74
8/10/2005	6:00:00	24.28	7.34	0.1433	85.3	7.37	2.74
8/10/2005	7:00:00	24.27	7.35	0.1433	86.0	7.43	2.74
8/10/2005	8:00:00	24.33	7.37	0.1433	86.9	7.50	2.74
8/10/2005	9:00:00	24.40	7.38	0.1432	86.6	7.47	2.74
8/10/2005	10:00:00	24.45	7.37	0.1435	86.5	7.46	2.74
8/10/2005	11:00:00	24.44	7.35	0.1432	86.4	7.46	2.74
8/10/2005	12:00:00	24.51	7.36	0.1436	86.6	7.63	2.74
8/10/2005	13:00:00	24.44	7.33	0.1436	87.4	7.54	2.74
8/10/2005	14:00:00	24.50	7.33	0.1441	82.2	7.12	2.74
8/10/2005	15:00:00	24.48	7.35	0.1438	86.6	7.48	2.74
8/10/2005	16:00:00	24.36	7.32	0.1444	85.6	7.41	2.74
8/10/2005	17:00:00	24.36	7.33	0.1451	85.5	7.42	2.74
8/10/2005	18:00:00	24.19	7.29	0.1450	85.7	7.45	2.74
8/10/2005	19:00:00	24.14	7.29	0.1450	84.0	7.32	2.74
8/10/2005	20:00:00	24.09	7.28	0.1450	83.6	7.30	2.74
8/10/2005	21:00:00	24.06	7.27	0.1446	83.0	7.27	2.74
8/10/2005	22:00:00	24.08	7.28	0.1447	83.6	7.31	2.74
8/10/2005	23:00:00	24.02	7.26	0.1447	83.2	7.29	2.74
8/11/2005	0:00:00	23.99	7.27	0.1446	83.5	7.32	2.74
8/11/2005	1:00:00	24.03	7.28	0.1449	83.8	7.34	2.74
8/11/2005	2:00:00	24.09	7.32	0.1452	84.8	7.43	2.74

Bond Falls Hydroelectric Project - Victoria Tailrace

08-04-2005 to 08-24-2005

Date	Time	Temp	pH	SpCond	DO%	DO	Total Generation
MMDDYY	HHMMSS	°C	Units	mS/cm	Sat	mg/l	MWH
8/11/2005	3:00:00	24.05	7.33	0.1459	85.3	7.47	2.74
8/11/2005	4:00:00	24.06	7.34	0.1457	85.3	7.47	2.74
8/11/2005	5:00:00	24.02	7.33	0.1457	85.3	7.49	2.74
8/11/2005	6:00:00	24.02	7.35	0.1454	85.9	7.53	2.74
8/11/2005	7:00:00	24.05	7.36	0.1457	86.4	7.57	2.74
8/11/2005	8:00:00	24.08	7.37	0.1459	86.8	7.61	2.74
8/11/2005	9:00:00	24.10	7.38	0.1461	87.0	7.62	2.74
8/11/2005	10:00:00	24.15	7.39	0.1458	87.1	7.63	2.74
8/11/2005	11:00:00	24.26	7.39	0.1462	87.5	7.66	2.74
8/11/2005	12:00:00	24.21	7.39	0.1460	87.1	7.63	2.74
8/11/2005	13:00:00	24.25	7.38	0.1461	87.1	7.63	2.74
8/11/2005	14:00:00	24.25	7.41	0.1459	87.9	7.70	2.74
8/11/2005	15:00:00	24.07	7.35	0.1457	86.0	7.56	2.74
8/11/2005	16:00:00	24.10	7.35	0.1460	85.9	7.56	2.74
8/11/2005	17:00:00	24.11	7.34	0.1466	85.9	7.56	2.74
8/11/2005	18:00:00	24.10	7.34	0.1470	85.5	7.53	2.74
8/11/2005	19:00:00	24.03	7.32	0.1467	84.3	7.45	2.74
8/11/2005	20:00:00	24.01	7.30	0.1468	83.8	7.42	2.74
8/11/2005	21:00:00	24.01	7.30	0.1467	83.8	7.41	2.74
8/11/2005	22:00:00	24.00	7.30	0.1466	83.3	7.39	2.74
8/11/2005	23:00:00	23.99	7.31	0.1472	84.1	7.45	2.74
8/12/2005	0:00:00	23.95	7.30	0.1467	83.5	7.41	2.74
8/12/2005	1:00:00	23.97	7.29	0.1466	83.6	7.42	2.74
8/12/2005	2:00:00	23.93	7.29	0.1466	82.9	7.37	2.74
8/12/2005	3:00:00	23.94	7.30	0.1463	83.7	7.43	2.74
8/12/2005	4:00:00	23.90	7.29	0.1463	83.3	7.42	2.74
8/12/2005	5:00:00	23.91	7.29	0.1467	83.2	7.41	2.74
8/12/2005	6:00:00	23.89	7.28	0.1471	82.9	7.39	2.74
8/12/2005	7:00:00	23.89	7.30	0.1478	83.7	7.46	2.74
8/12/2005	8:00:00	23.95	7.34	0.1475	85.4	7.59	2.74
8/12/2005	9:00:00	23.99	7.37	0.1472	86.1	7.65	2.74
8/12/2005	10:00:00	24.10	7.42	0.1469	88.1	7.80	2.74
8/12/2005	11:00:00	24.26	7.54	0.1463	91.5	8.06	2.74
8/12/2005	12:00:00	24.14	7.49	0.1465	92.8	8.17	2.74
8/12/2005	13:00:00	24.16	7.50	0.1468	90.4	7.99	2.74
8/12/2005	14:00:00	24.25	7.55	0.1470	91.3	8.05	2.74
8/12/2005	15:00:00	24.26	7.53	0.1469	91.6	8.07	2.74
8/12/2005	16:00:00	24.27	7.54	0.1470	91.4	8.07	2.74
8/12/2005	17:00:00	24.05	7.48	0.1468	89.5	7.95	2.74
8/12/2005	18:00:00	24.00	7.49	0.1468	89.5	7.95	2.74
8/12/2005	19:00:00	23.99	7.49	0.1473	89.1	7.92	2.74
8/12/2005	20:00:00	23.96	7.48	0.1476	88.5	7.89	2.74
8/12/2005	21:00:00	23.78	7.39	0.1479	86.1	7.71	2.74
8/12/2005	22:00:00	23.79	7.37	0.1475	85.4	7.66	2.74
8/12/2005	23:00:00	23.77	7.37	0.1472	85.7	7.69	2.74
8/13/2005	0:00:00	23.78	7.38	0.1475	86.3	7.74	2.74
8/13/2005	1:00:00	23.79	7.41	0.1471	87.0	7.80	2.74
8/13/2005	2:00:00	23.75	7.40	0.1474	86.7	7.78	2.74
8/13/2005	3:00:00	23.76	7.43	0.1475	87.7	7.86	2.74
8/13/2005	4:00:00	23.73	7.45	0.1473	87.4	7.85	2.74
8/13/2005	5:00:00	23.69	7.45	0.1470	87.7	7.88	2.74
8/13/2005	6:00:00	23.65	7.47	0.1469	88.1	7.92	2.87
8/13/2005	7:00:00	23.66	7.50	0.1470	88.8	7.99	2.93
8/13/2005	8:00:00	23.71	7.51	0.1472	89.3	8.02	2.93
8/13/2005	9:00:00	23.77	7.52	0.1470	89.5	8.03	2.93

Bond Falls Hydroelectric Project - Victoria Tailrace

08-04-2005 to 08-24-2005

Date	Time	Temp	pH	SpCond	DO%	DO	Total Generation
MMDDYY	HHMMSS	°C	Units	mS/cm	Sat	mg/l	MWH
8/13/2005	10:00:00	23.83	7.52	0.1473	90.0	8.08	2.93
8/13/2005	11:00:00	23.91	7.52	0.1472	90.2	8.08	2.93
8/13/2005	12:00:00	23.89	7.53	0.1476	90.1	8.07	2.93
8/13/2005	13:00:00	23.84	7.49	0.1479	89.5	8.04	2.93
8/13/2005	14:00:00	23.76	7.49	0.1486	89.2	8.03	2.93
8/13/2005	15:00:00	23.83	7.45	0.1488	88.3	7.94	2.93
8/13/2005	16:00:00	23.78	7.39	0.1486	86.6	7.82	2.93
8/13/2005	17:00:00	23.61	7.34	0.1486	84.5	7.67	2.93
8/13/2005	18:00:00	23.48	7.34	0.1486	83.9	7.64	2.93
8/13/2005	19:00:00	23.40	7.34	0.1491	84.5	7.71	2.93
8/13/2005	20:00:00	23.36	7.34	0.1477	84.1	7.68	2.93
8/13/2005	21:00:00	23.44	7.34	0.1490	84.3	7.69	2.93
8/13/2005	22:00:00	23.38	7.35	0.1484	84.9	7.76	2.93
8/13/2005	23:00:00	23.40	7.39	0.1479	85.8	7.83	2.93
8/14/2005	0:00:00	23.40	7.42	0.1479	86.8	7.91	2.93
8/14/2005	1:00:00	23.37	7.44	0.1478	87.3	7.96	2.93
8/14/2005	2:00:00	23.36	7.44	0.1477	87.5	7.98	2.93
8/14/2005	3:00:00	23.36	7.45	0.1477	88.0	8.02	2.93
8/14/2005	4:00:00	23.32	7.43	0.1479	87.3	7.98	2.93
8/14/2005	5:00:00	23.24	7.41	0.1474	87.0	7.97	2.93
8/14/2005	6:00:00	23.22	7.39	0.1476	86.8	7.95	2.93
8/14/2005	7:00:00	23.20	7.41	0.1477	87.1	7.99	2.93
8/14/2005	8:00:00	23.26	7.43	0.1473	87.7	8.03	2.93
8/14/2005	9:00:00	23.36	7.45	0.1473	87.7	8.02	2.93
8/14/2005	10:00:00	23.45	7.47	0.1475	89.7	8.18	2.93
8/14/2005	11:00:00	23.45	7.48	0.1478	88.7	8.09	2.93
8/14/2005	12:00:00	23.50	7.47	0.1477	87.8	8.02	2.93
8/14/2005	13:00:00	23.42	7.45	0.1477	89.4	8.17	2.93
8/14/2005	14:00:00	23.44	7.45	0.1484	89.2	8.15	2.93
8/14/2005	15:00:00	23.43	7.45	0.1484	88.9	8.12	2.89
8/14/2005	16:00:00	23.38	7.41	0.1488	88.4	8.10	2.73
8/14/2005	17:00:00	23.30	7.41	0.1483	88.0	8.08	2.73
8/14/2005	18:00:00	23.20	7.40	0.1485	87.4	8.05	2.73
8/14/2005	19:00:00	23.13	7.39	0.1479	87.1	8.04	2.73
8/14/2005	20:00:00	23.02	7.35	0.1483	86.0	7.96	2.73
8/14/2005	21:00:00	22.99	7.32	0.1482	85.1	7.89	2.73
8/14/2005	22:00:00	23.04	7.34	0.1482	86.1	7.98	2.73
8/14/2005	23:00:00	22.97	7.34	0.1479	85.7	7.95	2.73
8/15/2005	0:00:00	22.95	7.37	0.1476	86.4	8.02	2.73
8/15/2005	1:00:00	22.95	7.38	0.1475	87.1	8.08	2.73
8/15/2005	2:00:00	22.90	7.39	0.1476	87.4	8.12	2.73
8/15/2005	3:00:00	22.90	7.41	0.1473	87.9	8.16	2.73
8/15/2005	4:00:00	22.87	7.43	0.1472	88.5	8.22	2.73
8/15/2005	5:00:00	22.78	7.41	0.1474	87.9	8.18	2.73
8/15/2005	6:00:00	22.76	7.40	0.1486	87.9	8.19	2.73
8/15/2005	7:00:00	22.78	7.43	0.1465	88.9	8.28	2.73
8/15/2005	8:00:00	22.81	7.46	0.1482	89.7	8.34	2.73
8/15/2005	9:00:00	22.88	7.48	0.1463	89.5	8.31	2.73
8/15/2005	10:00:00	22.95	7.47	0.1468	91.0	8.44	2.73
8/15/2005	11:00:00	23.03	7.48	0.1468	87.6	8.15	2.73
8/15/2005	12:00:00	23.26	7.54	0.1469	95.8	8.79	2.73
8/15/2005	13:00:00	23.37	7.56	0.1469	92.9	8.54	2.73
8/15/2005	14:00:00	23.23	7.49	0.1467	91.0	8.41	2.73
8/15/2005	15:00:00	23.15	7.47	0.1468	90.6	8.39	2.73
8/15/2005	16:00:00	23.14	7.48	0.1469	90.5	8.39	2.73

Bond Falls Hydroelectric Project - Victoria Tailrace

08-04-2005 to 08-24-2005

Date	Time	Temp	pH	SpCond	DO%	DO	Total Generation
MMDDYY	HHMMSS	°C	Units	mS/cm	Sat	mg/l	MWH
8/15/2005	17:00:00	23.04	7.43	0.1467	89.7	8.34	2.73
8/15/2005	18:00:00	23.00	7.44	0.1468	91.4	8.49	2.73
8/15/2005	19:00:00	22.88	7.44	0.1468	89.0	8.31	2.73
8/15/2005	20:00:00	22.88	7.44	0.1467	88.9	8.30	2.73
8/15/2005	21:00:00	22.78	7.42	0.1469	88.5	8.29	2.73
8/15/2005	22:00:00	22.72	7.39	0.1479	87.6	8.23	2.73
8/15/2005	23:00:00	22.77	7.39	0.1478	88.3	8.28	2.73
8/16/2005	0:00:00	22.71	7.38	0.1479	87.0	8.18	2.73
8/16/2005	1:00:00	22.67	7.37	0.1476	87.0	8.19	2.73
8/16/2005	2:00:00	22.69	7.38	0.1476	87.5	8.23	2.73
8/16/2005	3:00:00	22.67	7.38	0.1475	87.7	8.26	2.73
8/16/2005	4:00:00	22.67	7.41	0.1479	88.4	8.32	2.73
8/16/2005	5:00:00	22.66	7.42	0.1475	88.5	8.33	2.73
8/16/2005	6:00:00	22.59	7.40	0.1476	88.5	8.34	2.73
8/16/2005	7:00:00	22.62	7.41	0.1477	89.5	8.43	2.97
8/16/2005	8:00:00	22.65	7.43	0.1480	90.3	8.49	2.93
8/16/2005	9:00:00	22.63	7.41	0.1480	89.3	8.41	2.91
8/16/2005	10:00:00	22.62	7.40	0.1478	90.1	8.49	2.45
8/16/2005	11:00:00	22.76	7.46	0.1478	91.5	8.59	2.90
8/16/2005	12:00:00	22.69	7.42	0.1475	90.1	8.48	2.90
8/16/2005	13:00:00	22.69	7.43	0.1479	90.5	8.52	2.90
8/16/2005	14:00:00	22.76	7.41	0.1465	89.8	8.45	2.90
8/16/2005	15:00:00	22.71	7.38	0.1486	89.2	8.41	2.90
8/16/2005	16:00:00	22.70	7.36	0.1485	89.2	8.42	2.90
8/16/2005	17:00:00	22.64	7.38	0.1480	89.2	8.43	2.90
8/16/2005	18:00:00	22.38	7.32	0.1481	86.8	8.27	2.90
8/16/2005	19:00:00	22.44	7.32	0.1482	87.1	8.30	2.90
8/16/2005	20:00:00	22.44	7.31	0.1480	86.6	8.26	2.90
8/16/2005	21:00:00	22.34	7.29	0.1482	86.1	8.23	2.90
8/16/2005	22:00:00	22.43	7.33	0.1481	87.1	8.31	2.90
8/16/2005	23:00:00	22.38	7.35	0.1475	88.0	8.39	2.90
8/17/2005	0:00:00	22.38	7.39	0.1478	89.0	8.47	2.90
8/17/2005	1:00:00	22.38	7.39	0.1478	89.1	8.49	2.90
8/17/2005	2:00:00	22.33	7.36	0.1477	88.2	8.42	2.90
8/17/2005	3:00:00	22.33	7.38	0.1475	88.6	8.45	2.90
8/17/2005	4:00:00	22.28	7.38	0.1476	88.9	8.50	2.90
8/17/2005	5:00:00	22.27	7.38	0.1476	88.7	8.49	2.90
8/17/2005	6:00:00	22.24	7.37	0.1477	88.6	8.48	2.90
8/17/2005	7:00:00	22.29	7.40	0.1480	89.5	8.55	2.90
8/17/2005	8:00:00	22.31	7.40	0.1476	90.0	8.59	2.90
8/17/2005	9:00:00	22.37	7.44	0.1476	91.4	8.71	2.90
8/17/2005	10:00:00	22.37	7.45	0.1462	90.9	8.68	2.90
8/17/2005	11:00:00	22.40	7.46	0.1482	91.5	8.72	2.90
8/17/2005	12:00:00	22.47	7.49	0.1460	92.1	8.76	2.90
8/17/2005	13:00:00	22.39	7.43	0.1481	90.2	8.62	2.90
8/17/2005	14:00:00	22.36	7.44	0.1476	91.0	8.69	2.90
8/17/2005	15:00:00	22.30	7.46	0.1481	90.5	8.66	2.90
8/17/2005	16:00:00	22.26	7.45	0.1477	90.6	8.68	2.90
8/17/2005	17:00:00	22.22	7.44	0.1479	90.0	8.64	2.90
8/17/2005	18:00:00	22.27	7.44	0.1484	89.9	8.63	2.90
8/17/2005	19:00:00	22.23	7.40	0.1485	88.9	8.55	2.90
8/17/2005	20:00:00	22.20	7.41	0.1482	88.7	8.54	2.90
8/17/2005	21:00:00	22.16	7.40	0.1484	88.3	8.52	2.90
8/17/2005	22:00:00	22.17	7.40	0.1486	88.7	8.56	2.90
8/17/2005	23:00:00	22.18	7.38	0.1483	88.5	8.54	2.90

Bond Falls Hydroelectric Project - Victoria Tailrace

08-04-2005 to 08-24-2005

Date	Time	Temp	pH	SpCond	DO%	DO	Total Generation
MMDDYY	HHMMSS	°C	Units	mS/cm	Sat	mg/l	MWH
8/18/2005	0:00:00	22.16	7.35	0.1486	87.4	8.45	2.90
8/18/2005	1:00:00	22.10	7.34	0.1480	87.0	8.43	2.90
8/18/2005	2:00:00	22.07	7.35	0.1479	87.3	8.47	2.90
8/18/2005	3:00:00	22.03	7.34	0.1482	87.3	8.47	2.90
8/18/2005	4:00:00	22.00	7.34	0.1484	87.1	8.46	2.90
8/18/2005	5:00:00	21.97	7.33	0.1483	86.5	8.42	2.90
8/18/2005	6:00:00	21.96	7.33	0.1484	86.3	8.41	2.90
8/18/2005	7:00:00	21.98	7.35	0.1486	87.2	8.49	2.90
8/18/2005	8:00:00	22.00	7.35	0.1483	87.6	8.52	2.90
8/18/2005	9:00:00	22.09	8.22	0.1466	87.5	7.37	2.90
8/18/2005	10:00:00	22.16	8.23	0.1471	87.1	7.32	2.90
8/18/2005	11:00:00	22.24	8.24	0.1471	88.4	7.42	2.91
8/18/2005	12:00:00	22.23	8.24	0.1471	88.7	7.44	2.90
8/18/2005	13:00:00	22.12	8.24	0.1472	88.5	7.44	2.90
8/18/2005	14:00:00	22.09	8.22	0.1469	88.1	7.41	2.90
8/18/2005	15:00:00	22.11	8.22	0.1472	88.5	7.45	2.90
8/18/2005	16:00:00	22.03	8.20	0.1469	87.8	7.40	2.90
8/18/2005	17:00:00	21.96	8.17	0.1472	87.2	7.36	2.90
8/18/2005	18:00:00	21.96	8.17	0.1476	87.2	7.35	2.90
8/18/2005	19:00:00	21.91	8.16	0.1477	86.8	7.33	2.90
8/18/2005	20:00:00	21.90	8.16	0.1475	86.5	7.30	2.90
8/18/2005	21:00:00	21.81	8.15	0.1480	86.5	7.32	2.90
8/18/2005	22:00:00	21.73	8.13	0.1481	86.1	7.30	2.90
8/18/2005	23:00:00	21.81	8.17	0.1483	86.7	7.34	2.90
8/19/2005	0:00:00	21.73	8.12	0.1483	85.9	7.28	2.90
8/19/2005	1:00:00	21.77	8.16	0.1485	87.1	7.38	2.90
8/19/2005	2:00:00	21.73	8.12	0.1486	86.1	7.30	2.90
8/19/2005	3:00:00	21.68	8.13	0.1488	86.1	7.31	2.90
8/19/2005	4:00:00	21.74	8.15	0.1490	86.8	7.36	2.90
8/19/2005	5:00:00	21.69	8.13	0.1489	86.4	7.33	2.90
8/19/2005	6:00:00	21.70	8.12	0.1487	86.3	7.32	2.90
8/19/2005	7:00:00	21.65	8.12	0.1490	86.6	7.35	2.90
8/19/2005	8:00:00	21.67	8.13	0.1489	87.1	7.39	2.90
8/19/2005	9:00:00	21.64	8.13	0.1493	86.9	7.38	2.90
8/19/2005	10:00:00	21.62	8.14	0.1493	87.6	7.44	2.90
8/19/2005	11:00:00	21.71	8.16	0.1495	88.3	7.49	2.90
8/19/2005	12:00:00	21.68	8.14	0.1496	88.0	7.46	2.90
8/19/2005	13:00:00	21.71	8.15	0.1492	87.7	7.44	2.90
8/19/2005	14:00:00	21.70	8.15	0.1493	87.9	7.46	2.90
8/19/2005	15:00:00	21.79	8.16	0.1497	88.6	7.50	2.90
8/19/2005	16:00:00	21.69	8.15	0.1500	88.2	7.48	2.90
8/19/2005	17:00:00	21.67	8.14	0.1498	87.5	7.43	2.90
8/19/2005	18:00:00	21.58	8.11	0.1500	86.5	7.35	2.90
8/19/2005	19:00:00	21.47	8.10	0.1501	86.4	7.36	2.90
8/19/2005	20:00:00	21.36	8.09	0.1504	85.8	7.32	2.90
8/19/2005	21:00:00	21.41	8.10	0.1503	85.7	7.31	2.90
8/19/2005	22:00:00	21.46	8.12	0.1501	86.5	7.37	2.90
8/19/2005	23:00:00	21.48	8.11	0.1502	86.7	7.38	2.90
8/20/2005	0:00:00	21.44	8.11	0.1503	86.5	7.37	2.90
8/20/2005	1:00:00	21.44	8.11	0.1503	86.9	7.40	2.90
8/20/2005	2:00:00	21.43	8.11	0.1504	87.0	7.42	2.90
8/20/2005	3:00:00	21.50	8.11	0.1501	86.6	7.37	2.90
8/20/2005	4:00:00	21.50	8.11	0.1500	86.6	7.37	2.90
8/20/2005	5:00:00	21.37	8.10	0.1502	86.5	7.39	2.90
8/20/2005	6:00:00	21.39	8.11	0.1503	86.8	7.40	2.90

Bond Falls Hydroelectric Project - Victoria Tailrace

08-04-2005 to 08-24-2005

Date	Time	Temp	pH	SpCond	DO%	DO	Total Generation
MMDDYY	HHMMSS	°C	Units	mS/cm	Sat	mg/l	MWH
8/20/2005	7:00:00	21.41	8.12	0.1503	87.1	7.43	2.90
8/20/2005	8:00:00	21.46	8.13	0.1504	87.5	7.46	2.90
8/20/2005	9:00:00	21.59	8.16	0.1500	88.7	7.54	2.90
8/20/2005	10:00:00	21.66	8.18	0.1499	90.3	7.67	2.90
8/20/2005	11:00:00	21.65	8.15	0.1505	91.0	7.72	2.90
8/20/2005	12:00:00	21.69	8.17	0.1501	89.1	7.56	2.90
8/20/2005	13:00:00	21.90	8.24	0.1497	91.2	7.71	2.90
8/20/2005	14:00:00	21.90	8.27	0.1504	92.0	7.78	2.90
8/20/2005	15:00:00	22.19	8.38	0.1492	94.2	7.91	2.90
8/20/2005	16:00:00	22.25	8.41	0.1491	94.9	7.97	2.90
8/20/2005	17:00:00	22.04	8.36	0.1493	93.4	7.87	2.90
8/20/2005	18:00:00	21.82	8.33	0.1495	92.7	7.85	2.90
8/20/2005	19:00:00	21.82	8.34	0.1495	92.5	7.83	2.90
8/20/2005	20:00:00	21.62	8.28	0.1499	91.3	7.75	2.90
8/20/2005	21:00:00	21.59	8.25	0.1494	90.3	7.67	2.90
8/20/2005	22:00:00	21.54	8.23	0.1497	89.9	7.65	2.90
8/20/2005	23:00:00	21.60	8.24	0.1495	90.5	7.69	2.90
8/21/2005	0:00:00	21.54	8.24	0.1499	90.5	7.70	2.90
8/21/2005	1:00:00	21.60	8.26	0.1494	90.5	7.69	2.90
8/21/2005	2:00:00	21.61	8.27	0.1495	90.7	7.71	2.90
8/21/2005	3:00:00	21.55	8.25	0.1494	90.4	7.69	2.90
8/21/2005	4:00:00	21.59	8.27	0.1491	90.8	7.72	2.90
8/21/2005	5:00:00	21.59	8.27	0.1492	90.7	7.71	2.90
8/21/2005	6:00:00	21.62	8.26	0.1494	90.6	7.70	2.89
8/21/2005	7:00:00	21.65	8.27	0.1492	90.7	7.70	2.88
8/21/2005	8:00:00	21.64	8.26	0.1489	90.7	7.70	2.88
8/21/2005	9:00:00	21.74	8.34	0.1485	92.5	7.84	2.88
8/21/2005	10:00:00	21.69	8.32	0.1489	92.6	7.85	2.88
8/21/2005	11:00:00	21.66	8.29	0.1489	92.1	7.81	2.88
8/21/2005	12:00:00	21.73	8.30	0.1491	92.6	7.85	2.88
8/21/2005	13:00:00	21.67	8.30	0.1492	92.1	7.82	2.88
8/21/2005	14:00:00	21.63	8.28	0.1493	92.2	7.83	2.88
8/21/2005	15:00:00	21.66	8.28	0.1489	92.2	7.82	2.88
8/21/2005	16:00:00	21.78	8.33	0.1487	93.2	7.90	2.88
8/21/2005	17:00:00	21.56	8.27	0.1492	91.8	7.81	2.88
8/21/2005	18:00:00	21.49	8.24	0.1494	90.8	7.73	2.88
8/21/2005	19:00:00	21.52	8.23	0.1492	90.8	7.73	2.88
8/21/2005	20:00:00	21.48	8.21	0.1492	90.0	7.67	2.88
8/21/2005	21:00:00	21.41	8.20	0.1495	89.6	7.64	2.88
8/21/2005	22:00:00	21.41	8.21	0.1492	89.9	7.66	2.88
8/21/2005	23:00:00	21.40	8.22	0.1494	90.1	7.69	2.88
8/22/2005	0:00:00	21.32	8.19	0.1494	89.6	7.65	2.88
8/22/2005	1:00:00	21.29	8.18	0.1494	89.5	7.65	2.88
8/22/2005	2:00:00	21.32	8.21	0.1496	89.8	7.68	2.88
8/22/2005	3:00:00	21.30	8.20	0.1492	90.1	7.70	2.88
8/22/2005	4:00:00	21.31	8.21	0.1492	89.9	7.68	2.88
8/22/2005	5:00:00	21.27	8.21	0.1494	89.8	7.68	2.88
8/22/2005	6:00:00	21.26	8.20	0.1497	89.7	7.67	2.88
8/22/2005	7:00:00	21.24	8.22	0.1494	90.0	7.71	2.88
8/22/2005	8:00:00	21.26	8.21	0.1491	90.5	7.74	2.88
8/22/2005	9:00:00	21.28	8.23	0.1494	90.4	7.73	2.88
8/22/2005	10:00:00	21.26	8.21	0.1495	89.9	7.69	2.88
8/22/2005	11:00:00	21.27	8.18	0.1500	90.0	7.70	2.88
8/22/2005	12:00:00	21.35	8.20	0.1502	90.7	7.74	2.88
8/22/2005	13:00:00	21.38	8.19	0.1501	91.7	7.82	2.88

Bond Falls Hydroelectric Project - Victoria Tailrace

08-04-2005 to 08-24-2005

Date	Time	Temp	pH	SpCond	DO%	DO	Total Generation
MMDDYY	HHMMSS	°C	Units	mS/cm	Sat	mg/l	MWH
8/22/2005	14:00:00	21.39	8.18	0.1497	91.0	7.77	2.88
8/22/2005	15:00:00	21.36	8.18	0.1500	90.4	7.72	2.88
8/22/2005	16:00:00	21.25	8.16	0.1502	89.6	7.67	2.88
8/22/2005	17:00:00	21.16	8.19	0.1497	89.8	7.70	2.88
8/22/2005	18:00:00	21.04	8.21	0.1495	90.1	7.74	2.88
8/22/2005	19:00:00	20.98	8.21	0.1495	89.9	7.73	2.88
8/22/2005	20:00:00	20.96	8.22	0.1496	90.3	7.77	2.88
8/22/2005	21:00:00	20.98	8.24	0.1492	90.2	7.76	2.88
8/22/2005	22:00:00	20.97	8.24	0.1493	90.3	7.76	2.88
8/22/2005	23:00:00	20.92	8.25	0.1492	90.5	7.80	2.88
8/23/2005	0:00:00	20.94	8.25	0.1494	90.9	7.82	2.88
8/23/2005	1:00:00	20.96	8.27	0.1493	90.9	7.82	2.88
8/23/2005	2:00:00	20.87	8.25	0.1489	90.6	7.81	2.88
8/23/2005	3:00:00	20.85	8.29	0.1489	91.4	7.88	2.88
8/23/2005	4:00:00	20.81	8.29	0.1487	91.3	7.88	2.88
8/23/2005	5:00:00	20.79	8.28	0.1487	91.5	7.89	2.88
8/23/2005	6:00:00	20.80	8.30	0.1490	91.5	7.90	2.88
8/23/2005	7:00:00	20.80	8.32	0.1486	92.1	7.95	2.88
8/23/2005	8:00:00	20.80	8.30	0.1487	91.6	7.91	2.88
8/23/2005	9:00:00	20.87	8.30	0.1489	92.4	7.96	2.88
8/23/2005	10:00:00	20.94	8.29	0.1488	89.7	7.72	2.88
8/23/2005	11:00:00	21.01	8.28	0.1490	92.0	7.91	2.88
8/23/2005	12:00:00	21.02	8.27	0.1492	93.5	8.03	2.88
8/23/2005	13:00:00	21.08	8.27	0.1494	91.3	7.83	2.88
8/23/2005	14:00:00	21.09	8.29	0.1493	92.2	7.91	2.88
8/23/2005	15:00:00	21.06	8.28	0.1494	92.5	7.95	2.88
8/23/2005	16:00:00	20.97	8.28	0.1495	92.1	7.92	2.88
8/23/2005	17:00:00	20.88	8.27	0.1494	91.5	7.88	2.88
8/23/2005	18:00:00	20.71	8.22	0.1498	90.1	7.79	2.88
8/23/2005	19:00:00	20.70	8.21	0.1499	89.8	7.76	2.88
8/23/2005	20:00:00	20.70	8.19	0.1497	89.1	7.70	2.88
8/23/2005	21:00:00	20.60	8.18	0.1496	88.7	7.69	2.88
8/23/2005	22:00:00	20.59	8.18	0.1497	88.8	7.69	2.88
8/23/2005	23:00:00	20.70	8.22	0.1494	89.6	7.75	2.88
8/24/2005	0:00:00	20.73	8.28	0.1490	90.9	7.86	2.88
8/24/2005	1:00:00	20.59	8.28	0.1495	91.1	7.89	2.88

Appendix C

Dissolved Oxygen Profiles: Victoria Reservoir

DISSOLVED OXYGEN PROFILE

Location: Victoria Dam

Date/Time: 8/18/05 9:45 Analyst: MLM

Weather Conditions: Sunny +70° - No Wind - No Flow

YSI Model 95 Calibration BP: 731.0 Altitude: 700'

	Before Cal.	After Cal.
% Sat	<u>90.1</u>	<u>97.4</u>
mg/L DO	<u>7.72</u>	<u>8.33</u>
Temp °C	<u>23.1</u>	<u>23.1</u>

Secchi Disk = 7'

Profile Readings:

9.5at

Depth	D.O. mg/L	%Sat Temp°C	Depth	D.O. mg/L	Temp. °C
0.5 meters	7.19	83.5 22.7	10.0 meters	0.37	4.0 18.9
1.0 meters	7.16	83.0 22.7	10.5 meters	0.35	3.8 18.2
1.5 meters	7.16	82.9 22.7	11.0 meters	0.34	3.6 17.8
2.0 meters	7.10	82.3 22.7	11.5 meters	0.32	3.2 15.8
2.5 meters	7.08	82.0 22.6	12.0 meters		
3.0 meters	7.14	82.7 22.6	12.5 meters		
3.5 meters	7.09	82.1 22.6	13.0 meters		
4.0 meters	7.09	82.1 22.6	13.5 meters		
4.5 meters	7.08	82.0 22.6	14.0 meters		
5.0 meters	7.08	82.0 22.6	14.5 meters		
5.5 meters	7.06	81.7 22.6	15.0 meters		
6.0 meters	7.06	81.7 22.6	15.5 meters		
6.5 meters	7.03	81.4 22.6	16.0 meters		
7.0 meters	6.88	79.6 22.6	16.5 meters		
7.5 meters	2.83	32.2 21.8	17.0 meters		
8.0 meters	0.70	7.9 21.0			
8.5 meters	0.41	4.6 20.5			
9.0 meters	0.39	4.4 20.3			
9.5 meters	0.38	4.3 19.7			

DISSOLVED OXYGEN PROFILE

Location: Victoria Dam

Date/Time: 9/1/05 10:30 Analyst: JA

Weather Conditions: Clear, strong winds, 72°F

YSI Model 95 Calibration BP: 727.3 mmHg Altitude: 708

	Before Cal.	After Cal.
% Sat	<u>96.8%</u>	<u>97.5%</u>
mg/L DO	<u>8.42 mg/L</u>	<u>8.47 mg/L</u>
Temp °C	<u>22.3°C</u>	<u>22.3°C</u>

Secchi Disk = 4' 6"
Very choppy

Profile Readings:

Depth	D.O. mg/L	%Sat Temp °C	Depth	D.O. mg/L	Temp. °C
0.5 meters	8.68	96.8 20.7	10.0 meters	7.33	81.3 20.3
1.0 meters	8.66	96.6 20.7	10.5 meters	7.19	77.4 20.3
1.5 meters	8.63	96.4 20.7	11.0 meters		
2.0 meters	8.61	96.0 20.7	11.5 meters		
2.5 meters	8.61	96.0 20.7	12.0 meters		
3.0 meters	8.61	96.0 20.7	12.5 meters		
3.5 meters	8.60	95.9 20.7	13.0 meters		
4.0 meters	8.60	95.9 20.7	13.5 meters		
4.5 meters	8.55	95.4 20.7	14.0 meters		
5.0 meters	8.51	94.9 20.7	14.5 meters		
5.5 meters	8.57	95.6 20.7	15.0 meters		
6.0 meters	8.55	95.4 20.7	15.5 meters		
6.5 meters	8.56	95.6 20.7	16.0 meters		
7.0 meters	8.56	95.5 20.7	16.5 meters		
7.5 meters	8.51	95.0 20.7	17.0 meters		
8.0 meters	8.48	94.6 20.6			
8.5 meters	8.25	91.7 20.6			
9.0 meters	7.81	86.6 20.4			
9.5 meters	7.68	85.0 20.3			

← Bottom

Appendix D

Documentation of Agency Consultation

From: Mark Metcalf
To: Bussiere, Donald; Deephouse, Bill; Detoria, Christie; Evans, Robert A; Fedora, Mark; Martini, Bob; Mensch, Gene; Meyers, Robert; Mistak, Jessica; Poissant, Kevin; Puzen, Shawn; Suppnick, John
Date: 8/19/2005 8:25:59 AM
Subject: Bond Falls Water Quality monitoring

Hello everyone,

Water quality monitoring data collected between August 3 and August 18 at the Bond Falls Hydroelectric Project has been reviewed. Deviations from the State water quality standard were observed below the Cisco Dam. A spreadsheet with the monitoring data is attached for your review.

Also, two hourly readings below the water quality standard were observed in the Victoria Powerhouse tailrace. The first reading occurred on 8/4 at 14:00, and the second on 8/6 at 13:00. On 8/4, the hourly reading at 13:00 was 8.12 mg/l DO, then it dropped to 6.55 at 14:00. The DO concentration the following hour was 7.63. On 8/6, the hourly reading at 12:00 was 7.96, then it dropped to 6.97 at 13:00. The DO concentration at 14:00 was 8.09 mg/l. I believe the low readings are anomalies, due possibly to debris or equipment malfunctions. The data recorded below the Victoria Powerhouse is attached for your review.

If you have any questions regarding the data, feel free to contact me.

Thanks, and have a nice weekend.

Mark

Mark Metcalf
Environmental Consultant\Chemist
Wisconsin Public Service Corp.
920-433-1833
mmetcal@wpsr.com

From: Mark Metcalf
To: Bussiere, Donald; Deephouse, Bill; Deloria, Christie; Evans, Robert A; Fedora, Mark; Martini, Bob; Mensch, Gene; Meyers, Robert; Mistak, Jessica; Poissant, Kevin; Puzen, Shawn; Suppnick, John
Date: 9/2/2005 11:58:37 AM
Subject: Bond Falls Water Quality Monitoring Data

Good Morning,

Water quality monitoring data recorded between August 18th and September 1st has been reviewed for deviation from the State water quality standards. Deviations have been observed at the Cisco Dam monitoring location. The attached spreadsheet contains the Cisco Dam monitoring location data for your review. Also included is USGS gauge height information from a station located near the dam.

No other deviations from State water quality standards were observed. Data was lost from the Victoria Dam tailrace monitoring location due to equipment problems. Data was recorded from the time the equipment was deployed on August 19th until 01:00 on August 24th, when the equipment stopped working. All data collected was above the water quality standard of 7.0 mg/l D.O. The results of D.O. profiles conducted on August 4th, 18th and September 1st are attached for your review.

Please feel free to contact me if you have any questions regarding the water quality monitoring data.

Thanks,

Mark

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