



Fairfield-Suisun Sewer District

MAY 15 2001

QUALITY CONTROL BOARD

Richard F. Luthy, Jr.
General Manager/District Engineer
RW-100.10.10/01

May 14, 2001

Mr. Steve Moore
San Francisco Bay Regional
Water Quality Control Board
1515 Clay Street, Suite 1400
Oakland, CA 94612

Reference: Water Quality Information for 303(d) List Development

Dear Mr. Moore:

The Fairfield-Suisun Sewer District wishes to call your attention to several NPDES permit required studies (Permit Number CA0038024) that have been or soon will be submitted to the Regional Board. These studies may contain information that is pertinent to the development of the 303(d) list.

The studies are:

Study	Permit Provision	Approximate Date of Submission
Effluent Monitoring Study	E.2.	March 2000
Mercury Reduction Study	E.3.	July 2001
Copper Reduction Study	E.4.	May 1999
Cyanide Reduction Study	E.5.	February 2000
Receiving Water Study	E.6.	January 2002
Collection System Design Storm Study	E.7.	March 2000
Reclamation Study	E.8.	August 1999

Please contact me at (707) 429-8930 or by e-mail at lbahr@fssd.com if you have questions.

Sincerely,

Larry Bahr
Senior Environmental Scientist

Cc: Mr. Tom Hall, EOA, Inc.

/jb

- Address:
1010 Chadbourne Rd.
Fairfield, CA 94585-9700
- Telephone:
(707) 429-8930
Fax (707) 429-1280





Richard F. Luthy, Jr.
General Manager/District Engineer

July 10, 2001.

RW-100.10.10/01

Ms. Tobi Tyler
San Francisco Bay Regional
Water Quality Control Board
1515 Clay Street, Suite 1400
Oakland, CA 94612

Reference: Mercury Reduction Study – Final Report

Dear Ms. Tyler:

The District submits this final report in compliance with the tasks and time schedules in Provision 3, *Mercury Reduction Study and Schedule*, of the Fairfield Suisun Sewer District's Wastewater Discharge NPDES Permit (CA0038024), Order No. 98-077.

Since submission of the Mercury Reduction Study Plan in November 1998 and the Interim Report in October 1999, the District has achieved full compliance with the 12 ng/l final mercury limit. The attached report details the District's efforts to comply with Provision 3 and with the final limit.

Please contact me if you have questions.

Sincerely,

Larry Bahr
Senior Environmental Scientist

/js

Attachment

cc: Dr Tom Hall, EOA, Inc.

- Address:
1010 Chadbourne Rd.
Fairfield, CA 94585-9700
- Telephone:
(707) 429-8930
Fax (707) 429-1280



Exhibit III

Fairfield-Suisun Sewer District
Receiving Water Sampling

Sample Date: August 9, 2000

Sample ID ----->		CR-1	CR-2	C-1	C-2	C-3	C-4	C-5	C-6	Effluent
Sample Time ----->		1450	1305	1415	1430	1400	1340	1330	1435	1410
	Units									
Arsenic										
Total	ug/l	< 2	3	3	3	3	3	4	5	< 2
Dissolved	ug/l	4	4	3	4	4	4	4	4	< 2
Cadmium										
Total	ug/l	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Dissolved	ug/l	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Chromium										
Total	ug/l	3	5	6	6	4	4	4	2	< 1
Dissolved	ug/l	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Copper										
Total	ug/l	6	5	6	5	5	6	6	6	4
Dissolved	ug/l	4	3	3	2	3	3	4	3	3
Lead										
Total	ug/l	< 2	< 2	< 2	< 2	< 2	< 2	< 2	2	< 2
Dissolved	ug/l	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Mercury										
Total	ng/l	7.8	12.0	18.55	13.0	12.0	10.0	11.0	8.9	2.6
Dissolved	ng/l	1.0	< 0.5	1.75	0.9	1.0	0.9	0.7	1.7	1.9
Total Methyl	ng/l	0.074	0.014	0.059	0.114	0.137	0.116	0.056	0.360	0.015
Nickel										
Total	ug/l	8	6	8	9	8	8	8	9	4
Dissolved	ug/l	4	< 3	4	5	5	< 3	3	4	< 3
Selenium										
Total	ug/l	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Dissolved	ug/l	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1

Sample Date:

August 9, 2000

Sample ID ----->		CR-1	CR-2	C-1	C-2	C-3	C-4	C-5	C-6	Effluent
Sample Time ----->		1450	1305	1415	1430	1400	1340	1330	1435	1410
Units										
silver										
	Total	ug/l	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	Dissolved	ug/l	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Zinc										
	Total	ug/l	< 20	< 20	40	40	30	< 20	20	< 20
	Dissolved	ug/l	< 20	< 20	< 20	< 20	< 20	< 20	< 20	30
Coliform										
	Total	mpn/100 ml	1600	350	920	3500	2100	920	460	9200
	Fecal	mpn/100 ml	130	17	79	540	79	23	49	46
TSS		mg/l	36	41	43	48	42	34	40	36
Calcium		mg/l	84	69	38	41	49	78	77	78
Magnesium		mg/l	120	180	44	44	70	150	160	140
Depth		feet	4.3	12	5.5	6	11	9	12	5
Dissolved Oxygen		mg/l	7.2	8.5	5.8	6.4	6.0	8.2	8.8	8.0
Temperature-C		degrees	21.3	22.3	22.5	22.5	21.7	21.5	22.3	21.2
pH		units	8.0	7.7	7.4	7.6	7.6	8.1	8.0	7.9
Secchi Disk		inches	12	11	10	9	10	11	11	12
Salinity		PPT	2.9	5.2	0.8	0.9	1.7	4.0	4.4	3.7
Conductivity		umhos	5290	9290	1923	2160	3480	7230	7990	6800
Turbidity		ntu	31.4	38.3	41.2	53.2	46	30.5	34	26.2
Hardness		mg/l as CaCO3	700	910	280	300	410	810	850	770
Total Phosphate		mg/l	0.38	0.19	2.40	2.00	1.90	0.92	0.80	1.10
Nitrate		mg/l as N	0.53	0.40	9.20	7.20	1.60	0.84	1.30	7.60
Total Kjeldahl Nitrogen		mg/l as N	1.03	0.65	1.07	1.31	1.17	0.75	0.79	1.21
Ammonia		mg/l as N	LE	LE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Organic Nitrogen		mg/l as N	LE	LE	1.07	1.31	1.17	0.75	0.79	1.21
Chlorophyll "a"		mg/m3	11.00	4.26	15.20	26.90	16.60	13.40	9.01	25.50

Fairfield-Suisun Sewer District
Receiving Water Sampling

Sample Date: **October 18, 2000**

Sample ID ---->		CR-1	CR-2	C-1	C-2	C-3	C-4	C-5	C-6	Effluent
Sample Time ---->		955	800	900	910	850	840	830	835	840
Units										
Arsenic	Total	ug/l	4	5	3	4	3	4	5	< 2
	Dissolved	ug/l	3	2	2	2	< 2	< 2	2	< 2
Cadmium	Total	ug/l	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
	Dissolved	ug/l	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Chromium	Total	ug/l	2	4	2	3	4	3	4	< 1
	Dissolved	ug/l	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Copper	Total	ug/l	3	6	4	4	4	5	5	5
	Dissolved	ug/l	< 2	< 2	< 2	< 2	< 2	< 2	2	< 2
Lead	Total	ug/l	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
	Dissolved	ug/l	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Mercury	Total	ng/l	14.35	16.74	5.35	10.01	6.64	8.59	6.47	18.08
	Dissolved	ng/l	4.03	1.45	3.12	0.78	0.96	2.23	4.18	0.98
	Total Methyl	ng/l	2.919	0.078	0.858	0.613	0.829	0.508	0.279	0.500
	Dissolved Methyl	ng/l	1.122	< 0.012	0.163	0.181	0.091	0.062	0.048	0.072
Nickel	Total	ug/l	8	7	6	8	8	7	8	9
	Dissolved	ug/l	8	4	6	6	7	6	8	7
Selenium	Total	ug/l	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	Dissolved	ug/l	< 1	< 1	< 1	< 1	< 2	< 1	< 1	< 2

Sample Date: October 18, 2000

Sample ID ---->		CR-1	CR-2	C-1	C-2	C-3	C-4	C-5	C-6	Effluent
Sample Time ---->		955	800	900	910	850	840	830	835	840
Units										
Silver										
	Total	ug/l	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	Dissolved	ug/l	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Zinc										
	Total	ug/l	< 20	< 20	< 20	< 20	< 20	< 20	< 20	30
	Dissolved	ug/l	< 20	< 20	< 20	< 20	< 20	< 20	< 20	30
Coliform										
	Total	mpn/100 ml	5400	170	350	1100	350	130	350	110
	Fecal	mpn/100 ml	140	8	79	350	11	13	33	13
TSS		mg/l	34	48	24	32	68	41	50	36
Calcium		mg/l	83	120	68	75	97	100	110	100
Magnesium		mg/l	140	340	130	140	210	240	280	230
Depth		Feet	15	12	7	9	9	9	8	16
Dissolved Oxygen		mg/l	2.0	7.6	4.6	6.0	4.5	4.8	6.4	4.1
Temperature		C	16.8	17.0	19.3	18.0	16.9	17.1	17.0	17.1
pH		Units	7.3	7.4	7.1	7.2	7.4	7.3	7.2	7.2
Secchi Disk		inches	12	11	16	14	11	11	11	11
Salinity		ppt	3.7	9.9	3.8	3.7	6.1	7.0	8.0	6.4
Conductivity		umho	6750	16970	6990	6980	10910	12350	13860	11320
Turbidity		ntu	28	36	18	29	37	33	36	34
Hardness		mg/l as CaCO ₃	780	1700	710	760	1100	1200	1400	1200
Phosphate as P		mg/l	1.44	0.15	0.94	0.94	0.32	0.24	0.17	0.24
Nitrate		mg/l	0.37	0.40	5.90	4.10	0.42	0.21	0.24	0.28
Total Kjeldahl Nit.		mg/l	1.40	0.75	0.93	1.21	1.03	1.07	0.98	1.07
Ammonia		mg/l	0.23	0.12	0.19	0.25	0.25	0.25	0.24	0.29
Organic Nitrogen		mg/l	1.17	0.63	0.74	0.96	0.78	0.82	0.74	0.78
Chlorophyl 'A'		mg/M3	1.18	11.0	14.8	8.85	9.16	12.9	6.79	6.79

**Fairfield-Suisun Sewer District
Receiving Water Sampling**

Sample Date: December 6, 2000

Sample ID →		CR-1	CR-2	C-1	C-2	C-3	C-4	C-5	C-6	Effluent
Sample Time →		1235	1100	1150	1200	1140	1130	1115	1220	1220
Units										
Arsenic										
Total	ug/l	3	3	2	< 2	< 2	< 2	< 2	< 2	< 2
Dissolved	ug/l	< 2	< 2	< 2	< 2	< 2	2	< 2	3	< 2
Cadmium										
Total	ug/l	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Dissolved	ug/l	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Chromium										
Total	ug/l	2	4	3	4	4	3	3	4	< 1
Dissolved	ug/l	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Copper										
Total	ug/l	3	4	5	5	6	5	5	5	3
Dissolved	ug/l	< 2	< 2	< 2	< 2	3	2	2	2	3
Lead										
Total	ug/l	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Dissolved	ug/l	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Mercury										
Total	ng/l	7.807	7.809	11.46	13.45	8.488	9.707	11.49	14.14	1.847
Dissolved	ng/l	1.911	0.928	3.427	1.614	2.295	1.886	2.914	0.711	1.637
Total Methyl	ng/l	0.30	0.03	0.30	0.16	0.14	0.10	0.14	0.24	0.22
Dissolved Methyl	ng/l	0.399	0.020	0.196	0.146	0.075	0.112	0.052	0.119	0.070
Nickel										
Total	ug/l	7	5	8	9	10	11	9	9	< 3
Dissolved	ug/l	6	3	8	6	6	5	5	6	4
Selenium										
Total	ug/l	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Dissolved	ug/l	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1

Sample Date: December 6, 2000

Sample ID ---->		CR-1	CR-2	C-1	C-2	C-3	C-4	C-5	C-6	Effluent
Sample Time ----->		1235	1100	1150	1200	1140	1130	1115	1220	1220
Units										
Silver	Total	ug/l	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	Dissolved	ug/l	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Zinc	Total	ug/l	< 20	< 20	30	< 20	< 20	< 20	< 20	40
	Dissolved	ug/l	< 20	< 20	< 20	< 20	< 20	< 20	< 20	30
Coliform	Total	mpn/100 ml	920	350	240	170	110	920	79	350
	Fecal	mpn/100 ml	240	5	49	40	< 2	33	17	17
TSS		mg/l	22	33	39	43	36	23	30	27
Calcium		mg/l	47	84	60	55	73	75	80	74
Magnesium		mg/l	72	250	120	98	170	170	160	170
Depth		feet	8.5	14	8	8	11	9	5	16
Dissolved Oxygen		mg/l	8.6	10.3	9.4	7.1	8.9	8.5	9.1	7.9
Temperature-C		degrees	10.1	9.8	9.8	9.7	9.6	9.4	9.8	9.5
pH		units	7.6	7.2	7.3	7.4	7.4	7.2	7.2	7.6
Secci Disk		inches	16	15	11	11	12	13	14	13
Salinity		PPT	1.7	7.7	3.3	2.6	4.7	5.2	6.1	4.9
Conductivity		umhos	3500	13800	6300	5000	8670	9380	11010	8880
Turbidity		ntu	14.8	20.3	27.4	38.6	26.7	23.6	17.3	23.3
Hardness		mg/l as CaCO3	410	1200	640	540	880	890	860	880
Total Phosphate		mg/l	1.40	0.16	1.10	1.30	0.53	0.44	0.20	0.39
Nitrate		mg/l as N	5.60	0.50	10.60	5.10	2.40	1.10	0.63	1.80
Total Kjeldahl Nitrogen		mg/l as N	1.59	0.37	1.40	1.59	1.21	1.12	0.75	1.12
Ammonia		mg/l as N	0.24	0.23	0.25	0.22	0.19	0.17	0.19	0.16
Organic Nitrogen		mg/l as N	1.35	0.14	1.15	1.37	1.02	0.95	0.56	0.96
Chlorophyll "a"		mg/m3	32.90	0.00	22.90	20.50	9.17	7.97	0.00	0.00

Fairfield-Suisun Sewer District
Receiving Water Sampling

Sample Date: March 7, 2001

Sample ID ---->		CR-1	CR-2	C-1	C-2	C-3	C-4	C-5	C-6	Effluent
Sample Time ----->		1325	1150	1245	1250	1235	1225	1210	1310	1300
Units										
Arsenic										
Total	ug/l	2	3	2	3	3	2	3	2	< 2
Dissolved	ug/l	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Cadmium										
Total	ug/l	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Dissolved	ug/l	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Chromium										
Total	ug/l	8	12	9	9	10	10	11	9	< 1
Dissolved	ug/l	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Copper										
Total	ug/l	8	11	8	9	9	9	10	8	3
Dissolved	ug/l	2	3	3	3	3	3	3	3	2
Lead										
Total	ug/l	3	3	3	3	3	4	3	3	< 2
Dissolved	ug/l	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Mercury										
Total	ng/l	34.180	36.900	30.07	23.19	45.670	17.280	14.88	23.020	5.45
Dissolved	ng/l	1.890	1.985	1.240	< 0.025	2.280	< 0.025	1.300	5.330	0.350
Total Methyl	ng/l	0.13	0.15	0.27	0.03	0.20	0.11	0.20	< 0.02	0.06
Dissolved Methyl	ng/l	0.050	< 0.015	0.050	0.050	< 0.015	< 0.015	0.630	0.220	< 0.015
Nickel										
Total	ug/l	14	18	15	14	16	17	19	17	< 3
Dissolved	ug/l	5	3	5	4	5	5	6	5	< 3
Selenium										
Total	ug/l	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Dissolved	ug/l	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1

Sample Date:

March 7, 2001

Sample ID ---->		CR-1	CR-2	C-1	C-2	C-3	C-4	C-5	C-6	Effluent
Sample Time ---->		1325	1150	1245	1250	1235	1225	1210	1310	1300
Units										
Silver										
	Total	ug/l	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	Dissolved	ug/l	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Zinc										
	Total	ug/l	30	20	20	20	< 20	20	20	30
	Dissolved	ug/l	< 20	< 20	< 20	< 20	< 20	< 20	< 20	30
Coliform										
	Total	mpn/100 ml	1600	540	4600	3500	1700	2200	540	> 1600
	Fecal	mpn/100 ml	920	350	280	240	540	170	170	540
TSS		mg/l	62	100	75	81	89	83	82	67
Calcium		mg/l	44	30	44	45	43	40	34	43
Magnesium		mg/l	46	58	50	48	53	54	47	52
Depth		feet	10	15	10	11	14	11	13	19
Dissolved Oxygen		mg/l	8.0	10.1	8.1	7.9	8.4	8.7	9.0	8.3
Temperature-C		degrees	13.1	11.9	12.7	12.7	12.6	12.4	12.1	12.5
pH		units	7.4	7.4	7.4	7.4	7.5	7.4	7.6	7.2
Secci Disk		inches	6	6	6	6	6	6	6	6
Salinity		PPT	0.8	1.4	1.0	0.8	1.1	1.1	0.9	1.1
Conductivity		umhos	2000	2920	2210	2080	2390	2440	2140	2320
Turbidity		ntu	77.6	95.4	89.8	85.5	89.7	85.6	92.2	78.5
Hardness		mg/l as CaCO3	300	310	320	310	330	320	280	320
Total Phosphate		mg/l as P	0.46	0.24	0.61	0.76	0.42	0.34	0.32	0.39
Nitrate		mg/l as N	1.70	0.54	2.10	2.00	1.90	1.40	1.20	1.40
Total Kjeldahl Nitrogen		mg/l as N	0.75	0.65	1.17	1.26	1.28	0.84	0.93	0.84
Ammonia		mg/l as N	0.13	0.16	0.12	0.12	0.14	0.16	0.16	0.14
Organic Nitrogen		mg/l as N	0.62	0.49	1.05	1.14	1.14	0.68	0.77	0.70
Chlorophyll "a"		mg/m3	7.82	5.60	4.26	7.97	4.58	4.74	2.37	1.19

**Fairfield-Suisun Sewer District
Receiving Water Sampling**

Sample Date: May 3, 2001

Sample ID ---->		CR-1	CR-2	C-1	C-2	C-3	C-4	C-5	C-6	Effluent
Sample Time ----->		1256	1140	1226	1233	1219	1208	1246		1230
Units										
Arsenic										
Total	ug/l	5	4.6	4.3	4	5.1	5.2	4.6	5.3	1.1
Dissolved	ug/l	4.6	3.4	4.2	3.9	4.7	4.7	3.9	4.7	1.2
Cadmium										
Total	ug/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Dissolved	ug/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Chromium										
Total	ug/l	5.3	9.4	5	4.6	5.9	7	6.7	7.7	< 0.5
Dissolved	ug/l	2.3	1.1	1.8	2	1.8	1.7	1.5	2.1	1.6
Copper										
Total	ug/l	6.3	8.3	6.3	6.2	6.8	7.2	6.6	7.3	6.2
Dissolved	ug/l	3.5	3.3	4.7	4	4	3.8	3.5	4.3	6.6
Lead										
Total	ug/l	2.4	3	2.1	2	2.2	2.7	2.3	2.7	0.42
Dissolved	ug/l	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	0.37
Mercury										
Total	ng/l	15.093	34.699	29.74	14.60	17.238	21.935	13.663	28.742	7.145
Dissolved	ng/l	1.132	0.750	1.517	2.197	1.280	1.037	1.444	1.435	3.792
Total Methyl	ng/l	0.390	0.238	0.159	0.158	0.289	0.200	0.094	0.164	0.422
Dissolved Methyl	ng/l	0.034	0.084	0.084	0.059	0.247	0.070	0.099	0.154	0.207
Nickel										
Total	ug/l	11	12	9.7	9.1	11	12	11	12	2.6
Dissolved	ug/l	6	3	5.1	5	5.7	5.8	4.6	7.2	2.4
Selenium										
Total	ug/l									
Dissolved	ug/l									

Sample Date:

May 3, 2001

Sample ID ---->		CR-1	CR-2	C-1	C-2	C-3	C-4	C-5	C-6	Effluent
Sample Time ----->		1256	1140	1226	1233	1219	1208	1246		1230
Units										
Silver										
	Total	ug/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.1
	Dissolved	ug/l	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Zinc										
	Total	ug/l	10	20	20	30	20	20	20	40
	Dissolved	ug/l	< 10	< 10	10	10	< 10	< 10	< 10	40
Coliform										
	Total	mpn/100 ml	220	130	350	460	920	1400	350	920
	Fecal	mpn/100 ml	170	33	49	49	140	540	21	130
TSS		mg/l	81	90	64	66	76	89	62	84
Calcium		mg/l	55	27	39	38	42	39	33	42
Magnesium		mg/l	58	49	41	37	52	51	48	53
Depth		feet	9	20	7	9	11	9	9	13
Dissolved Oxygen		mg/l	9.1	9.8	8.2	7.7	9.2	9.2	9.0	9.2
Temperature-C		degrees	17.3	17.5	18.3	18.4	17.1	17.2	17.5	17.1
pH		units	8.0	7.2	7.5	7.5	7.6	7.6	7.4	7.4
Secchi Disk		inches	5	5	6	6	6	5	6	7
Salinity		PPT	1.0	1.1	0.7	0.5	1.1	1.1	1.1	1.1
Conductivity		umhos	2250	2380	1660	1440	2360	2390	2380	2390
Turbidity		ntu	80.0	86.3	75.9	110	61.6	64.9	74.4	88.5
Hardness		mg/l as CaCO3	380	270	270	250	320	310	280	320
Total Phosphate		mg/l	0.49	0.15	1.98	2.24	0.76	0.48	0.28	0.47
Nitrate		mg/l as N	2.20	1.40	0.89	0.55	8.60	8.80	2.50	2.10
Total Kjeldahl Nitrogen		mg/l as N	1.20	0.47	1.31	1.40	1.12	1.12	0.75	1.12
Ammonia		mg/l as N	0.13	0.12	0.22	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Organic Nitrogen		mg/l as N	1.07	0.35	1.09	1.40	1.12	1.12	0.75	1.12
Chlorophyll "a"		mg/m3	54.80	2.20	21.30	14.00	38.10	13.60	105.80	94.00