

Biological Assessment of

Lakeland Electric – McIntosh Plant

Polk County

NPDES #FL0026301

Sampled May 27 and 28, 2003

February 2004

Biology Section

Bureau of Laboratories

Division of Resource Assessment and Management

Quality Manual No. 870346G

NELAC Certification No. E31780

Florida Department of Environmental Protection

Fifth Year Inspection Summary

Discharger: Lakeland Electric – McIntosh Plant

County: Polk

NPDES Number: FL0026301

Permit Expiration: 3/22/05

Toxics Sampling Inspection **(XSI)**

Date Sampled: May 27, 2003

Results: Atrazine was detected in the effluent (0.068 µg/L) and intake (0.062 µg/L) samples at a level greater than or equal to the method detection limit (MDL) but below the practical quantitation limit (PQL). Lead was also detected in the effluent (2.5 µg/L, respectively) and intake (2.2 µg/L, respectively) samples at a level that exceeded the Class III Surface Water Quality Criterion (62-302.530(40) F.A.C.). Copper was detected in all water samples at levels greater than or equal to the method detection limit (MDL) but below the practical quantitation limit (PQL). Copper concentrations in the effluent and water samples from Test Sites 1 and 4 approach the Class III Surface Water Quality Criterion (6.7 µg/L)

Compliance Biomonitoring Inspection **(CBI)**

Date Sampled: May 27, 2003

Results: The effluent sample was not toxic to the fish, *Cyprinella leedsi,* or to the water flea, *Ceriodaphnia dubia,* during the 48-hour acute bioassays.

Water Quality Inspection **(WQI)**

Date Sampled: May 27 and 28, 2003

Results: The effluent and water samples from Test Sites 1, 2 and 3 exceeded the Class III Surface Water Quality Criterion for pH (62-302.530(52)(c) F.A.C.). The effluent and water samples from Test Sites 1 and 2 also exceeded the Class III Surface Water Criterion for temperature (62-302.520(4)(a) F.A.C.). Nutrients levels were relatively the same at all study sites. The concentration of TKN at all sites ranged between 80-90% of typical values for Florida lakes, while total phosphorus values ranged between 70-80% of typical values for Florida lakes. All other nutrient concentrations were in the 5-10% range of typical values.

Impact Bioassessment Inspection **(IBI)**

Date Sampled: May 27 and 28, 2003

Results: Chlorophyll-*a* values measured at most of the study sites were greater than 70-90% of typical values for Florida lakes. The concentrations ranged from 46 to 74 µg/L. Macroinvertebrate populations were depauperate at all study sites, except Test Site 1. The total number of taxa ranged from ranged from 4-8, and was 30 at Test Site 1.

Biological assessments are prepared by FDEP staff to provide information for review of NPDES permit renewal applications. Biological assessments, in conjunction with other information concerning the subject facility and its receiving-water body, are used to determine appropriate permit conditions.

Introduction

The Lakeland Electric McIntosh Plant is located in Polk County, Florida (Appendix 1). This facility is a steam electric power generating plant. Activities at this plant include a fossil fuel-fired generating unit that is cooled using water from Lake Parker (see Facility Summary in Appendix 2). Water is pumped from Lake Parker through the condenser of Unit1 and discharged back into the Class III Surface Waters of Lake Parker through Outfall D-001. The design flow of the system is 115.2 million gallons per day (MGD). The actual mean flow during this survey was 115.2 MGD (Melissa Gunter, FDEP Southwest District). The volume of the lake is filtered through the plant at the rate of 2.8% per day (Table 5). The Lakeland Electric Larsen Plant is also located on Lake Parker opposite the McIntosh plant on the south side. This facility does not continuously discharge and was off-line during our survey on May 27, 2003. However, it did discharge for a short period of time on May 28, 2003 and effluent samples were collected. Those results are not included in this report and will be provided separately.

Surface Water Quality Criteria and facility permit limits are listed in Table 1. According to the facility's monthly discharge monitoring reports from 1/1/02 to 3/1/03, the plant has had no permit violations (Appendix 2). The facility has been operating under administrative order AO005TL for exceedances of the Class III Surface Water Quality Criterion. The facility was ordered to conduct a wet and dry season study to demonstrate that discharges from the plant are not causing or contributing to the elevated levels of copper found in Lake Parker. Upon completion of the dry weather study, the facility submitted a petition for relief from the Class III freshwater Surface Water Quality Criterion for copper through a mixing zone. This issue is currently under review by the facility and FDEP.

Methods

The purpose of this investigation was to determine the potential effects of the facility's effluent on the biota of the receiving waters. Chemical and biological comparisons were made between two control sites (located in Lake Parker outside of the zone of initial effluent dilution) and four test sites (located in Lake Parker as a gradient from the discharge) (see detailed map in Appendix 1). Effluent and intake samples were collected on May 27, 2003. Water, sediment, and macroinvertebrate samples were collected from the Control and Test Sites on May 28, 2003.

To establish sampling locations, exposure to the effluent was estimated by adding rhodamine dye to the effluent and measuring fluorescence in the receiving water during discharge on May 27, 2003. Test Sites were located at approximate exposures of 18%, 12%, 10%, and 4% percent effluent and Control Sites were located at 0% effluent. These concentrations are equivalent to the concentrations of dye detected at the access point. The effluent traveled through a channel approximately 150 meters long and 10 meters wide before reaching a location where it could be measured. This travel time allowed for the dye and surrounding water in the channel to mix, diluting the effluent concentration. Water samples were collected from the top (approximately 0.5 meters below the surface) and from the bottom (approximately 0.5 meters above the bottom substrate). Macroinvertebrate collections consisted of three single petite-ponar drops from each sampling location. These samples were not composited. Detailed methods and their relationship to Florida Administrative Code are given in Appendix 3.

Fecal and total coliform samples were not collected in the effluent or receiving waters for this assessment. Neither phytoplankton nor periphyton collections were done for this assessment. Phytoplankton were not collected because there was no expectation that these data would supplement the assessment with the conditions of this lake (shallow, wind-driven, watershed nutrient inputs). It would have been difficult to separate effects from the

Table 5.

Lakeland Electric McIntosh Generating Plant

	Lake Area	Lake Depth	Discharge Volume	
	acres	avg. (m)	volume gallons/day	
	2272 *	1.7 **	115,000,000	
m3 by area	15630578	1.7	435321	m3 by volume
			0.02785	m3 by volume/area
	Percent of lake filtered per day		**2.785**	

100% of lake filtered through plant in 36 days

* Florida Lakes Gazetteer, Part III, 1969.

** Historical and Year 2002 Copper Source Evaluation for the Once-through Cooling Water Discharges of the C. D. McIntosh and Larsen Memorial Power Plants

1 galllon = 0.0037854 m3

Table 1a. Effluent limits, Class III Criteria and chemical, microbiological, and toxicological data.

Lakeland Electric McIntosh Plant	Class III Stds	Effluent Limits	Effluent	Effluent Bottom	Intake 1	Intake 2	Intake 2 Bottom	Control Site 1	Control Site 1 Bottom	Control Site 2	Control Site 2 Bottom
Organic Constituents (µg/L)											
Atrazine	-	-	0.068 l	-	0.062 l	-	-	-	-	-	-
Metals (µg/L, unless otherwise noted)											
Aluminum	-	-	319	322	306 A	294	289	280	289	273	346
Arsenic	≤ 50	-	7.0 U	7.0 U	7.0 U	7.0 U	7.0 U	7.0 U		7.0 U	
Cadmium	b	≤ 0.8 b	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.5 U	0.5 U	0.5 U	0.5 U
Calcium (mg/L)	-	-	22.3	22.3	22.3 A	21.7	22.0	21.8	22.4	21.9	22.7
Chromium-III	b	≤ 62.6 b	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Copper	b	≤ 6.7 b	6.0 l	5.7 l	3.3 l	3.5 l	3.7 l	3.3 l	3.9 l	3.6 l	4.2 l
Iron	≤ 1000	-	100	101	101 A	86	80	86	93	79	119
Lead	b	1.86-2.05	2.5	2.7	2.2 A	2.0	2.1	12 U	12 U	12 U	12 U
Magnesium (mg/L)	-	-	2.9	2.9	2.9 A	2.8	2.8	2.8	2.9	2.8	2.9
Nickel	b	≤ 37.5 b	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Selenium	≤ 5	-	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	15 U	-	15 U	-
Silver	≤ 0.07	-	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.75 U	0.75 U	0.75 U	0.75 U
Zinc	b	≤ 86 b	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U
Nutrients (mg/L)											
Ortho-phosphate		-	0.007 l	-	0.006 l	-	-	0.007 l	-	0.01	-
Total Phosphorus		-	0.13	-	0.11 A	-	-	0.11	-	0.12	-
Ammonia		-	0.016 l	-	0.020 l	-	-	0.015 l	-	0.014 l	-
Unionized Ammonia	≤ 0.02 s	-	< 0.02 c	-	-	-	-	< 0.02 c	-	< 0.02 c	-
Nitrate+Nitrite		-	0.007 l	-	0.004 U	-	-	0.004 U	-	0.004 U	-
Total Kjeldahl Nitrogen		-	2.1 J	-	1.9 JA	-	-	1.8	-	1.7	-
Organic Nitrogen		-	2.06 c	-	1.9 c	-	-	1.79 c	-	1.68 c	-
Total Nitrogen		-	2.11 c	-	1.9 c	-	-	1.8 c	-	1.7 c	-
General Physical and Chemical Parameters											
Dissolved Oxygen (mg/L)	≥ 5 s	-	8.3	-	8.8	-	-	9.2	9.2	9.1	8.5
pH (S.U.)	≤ 8.9 s	-	9.4	-	8.9	-	-	8.9	8.9	8.9	8.8
Conductivity (umhos/cm)	≤ 1275 s	-	188	-	184	-	-	174	174	174	173
Temperature (C)	-	Report d	35.8	-	30.3	-	-	28.7	28.1	28.6	28.0
Temperature (F)	f	Report d	96.4 c	-	86.5 c	-	-	83.7 c	82.6 c	83.5 c	82.4 c
BOD5	-	-	6	-	6	6	-	-	-	-	-
CBOD5	-	-	5	-	5	5	-	-	-	-	-
Color (Pt-Co)	-	-	100	-	100	100	-	-	-	-	-
TSS (mg/L)	-	-	7	-	31	31	-	-	-	-	-
Turbidity (NTU)	-	-	16.5	-	14.7	14.7	-	-	-	-	-
Flow (MGD)	-	Report d	115.2	-	-	-	-	-	-	-	-
Hardness (mg/L)	-	-	67.6 c	67.6 c	67.6 c	65.7 c	66.5 c	66 c	67.9 c	66.2 c	68.6 c
Chlorophyll a (µg/L)	-	-	-	-	52	52	-	74	-	64	-
Phaeophytin (µg/L)	-	-	-	-	0	0	-	0	-	0	-
AGP (mg DryWt/L)	-	-	17.9	-	10.7	10.7	-	29.8	-	28.3	-
Toxicity (48-hour static, acute, screening bioassay; percent mortality)											
Bioassay - Water flea	e	-	0%	-	-	-	-	-	-	-	-
Bioassay - Fish	e	-	0%	-	-	-	-	-	-	-	-
Bioassay - Water flea, pH-adjusted	e	-	0%	-	-	-	-	-	-	-	
Bioassay - Fish, pH-adjusted	e	-	0%	-	-	-	-	-	-	-	-

Result is an exceedance of the Class III Surface Water Criteria.

a - Annual average
b - Value is calculated based on hardness
c - Calculated value
d - Daily average
e - No substance shall be present in concentrations so as to cause ≥20% mortality in a 48-hr acute bioassay test.
f - < 92° F, or not more than 3° higher than ambient temperature of the lake
s - Single sample
A - Value reported is the mean of two or more determinations
l - Value reported is < the minimum quantitation limit, and ≥ the minimum detection limit
J - Estimated value
U - Material analyzed for but not detected; value reported is the minimum detection limit

discharge and effects from these lake conditions.

All field and laboratory biological methods followed Biology Section Standard Operating Procedures (SOPs, see http://www.floridadep.org/labs/qa/2002sops.htm for details) and met DEP quality assurance/quality control standards (see http://www.floridadep.org/labs/qa/index.htm).

The following were involved in this investigation: Melissa Gunter, Mary Szafraniec, Lori Pillsbury, and Nahir Cornwell (FDEP Southwest District), Julie Espy, Ken Espy, and Travis Hill (FDEP Tallahassee). The report was reviewed by District representatives and the Point Source Studies Review Committee (Wayne Magley, Chuck Ziegmont and Michael Tanski).

Results and Discussion

- Specific chemical results are reported in Tables 1a and 1b and a complete list of chemical analytes can be reviewed in Appendix 4. Lead was found in the effluent (2.5 µg/L) and intake (2.2 µg/L) samples at levels that exceeded the Class III Surface Water Quality Criterion 62-302.530(40) F.A.C. The changes in detection limits for some of the reported metals are due to the difference in methods used to analyze for these metals. The effluent and intake samples were analyzed using the ICP-MS (mass spectroscopy) method, while the water samples from the Control and Test Sites were analyzed using the ICP method. The ICP-MS method allows for lower method detection limits.
- Copper was detected in all water samples at levels greater than or equal to the method detection limit (MDL) but below the practical quantitation limit (PQL). Copper concentrations in the effluent and water samples from Test Sites 1 and 4 approached the Class III Surface Water Quality Criterion (6.7 µg/L)(Tables 1a and 1b). Aluminum was detected in the effluent and water samples from all of the study sites. Iron and zinc were detected at all of the Test Sites, but levels of these metals complied with Class III Surface Water Quality Criteria (62-302 F.A.C.).
- The herbicide atrazine was detected in the effluent and intake samples above the method detection limit and below the practical quantitation limit (Table 1a). No other organic constituents were detected.
- Effluent temperature (96.4 °F) and pH (9.4 SU) exceeded Class III Water Quality Criteria for lakes (temperature <92°F, pH = 8.9 S.U.; 62-302 F.A.C.) and facility permit limits. Effluent conductivity (µmhos/cm) and dissolved oxygen (DO as mg/L) complied with Class III Water Quality Criteria (62-302 F.A.C.) (Table 1a).
- Temperature measurements (degrees Fahrenheit) exceeded Class III Water Quality Criteria (<92°F, or not more than 3° higher than ambient temperature in the lake, 62-302 F.A.C.) at Test Site 1 (97.9°F, surface and 90.3°F, bottom) and Test Site 2 (88.7°F, surface). Receiving water pH (Standard Units) measurements also exceeded Class III Water Quality Criteria (= 8.9 S.U., 62-302 F.A.C.) at Test Site 1 (9.0 S.U.), Test Site 2 (9.0 S.U.), and Test Site 3 (9.0 S.U.) (Table 1b). These exceedances can be attributed to the facility's discharge.
- Dissolved oxygen (DO as mg/L) and conductivity (µmhos/cm) at the Test and Control Sites complied with Class III Water Quality Criteria (Tables 1a and 1b, 62-302.530 F.A.C.).
- Lake Parker is a large, relatively shallow lake. It covers approximately 2,200 acres and has an average depth of 1.7 meters. Sampling location depths ranged from 1.7 m to 2.5 m deep. All sediment collections were noted as consisting of sand and coarse particulate matter (CPOM) and also having an anaerobic odor.
- Rhodamine dye was pumped into the effluent at a level that would yield approximately 50 ppb at the end of the effluent pipe during an approximate 3-hr continuous injection (see Appendix 3 for a complete methods description). The dye plume was tracked using a fluorometer, and buoys were set to mark the sampling stations. Stations were selected based on having similar depths and bottom substrates, and varying effluent exposure.
- Sediments at all sites were predominantly mixtures of sand and silt (Table 3). Sediments <0.125 mm diameter comprised <8% of the total volume at both Test Site 1 and the Intake Site, compared to >18% of the total sediment at all other sites. This is likely due to scouring caused by the velocity of the effluent at Test Site 1 and the suction at the Intake Site. Percent organic content was approximately 1-3% at all sites and did not show a pattern with respect to the outfall.
- Sediment content of metals was measured from samples collected at all study sites. Metals were extracted using total recoverable metals techniques. However, because it was not possible to use perchloric and hydrofluoric acid digestions, results are underestimates of sediment total metal content. For this reason, the aluminum normalization tool (MacDonald 2003, Carvalho et al. 2002) is not appropriate to use for interpretation. Data were compared to Florida Sediment Quality Guidelines (MacDonald, *et al* 2000a). Sediment samples collected at Test Sites 1, 2 and 3 (effluent exposure 18-10%) showed levels of aluminum, cadmium, chromium, iron, lead, and nickel almost twice those at the Control and

Table 1b. Effluent limits, Class III Criteria and chemical and toxicological data.

Lakeland Electric McIntosh Plant	Class III Stds	Test Site 1	Test Site 1 Bottom	Test Site 2	Test Site 2 Bottom	Test Site 3	Test Site 3 Bottom	Test Site 4	Test Site 4 Bottom
Metals (µg/L, unless otherwise noted)									
Aluminum	-	333	363	349	361	304	337	319 A	422
Arsenic	≤ 50	7.0 U	-	7.0 U	-	7.0 U	-	7.0 U	-
Cadmium	≤ 0.8 b	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Calcium (mg/L)	-	22.4	22.4	23.4	22.6	22.1	22.4	22.3 A	23.2
Chromium-III	≤ 62.7 b	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Copper	≤ 6.7 b	5.9 I	6.4 I	6.0 I	5.9 I	5.6 I	5.2 I	5.4 I	6.6 I
Iron	≤ 1000	102	147	114	171	99	133	109 A	182
Lead	≤ 1.9 b	12 U	12 U	12 U	12 U	12 U	12 U	12 U	12 U
Magnesium (mg/L)	-	2.9	2.9	3.0	2.9	2.9	2.9	2.9 A	3.0
Nickel	≤ 37.6 b	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Selenium	≤ 5	15 U	-	15 U	-	15 U	-	15 U	-
Silver	≤ 0.07	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
Zinc	≤ 86.3 b	6.5 I	4.1 I	3.8 I	4.5 I	3 U	3.8 I	3 U	5.5 I
Nutrients (mg/L)									
Ortho-phosphate	-	0.017	-	0.013	-	0.007 I	-	0.004 I	-
Total Phosphorus	-	0.12	-	0.14	-	0.14	-	0.14	-
Ammonia	-	0.012 I	-	0.013 I	-	0.015 I	-	0.015 I	-
Unionized Ammonia	≤ 0.02 s	< 0.02 c	-	< 0.02 c	-	< 0.02 c	-	< 0.02 c	-
Nitrate+Nitrite	-	0.004 U	-	0.004 U	-	0.004 U	-	0.004 U	-
Total Kjeldahl Nitrogen	-	1.7	-	2.3	-	2.2	-	2.0	-
Organic Nitrogen	-	1.69 c	-	2.29 c	-	2.19 c	-	1.99 c	-
Total Nitrogen	-	1.7 c	-	2.3 c	-	2.2 c	-	2.0 c	-
General Physical and Chemical Parameters									
Dissolved Oxygen (mg/L)	≥ 5	9.9	8.3	9.1	7.8	7.8	7.7	7.7	7.4
pH (S.U.)	≤ 8.9 s	8.9	9.0	9.0	8.6	9.0	8.6	8.9	8.6
Conductivity (umhos/cm)	≤ 1275 s	180	177	176	174	175	174	174	174
Temperature (C)	-	36.6	32.4	31.5	28.5	29.0	28.5	28.6	28.3
Temperature (F)	f	97.9 c	90.3 c	88.7 c	83.3 c	84.2 c	83.3 c	83.5 c	82.9 c
Hardness (mg/L)	-	67.9 c	67.9 c	70.8 c	68.4 c	67.1 c	67.9 c	67.6 c	70.3 c
Chlorophyll a (µg/L)	-	73	-	73	-	46	-	64	-
Phaeophytin (µg/L)	-	0	-	0	-	0	-	0	-
AGP (mg DryWt/L)	-	29.3	-	24.5	-	25.2	-	30.9	-

Result is an exceedance of the Class III Surface Water Criteria.

a - Annual average
b - Value is calculated based on hardness
c - Calculated value
d - Daily average
f - < 92° F, or not more than 3° higher than ambient temperature of the lake
s - Single sample
A - Value reported is the mean of two or more determinations
I - Value reported is < the minimum quantitation limit, and ≥ the minimum detection limit
J - Estimated value
U - Material analyzed for but not detected; value reported is the minimum detection limit

Table 2. Measured and predicted algal growth potential (AGP) for total phosphorus (TP) and total nitrogen (TN) limitation

Location	AGP (measured)	Predicted AGP (TP) ± 20%	Predicted AGP (TN) ± 20%	Total N:P ratio
Control 1 (mg dry wt/L)	29.8	47.3 ± 9.5	68.6 ± 13.7	16.4
Control 2 (mg dry wt/L)	28.3	51.6 ± 10.3	64.8 ± 13.0	14.2
Test 1 (mg dry wt/L)	29.3	51.6 ± 10.3	64.8 ± 13.0	14.2
Test 2 (mg dry wt/L)	24.5	60.2 ± 12.0	87.6 ± 17.5	16.5
Test 3 (mg dry wt/L)	25.2	60.2 ± 12.0	83.8 ± 16.8	15.7
Test 4 (mg dry wt/L)	30.9	60.2 ± 12.0	76.2 ± 15.2	14.3
Effluent (mg dry wt/L)	17.9	55.9 ± 11.2	80.1 ± 16.0	16.2

Intake Sites, with levels dropping back to Control Site levels at Test Site 4 (effluent exposure of 4%, Table 3). No metals were present above Threshold Effects Levels (TEL). Although metals content was higher at Test Sites1-3 than at the Control Sites, there was no consistent pattern of enrichment in metals content with percent effluent in the overlaying lake water. Relatively lower metals content at Test Site 1 as compared with Test Sites 2-3 may be related to the <4% sediment volume of sediments <0.125 mm in diameter. Metals are more likely to bind to finer sediments. This, in addition to the scouring, may account for the absolute metals values at Test Site 1 being slightly lower than those at Test Sites 2 and 3.

- The effluent sample was not toxic to the fish, *Cyprinella leedsi,* or to the water flea, *Ceriodaphnia dubia,* during 48-hour acute screening bioassays (See Table 1a for percent mortality and Appendix 6 for bioassay bench sheets).
- The effluent total nitrogen concentration was 2.11 mg/L (Table 1a). Effluent total phosphorus (0.13 mg/L), ortho-phosphate (0.007 mg/L), and total ammonia concentrations (0.016 mg/L, Table 1a) did not appear to contribute to levels at the Test Sites. Nutrient levels at the Test Sites compared with the Control Sites were similar (Tables 1a and 1b). The concentration of TKN at all study sites ranged between 80-90% of typical values for Florida lakes, while total phosphorus values ranged between 70-80% of typical values for Florida lakes. All other nutrient concentrations were in the 5-10% range of typical values (Appendix 5).
- Algal growth potential (AGP) is a measure of nutrients available for algal growth (Miller *et al.* 1978). Raschke and Shultz (1987) found that AGP above 5.0 mg dry weight/L represent a "problem" threshold for fresh receiving waters, implying nutrient enrichment. The average AGP value at the two Control Sites was 29.1 mg dry weight/L (Table 2). The average AGP value of the Test Sites was 27.5 mg dry weight/L, and the effluent AGP value was 17.9 mg dry weight/L. All values were above the "problem" threshold. This indicates there is nutrient enrichment in this portion of Lake Parker. There was evidence of growth inhibition in the AGP data (Table 2). It may be the result of low concentrations of biologically available nutrients in the water because most of the available nitrogen is bound up as organic nitrogen.
- Chlorophyll-*a* was detected in the effluent and each of the Test and Control Site samples (Tables 1a and 1b). Chlorophyll-*a* values measured at most of the study sites were greater than 80-90% of typical values for Florida lakes (Appendix 5) and ranged from 74 to 46 µg/L. These levels are more than 2 times the Impaired Waters Rule (IWR) annual average value (20 µg/L).
- Quantitative measures of benthic macroinvertebrate assemblages from petite-ponar dredge samples showed depauperate populations. The total number of taxa for all sites ranged from 4-8, except for Test Site 1, which had 30 taxa. Shannon-Weaver diversity scores (1.19 – 1.83) were lower than 20-30% of typical values for Florida lakes at all of the sites, except Test Site 1 (2.88), which was more diverse than 80% of typical values (Appendix 5). The increased number of taxa and higher Shannon-Weaver diversity score at Test Site 1 is likely due to the lower percent of fine sediments. Test Site 1 had fewer Dipteran and 8.4% leeches, which tend to be tolerant of swings in dissolved oxygen levels. Even though community measures at Test Site 1 appeared better when compared to the other sites, the taxa at all Test and Control Sites were dominated by pollution-tolerant worms (Table 4, Appendix 9). This indicates wide spread degradation of the lake benthic macroinvertebrate community, which cannot be directly attributed to the facility as no gradient of response was observed. The continuous recycling of the lake water through the power plant's condensers (averaging one lake volume every 36 days) may compound the effects of watershed inputs.

Summary

Lake Parker is surrounded by low-density residential, industrial, and commercial land uses. Study sites were selected in close proximity of the facility, so as to diminish any influences from these sources. However, since the entire volume of the lake cycles through the power plant's condensers every 36 days, inputs from the facility are mixed with

Table 3. Sediment charcterisitcs and metals content

Lakeland Electric - McIntosh Plant	Control Site 1	Control Site 2	Intake	Test Site 1	Test Site 2	Test Site 3	Test Site 4
Effluent exposure							
Percent effluent in overlying water	0%	0%	0%	~18%	~12%	~10%	~4%
Particle size distribution (percent volume)							
<0.063 mm	16.6	9.93	5.25	1.58	16.4	9.3	14.6 A
0.063-0.125 mm	17.2	8.84	2.42	1.66	20.4	9.38	14.2 A
0.125-0.25 mm	23.5	20.6	20.7	28.0	37.8	24.1	22.9 A
0.25-0.5 mm	34.2	48.1	54.9	55.4	14.7	43.5	37.8 A
0.5-2.0 mm	8.45	12.5	16.8	13.4	10.6	13.6	10.4 A
>2.0 mm (percent dry weight)	0.67	0.14	0.21	0.35	0.23	0.94	0.07 A
Organic content as percent of dry weight	2.0	1	1.1	1.3	2.9	0.98	1.9 A
Metals (mg/kg)							
Aluminum	490	350	230 A	1230	1870	1460	610
Cadmium	0.092 I	0.072 I	0.048 I	0.13 I	0.23	0.21	0.097 I
Chromium	1.24 J	0.82 J	1.09 AJ	2.98 J	4.04 J	3.39 J	1.38 J
Copper	9.2	5.6	2.8 A	12.3	15.7	21.1	8.8
Iron	358	275	236 A	383	699	764	380
Lead	4.3	2.9 I	1.7 I	4.6	8.4	10.4	4.5
Nickel	1.9 J	1.36 J	2.99 AJ	2.62 J	4.47 J	6.48 J	1.82 J
Silver	0.065 U	0.067 U	0.065 U	0.068 U	0.18 U	0.074 U	0.069 U
Zinc	12.3 J	8.2 J	5.0 AJ	9.1 J	21.4 J	24.4 J	10.9 J

A - Value reported is the mean of two or more determinations
I - Value reported is < the minimum quantitation limit, and ≥ the minimum detection limit
J - Estimated value
U - Material analyzed for but not detected; value reported is the minimum detection limit

other watershed inputs and distributed throughout the lake on a regular basis. Therefore, it is difficult to separate facility affects from other watershed affects. The facility's effluent exceeded Class III Surface Water Quality Criteria for lead, pH and temperature. Temperature measurements exceeded Class III Water Quality Criteria at Test Sites 1 and 2; and pH measurements exceeded Class III Water Quality Criteria at Test Sites 1, 2, and 3. These exceedances can be attributed to the facility's discharge. The copper concentration in the effluent was close to the Class III Surface Water Quality Criteria, but did not exceed this limit. Chlorophyll-*a* and AGP values indicated nutrient enrichment or eutrophication in Lake Parker. Levels were more than 2 times the IWR annual average value (20 µg/L), but are not directly related to the Lakeland discharge. The macroinvertebrate populations at each of the Test and Control Sites were dominated by pollution-tolerant worms, an indication of widespread degradation.

Literature Cited

Barbour, M. T. and J. B. Stribling. 1994. A technique for assessing stream habitat structure. In: Proceedings of Riparian Ecosystems in the Humid United States: Functions and Values. U. S. Dept. Agriculture. 15-18 March 1993, Atlanta, Ga. 22 pp.

Beck, W. M. Jr. 1954. Studies in stream pollution biology 1. A simplified ecological classification of organisms. Quart. J. Fla. Acad. Sci. 17(4): 211-227.

Carvalho, A,, Schropp, S.J., Taylor Engineering, Inc., G. Sloane, T. Biernacki, and T. Seal. 2002. Development of an Interpretive Tool for Assessment of Metal Enrichment in Florida Freshwater Sediment. Prepared for FDEP.

EA Engineering, Science, and Technology and Tetra Tech, Inc. 1994. Bioassessment for the nonpoint source program (draft). Prepared for the Florida Department of Environmental Protection. Unpaginated.

FDEP. 1994. Lake bioassessments for the determination of nonpoint source impairment in Florida. Florida Department of Environmental Protection, Biology Section, Tallahassee, Fla. 73 p.

MacDonald Environmental Sciences Ltd. and USGS. 2003. Development and Evaluation of Numerical Sediment Quality Assessment Guidelines for Florida Inland Waters. Prepared for FDEP.

Magurran, A. E. 1988. Ecological diversity and its measurement. Princeton University Press, Princeton, New Jersey.

Miller, W. E., T. E. Maloney, and J. C. Greene. 1978. The *Selenastrum capricornutum* Printz algal assay bottle test. EPA-600/9-78-018. U. S. EPA, Cincinnati, Ohio. 126 p.

Plafkin, J. L., M. T. Barbour, K. D. Porter, S. K. Gross and R. M. Hughes. 1989. Rapid bioassessment protocols for use in streams and rivers: Benthic macroinvertebrates and fish. U. S. EPA, Office of Water Regulations and Standards,

Table 4. Macroinvertebrate Ponar Samples - Quantitative

Lakeland Electric - McIntosh Plant	Control Site 1	Control Site 2	Intake	Test Site 1	Test Site 2	Test Site 3	Test Site 4
Effluent exposure							
Percent effluent in overlying water	0%	0%	0%	~18%	~12%	~10%	~4%
Summary Statistics							
Shannon-Weaver Diversity	1.82	1.81	1.19	2.88	1.54	1.61	1.83
Number of Taxa	5	5	4	30	8	4	8
Percent Dominant Taxon	52.82	44.39	74.19	36.57	59.23	49.02	52.82
Dominant Taxon (name)	Limnodrilus	Limnodrilus	Chaoborus	Bratislavia unidentata	Limnodrilus	Limnodrilus	Limnodrilus
Dominant Taxon (group))	Oligochaeta	Oligochaeta	Diptera	Oligochaeta	Oligochaeta	Oligochaeta	Oligochaeta
Number of samples/site	3	3	3	3	3	3	3
Total Number of Individuals	301	410	31	2078	233	51	195
Community Composition: Percent of total							
Amphipoda	0.0	0.0	0.0	17.9	0.4	0.0	0.0
Diptera	47.2	55.6	87.1	6.8	38.6	51.0	46.7
Ephemeroptera	0.0	0.0	0.0	0.4	0.0	0.0	0.0
Hirudinea	0.0	0.0	0.0	8.2	0.0	0.0	0.5
Odonata	0.0	0.0	0.0	0.4	0.0	0.0	0.0
Oligochaeta	52.8	44.4	12.9	65.0	59.7	49.0	52.8
Trichoptera	0.0	0.0	0.0	0.7	0.0	0.0	0.0
Other	0.0	0.0	0.0	0.7	1.3	0.0	0.0
Functional Feeding Groups: Percent of total							
Burrowing Deposit Feeders	52.8	44.4	12.9	65.0	59.7	49.0	52.8
Predators	24.3	13.2	83.9	9.5	38.6	49.0	34.6
Scraper	0.0	0.0	0.0	0.5	0.2	0.0	0.0
Surface Deposit Feeders	11.5	21.2	1.6	13.7	1.3	2.0	6.4
Suspension Feeders	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Shredders	11.5	21.2	1.6	11.3	0.2	0.0	6.2
Unknown	0.0	0.0	0.0	0.1	0.0	0.0	0.0

Washington D.C., EPA 440-4-89-001

Raschke, R. L. and D. A. Schultz. 1987. The use of the algal growth potential test for data assessment. J. Wat. Poll. Cont. Fed. 59(4): 222-227.

Ross, L. T. 1990. Methods for aquatic biology. Florida Department of Environmental Regulation Technical Series 10(1): 1-47.

Sokal, R. R. and F. J. Rohlf. 1995. Biometry, Third edition. W. H. Freeman and Company, New York.

Stevenson, R. J. and L. L. Bahls. 1999. Periphyton protocols. Pp. 6.1-6.22 in: Rapid bioassessment protocols for use in wadeable streams and rivers. 2nd edition. By: M. T. Barbour, J. Gerritsen, B. D. Snyder and J. B. Stribling. EPA 841-B-99-002. U. S. Environmental Protection Agency, Office of Water, Washington, D. C.

Stevenson, R. J. and J. P. Smol. 2003. Use of algae in environmental assessments, pp. 775-803, in: Freshwater algae of North America, edited by J. D. Wehr and R. G. Sheath, Academic Press, San Diego. 918 pp.

Wallace, J. B., J. W. Grubaugh and M. R. Whiles. 1996. Biotic indices and stream ecosystem processes: results from an experimental study. Ecol. Appl. 6(1): 140-151.

USEPA. 2000. Nutrient Criteria Technical Guidance Manual – River and Streams. EPA-822-B-00-002.

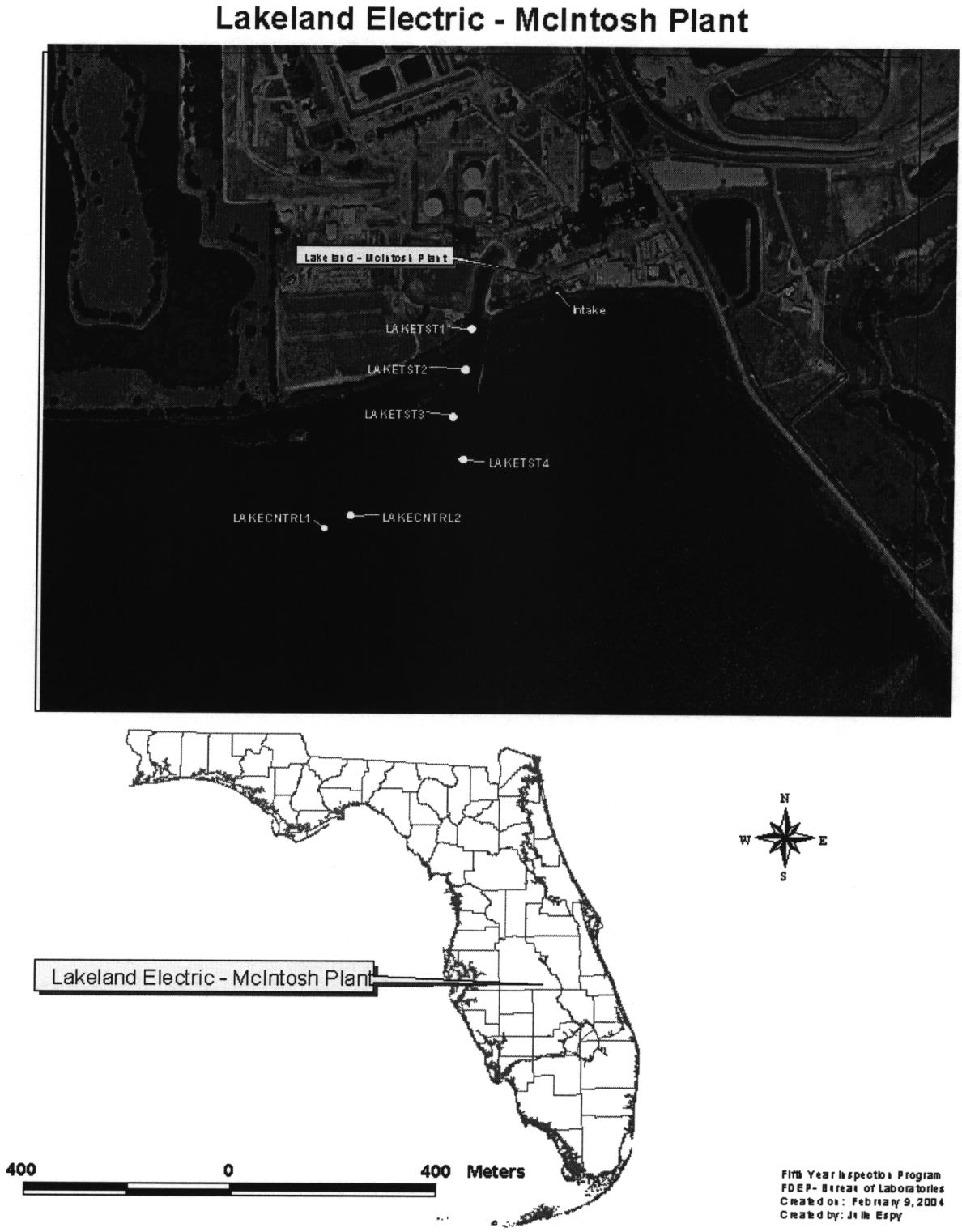
USEPA. 2002. Short-term methods for estimating the chronic toxicity of effluents and receiving waters to freshwater organisms. 4th Edition. EPA-821-R-02-013

Appendices

- Appendix 1. Map of facility
- Appendix 2. Facility summary
- Appendix 3. Explanation of measurements
- Appendix 4. Chemical analyses of effluent and receiving water.
- Appendix 5. Typical values for selected parameters in Florida waters
- Appendix 6. Toxicological benchsheets
- Appendix 7. Habitat Assessment field sheets
- Appendix 8a. Ponar samples: Taxa list and macroinvertebrate density (average number of individuals per m^2)
- Appendix 8b. Ponar samples: Taxa list and total number of macroinvertebrates counted

Appendix 1

Map of Facility



Appendix 2

Facility Summary

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENT PROECTION
FACILITY INTRODUCTION

Facility name: C.D. McIntosh Power Plant

Date of Summary: April 3, 2003

Location (detailed ARC view map attached):
3030 East Lake Parker Drive
Lakeland, Florida 33809
Latitude 28° 04′ 40″ N Longitude 81° 55′ 22″ W

County: Polk County

District: SWD

NPDES Permit: FL0026301

State GMS # and
State expiration date: 03/22/05

Facility Type: Industrial Waste

Function of facility: The facility consists of fossil fuel-fired Unit 1. Unit 1 has a once-through cooling water design flow of 115.2 MGD and a total nameplate rating of 90.0 MW.

Description of treatment process: No chemicals are added and no treatment is provided for Unit 1 condenser once-through cooling water. The water is pumped from Lake Parker, and heated in the condenser of Unit 1 and then discharged back into Lake Parker, via a discharge canal, through Outfall D-001. Wastewater from sources other than once-through condenser cooling water are discharged to the City of Lakeland Glendale domestic wastewater treatment facility.

Receiving waters: Lake Parker

Classification of water: Class III Fresh water

Design Flow: 115.2 MGD

Mean Flow (12 month average):

Flow during survey:

Discharge is: Continuous
Therefore, the best time to sample the outfall is: No limitations

If facility has a mixing zone proved details (size and parameters): No mixing zone

List effluent limits (add or remove rows and columns):

Parameter	Units	Daily Avg	Daily Max	Sample Frequency	Sample Point
Flow	MGD	Report	Report	Continuous	INT-1
Copper, Total Recoverable, Intake	µg/L	N/A	$e^{(0.8545[\ln H] - 1.465)}$	Monthly	INT-1
Effluent Total Hardness[1] as $CaCO_3$	mg/L	N/A	Report	Monthly	EFF-1
Copper, Total Recoverable[2], Effluent	µg/L	N/A	$e^{(0.8545[\ln H] - 1.465)}$	Monthly	EFF-1
Discharge Temperature	°F	Report	See Footnote[3]	Continuous	EFF-1
Temperature Rise	°F	Report	Report	Hourly	N/A

1. Total effluent hardness samples shall be taken concurrently with recoverable copper samples.
2. The actual copper limit is based on the hardness-based water quality standard set forth in Rule 62-302.520 F.A.C. for Class III freshwater. "lnH" means the natural log of total hardness expressed as milligrams/L of $CaCO_3$.
3. The thermal component of the discharge shall be consistent with the requirements of Rule 62-302.520(1) F.A.C.

Describe special permit conditions and permit modifications:

Description of permitted outfall(s):

The permit authorizes a 115.2 MGD design flow discharge of once-through cooling water from outfall D-001 to Lake Parker, a Class III Fresh water. The D-001 outfall is located approximately at Latitude: 28° 04' 40", Longitude: 81° 55' 22".

List permit violations (form DMR data or other sources) and plant upsets that occurred within past year:
Reviewed DMRs from 01/01/2002 to 03/01/2003 and the following permit violations occurred:

- No permit violations occurred.

Describe previous impact bioassessments, WQBELs, and previous or current enforcement actions:

The Department will conduct an FYI-5 sampling event on May 19, 2003.

A warning letter was issued on August 11, 1997 for potentially-unauthorized discharges to groundwater during 1997.

An Administrative Order No. AO005TL was issued as an *Order Establishing Compliance Schedule Under Section 403.088 (2)(f), F.S.* for copper violations. According to AO section II.6., the permittee has not provided reasonable assurance that the discharge from the C.D. McIntosh Power Plant is not causing or contributing to the elevated levels of copper in Lake Parker. The facility was ordered to conduct a wet and dry season study to demonstrate that discharges from the plant are not causing or contributing to the elevated levels of copper in Lake Parker and the discharge meets the fresh water standard for copper.

Upon completion of the dry weather study, the permittee had terminated the study and submitted a petition for relief from the Class III fresh water standard for copper.

OGC # 01-1498 was issued against Lakeland Electric- McIntosh (LEM) concerning a series of spill incidents. LEM Management decided to pay the sum of $180,691 in Civil Penalties in settlement of the matters addressed in the Consent Order OGC Case # 01-1498 (CO). In accordance with condition 21(b) of the CO, Lakeland will be making four equal payments of $45,172.75.

Discuss comparability of DMR results to past DEP sampling results and whether there are trends (improving, declining) in the data set. If ambient monitoring is required by permit then discuss results:

Additional information

Staff contributing to this review:

Biologist: Melissa Gunter

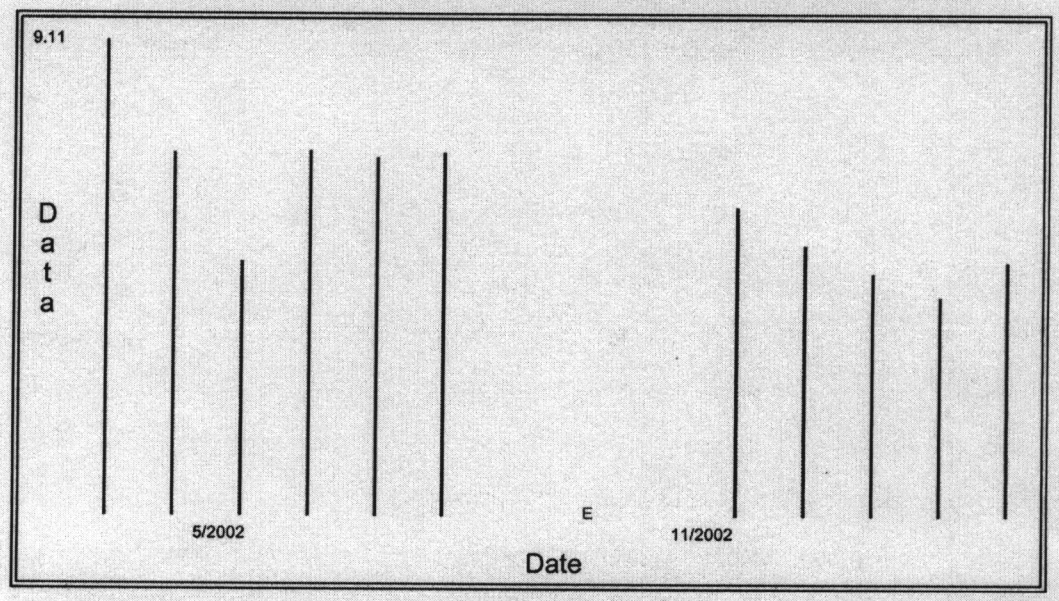
Inspector:

Engineer:

Grey line denotes that biologist should know data

Black line denotes that inspector or engineer should know data

COPPER, TOTAL RECOVERABLE versus TIME



Permit Number: FL0026301

Facility Name: LAKELAND-MCINTOSH STEAM

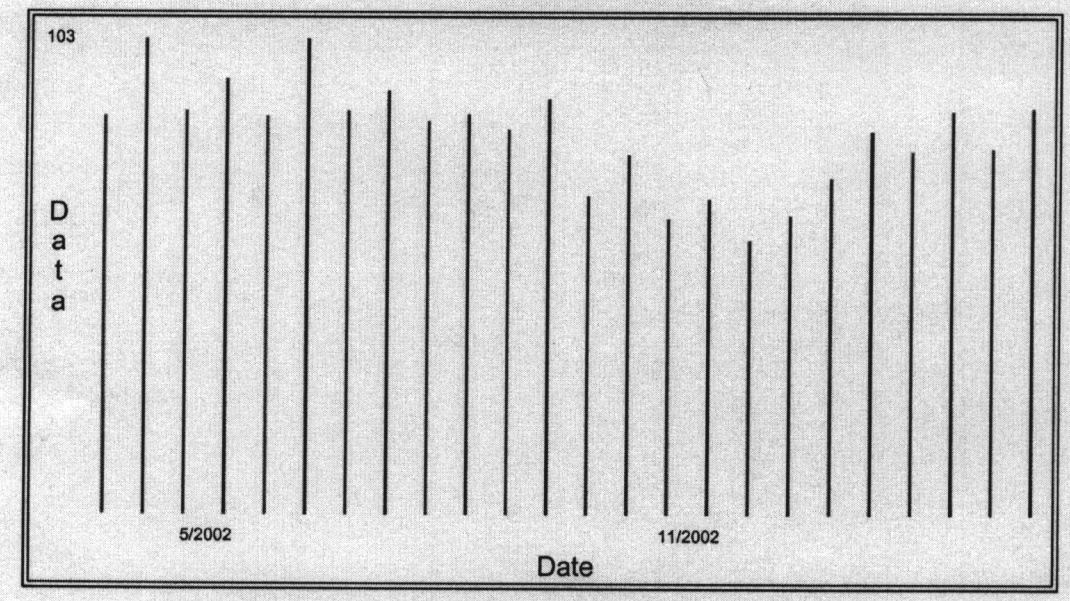
Outfall Number & Report Indicator: 001-1

Monitoring Location Code: 1

Limit starting 8/1/2000 and ending 3/31/2005: ADDMON
Statistical Base: DAILY MX
Units: UG/L
Highest Data Value: 9.11
Lowest Data Value: 4.24
Data Average: 6.0855

If a letter or number is printed on the graph in place of a bar, this is the NODI code indicating why there is not a data value for the reporting period. An asterisk (*) indicates that the data was reported as being above or below some detection limit, and therefore cannot be plotted.

TEMPERATURE, WATER DEG FAHRENHEIT versus TIME



Permit Number: FL0026301

Facility Name: LAKELAND-MCINTOSH STEAM

Outfall Number & Report Indicator: 001-1

Monitoring Location Code: 1

Limit starting 8/1/2000 and ending 3/31/2005: ADDMON
Statistical Base: DAILY AV
Units: DEG.F
Highest Data Value: 87.7
Lowest Data Value: 59.65
Data Average: 78.6725

Limit starting 8/1/2000 and ending 3/31/2005: ADDMON
Statistical Base: DAILY MX
Units: DEG.F
Highest Data Value: 103.2
Lowest Data Value: 65
Data Average: 86.875

Appendix 3

Explanation of Measurements

(1) Quality Assurance and Quality Control

FDEP's quality assurance requirements for analytical laboratories and field activities are codified in Chapter 62-160, F.A.C., Quality Assurance (QA Rule) and in internal Standard Operating Procedures (FDEP SOPs). Methods for all analyses are on file at the FDEP Central Laboratory in Tallahassee and may be viewed on the web at http://www.floridadep.org/labs/sop/index.htm and/or http://www.floridadep.org/labs/qa/index.htm .

(2) Chemical Analyses of the Effluent

The effluent was analyzed for nutrients, metals, organic constituents (base, neutral, and acid extractables) and pesticides following FDEP SOPs. A list of the analytes tested for, results, data qualifiers, the minimum detection limit and the practical quantitation limit are given in Appendix 4. The results from these analyses were compared with Water Quality Criteria (62-302 F.A.C.) and facility permit limits (Table 1, Appendix 2). Exceedances of Water Quality Criteria may be violations of specific provisions of Chapter 62-302 (F.A.C.) and/ or facility permit limits.

(3) Toxicity Bioassays

Acute screening toxicity bioassays were performed on the effluent sample using the water flea, *Ceriodaphnia dubia,* and the fish, *Cyprinella leedsi* following FDEP SOPs TA07_01 and TA07_02. Failure of toxicity testing may constitute a violation of 62-302.520(21), 62-302.530(62) and/or facility permit limits.

(4) Establishment of Sampling Stations

Chemical and biological comparisons were made among six sampling stations located on an effluent dilution gradient leading from close to the outfall where dilution was minimal to areas of increasing dilution and an area unexposed to effluent (two control stations).

Rhodamine dye was continuously fed into the effluent stream and tracked in the receiving water using a fluorometer. Rhodamine is a conservative tracer and may be used to track dilution to <1% of effluent. Background readings of fluorescence were taken to correct for interference in the water column. Dye injection lasted for approximately 3 hours. A boat was used to travel through the receiving water, continuously pumping receiving water through the fluorometer, recording the dye concentration at the end of the outfall and tracking the path of the effluent plume. Weather conditions were good during collections with light winds and sunny skies.

Sampling stations were then established after measurement of effluent dilution in the receiving water. Stations were selected based on having the same depth of water and bottom substrates. Test Site 1 was located at an estimated effluent exposure of 18%. Test Site 2 was located at an estimated effluent exposure of 12%. Test Site 3 was located at an estimated effluent exposure of 10% and Test Site 4 was located where ~4% effluent was detected in the water column during the dye study.

(6) Algal Growth Potential (AGP)

The effluent and water from control and test sites are autoclaved, filtered (0.45μm), inoculated with the unicellular green alga, *Pseudokirchneriella subcapitata* (formerly *Selenastrum capricornutum,* USEPA 2002), and incubated for 14 days (FDEP SOP TA08_05). The algal growth potential (AGP) value is the peak growth of the alga within that 14-day period, recorded as mg dry weight/L. Raschke and Shultz (1987) found that an AGP above 5.0 mg dry weight/L represents a "problem" threshold for fresh receiving waters, implying nutrient enrichment. High AGP values may constitute one line of evidence for violation of 62-302.530(47) F.A.C., 62-302.530(48)(a) F.A.C. and/or 62-302.530(48)(b) F.A.C..

The concentration of nutrients in a water sample may be used to calculate the expected yield of AGP under the assumption that other required nutrients (e.g. silicon, micronutrients) are present in excess (Miller *et al.* 1978). The expected amount of production is calculated as 38 times the total soluble inorganic nitrogen (nitrate and nitrite plus ammonia) under nitrogen limitation or 430 times the ortho-phosphate (OP) concentration under phosphorus limitation with an error of ± 20%. When the ratio of nitrogen to phosphorus (N:P) is less than 10:1, nitrogen limitation of algal production is likely. When the N:P ratio is 20:1 or greater, phosphorus limitation is likely (USEPA 2000). For ratios in-between, co-limitation may occur. Production of lower biomass than expected may be evidence of growth inhibition related to toxic compounds present in the water sample tested and may be a violation of 62-302.530(62) F.A.C..

(7) Chlorophyll-*a* Analyses

Methods: Phytoplankton were sampled using a 1 L grab sample (QA Rule SOP FS7100).

Chlorophyll *a* Content: Chlorophyll *a* content is measured in both phytoplankton and periphyton samples to estimate algal biomass (FDEP SOP BB05). High algal biomass implies nutrient stress (Stevenson and Bahls 1999) and may be a violation of 62-302.530(47) F.A.C., 62-302.530(48)(a) F.A.C. and/or 62-302.530(48)(b) F.A.C..

(8) Benthic Macroinvertebrate Assemblages

Methods: Benthic macroinvertebrates were collected from petite ponar samples. Benthic macroinvertebrates were sorted and identified to the lowest practical taxonomic level, usually species (FDEP SOP IZ06).

Taxa richness: Taxa richness is the number of distinct macroinvertebrate taxa present in a sample. Stress, habitat destruction and pollution tend to reduce the number of different types of organisms present (Karr and Chu 1998). Decreases in taxa richness related to a facility's effluent may constitute violations of 62-302.530(47) F.A.C., 62-302.530(48)(a) F.A.C., 62-302.530(48)(b) F.A.C. and/or 62-302.530(62) F.A.C..

Percent Contribution of Dominant Taxon: Percent contribution of the dominant taxon is calculated by dividing the number of individuals in the most abundant taxa by the total number of individuals counted. Percent contribution of the dominant taxon tends to increase with increasing perturbation (Plafkin *et al.*, 1989). Increases in the percent contribution of the dominant taxon related to a facility's effluent may constitute violations of 62-302.530(47) F.A.C., 62-302.530(48)(a) F.A.C. and/or 62-302.530(48)(b) F.A.C..

Shannon-Weaver Diversity Index: This index is specified in the Florida Administrative Code 62-302 as a measure of biological integrity. Low diversity scores are undesirable. Where diversity is low, only a few taxa are abundant as compared to an area where many taxa are present in equitable abundance among taxa (Magurran 1988). A difference of 25% in Shannon-Weaver diversity between results from Hester-Dendy multiplate samplers incubated for 28 days at test and control sites constitutes a violation of 62-302.530(11) F.A.C..

The Florida Index: Some organisms become rare or absent as the intensity or duration of disturbance increases. The Florida Index assigns points to stream-dwelling macroinvertebrates based on their ranked sensitivity to pollution (Beck 1954). A site with a high Florida Index score is considered healthy (Ross 1990). Decreases in Florida Index points related to a facility's effluent may constitute violations of 62-302.530(47) F.A.C., 62-302.530(48)(a) F.A.C., 62-302.530(48)(b) F.A.C. and/or 62-302.530(62) F.A.C..

Ephemeroptera/Plecoptera/Trichoptera (EPT) Taxa: This value is the number of EPT taxa present. More EPT taxa are usually present in unpolluted waters (Plafkin *et al.*, 1989, Wallace *et al.*, 1996). Decreases in the number of EPT taxa related to a facility's effluent may constitute violations of 62-302.530(47) F.A.C., 62-302.530(48)(a) F.A.C., 62-302.530(48)(b) F.A.C. and/or 62-302.530(62) F.A.C..

Community Composition: Shifts in proportions of major groups of organisms downstream of a point source, compared to upstream, control conditions, may indicate negative effects of a discharge (Karr and Chu 1998). Shifts in community composition related to a facility's effluent may constitute violations of 62-302.530(47) F.A.C., 62-302.530(48)(a) F.A.C., 62-302.530(48)(b) F.A.C. and/or 62-302.530(62) F.A.C..

Functional Feeding Groups: Environmental degradation may differentially affect groups of invertebrates based on how the group feeds (e.g. predators, deposit feeders, etc.). In Florida, pollution may be responsible for reducing the numbers of filter feeders (FDEP 1994) and shredders (EA Engineering 1994). Changes in the proportions of functional feeding groups related to a facility's effluent may constitute violations of 62-302.530(47) F.A.C., 62-302.530(48)(a) F.A.C., 62-302.530(48)(b) F.A.C. and/or 62-302.530(62) F.A.C..

Appendix 4

Chemical analysis of effluent and receiving water

Date Sampled	Site Location	Field ID	Analysis Group	Component	Result	Units	Remark	MDL	PQL
5/28/2003 9:00	MCINTOSH POWER	CONTROL SITE 1	Bio-AGP/LimNut	Algal Growth Potential	29.8	mg DryWt/L		0.1	0.3
5/28/2003 10:40	MCINTOSH POWER	CONTROL SITE 2	Bio-AGP/LimNut	Algal Growth Potential	28.3	mg DryWt/L		0.1	0.3
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	Bio-AGP/LimNut	Algal Growth Potential	17.9	mg DryWt/L		0.1	0.3
5/27/2003 11:40	Mcintosh power plant	MCINTOSH INTAKE 1	Bio-AGP/LimNut	Algal Growth Potential	10.7	mg DryWt/L		0.1	0.3
5/28/2003 13:10	MCINTOSH POWER	SITE 1	Bio-AGP/LimNut	Algal Growth Potential	29.3	mg DryWt/L		0.1	0.3
5/28/2003 12:30	MCINTOSH POWER	SITE 2	Bio-AGP/LimNut	Algal Growth Potential	24.5	mg DryWt/L		0.1	0.3
5/28/2003 12:00	MCINTOSH POWER	SITE 3	Bio-AGP/LimNut	Algal Growth Potential	25.2	mg DryWt/L		0.1	0.3
5/28/2003 11:20	MCINTOSH POWER	SITE 4	Bio-AGP/LimNut	Algal Growth Potential	30.9	mg DryWt/L		0.1	0.3
5/28/2003 9:00	MCINTOSH POWER	CONTROL SITE 1	Bio-Chl-a	Chlorophyll-A, Monochromatic, Water	74	ug/L		4.3	13
5/28/2003 9:00	MCINTOSH POWER	CONTROL SITE 1	Bio-Chl-a	Phaeophytin-A, Monochromatic, Water	0	ug/L		4.3	13
5/28/2003 10:40	MCINTOSH POWER	CONTROL SITE 2	Bio-Chl-a	Chlorophyll-A, Monochromatic, Water	64	ug/L		4.3	13
5/28/2003 10:40	MCINTOSH POWER	CONTROL SITE 2	Bio-Chl-a	Phaeophytin-A, Monochromatic, Water	0	ug/L		4.3	13
5/27/2003 11:40	Mcintosh power plant	MCINTOSH INTAKE 1	Bio-Chl-a	Chlorophyll-A, Monochromatic, Water	52	ug/L	A	4.3	13
5/27/2003 11:40	Mcintosh power plant	MCINTOSH INTAKE 1	Bio-Chl-a	Phaeophytin-A, Monochromatic, Water	0	ug/L	A	4.3	13
5/28/2003 13:10	MCINTOSH POWER	SITE 1	Bio-Chl-a	Chlorophyll-A, Monochromatic, Water	73	ug/L		4.3	13
5/28/2003 13:10	MCINTOSH POWER	SITE 1	Bio-Chl-a	Phaeophytin-A, Monochromatic, Water	0	ug/L		4.3	13
5/28/2003 12:30	MCINTOSH POWER	SITE 2	Bio-Chl-a	Chlorophyll-A, Monochromatic, Water	73	ug/L		4.3	13
5/28/2003 12:30	MCINTOSH POWER	SITE 2	Bio-Chl-a	Phaeophytin-A, Monochromatic, Water	0	ug/L		4.3	13
5/28/2003 12:00	MCINTOSH POWER	SITE 3	Bio-Chl-a	Chlorophyll-A, Monochromatic, Water	46	ug/L		4.3	13
5/28/2003 12:00	MCINTOSH POWER	SITE 3	Bio-Chl-a	Phaeophytin-A, Monochromatic, Water	0	ug/L		4.3	13
5/28/2003 11:20	MCINTOSH POWER	SITE 4	Bio-Chl-a	Chlorophyll-A, Monochromatic, Water	64	ug/L	A	4.8	14
5/28/2003 11:20	MCINTOSH POWER	SITE 4	Bio-Chl-a	Phaeophytin-A, Monochromatic, Water	0	ug/L	A	4.8	14
5/28/2003 9:00	MCINTOSH POWER	CONTROL SITE 1 - REP 1	Bio-Invertebrates	Macroinvert-FW-Quan-NatSubstr-# Taxa	5	# Taxa			
5/28/2003 9:00	MCINTOSH POWER	CONTROL SITE 1 - REP 2	Bio-Invertebrates	Macroinvert-FW-Quan-NatSubstr-# Taxa	4	# Taxa			
5/28/2003 9:00	MCINTOSH POWER	CONTROL SITE 1 - REP 3	Bio-Invertebrates	Macroinvert-FW-Quan-NatSubstr-# Taxa	5	# Taxa			
5/28/2003 10:40	MCINTOSH POWER	CONTROL SITE 2 - REP 1	Bio-Invertebrates	Macroinvert-FW-Quan-NatSubstr-# Taxa	4	# Taxa			
5/28/2003 10:40	MCINTOSH POWER	CONTROL SITE 2 - REP 2	Bio-Invertebrates	Macroinvert-FW-Quan-NatSubstr-# Taxa	5	# Taxa			
5/28/2003 10:40	MCINTOSH POWER	CONTROL SITE 2 - REP 3	Bio-Invertebrates	Macroinvert-FW-Quan-NatSubstr-# Taxa	5	# Taxa			
5/28/2003 14:00	MCINTOSH POWER	INTAKE - REP 1	Bio-Invertebrates	Macroinvert-FW-Quan-NatSubstr-# Taxa	2	# Taxa			
5/28/2003 14:00	MCINTOSH POWER	INTAKE - REP 2	Bio-Invertebrates	Macroinvert-FW-Quan-NatSubstr-# Taxa	2	# Taxa			
5/28/2003 14:00	MCINTOSH POWER	INTAKE - REP 3	Bio-Invertebrates	Macroinvert-FW-Quan-NatSubstr-# Taxa	3	# Taxa			
5/28/2003 13:10	MCINTOSH POWER	SITE 1 - REP 1	Bio-Invertebrates	Macroinvert-FW-Quan-NatSubstr-# Taxa	8	# Taxa			
5/28/2003 13:10	MCINTOSH POWER	SITE 1 - REP 2	Bio-Invertebrates	Macroinvert-FW-Quan-NatSubstr-# Taxa	4	# Taxa			
5/28/2003 13:10	MCINTOSH POWER	SITE 1 - REP 3	Bio-Invertebrates	Macroinvert-FW-Quan-NatSubstr-# Taxa	30	# Taxa			
5/28/2003 12:30	MCINTOSH POWER	SITE 2 - REP 1	Bio-Invertebrates	Macroinvert-FW-Quan-NatSubstr-# Taxa	6	# Taxa			
5/28/2003 12:30	MCINTOSH POWER	SITE 2 - REP 2	Bio-Invertebrates	Macroinvert-FW-Quan-NatSubstr-# Taxa	6	# Taxa			
5/28/2003 12:30	MCINTOSH POWER	SITE 2 - REP 3	Bio-Invertebrates	Macroinvert-FW-Quan-NatSubstr-# Taxa	3	# Taxa			
5/28/2003 12:00	MCINTOSH POWER	SITE 3 - REP 1	Bio-Invertebrates	Macroinvert-FW-Quan-NatSubstr-# Taxa	3	# Taxa			
5/28/2003 12:00	MCINTOSH POWER	SITE 3 - REP 2	Bio-Invertebrates	Macroinvert-FW-Quan-NatSubstr-# Taxa	3	# Taxa			
5/28/2003 12:00	MCINTOSH POWER	SITE 3 - REP 3	Bio-Invertebrates	Macroinvert-FW-Quan-NatSubstr-# Taxa	3	# Taxa			
5/28/2003 11:20	MCINTOSH POWER	SITE 4 - REP 1	Bio-Invertebrates	Macroinvert-FW-Quan-NatSubstr-# Taxa	6	# Taxa			
5/28/2003 11:20	MCINTOSH POWER	SITE 4 - REP 2	Bio-Invertebrates	Macroinvert-FW-Quan-NatSubstr-# Taxa	6	# Taxa			
5/28/2003 11:20	MCINTOSH POWER	SITE 4 - REP 3	Bio-Invertebrates	Macroinvert-FW-Quan-NatSubstr-# Taxa	7	# Taxa			
5/28/2003 9:00	MCINTOSH POWER	CONTROL SITE 1	Bio-SedPrtSz/AFDW	Sediment % Organic	2	% dry wt			
5/28/2003 9:00	MCINTOSH POWER	CONTROL SITE 1	Bio-SedPrtSz/AFDW	Sediment Particle Size, %, 0.063-0.125mm	17.2	% vol <2mm			
5/28/2003 9:00	MCINTOSH POWER	CONTROL SITE 1	Bio-SedPrtSz/AFDW	Sediment Particle Size, %, 0.125-0.25 mm	23.5	% vol <2mm			
5/28/2003 9:00	MCINTOSH POWER	CONTROL SITE 1	Bio-SedPrtSz/AFDW	Sediment Particle Size, %, 0.25-0.5 mm	34.2	% vol <2mm			
5/28/2003 9:00	MCINTOSH POWER	CONTROL SITE 1	Bio-SedPrtSz/AFDW	Sediment Particle Size, %, 0.5-2.0 mm	8.45	% vol <2mm			
5/28/2003 9:00	MCINTOSH POWER	CONTROL SITE 1	Bio-SedPrtSz/AFDW	Sediment Particle Size, %, <0.063 mm	16.6	% vol <2mm			
5/28/2003 9:00	MCINTOSH POWER	CONTROL SITE 1	Bio-SedPrtSz/AFDW	Sediment Particle Size, %, >2.0 mm	0.67	%tot drywt			
5/28/2003 10:40	MCINTOSH POWER	CONTROL SITE 2	Bio-SedPrtSz/AFDW	Sediment % Organic	1	% dry wt			
5/28/2003 10:40	MCINTOSH POWER	CONTROL SITE 2	Bio-SedPrtSz/AFDW	Sediment Particle Size, %, 0.063-0.125mm	8.84	% vol <2mm			
5/28/2003 10:40	MCINTOSH POWER	CONTROL SITE 2	Bio-SedPrtSz/AFDW	Sediment Particle Size, %, 0.125-0.25 mm	20.6	% vol <2mm			
5/28/2003 10:40	MCINTOSH POWER	CONTROL SITE 2	Bio-SedPrtSz/AFDW	Sediment Particle Size, %, 0.25-0.5 mm	48.1	% vol <2mm			
5/28/2003 10:40	MCINTOSH POWER	CONTROL SITE 2	Bio-SedPrtSz/AFDW	Sediment Particle Size, %, 0.5-2.0 mm	12.5	% vol <2mm			
5/28/2003 10:40	MCINTOSH POWER	CONTROL SITE 2	Bio-SedPrtSz/AFDW	Sediment Particle Size, %, <0.063 mm	9.93	% vol <2mm			
5/28/2003 10:40	MCINTOSH POWER	CONTROL SITE 2	Bio-SedPrtSz/AFDW	Sediment Particle Size, %, >2.0 mm	0.14	%tot drywt			
5/27/2003 16:45	MCINTOSH POWER	INTAKE	Bio-SedPrtSz/AFDW	Sediment % Organic	1.1	% dry wt			

Date Sampled	Site Location	Field ID	Analysis Group	Component	Result	Units	Remark	MDL	PQL
5/27/2003 16:45	MCINTOSH POWER	INTAKE	Bio-SedPrtSz/AFDW	Sediment Particle Size, %, 0.063-0.125mm	2.42	% vol	<2mm		
5/27/2003 16:45	MCINTOSH POWER	INTAKE	Bio-SedPrtSz/AFDW	Sediment Particle Size, %, 0.125-0.25 mm	20.7	% vol	<2mm		
5/27/2003 16:45	MCINTOSH POWER	INTAKE	Bio-SedPrtSz/AFDW	Sediment Particle Size, %, 0.25-0.5 mm	54.9	% vol	<2mm		
5/27/2003 16:45	MCINTOSH POWER	INTAKE	Bio-SedPrtSz/AFDW	Sediment Particle Size, %, 0.5-2.0 mm	16.8	% vol	<2mm		
5/27/2003 16:45	MCINTOSH POWER	INTAKE	Bio-SedPrtSz/AFDW	Sediment Particle Size, %, <0.063 mm	5.25	% vol	<2mm		
5/27/2003 16:45	MCINTOSH POWER	INTAKE	Bio-SedPrtSz/AFDW	Sediment Particle Size, %, >2.0 mm	0.21	%tot drywt			
5/28/2003 13:10	MCINTOSH POWER	SITE 1	Bio-SedPrtSz/AFDW	Sediment % Organic	1.3	% dry wt			
5/28/2003 13:10	MCINTOSH POWER	SITE 1	Bio-SedPrtSz/AFDW	Sediment Particle Size, %, 0.063-0.125mm	1.66	% vol	<2mm		
5/28/2003 13:10	MCINTOSH POWER	SITE 1	Bio-SedPrtSz/AFDW	Sediment Particle Size, %, 0.125-0.25 mm	28	% vol	<2mm		
5/28/2003 13:10	MCINTOSH POWER	SITE 1	Bio-SedPrtSz/AFDW	Sediment Particle Size, %, 0.25-0.5 mm	55.4	% vol	<2mm		
5/28/2003 13:10	MCINTOSH POWER	SITE 1	Bio-SedPrtSz/AFDW	Sediment Particle Size, %, 0.5-2.0 mm	13.4	% vol	<2mm		
5/28/2003 13:10	MCINTOSH POWER	SITE 1	Bio-SedPrtSz/AFDW	Sediment Particle Size, %, <0.063 mm	1.58	% vol	<2mm		
5/28/2003 13:10	MCINTOSH POWER	SITE 1	Bio-SedPrtSz/AFDW	Sediment Particle Size, %, >2.0 mm	0.35	%tot drywt			
5/28/2003 12:30	MCINTOSH POWER	SITE 2	Bio-SedPrtSz/AFDW	Sediment % Organic	2.9	% dry wt			
5/28/2003 12:30	MCINTOSH POWER	SITE 2	Bio-SedPrtSz/AFDW	Sediment Particle Size, %, 0.063-0.125mm	20.4	% vol	<2mm		
5/28/2003 12:30	MCINTOSH POWER	SITE 2	Bio-SedPrtSz/AFDW	Sediment Particle Size, %, 0.125-0.25 mm	37.8	% vol	<2mm		
5/28/2003 12:30	MCINTOSH POWER	SITE 2	Bio-SedPrtSz/AFDW	Sediment Particle Size, %, 0.25-0.5 mm	14.7	% vol	<2mm		
5/28/2003 12:30	MCINTOSH POWER	SITE 2	Bio-SedPrtSz/AFDW	Sediment Particle Size, %, 0.5-2.0 mm	10.6	% vol	<2mm		
5/28/2003 12:30	MCINTOSH POWER	SITE 2	Bio-SedPrtSz/AFDW	Sediment Particle Size, %, <0.063 mm	16.4	% vol	<2mm		
5/28/2003 12:30	MCINTOSH POWER	SITE 2	Bio-SedPrtSz/AFDW	Sediment Particle Size, %, >2.0 mm	0.23	%tot drywt			
5/28/2003 12:00	MCINTOSH POWER	SITE 3	Bio-SedPrtSz/AFDW	Sediment % Organic	0.98	% dry wt			
5/28/2003 12:00	MCINTOSH POWER	SITE 3	Bio-SedPrtSz/AFDW	Sediment Particle Size, %, 0.063-0.125mm	9.38	% vol	<2mm		
5/28/2003 12:00	MCINTOSH POWER	SITE 3	Bio-SedPrtSz/AFDW	Sediment Particle Size, %, 0.125-0.25 mm	24.1	% vol	<2mm		
5/28/2003 12:00	MCINTOSH POWER	SITE 3	Bio-SedPrtSz/AFDW	Sediment Particle Size, %, 0.25-0.5 mm	43.5	% vol	<2mm		
5/28/2003 12:00	MCINTOSH POWER	SITE 3	Bio-SedPrtSz/AFDW	Sediment Particle Size, %, 0.5-2.0 mm	13.6	% vol	<2mm		
5/28/2003 12:00	MCINTOSH POWER	SITE 3	Bio-SedPrtSz/AFDW	Sediment Particle Size, %, <0.063 mm	9.3	% vol	<2mm		
5/28/2003 12:00	MCINTOSH POWER	SITE 3	Bio-SedPrtSz/AFDW	Sediment Particle Size, %, >2.0 mm	0.94	%tot drywt			
5/28/2003 11:20	MCINTOSH POWER	SITE 4	Bio-SedPrtSz/AFDW	Sediment % Organic	1.9	% dry wt	A		
5/28/2003 11:20	MCINTOSH POWER	SITE 4	Bio-SedPrtSz/AFDW	Sediment Particle Size, %, 0.063-0.125mm	14.2	% vol	<2r A		
5/28/2003 11:20	MCINTOSH POWER	SITE 4	Bio-SedPrtSz/AFDW	Sediment Particle Size, %, 0.125-0.25 mm	22.9	% vol	<2r A		
5/28/2003 11:20	MCINTOSH POWER	SITE 4	Bio-SedPrtSz/AFDW	Sediment Particle Size, %, 0.25-0.5 mm	37.8	% vol	<2r A		
5/28/2003 11:20	MCINTOSH POWER	SITE 4	Bio-SedPrtSz/AFDW	Sediment Particle Size, %, 0.5-2.0 mm	10.4	% vol	<2r A		
5/28/2003 11:20	MCINTOSH POWER	SITE 4	Bio-SedPrtSz/AFDW	Sediment Particle Size, %, <0.063 mm	14.6	% vol	<2r A		
5/28/2003 11:20	MCINTOSH POWER	SITE 4	Bio-SedPrtSz/AFDW	Sediment Particle Size, %, >2.0 mm	0.07	%tot dryw	A		
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	Bio-Toxicology	Bioassay-Acute-Screen-FW-C.dubia, LC50	100	LC50	L		
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	Bio-Toxicology	Bioassay-Acute-Screen-FW-Fish, LC50	100	LC50	L		
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	Bio-Toxicology	Bioassay-Acute-Screen-FW-Fish,LC50-pHadj	100	LC50	L		
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	Bio-Toxicology	Bioassay-Acute-Scrn-FW-Cdubia,LC50-pHad	100	LC50	L		
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	BNA-Water	1,2,4-Trichlorobenzene	0.96	ug/L	U	0.96	3.8
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	BNA-Water	1,2-Dichlorobenzene	0.96	ug/L	U	0.96	3.8
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	BNA-Water	1,3-Dichlorobenzene	0.96	ug/L	U	0.96	3.8
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	BNA-Water	1,4-Dichlorobenzene	0.96	ug/L	U	0.96	3.8
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	BNA-Water	2,4,6-Trichlorophenol	0.96	ug/L	U	0.96	3.8
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	BNA-Water	2,4-Dichlorophenol	0.96	ug/L	U	0.96	3.8
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	BNA-Water	2,4-Dimethylphenol	48	ug/L	U	48	190
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	BNA-Water	2,4-Dinitrophenol	14	ug/L	U	14	58
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	BNA-Water	2,4-Dinitrotoluene	0.96	ug/L	U	0.96	3.8
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	BNA-Water	2,6-Dinitrotoluene	0.96	ug/L	U	0.96	3.8
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	BNA-Water	2-Chloronaphthalene	0.96	ug/L	U	0.96	3.8
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	BNA-Water	2-Chlorophenol	0.96	ug/L	U	0.96	3.8
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	BNA-Water	2-Methyl-4,6-dinitrophenol	2.9	ug/L	U	2.9	12
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	BNA-Water	2-Nitrophenol	0.96	ug/L	U	0.96	3.8
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	BNA-Water	3,3'-Dichlorobenzidine	38	ug/L	U	38	150
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	BNA-Water	4,4'-DDD	1.4	ug/L	U	1.4	5.8
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	BNA-Water	4,4'-DDE	1.4	ug/L	U	1.4	5.8
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	BNA-Water	4,4'-DDT	1.4	ug/L	U	1.4	5.8
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	BNA-Water	4-Bromophenyl phenyl ether	0.96	ug/L	U	0.96	3.8
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	BNA-Water	4-Chloro-3-methylphenol	0.96	ug/L	U	0.96	3.8
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	BNA-Water	4-Chlorophenyl phenyl ether	1.9	ug/L	U	1.9	7.7
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	BNA-Water	4-Nitrophenol	14	ug/L	U	14	58
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	BNA-Water	Acenaphthene	0.96	ug/L	U	0.96	3.8
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	BNA-Water	Acenaphthylene	0.96	ug/L	U	0.96	3.8
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	BNA-Water	Aldrin	1.4	ug/L	U	1.4	5.8
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	BNA-Water	Anthracene	0.96	ug/L	U	0.96	3.8
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	BNA-Water	Azobenzene/1,2-Diphenylhydrazine	0.96	ug/L	U	0.96	3.8
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	BNA-Water	Benzidine	96	ug/L	U	96	380
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	BNA-Water	Benzo(a)anthracene	0.96	ug/L	U	0.96	3.8
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	BNA-Water	Benzo(a)pyrene	0.96	ug/L	U	0.96	3.8
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	BNA-Water	Benzo(b)fluoranthene	0.96	ug/L	U	0.96	3.8
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	BNA-Water	Benzo(g,h,i)perylene	0.96	ug/L	U	0.96	3.8
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	BNA-Water	Benzo(k)fluoranthene	0.96	ug/L	U	0.96	3.8
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	BNA-Water	Bis(2-chloroethoxy)methane	0.96	ug/L	U	0.96	3.8
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	BNA-Water	Bis(2-chloroethyl)ether	0.96	ug/L	U	0.96	3.8
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	BNA-Water	Bis(2-chloroisopropyl)ether	2.9	ug/L	U	2.9	12

Date Sampled	Site Location	Field ID	Analysis Group	Component	Result	Units	Remark	MDL	PQL
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	BNA-Water	Dibenzo(a,h)anthracene	0.96	ug/L	U	0.96	3.8
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	BNA-Water	Dieldrin	1.4	ug/L	U	1.4	5.8
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	BNA-Water	Diethyl phthalate	0.96	ug/L	U	0.96	3.8
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	BNA-Water	Dimethyl phthalate	48	ug/L	U	48	190
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	BNA-Water	Endosulfan I	3.8	ug/L	U	3.8	15
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	BNA-Water	Endosulfan II	3.8	ug/L	U	3.8	15
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	BNA-Water	Endosulfan sulfate	1.4	ug/L	U	1.4	5.8
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	BNA-Water	Endrin	1.4	ug/L	U	1.4	5.8
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	BNA-Water	Endrin aldehyde	3.8	ug/L	U	3.8	15
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	BNA-Water	Fluoranthene	0.96	ug/L	U	0.96	3.8
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	BNA-Water	Fluorene	0.96	ug/L	U	0.96	3.8
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	BNA-Water	Heptachlor	1.4	ug/L	U	1.4	5.8
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	BNA-Water	Heptachlor epoxide	1.4	ug/L	U	1.4	5.8
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	BNA-Water	Hexachlorobenzene	0.96	ug/L	U	0.96	3.8
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	BNA-Water	Hexachlorobutadiene	2.9	ug/L	U	2.9	12
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	BNA-Water	Hexachlorocyclopentadiene	2.9	ug/L	U	2.9	12
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	BNA-Water	Hexachloroethane	2.9	ug/L	U	2.9	12
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	BNA-Water	Indeno(1,2,3-cd)pyrene	0.96	ug/L	U	0.96	3.8
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	BNA-Water	Isophorone	0.96	ug/L	U	0.96	3.8
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	BNA-Water	N-Nitrosodi-n-propylamine	1.9	ug/L	U	1.9	7.7
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	BNA-Water	N-Nitrosodimethylamine	1.9	ug/L	U	1.9	7.7
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	BNA-Water	N-Nitrosodiphenylamine	2.9	ug/L	U	2.9	12
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	BNA-Water	Naphthalene	0.96	ug/L	U	0.96	3.8
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	BNA-Water	Nitrobenzene	1.9	ug/L	U	1.9	7.7
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	BNA-Water	Pentachlorophenol	2.9	ug/L	U	2.9	12
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	BNA-Water	Phenanthrene	0.96	ug/L	U	0.96	3.8
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	BNA-Water	Phenol	0.96	ug/L	U	0.96	3.8
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	BNA-Water	Pyrene	0.96	ug/L	U	0.96	3.8
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	BNA-Water	alpha-BHC	1.4	ug/L	U	1.4	5.8
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	BNA-Water	beta-BHC	1.4	ug/L	U	1.4	5.8
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	BNA-Water	delta-BHC	1.4	ug/L	U	1.4	5.8
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	BNA-Water	gamma-BHC	1.4	ug/L	U	1.4	5.8
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	BNA-Water	1,2,4-Trichlorobenzene	0.96	ug/L	U	0.96	3.8
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	BNA-Water	1,2-Dichlorobenzene	0.96	ug/L	U	0.96	3.8
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	BNA-Water	1,3-Dichlorobenzene	0.96	ug/L	U	0.96	3.8
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	BNA-Water	1,4-Dichlorobenzene	0.96	ug/L	U	0.96	3.8
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	BNA-Water	2,4,6-Trichlorophenol	0.96	ug/L	U	0.96	3.8
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	BNA-Water	2,4-Dichlorophenol	0.96	ug/L	U	0.96	3.8
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	BNA-Water	2,4-Dimethylphenol	48	ug/L	U	48	190
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	BNA-Water	2,4-Dinitrophenol	14	ug/L	U	14	58
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	BNA-Water	2,4-Dinitrotoluene	0.96	ug/L	U	0.96	3.8
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	BNA-Water	2,6-Dinitrotoluene	0.96	ug/L	U	0.96	3.8
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	BNA-Water	2-Chloronaphthalene	0.96	ug/L	U	0.96	3.8
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	BNA-Water	2-Chlorophenol	0.96	ug/L	U	0.96	3.8
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	BNA-Water	2-Methyl-4,6-dinitrophenol	2.9	ug/L	U	2.9	12
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	BNA-Water	2-Nitrophenol	0.96	ug/L	U	0.96	3.8
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	BNA-Water	3,3'-Dichlorobenzidine	38	ug/L	U	38	150
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	BNA-Water	4,4'-DDD	1.4	ug/L	U	1.4	5.8
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	BNA-Water	4,4'-DDE	1.4	ug/L	U	1.4	5.8
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	BNA-Water	4,4'-DDT	1.4	ug/L	U	1.4	5.8
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	BNA-Water	4-Bromophenyl phenyl ether	0.96	ug/L	U	0.96	3.8
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	BNA-Water	4-Chloro-3-methylphenol	0.96	ug/L	U	0.96	3.8
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	BNA-Water	4-Chlorophenyl phenyl ether	1.9	ug/L	U	1.9	7.7
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	BNA-Water	4-Nitrophenol	14	ug/L	U	14	58
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	BNA-Water	Acenaphthene	0.96	ug/L	U	0.96	3.8
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	BNA-Water	Acenaphthylene	0.96	ug/L	U	0.96	3.8
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	BNA-Water	Aldrin	1.4	ug/L	U	1.4	5.8
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	BNA-Water	Anthracene	0.96	ug/L	U	0.96	3.8
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	BNA-Water	Azobenzene/1,2-Diphenylhydrazine	0.96	ug/L	U	0.96	3.8
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	BNA-Water	Benzidine	96	ug/L	U	96	380
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	BNA-Water	Benzo(a)anthracene	0.96	ug/L	U	0.96	3.8
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	BNA-Water	Benzo(a)pyrene	0.96	ug/L	U	0.96	3.8
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	BNA-Water	Benzo(b)fluoranthene	0.96	ug/L	U	0.96	3.8
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	BNA-Water	Benzo(g,h,i)perylene	0.96	ug/L	U	0.96	3.8
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	BNA-Water	Benzo(k)fluoranthene	0.96	ug/L	U	0.96	3.8
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	BNA-Water	Bis(2-chloroethoxy)methane	0.96	ug/L	U	0.96	3.8
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	BNA-Water	Bis(2-chloroethyl)ether	0.96	ug/L	U	0.96	3.8
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	BNA-Water	Bis(2-chloroisopropyl)ether	2.9	ug/L	U	2.9	12
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	BNA-Water	Bis(2-ethylhexyl)phthalate	14	ug/L	U	14	58
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	BNA-Water	Butyl benzyl phthalate	4.8	ug/L	U	4.8	19
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	BNA-Water	Chrysene	0.96	ug/L	U	0.96	3.8
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	BNA-Water	Di-n-butyl phthalate	4.8	ug/L	U	4.8	19
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	BNA-Water	Di-n-octyl phthalate	0.96	ug/L	U	0.96	3.8
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	BNA-Water	Dibenzo(a,h)anthracene	0.96	ug/L	U	0.96	3.8

Date Sampled	Site Location	Field ID	Analysis Group	Component	Result	Units	Remark	MDL	PQL
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	BNA-Water	Endosulfan II	3.8	ug/L	U	3.8	15
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	BNA-Water	Endosulfan sulfate	1.4	ug/L	U	1.4	5.8
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	BNA-Water	Endrin	1.4	ug/L	U	1.4	5.8
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	BNA-Water	Endrin aldehyde	3.8	ug/L	U	3.8	15
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	BNA-Water	Fluoranthene	0.96	ug/L	U	0.96	3.8
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	BNA-Water	Fluorene	0.96	ug/L	U	0.96	3.8
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	BNA-Water	Heptachlor	1.4	ug/L	U	1.4	5.8
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	BNA-Water	Heptachlor epoxide	1.4	ug/L	U	1.4	5.8
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	BNA-Water	Hexachlorobenzene	0.96	ug/L	U	0.96	3.8
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	BNA-Water	Hexachlorobutadiene	2.9	ug/L	U	2.9	12
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	BNA-Water	Hexachlorocyclopentadiene	2.9	ug/L	U	2.9	12
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	BNA-Water	Hexachloroethane	2.9	ug/L	U	2.9	12
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	BNA-Water	Indeno(1,2,3-cd)pyrene	0.96	ug/L	U	0.96	3.8
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	BNA-Water	Isophorone	0.96	ug/L	U	0.96	3.8
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	BNA-Water	N-Nitrosodi-n-propylamine	1.9	ug/L	U	1.9	7.7
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	BNA-Water	N-Nitrosodimethylamine	1.9	ug/L	U	1.9	7.7
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	BNA-Water	N-Nitrosodiphenylamine	2.9	ug/L	U	2.9	12
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	BNA-Water	Naphthalene	0.96	ug/L	U	0.96	3.8
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	BNA-Water	Nitrobenzene	1.9	ug/L	U	1.9	7.7
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	BNA-Water	Pentachlorophenol	2.9	ug/L	U	2.9	12
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	BNA-Water	Phenanthrene	0.96	ug/L	U	0.96	3.8
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	BNA-Water	Phenol	0.96	ug/L	U	0.96	3.8
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	BNA-Water	Pyrene	0.96	ug/L	U	0.96	3.8
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	BNA-Water	alpha-BHC	1.4	ug/L	U	1.4	5.8
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	BNA-Water	beta-BHC	1.4	ug/L	U	1.4	5.8
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	BNA-Water	delta-BHC	1.4	ug/L	U	1.4	5.8
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	BNA-Water	gamma-BHC	1.4	ug/L	U	1.4	5.8
5/27/2003 11:40	Mcintosh power plant	MCINTOSH INTAKE 1	BNA-Water	1,2,4-Trichlorobenzene	0.96	ug/L	U	0.96	3.8
5/27/2003 11:40	Mcintosh power plant	MCINTOSH INTAKE 1	BNA-Water	1,2-Dichlorobenzene	0.96	ug/L	U	0.96	3.8
5/27/2003 11:40	Mcintosh power plant	MCINTOSH INTAKE 1	BNA-Water	1,3-Dichlorobenzene	0.96	ug/L	U	0.96	3.8
5/27/2003 11:40	Mcintosh power plant	MCINTOSH INTAKE 1	BNA-Water	1,4-Dichlorobenzene	0.96	ug/L	U	0.96	3.8
5/27/2003 11:40	Mcintosh power plant	MCINTOSH INTAKE 1	BNA-Water	2,4,6-Trichlorophenol	0.96	ug/L	U	0.96	3.8
5/27/2003 11:40	Mcintosh power plant	MCINTOSH INTAKE 1	BNA-Water	2,4-Dichlorophenol	0.96	ug/L	U	0.96	3.8
5/27/2003 11:40	Mcintosh power plant	MCINTOSH INTAKE 1	BNA-Water	2,4-Dimethylphenol	48	ug/L	U	48	190
5/27/2003 11:40	Mcintosh power plant	MCINTOSH INTAKE 1	BNA-Water	2,4-Dinitrophenol	14	ug/L	U	14	58
5/27/2003 11:40	Mcintosh power plant	MCINTOSH INTAKE 1	BNA-Water	2,4-Dinitrotoluene	0.96	ug/L	U	0.96	3.8
5/27/2003 11:40	Mcintosh power plant	MCINTOSH INTAKE 1	BNA-Water	2,6-Dinitrotoluene	0.96	ug/L	U	0.96	3.8
5/27/2003 11:40	Mcintosh power plant	MCINTOSH INTAKE 1	BNA-Water	2-Chloronaphthalene	0.96	ug/L	U	0.96	3.8
5/27/2003 11:40	Mcintosh power plant	MCINTOSH INTAKE 1	BNA-Water	2-Chlorophenol	0.96	ug/L	U	0.96	3.8
5/27/2003 11:40	Mcintosh power plant	MCINTOSH INTAKE 1	BNA-Water	2-Methyl-4,6-dinitrophenol	2.9	ug/L	U	2.9	12
5/27/2003 11:40	Mcintosh power plant	MCINTOSH INTAKE 1	BNA-Water	2-Nitrophenol	0.96	ug/L	U	0.96	3.8
5/27/2003 11:40	Mcintosh power plant	MCINTOSH INTAKE 1	BNA-Water	3,3'-Dichlorobenzidine	38	ug/L	U	38	150
5/27/2003 11:40	Mcintosh power plant	MCINTOSH INTAKE 1	BNA-Water	4,4'-DDD	1.4	ug/L	U	1.4	5.8
5/27/2003 11:40	Mcintosh power plant	MCINTOSH INTAKE 1	BNA-Water	4,4'-DDE	1.4	ug/L	U	1.4	5.8
5/27/2003 11:40	Mcintosh power plant	MCINTOSH INTAKE 1	BNA-Water	4,4'-DDT	1.4	ug/L	U	1.4	5.8
5/27/2003 11:40	Mcintosh power plant	MCINTOSH INTAKE 1	BNA-Water	4-Bromophenyl phenyl ether	0.96	ug/L	U	0.96	3.8
5/27/2003 11:40	Mcintosh power plant	MCINTOSH INTAKE 1	BNA-Water	4-Chloro-3-methylphenol	0.96	ug/L	U	0.96	3.8
5/27/2003 11:40	Mcintosh power plant	MCINTOSH INTAKE 1	BNA-Water	4-Chlorophenyl phenyl ether	1.9	ug/L	U	1.9	7.7
5/27/2003 11:40	Mcintosh power plant	MCINTOSH INTAKE 1	BNA-Water	4-Nitrophenol	14	ug/L	U	14	58
5/27/2003 11:40	Mcintosh power plant	MCINTOSH INTAKE 1	BNA-Water	Acenaphthene	0.96	ug/L	U	0.96	3.8
5/27/2003 11:40	Mcintosh power plant	MCINTOSH INTAKE 1	BNA-Water	Acenaphthylene	0.96	ug/L	U	0.96	3.8
5/27/2003 11:40	Mcintosh power plant	MCINTOSH INTAKE 1	BNA-Water	Aldrin	1.4	ug/L	U	1.4	5.8
5/27/2003 11:40	Mcintosh power plant	MCINTOSH INTAKE 1	BNA-Water	Anthracene	0.96	ug/L	U	0.96	3.8
5/27/2003 11:40	Mcintosh power plant	MCINTOSH INTAKE 1	BNA-Water	Azobenzene/1,2-Diphenylhydrazine	0.96	ug/L	U	0.96	3.8
5/27/2003 11:40	Mcintosh power plant	MCINTOSH INTAKE 1	BNA-Water	Benzidine	96	ug/L	U	96	380
5/27/2003 11:40	Mcintosh power plant	MCINTOSH INTAKE 1	BNA-Water	Benzo(a)anthracene	0.96	ug/L	U	0.96	3.8
5/27/2003 11:40	Mcintosh power plant	MCINTOSH INTAKE 1	BNA-Water	Benzo(a)pyrene	0.96	ug/L	U	0.96	3.8
5/27/2003 11:40	Mcintosh power plant	MCINTOSH INTAKE 1	BNA-Water	Benzo(b)fluoranthene	0.96	ug/L	U	0.96	3.8
5/27/2003 11:40	Mcintosh power plant	MCINTOSH INTAKE 1	BNA-Water	Benzo(g,h,i)perylene	0.96	ug/L	U	0.96	3.8
5/27/2003 11:40	Mcintosh power plant	MCINTOSH INTAKE 1	BNA-Water	Benzo(k)fluoranthene	0.96	ug/L	U	0.96	3.8
5/27/2003 11:40	Mcintosh power plant	MCINTOSH INTAKE 1	BNA-Water	Bis(2-chloroethoxy)methane	0.96	ug/L	U	0.96	3.8
5/27/2003 11:40	Mcintosh power plant	MCINTOSH INTAKE 1	BNA-Water	Bis(2-chloroethyl)ether	0.96	ug/L	U	0.96	3.8
5/27/2003 11:40	Mcintosh power plant	MCINTOSH INTAKE 1	BNA-Water	Bis(2-chloroisopropyl)ether	2.9	ug/L	U	2.9	12
5/27/2003 11:40	Mcintosh power plant	MCINTOSH INTAKE 1	BNA-Water	Bis(2-ethylhexyl)phthalate	14	ug/L	U	14	58
5/27/2003 11:40	Mcintosh power plant	MCINTOSH INTAKE 1	BNA-Water	Butyl benzyl phthalate	4.8	ug/L	U	4.8	19
5/27/2003 11:40	Mcintosh power plant	MCINTOSH INTAKE 1	BNA-Water	Chrysene	0.96	ug/L	U	0.96	3.8
5/27/2003 11:40	Mcintosh power plant	MCINTOSH INTAKE 1	BNA-Water	Di-n-butyl phthalate	4.8	ug/L	U	4.8	19
5/27/2003 11:40	Mcintosh power plant	MCINTOSH INTAKE 1	BNA-Water	Di-n-octyl phthalate	0.96	ug/L	U	0.96	3.8
5/27/2003 11:40	Mcintosh power plant	MCINTOSH INTAKE 1	BNA-Water	Dibenzo(a,h)anthracene	0.96	ug/L	U	0.96	3.8
5/27/2003 11:40	Mcintosh power plant	MCINTOSH INTAKE 1	BNA-Water	Dieldrin	1.4	ug/L	U	1.4	5.8
5/27/2003 11:40	Mcintosh power plant	MCINTOSH INTAKE 1	BNA-Water	Diethyl phthalate	0.96	ug/L	U	0.96	3.8
5/27/2003 11:40	Mcintosh power plant	MCINTOSH INTAKE 1	BNA-Water	Dimethyl phthalate	48	ug/L	U	48	190
5/27/2003 11:40	Mcintosh power plant	MCINTOSH INTAKE 1	BNA-Water	Endosulfan I	3.8	ug/L	U	3.8	15
5/27/2003 11:40	Mcintosh power plant	MCINTOSH INTAKE 1	BNA-Water	Endosulfan II	3.8	ug/L	U	3.8	15

Date Sampled	Site Location	Field ID	Analysis Group	Component	Result	Units	Remark	MDL	P
5/27/2003 11:40	Mcintosh power plant	MCINTOSH INTAKE 1	BNA-Water	Heptachlor epoxide	1.4	ug/L	U	1.4	5
5/27/2003 11:40	Mcintosh power plant	MCINTOSH INTAKE 1	BNA-Water	Hexachlorobenzene	0.96	ug/L	U	0.96	3
5/27/2003 11:40	Mcintosh power plant	MCINTOSH INTAKE 1	BNA-Water	Hexachlorobutadiene	2.9	ug/L	U	2.9	1
5/27/2003 11:40	Mcintosh power plant	MCINTOSH INTAKE 1	BNA-Water	Hexachlorocyclopentadiene	2.9	ug/L	U	2.9	1
5/27/2003 11:40	Mcintosh power plant	MCINTOSH INTAKE 1	BNA-Water	Hexachloroethane	2.9	ug/L	U	2.9	1
5/27/2003 11:40	Mcintosh power plant	MCINTOSH INTAKE 1	BNA-Water	Indeno(1,2,3-cd)pyrene	0.96	ug/L	U	0.96	3
5/27/2003 11:40	Mcintosh power plant	MCINTOSH INTAKE 1	BNA-Water	Isophorone	0.96	ug/L	U	0.96	3
5/27/2003 11:40	Mcintosh power plant	MCINTOSH INTAKE 1	BNA-Water	N-Nitrosodi-n-propylamine	1.9	ug/L	U	1.9	7
5/27/2003 11:40	Mcintosh power plant	MCINTOSH INTAKE 1	BNA-Water	N-Nitrosodimethylamine	1.9	ug/L	U	1.9	7
5/27/2003 11:40	Mcintosh power plant	MCINTOSH INTAKE 1	BNA-Water	N-Nitrosodiphenylamine	2.9	ug/L	U	2.9	1
5/27/2003 11:40	Mcintosh power plant	MCINTOSH INTAKE 1	BNA-Water	Naphthalene	0.96	ug/L	U	0.96	3
5/27/2003 11:40	Mcintosh power plant	MCINTOSH INTAKE 1	BNA-Water	Nitrobenzene	1.9	ug/L	U	1.9	7
5/27/2003 11:40	Mcintosh power plant	MCINTOSH INTAKE 1	BNA-Water	Pentachlorophenol	2.9	ug/L	U	2.9	1
5/27/2003 11:40	Mcintosh power plant	MCINTOSH INTAKE 1	BNA-Water	Phenanthrene	0.96	ug/L	U	0.96	3
5/27/2003 11:40	Mcintosh power plant	MCINTOSH INTAKE 1	BNA-Water	Phenol	0.96	ug/L	U	0.96	3
5/27/2003 11:40	Mcintosh power plant	MCINTOSH INTAKE 1	BNA-Water	Pyrene	0.96	ug/L	U	0.96	3
5/27/2003 11:40	Mcintosh power plant	MCINTOSH INTAKE 1	BNA-Water	alpha-BHC	1.4	ug/L	U	1.4	5
5/27/2003 11:40	Mcintosh power plant	MCINTOSH INTAKE 1	BNA-Water	beta-BHC	1.4	ug/L	U	1.4	5
5/27/2003 11:40	Mcintosh power plant	MCINTOSH INTAKE 1	BNA-Water	delta-BHC	1.4	ug/L	U	1.4	5
5/27/2003 11:40	Mcintosh power plant	MCINTOSH INTAKE 1	BNA-Water	gamma-BHC	1.4	ug/L	U	1.4	5
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	GC-Water	Alachlor	0.61	ug/L	U	0.61	2.
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	GC-Water	Ametryn	0.05	ug/L	U	0.05	0
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	GC-Water	Atrazine	0.068	ug/L	I	0.05	0
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	GC-Water	Azinphos Methyl	0.05	ug/L	U	0.05	0
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	GC-Water	Bromacil	0.2	ug/L	U	0.2	0
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	GC-Water	Butylate	0.2	ug/L	U	0.2	0
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	GC-Water	Chlorpyrifos Ethyl	0.05	ug/L	U	0.05	0
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	GC-Water	Chlorpyrifos Methyl	0.1	ug/L	U	0.1	0
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	GC-Water	Diazinon	0.05	ug/L	U	0.05	0
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	GC-Water	Ethion	0.05	ug/L	U	0.05	0
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	GC-Water	Ethoprop	0.1	ug/L	U	0.1	0
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	GC-Water	Fenamiphos	0.2	ug/L	U	0.2	0
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	GC-Water	Fonofos	0.1	ug/L	U	0.1	0
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	GC-Water	Hexazinone	0.1	ug/L	U	0.1	0
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	GC-Water	Malathion	0.15	ug/L	U	0.15	0
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	GC-Water	Metalaxyl	0.25	ug/L	U	0.25	
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	GC-Water	Metolachlor	0.5	ug/L	U	0.5	:
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	GC-Water	Metribuzin	0.1	ug/L	U	0.1	0
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	GC-Water	Mevinphos	0.2	ug/L	U	0.2	0
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	GC-Water	Naled	0.81	ug/L	U	0.81	3.
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	GC-Water	Norflurazon	0.1	ug/L	U	0.1	0
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	GC-Water	Parathion Ethyl	0.15	ug/L	U	0.15	0
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	GC-Water	Parathion Methyl	0.1	ug/L	U	0.1	0
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	GC-Water	Phorate	0.05	ug/L	U	0.05	0
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	GC-Water	Prometryn	0.15	ug/L	U	0.15	0
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	GC-Water	Simazine	0.05	ug/L	U	0.05	0
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	GC-Water	Alachlor	0.58	ug/L	U	0.58	2.
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	GC-Water	Ametryn	0.048	ug/L	U	0.048	0.'
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	GC-Water	Atrazine	0.048	ug/L	U	0.048	0.'
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	GC-Water	Azinphos Methyl	0.048	ug/L	U	0.048	0.'
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	GC-Water	Bromacil	0.19	ug/L	U	0.19	0.
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	GC-Water	Butylate	0.19	ug/L	U	0.19	0.
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	GC-Water	Chlorpyrifos Ethyl	0.048	ug/L	U	0.048	0.'
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	GC-Water	Chlorpyrifos Methyl	0.097	ug/L	U	0.097	0.3
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	GC-Water	Diazinon	0.048	ug/L	U	0.048	0.'
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	GC-Water	Ethion	0.048	ug/L	U	0.048	0.'
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	GC-Water	Ethoprop	0.097	ug/L	U	0.097	0.3
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	GC-Water	Fenamiphos	0.19	ug/L	U	0.19	0.
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	GC-Water	Fonofos	0.097	ug/L	U	0.097	0.3
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	GC-Water	Hexazinone	0.097	ug/L	U	0.097	0.3
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	GC-Water	Malathion	0.14	ug/L	U	0.14	0.
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	GC-Water	Metalaxyl	0.24	ug/L	U	0.24	0.
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	GC-Water	Metolachlor	0.48	ug/L	U	0.48	1.
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	GC-Water	Metribuzin	0.097	ug/L	U	0.097	0.3
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	GC-Water	Mevinphos	0.19	ug/L	U	0.19	0.
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	GC-Water	Naled	0.78	ug/L	U	0.78	3.
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	GC-Water	Norflurazon	0.097	ug/L	U	0.097	0.3
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	GC-Water	Parathion Ethyl	0.14	ug/L	U	0.14	0.
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	GC-Water	Parathion Methyl	0.097	ug/L	U	0.097	0.3
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	GC-Water	Phorate	0.048	ug/L	U	0.048	0.'
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	GC-Water	Prometryn	0.14	ug/L	U	0.14	0.
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	GC-Water	Simazine	0.048	ug/L	U	0.048	0.'
5/27/2003 11:40	Mcintosh power plant	MCINTOSH INTAKE 1	GC-Water	Alachlor	0.58	ug/L	U	0.58	2.
5/27/2003 11:40	Mcintosh power plant	MCINTOSH INTAKE 1	GC-Water	Ametryn	0.048	ug/L	U	0.048	0.'

Date Sampled	Site Location	Field ID	Analysis Group	Component	Result	Units	Remark	MDL	PQL
5/28/2003 9:00	MCINTOSH POWER	CONTROL SITE 1-BOTTOM	Metals-Water	Copper	3.9	ug/L	I	3	12
5/28/2003 9:00	MCINTOSH POWER	CONTROL SITE 1-BOTTOM	Metals-Water	Iron	93	ug/L		10	40
5/28/2003 9:00	MCINTOSH POWER	CONTROL SITE 1-BOTTOM	Metals-Water	Lead	12	ug/L	U	12	48
5/28/2003 9:00	MCINTOSH POWER	CONTROL SITE 1-BOTTOM	Metals-Water	Nickel	2	ug/L	U	2	8
5/28/2003 9:00	MCINTOSH POWER	CONTROL SITE 1-BOTTOM	Metals-Water	Silver	0.75	ug/L	U	0.75	3
5/28/2003 9:00	MCINTOSH POWER	CONTROL SITE 1-BOTTOM	Metals-Water	Zinc	3	ug/L	U	3	12
5/28/2003 10:40	MCINTOSH POWER	CONTROL SITE 2	Metals-Water	Aluminum	273	ug/L		10	40
5/28/2003 10:40	MCINTOSH POWER	CONTROL SITE 2	Metals-Water	Arsenic	7	ug/L	U	7	28
5/28/2003 10:40	MCINTOSH POWER	CONTROL SITE 2	Metals-Water	Cadmium	0.5	ug/L	U	0.5	2
5/28/2003 10:40	MCINTOSH POWER	CONTROL SITE 2	Metals-Water	Calcium	21.9	mg/L		0.05	0.3
5/28/2003 10:40	MCINTOSH POWER	CONTROL SITE 2	Metals-Water	Chromium	2	ug/L	U	2	8
5/28/2003 10:40	MCINTOSH POWER	CONTROL SITE 2	Metals-Water	Copper	3.6	ug/L	I	3	12
5/28/2003 10:40	MCINTOSH POWER	CONTROL SITE 2	Metals-Water	Iron	79	ug/L		10	40
5/28/2003 10:40	MCINTOSH POWER	CONTROL SITE 2	Metals-Water	Lead	12	ug/L	U	12	48
5/28/2003 10:40	MCINTOSH POWER	CONTROL SITE 2	Metals-Water	Magnesium	2.8	mg/L		0.01	0.04
5/28/2003 10:40	MCINTOSH POWER	CONTROL SITE 2	Metals-Water	Nickel	2	ug/L	U	2	8
5/28/2003 10:40	MCINTOSH POWER	CONTROL SITE 2	Metals-Water	Selenium	15	ug/L	U	15	60
5/28/2003 10:40	MCINTOSH POWER	CONTROL SITE 2	Metals-Water	Silver	0.75	ug/L	U	0.75	3
5/28/2003 10:40	MCINTOSH POWER	CONTROL SITE 2	Metals-Water	Zinc	3	ug/L	U	3	12
5/28/2003 10:40	MCINTOSH POWER	CONTROL SITE 2-BOTTOM	Metals-Water	Aluminum	346	ug/L		10	40
5/28/2003 10:40	MCINTOSH POWER	CONTROL SITE 2-BOTTOM	Metals-Water	Cadmium	0.5	ug/L	U	0.5	2
5/28/2003 10:40	MCINTOSH POWER	CONTROL SITE 2-BOTTOM	Metals-Water	Chromium	2	ug/L	U	2	8
5/28/2003 10:40	MCINTOSH POWER	CONTROL SITE 2-BOTTOM	Metals-Water	Copper	4.2	ug/L	I	3	12
5/28/2003 10:40	MCINTOSH POWER	CONTROL SITE 2-BOTTOM	Metals-Water	Iron	119	ug/L		10	40
5/28/2003 10:40	MCINTOSH POWER	CONTROL SITE 2-BOTTOM	Metals-Water	Lead	12	ug/L	U	12	48
5/28/2003 10:40	MCINTOSH POWER	CONTROL SITE 2-BOTTOM	Metals-Water	Nickel	2	ug/L	U	2	8
5/28/2003 10:40	MCINTOSH POWER	CONTROL SITE 2-BOTTOM	Metals-Water	Silver	0.75	ug/L	U	0.75	3
5/28/2003 10:40	MCINTOSH POWER	CONTROL SITE 2-BOTTOM	Metals-Water	Zinc	3	ug/L	U	3	12
5/27/2003 15:15	Mcintosh power plant	EFFLUENT BOTTOM	Metals-Water	Aluminum	322	ug/L		10	40
5/27/2003 15:15	Mcintosh power plant	EFFLUENT BOTTOM	Metals-Water	Arsenic	7	ug/L	U	7	28
5/27/2003 15:15	Mcintosh power plant	EFFLUENT BOTTOM	Metals-Water	Cadmium	0.025	ug/L	U	0.025	0.1
5/27/2003 15:15	Mcintosh power plant	EFFLUENT BOTTOM	Metals-Water	Calcium	22.3	mg/L		0.05	0.3
5/27/2003 15:15	Mcintosh power plant	EFFLUENT BOTTOM	Metals-Water	Chromium	2	ug/L	U	2	8
5/27/2003 15:15	Mcintosh power plant	EFFLUENT BOTTOM	Metals-Water	Copper	5.7	ug/L	I	3	12
5/27/2003 15:15	Mcintosh power plant	EFFLUENT BOTTOM	Metals-Water	Iron	101	ug/L		10	40
5/27/2003 15:15	Mcintosh power plant	EFFLUENT BOTTOM	Metals-Water	Lead	2.7	ug/L		0.1	0.4
5/27/2003 15:15	Mcintosh power plant	EFFLUENT BOTTOM	Metals-Water	Magnesium	2.9	mg/L		0.01	0.04
5/27/2003 15:15	Mcintosh power plant	EFFLUENT BOTTOM	Metals-Water	Nickel	2	ug/L	U	2	8
5/27/2003 15:15	Mcintosh power plant	EFFLUENT BOTTOM	Metals-Water	Selenium	1	ug/L	U	1	4
5/27/2003 15:15	Mcintosh power plant	EFFLUENT BOTTOM	Metals-Water	Silver	0.02	ug/L	U	0.02	0.08
5/27/2003 15:15	Mcintosh power plant	EFFLUENT BOTTOM	Metals-Water	Zinc	3	ug/L	U	3	12
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	Metals-Water	Aluminum	319	ug/L		10	40
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	Metals-Water	Arsenic	7	ug/L	U	7	28
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	Metals-Water	Cadmium	0.025	ug/L	U	0.025	0.1
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	Metals-Water	Calcium	22.3	mg/L		0.05	0.3
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	Metals-Water	Chromium	2	ug/L	U	2	8
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	Metals-Water	Copper	6	ug/L	I	3	12
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	Metals-Water	Iron	100	ug/L		10	40
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	Metals-Water	Lead	2.5	ug/L		0.1	0.4
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	Metals-Water	Magnesium	2.9	mg/L		0.01	0.04
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	Metals-Water	Nickel	2	ug/L	U	2	8
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	Metals-Water	Selenium	1	ug/L	U	1	4
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	Metals-Water	Silver	0.02	ug/L	U	0.02	0.08
5/27/2003 15:15	Mcintosh power plant	EFFLUENT(28859)	Metals-Water	Zinc	3	ug/L	U	3	12
5/27/2003 13:25	Mcintosh power plant	EQUIPBLK 2 (28858)	Metals-Water	Aluminum	10	ug/L	U	10	40
5/27/2003 13:25	Mcintosh power plant	EQUIPBLK 2 (28858)	Metals-Water	Arsenic	7	ug/L	U	7	28
5/27/2003 13:25	Mcintosh power plant	EQUIPBLK 2 (28858)	Metals-Water	Cadmium	0.025	ug/L	U	0.025	0.1
5/27/2003 13:25	Mcintosh power plant	EQUIPBLK 2 (28858)	Metals-Water	Calcium	0.05	mg/L	U	0.05	0.3
5/27/2003 13:25	Mcintosh power plant	EQUIPBLK 2 (28858)	Metals-Water	Chromium	2	ug/L	U	2	8
5/27/2003 13:25	Mcintosh power plant	EQUIPBLK 2 (28858)	Metals-Water	Copper	3	ug/L	U	3	12
5/27/2003 13:25	Mcintosh power plant	EQUIPBLK 2 (28858)	Metals-Water	Iron	10	ug/L	U	10	40
5/27/2003 13:25	Mcintosh power plant	EQUIPBLK 2 (28858)	Metals-Water	Lead	1.3	ug/L		0.1	0.4
5/27/2003 13:25	Mcintosh power plant	EQUIPBLK 2 (28858)	Metals-Water	Magnesium	0.01	mg/L	U	0.01	0.04
5/27/2003 13:25	Mcintosh power plant	EQUIPBLK 2 (28858)	Metals-Water	Nickel	2	ug/L	U	2	8
5/27/2003 13:25	Mcintosh power plant	EQUIPBLK 2 (28858)	Metals-Water	Selenium	1	ug/L	U	1	4
5/27/2003 13:25	Mcintosh power plant	EQUIPBLK 2 (28858)	Metals-Water	Silver	0.02	ug/L	U	0.02	0.08
5/27/2003 13:25	Mcintosh power plant	EQUIPBLK 2 (28858)	Metals-Water	Zinc	3	ug/L	U	3	12
5/27/2003 16:10	Mcintosh power plant	EQUIPMENT 3	Metals-Water	Aluminum	10	ug/L	U	10	40
5/27/2003 16:10	Mcintosh power plant	EQUIPMENT 3	Metals-Water	Arsenic	7	ug/L	U	7	28
5/27/2003 16:10	Mcintosh power plant	EQUIPMENT 3	Metals-Water	Cadmium	0.025	ug/L	U	0.025	0.1
5/27/2003 16:10	Mcintosh power plant	EQUIPMENT 3	Metals-Water	Calcium	0.05	mg/L	U	0.05	0.3
5/27/2003 16:10	Mcintosh power plant	EQUIPMENT 3	Metals-Water	Chromium	2	ug/L	U	2	8
5/27/2003 16:10	Mcintosh power plant	EQUIPMENT 3	Metals-Water	Copper	3	ug/L	U	3	12
5/27/2003 16:10	Mcintosh power plant	EQUIPMENT 3	Metals-Water	Iron	10	ug/L	U	10	40

Date Sampled	Site Location	Field ID	Analysis Group	Component	Result	Units	Remark	MDL	PQL
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	Metals-Water	Aluminum	10	ug/L	U	10	40
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	Metals-Water	Arsenic	7	ug/L	U	7	28
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	Metals-Water	Cadmium	0.025	ug/L	U	0.025	0.1
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	Metals-Water	Calcium	0.05	mg/L	U	0.05	0.3
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	Metals-Water	Chromium	2	ug/L	U	2	8
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	Metals-Water	Copper	3	ug/L	U	3	12
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	Metals-Water	Iron	10	ug/L	U	10	40
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	Metals-Water	Lead	0.1	ug/L	U	0.1	0.4
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	Metals-Water	Magnesium	0.01	mg/L	U	0.01	0.04
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	Metals-Water	Nickel	2	ug/L	U	2	8
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	Metals-Water	Selenium	1	ug/L	U	1	4
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	Metals-Water	Silver	0.02	ug/L	U	0.02	0.08
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	Metals-Water	Zinc	3	ug/L	U	3	12
5/27/2003 11:40	Mcintosh power plant	INTAKE 2 (28857)	Metals-Water	Aluminum	294	ug/L		10	40
5/27/2003 11:40	Mcintosh power plant	INTAKE 2 (28857)	Metals-Water	Arsenic	7	ug/L	U	7	28
5/27/2003 11:40	Mcintosh power plant	INTAKE 2 (28857)	Metals-Water	Cadmium	0.025	ug/L	U	0.025	0.1
5/27/2003 11:40	Mcintosh power plant	INTAKE 2 (28857)	Metals-Water	Calcium	21.7	mg/L		0.05	0.3
5/27/2003 11:40	Mcintosh power plant	INTAKE 2 (28857)	Metals-Water	Chromium	2	ug/L	U	2	8
5/27/2003 11:40	Mcintosh power plant	INTAKE 2 (28857)	Metals-Water	Copper	3.5	ug/L	I	3	12
5/27/2003 11:40	Mcintosh power plant	INTAKE 2 (28857)	Metals-Water	Iron	86	ug/L		10	40
5/27/2003 11:40	Mcintosh power plant	INTAKE 2 (28857)	Metals-Water	Lead	2	ug/L		0.1	0.4
5/27/2003 11:40	Mcintosh power plant	INTAKE 2 (28857)	Metals-Water	Magnesium	2.8	mg/L		0.01	0.04
5/27/2003 11:40	Mcintosh power plant	INTAKE 2 (28857)	Metals-Water	Nickel	2	ug/L	U	2	8
5/27/2003 11:40	Mcintosh power plant	INTAKE 2 (28857)	Metals-Water	Selenium	1	ug/L	U	1	4
5/27/2003 11:40	Mcintosh power plant	INTAKE 2 (28857)	Metals-Water	Silver	0.02	ug/L	U	0.02	0.08
5/27/2003 11:40	Mcintosh power plant	INTAKE 2 (28857)	Metals-Water	Zinc	3	ug/L	U	3	12
5/27/2003 11:40	Mcintosh power plant	INTAKE BOTTOM	Metals-Water	Aluminum	289	ug/L		10	40
5/27/2003 11:40	Mcintosh power plant	INTAKE BOTTOM	Metals-Water	Arsenic	7	ug/L	U	7	28
5/27/2003 11:40	Mcintosh power plant	INTAKE BOTTOM	Metals-Water	Cadmium	0.025	ug/L	U	0.025	0.1
5/27/2003 11:40	Mcintosh power plant	INTAKE BOTTOM	Metals-Water	Calcium	22	mg/L		0.05	0.3
5/27/2003 11:40	Mcintosh power plant	INTAKE BOTTOM	Metals-Water	Chromium	2	ug/L	U	2	8
5/27/2003 11:40	Mcintosh power plant	INTAKE BOTTOM	Metals-Water	Copper	3.7	ug/L	I	3	12
5/27/2003 11:40	Mcintosh power plant	INTAKE BOTTOM	Metals-Water	Iron	80	ug/L		10	40
5/27/2003 11:40	Mcintosh power plant	INTAKE BOTTOM	Metals-Water	Lead	2.1	ug/L		0.1	0.4
5/27/2003 11:40	Mcintosh power plant	INTAKE BOTTOM	Metals-Water	Magnesium	2.8	mg/L		0.01	0.04
5/27/2003 11:40	Mcintosh power plant	INTAKE BOTTOM	Metals-Water	Nickel	2	ug/L	U	2	8
5/27/2003 11:40	Mcintosh power plant	INTAKE BOTTOM	Metals-Water	Selenium	1	ug/L	U	1	4
5/27/2003 11:40	Mcintosh power plant	INTAKE BOTTOM	Metals-Water	Silver	0.02	ug/L	U	0.02	0.08
5/27/2003 11:40	Mcintosh power plant	INTAKE BOTTOM	Metals-Water	Zinc	3	ug/L	U	3	12
5/27/2003 11:40	Mcintosh power plant	MCINTOSH INTAKE 1	Metals-Water	Aluminum	306	ug/L	A	10	40
5/27/2003 11:40	Mcintosh power plant	MCINTOSH INTAKE 1	Metals-Water	Arsenic	7	ug/L	U	7	28
5/27/2003 11:40	Mcintosh power plant	MCINTOSH INTAKE 1	Metals-Water	Cadmium	0.025	ug/L	U	0.025	0.1
5/27/2003 11:40	Mcintosh power plant	MCINTOSH INTAKE 1	Metals-Water	Calcium	22.3	mg/L	A	0.05	0.3
5/27/2003 11:40	Mcintosh power plant	MCINTOSH INTAKE 1	Metals-Water	Chromium	2	ug/L	U	2	8
5/27/2003 11:40	Mcintosh power plant	MCINTOSH INTAKE 1	Metals-Water	Copper	3.3	ug/L	I	3	12
5/27/2003 11:40	Mcintosh power plant	MCINTOSH INTAKE 1	Metals-Water	Iron	101	ug/L	A	10	40
5/27/2003 11:40	Mcintosh power plant	MCINTOSH INTAKE 1	Metals-Water	Lead	2.2	ug/L	A	0.1	0.4
5/27/2003 11:40	Mcintosh power plant	MCINTOSH INTAKE 1	Metals-Water	Magnesium	2.9	mg/L	A	0.01	0.04
5/27/2003 11:40	Mcintosh power plant	MCINTOSH INTAKE 1	Metals-Water	Nickel	2	ug/L	U	2	8
5/27/2003 11:40	Mcintosh power plant	MCINTOSH INTAKE 1	Metals-Water	Selenium	1	ug/L	U	1	4
5/27/2003 11:40	Mcintosh power plant	MCINTOSH INTAKE 1	Metals-Water	Silver	0.02	ug/L	U	0.02	0.08
5/27/2003 11:40	Mcintosh power plant	MCINTOSH INTAKE 1	Metals-Water	Zinc	3	ug/L	U	3	12
5/28/2003 13:10	MCINTOSH POWER SITE 1		Metals-Water	Aluminum	333	ug/L		10	40
5/28/2003 13:10	MCINTOSH POWER SITE 1		Metals-Water	Arsenic	7	ug/L	U	7	28
5/28/2003 13:10	MCINTOSH POWER SITE 1		Metals-Water	Cadmium	0.5	ug/L	U	0.5	2
5/28/2003 13:10	MCINTOSH POWER SITE 1		Metals-Water	Calcium	22.4	mg/L		0.05	0.3
5/28/2003 13:10	MCINTOSH POWER SITE 1		Metals-Water	Chromium	2	ug/L	U	2	8
5/28/2003 13:10	MCINTOSH POWER SITE 1		Metals-Water	Copper	5.9	ug/L	I	3	12
5/28/2003 13:10	MCINTOSH POWER SITE 1		Metals-Water	Iron	102	ug/L		10	40
5/28/2003 13:10	MCINTOSH POWER SITE 1		Metals-Water	Lead	12	ug/L	U	12	48
5/28/2003 13:10	MCINTOSH POWER SITE 1		Metals-Water	Magnesium	2.9	mg/L		0.01	0.04
5/28/2003 13:10	MCINTOSH POWER SITE 1		Metals-Water	Nickel	2	ug/L	U	2	8
5/28/2003 13:10	MCINTOSH POWER SITE 1		Metals-Water	Selenium	15	ug/L	U	15	60
5/28/2003 13:10	MCINTOSH POWER SITE 1		Metals-Water	Silver	0.75	ug/L	U	0.75	3
5/28/2003 13:10	MCINTOSH POWER SITE 1		Metals-Water	Zinc	6.5	ug/L	I	3	12
5/28/2003 13:10	MCINTOSH POWER SITE 1-BOTTOM		Metals-Water	Aluminum	363	ug/L		10	40
5/28/2003 13:10	MCINTOSH POWER SITE 1-BOTTOM		Metals-Water	Cadmium	0.5	ug/L	U	0.5	2
5/28/2003 13:10	MCINTOSH POWER SITE 1-BOTTOM		Metals-Water	Chromium	2	ug/L	U	2	8
5/28/2003 13:10	MCINTOSH POWER SITE 1-BOTTOM		Metals-Water	Copper	6.4	ug/L	I	3	12
5/28/2003 13:10	MCINTOSH POWER SITE 1-BOTTOM		Metals-Water	Iron	147	ug/L		10	40
5/28/2003 13:10	MCINTOSH POWER SITE 1-BOTTOM		Metals-Water	Lead	12	ug/L	U	12	48
5/28/2003 13:10	MCINTOSH POWER SITE 1-BOTTOM		Metals-Water	Nickel	2	ug/L	U	2	8
5/28/2003 13:10	MCINTOSH POWER SITE 1-BOTTOM		Metals-Water	Silver	0.75	ug/L	U	0.75	3
5/28/2003 13:10	MCINTOSH POWER SITE 1-BOTTOM		Metals-Water	Zinc	4.1	ug/L	I	3	12

Date Sampled	Site Location	Field ID	Analysis Group	Component	Result	Units	Remark	MDL	PQL
5/28/2003 12:30	MCINTOSH POWER	SITE 2	Metals-Water	Aluminum	349	ug/L		10	40
5/28/2003 12:30	MCINTOSH POWER	SITE 2	Metals-Water	Arsenic	7	ug/L	U	7	28
5/28/2003 12:30	MCINTOSH POWER	SITE 2	Metals-Water	Cadmium	0.5	ug/L	U	0.5	2
5/28/2003 12:30	MCINTOSH POWER	SITE 2	Metals-Water	Calcium	23.4	mg/L		0.05	0.3
5/28/2003 12:30	MCINTOSH POWER	SITE 2	Metals-Water	Chromium	2	ug/L	U	2	8
5/28/2003 12:30	MCINTOSH POWER	SITE 2	Metals-Water	Copper	6	ug/L	I	3	12
5/28/2003 12:30	MCINTOSH POWER	SITE 2	Metals-Water	Iron	114	ug/L		10	40
5/28/2003 12:30	MCINTOSH POWER	SITE 2	Metals-Water	Lead	12	ug/L	U	12	48
5/28/2003 12:30	MCINTOSH POWER	SITE 2	Metals-Water	Magnesium	3	mg/L		0.01	0.04
5/28/2003 12:30	MCINTOSH POWER	SITE 2	Metals-Water	Nickel	2	ug/L	U	2	8
5/28/2003 12:30	MCINTOSH POWER	SITE 2	Metals-Water	Selenium	15	ug/L	U	15	60
5/28/2003 12:30	MCINTOSH POWER	SITE 2	Metals-Water	Silver	0.75	ug/L	U	0.75	3
5/28/2003 12:30	MCINTOSH POWER	SITE 2	Metals-Water	Zinc	3.8	ug/L	I	3	12
5/28/2003 12:30	MCINTOSH POWER	SITE 2-BOTTOM	Metals-Water	Aluminum	361	ug/L		10	40
5/28/2003 12:30	MCINTOSH POWER	SITE 2-BOTTOM	Metals-Water	Cadmium	0.5	ug/L	U	0.5	2
5/28/2003 12:30	MCINTOSH POWER	SITE 2-BOTTOM	Metals-Water	Chromium	2	ug/L	U	2	8
5/28/2003 12:30	MCINTOSH POWER	SITE 2-BOTTOM	Metals-Water	Copper	5.9	ug/L	I	3	12
5/28/2003 12:30	MCINTOSH POWER	SITE 2-BOTTOM	Metals-Water	Iron	171	ug/L		10	40
5/28/2003 12:30	MCINTOSH POWER	SITE 2-BOTTOM	Metals-Water	Lead	12	ug/L	U	12	48
5/28/2003 12:30	MCINTOSH POWER	SITE 2-BOTTOM	Metals-Water	Nickel	2	ug/L	U	2	8
5/28/2003 12:30	MCINTOSH POWER	SITE 2-BOTTOM	Metals-Water	Silver	0.75	ug/L	U	0.75	3
5/28/2003 12:30	MCINTOSH POWER	SITE 2-BOTTOM	Metals-Water	Zinc	4.5	ug/L	I	3	12
5/28/2003 12:00	MCINTOSH POWER	SITE 3	Metals-Water	Aluminum	304	ug/L		10	40
5/28/2003 12:00	MCINTOSH POWER	SITE 3	Metals-Water	Arsenic	7	ug/L	U	7	28
5/28/2003 12:00	MCINTOSH POWER	SITE 3	Metals-Water	Cadmium	0.5	ug/L	U	0.5	2
5/28/2003 12:00	MCINTOSH POWER	SITE 3	Metals-Water	Calcium	22.1	mg/L		0.05	0.3
5/28/2003 12:00	MCINTOSH POWER	SITE 3	Metals-Water	Chromium	2	ug/L	U	2	8
5/28/2003 12:00	MCINTOSH POWER	SITE 3	Metals-Water	Copper	5.6	ug/L	I	3	12
5/28/2003 12:00	MCINTOSH POWER	SITE 3	Metals-Water	Iron	99	ug/L		10	40
5/28/2003 12:00	MCINTOSH POWER	SITE 3	Metals-Water	Lead	12	ug/L	U	12	48
5/28/2003 12:00	MCINTOSH POWER	SITE 3	Metals-Water	Magnesium	2.9	mg/L		0.01	0.04
5/28/2003 12:00	MCINTOSH POWER	SITE 3	Metals-Water	Nickel	2	ug/L	U	2	8
5/28/2003 12:00	MCINTOSH POWER	SITE 3	Metals-Water	Selenium	15	ug/L	U	15	60
5/28/2003 12:00	MCINTOSH POWER	SITE 3	Metals-Water	Silver	0.75	ug/L	U	0.75	3
5/28/2003 12:00	MCINTOSH POWER	SITE 3	Metals-Water	Zinc	3	ug/L	U	3	12
5/28/2003 12:00	MCINTOSH POWER	SITE 3-BOTTOM	Metals-Water	Aluminum	337	ug/L		10	40
5/28/2003 12:00	MCINTOSH POWER	SITE 3-BOTTOM	Metals-Water	Cadmium	0.5	ug/L	U	0.5	2
5/28/2003 12:00	MCINTOSH POWER	SITE 3-BOTTOM	Metals-Water	Chromium	2	ug/L	U	2	8
5/28/2003 12:00	MCINTOSH POWER	SITE 3-BOTTOM	Metals-Water	Copper	5.2	ug/L	I	3	12
5/28/2003 12:00	MCINTOSH POWER	SITE 3-BOTTOM	Metals-Water	Iron	133	ug/L		10	40
5/28/2003 12:00	MCINTOSH POWER	SITE 3-BOTTOM	Metals-Water	Lead	12	ug/L	U	12	48
5/28/2003 12:00	MCINTOSH POWER	SITE 3-BOTTOM	Metals-Water	Nickel	2	ug/L	U	2	8
5/28/2003 12:00	MCINTOSH POWER	SITE 3-BOTTOM	Metals-Water	Silver	0.75	ug/L	U	0.75	3
5/28/2003 12:00	MCINTOSH POWER	SITE 3-BOTTOM	Metals-Water	Zinc	3.8	ug/L	I	3	12
5/28/2003 11:20	MCINTOSH POWER	SITE 4	Metals-Water	Aluminum	319	ug/L	A	10	40
5/28/2003 11:20	MCINTOSH POWER	SITE 4	Metals-Water	Arsenic	7	ug/L	U	7	28
5/28/2003 11:20	MCINTOSH POWER	SITE 4	Metals-Water	Cadmium	0.5	ug/L	U	0.5	2
5/28/2003 11:20	MCINTOSH POWER	SITE 4	Metals-Water	Calcium	22.3	mg/L	A	0.05	0.3
5/28/2003 11:20	MCINTOSH POWER	SITE 4	Metals-Water	Chromium	2	ug/L	U	2	8
5/28/2003 11:20	MCINTOSH POWER	SITE 4	Metals-Water	Copper	5.4	ug/L	I	3	12
5/28/2003 11:20	MCINTOSH POWER	SITE 4	Metals-Water	Iron	109	ug/L	A	10	40
5/28/2003 11:20	MCINTOSH POWER	SITE 4	Metals-Water	Lead	12	ug/L	U	12	48
5/28/2003 11:20	MCINTOSH POWER	SITE 4	Metals-Water	Magnesium	2.9	mg/L	A	0.01	0.04
5/28/2003 11:20	MCINTOSH POWER	SITE 4	Metals-Water	Nickel	2	ug/L	U	2	8
5/28/2003 11:20	MCINTOSH POWER	SITE 4	Metals-Water	Selenium	15	ug/L	U	15	60
5/28/2003 11:20	MCINTOSH POWER	SITE 4	Metals-Water	Silver	0.75	ug/L	U	0.75	3
5/28/2003 11:20	MCINTOSH POWER	SITE 4	Metals-Water	Zinc	3	ug/L	U	3	12
5/28/2003 11:20	MCINTOSH POWER	SITE 4-BOTTOM	Metals-Water	Aluminum	422	ug/L		10	40
5/28/2003 11:20	MCINTOSH POWER	SITE 4-BOTTOM	Metals-Water	Cadmium	0.5	ug/L	U	0.5	2
5/28/2003 11:20	MCINTOSH POWER	SITE 4-BOTTOM	Metals-Water	Chromium	2	ug/L	U	2	8
5/28/2003 11:20	MCINTOSH POWER	SITE 4-BOTTOM	Metals-Water	Copper	6.6	ug/L	I	3	12
5/28/2003 11:20	MCINTOSH POWER	SITE 4-BOTTOM	Metals-Water	Iron	182	ug/L		10	40
5/28/2003 11:20	MCINTOSH POWER	SITE 4-BOTTOM	Metals-Water	Lead	12	ug/L	U	12	48
5/28/2003 11:20	MCINTOSH POWER	SITE 4-BOTTOM	Metals-Water	Nickel	2	ug/L	U	2	8
5/28/2003 11:20	MCINTOSH POWER	SITE 4-BOTTOM	Metals-Water	Silver	0.75	ug/L	U	0.75	3
5/28/2003 11:20	MCINTOSH POWER	SITE 4-BOTTOM	Metals-Water	Zinc	5.5	ug/L	I	3	12
5/28/2003 9:00	MCINTOSH POWER	CONTROL SITE 1	Nutrients-Liquid	Ammonia-N	0.015	mg N/L	I	0.01	0.02
5/28/2003 9:00	MCINTOSH POWER	CONTROL SITE 1	Nutrients-Liquid	NO2NO3-N	0.004	mg N/L	U	0.004	0.01
5/28/2003 9:00	MCINTOSH POWER	CONTROL SITE 1	Nutrients-Liquid	N_KJEL_TOT	1.8	mg N/L		0.06	0.2
5/28/2003 9:00	MCINTOSH POWER	CONTROL SITE 1	Nutrients-Liquid	O-Phosphate-P	0.007	mg P/L	I	0.004	0.01
5/28/2003 9:00	MCINTOSH POWER	CONTROL SITE 1	Nutrients-Liquid	Total-P	0.11	mg P/L		0.015	0.04
5/28/2003 10:40	MCINTOSH POWER	CONTROL SITE 2	Nutrients-Liquid	Ammonia-N	0.014	mg N/L	I	0.01	0.02
5/28/2003 10:40	MCINTOSH POWER	CONTROL SITE 2	Nutrients-Liquid	NO2NO3-N	0.004	mg N/L	U	0.004	0.01
5/28/2003 10:40	MCINTOSH POWER	CONTROL SITE 2	Nutrients-Liquid	N_KJEL_TOT	1.7	mg N/L		0.06	0.2

Date Sampled	Site Location	Field ID	Analysis Group	Component	Result	Units	Remark	MDL	PQL
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	Nutrients-Liquid	NO2NO3-N	0.004	mg N/L	U	0.004	0.01
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	Nutrients-Liquid	N_KJEL_TOT	0.06	mg N/L	U	0.06	0.2
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	Nutrients-Liquid	O-Phosphate-P	0.004	mg P/L	U	0.004	0.01
5/27/2003 10:45	Mcintosh power plant	EQUIPMENT BLK (28855)	Nutrients-Liquid	Total-P	0.015	mg P/L	U	0.015	0.04
5/27/2003 11:40	Mcintosh power plant	MCINTOSH INTAKE 1	Nutrients-Liquid	Ammonia-N	0.02	mg N/L	I	0.01	0.02
5/27/2003 11:40	Mcintosh power plant	MCINTOSH INTAKE 1	Nutrients-Liquid	NO2NO3-N	0.004	mg N/L	U	0.004	0.01
5/27/2003 11:40	Mcintosh power plant	MCINTOSH INTAKE 1	Nutrients-Liquid	N_KJEL_TOT	1.9	mg N/L	JA	0.06	0.2
5/27/2003 11:40	Mcintosh power plant	MCINTOSH INTAKE 1	Nutrients-Liquid	O-Phosphate-P	0.006	mg P/L	I	0.004	0.01
5/27/2003 11:40	Mcintosh power plant	MCINTOSH INTAKE 1	Nutrients-Liquid	Total-P	0.11	mg P/L	A	0.015	0.04
5/28/2003 13:10	MCINTOSH POWER	SITE 1	Nutrients-Liquid	Ammonia-N	0.012	mg N/L	I	0.01	0.02
5/28/2003 13:10	MCINTOSH POWER	SITE 1	Nutrients-Liquid	NO2NO3-N	0.004	mg N/L	U	0.004	0.01
5/28/2003 13:10	MCINTOSH POWER	SITE 1	Nutrients-Liquid	N_KJEL_TOT	1.7	mg N/L		0.06	0.2
5/28/2003 13:10	MCINTOSH POWER	SITE 1	Nutrients-Liquid	O-Phosphate-P	0.017	mg P/L		0.004	0.01
5/28/2003 13:10	MCINTOSH POWER	SITE 1	Nutrients-Liquid	Total-P	0.12	mg P/L		0.015	0.04
5/28/2003 12:30	MCINTOSH POWER	SITE 2	Nutrients-Liquid	Ammonia-N	0.013	mg N/L	I	0.01	0.02
5/28/2003 12:30	MCINTOSH POWER	SITE 2	Nutrients-Liquid	NO2NO3-N	0.004	mg N/L	U	0.004	0.01
5/28/2003 12:30	MCINTOSH POWER	SITE 2	Nutrients-Liquid	N_KJEL_TOT	2.3	mg N/L		0.06	0.2
5/28/2003 12:30	MCINTOSH POWER	SITE 2	Nutrients-Liquid	O-Phosphate-P	0.013	mg P/L		0.004	0.01
5/28/2003 12:30	MCINTOSH POWER	SITE 2	Nutrients-Liquid	Total-P	0.14	mg P/L		0.015	0.04
5/28/2003 12:00	MCINTOSH POWER	SITE 3	Nutrients-Liquid	Ammonia-N	0.015	mg N/L	I	0.01	0.02
5/28/2003 12:00	MCINTOSH POWER	SITE 3	Nutrients-Liquid	NO2NO3-N	0.004	mg N/L	U	0.004	0.01
5/28/2003 12:00	MCINTOSH POWER	SITE 3	Nutrients-Liquid	N_KJEL_TOT	2.2	mg N/L		0.06	0.2
5/28/2003 12:00	MCINTOSH POWER	SITE 3	Nutrients-Liquid	O-Phosphate-P	0.007	mg P/L	I	0.004	0.01
5/28/2003 12:00	MCINTOSH POWER	SITE 3	Nutrients-Liquid	Total-P	0.14	mg P/L		0.015	0.04
5/28/2003 11:20	MCINTOSH POWER	SITE 4	Nutrients-Liquid	Ammonia-N	0.015	mg N/L	I	0.01	0.02
5/28/2003 11:20	MCINTOSH POWER	SITE 4	Nutrients-Liquid	NO2NO3-N	0.004	mg N/L	U	0.004	0.01
5/28/2003 11:20	MCINTOSH POWER	SITE 4	Nutrients-Liquid	N_KJEL_TOT	2	mg N/L		0.06	0.2
5/28/2003 11:20	MCINTOSH POWER	SITE 4	Nutrients-Liquid	O-Phosphate-P	0.004	mg P/L	I	0.004	0.01
5/28/2003 11:20	MCINTOSH POWER	SITE 4	Nutrients-Liquid	Total-P	0.14	mg P/L		0.015	0.04

Sample ID		Ca (ppm)	Mg (ppm)	Qualifier	Comment
677676	CONTROL SITE 1-BC	22.4	2.9		Data gathered from Chemisty section.
677677	CONTROL SITE 2-BC	22.7	2.9		Data gathered from Chemisty section.
677678	SITE 1-BOTTOM	22.4	2.9		Data gathered from Chemisty section.
677679	SITE 2-BOTTOM	22.6	2.9		Data gathered from Chemisty section.
677680	SITE 3-BOTTOM	22.4	2.9		Data gathered from Chemisty section.
677681	SITE 4-BOTTOM	23.2	3.0		Data gathered from Chemisty section.

Appendix 5

Typical Values for Selected Parameters in Florida Waters

Adapted from Joe Hand, FDER, personal communication, 1991
(data was collected between 1980 and 1989, 477 lake stations)

Control Site 1

Percentile Distribution

Parameter	5%	10%	20%	30%	40%	50%	60%	70%	80%	90%	95%	Measured
Phytoplankton Chlorophyll *a*	0.80	1.71	2.88	4.28	10.06	13.40	20.00	30.10	47.20	65.44	113.90	74
Dredge Diversity	0.71	0.97	1.43	1.74	1.98	2.12	2.21	2.59	2.85	3.15	3.17	1.82
Dredge Taxa Richness	3.00	5.00	6.50	7.00	9.00	10.00	11.00	13.00	15.00	17.00	21.00	5
TKN	0.36	0.49	0.67	0.83	1.08	1.26	1.40	1.51	1.68	2.11	3.46	1.8
NH3+NH4	0.01	0.02	0.02	0.03	0.04	0.06	0.08	0.12	0.15	0.21	0.28	0.015 I
NO2-NO3	0.00	0.00	0.01	0.01	0.01	0.02	0.04	0.05	0.10	0.14	0.23	0.004 U
Total Phosphorus	0.01	0.02	0.02	0.03	0.05	0.07	0.09	0.11	0.14	0.23	0.42	0.11
Ortho-Phosphate	0.00	0.01	0.01	0.02	0.03	0.04	0.05	0.06	0.08	0.21	0.32	0.007 I
Turbidity	1.00	1.25	1.55	2.05	2.75	4.50	6.45	9.60	14.10	26.00	40.00	ND

Units: Phytoplankton Chlorophyll *a* (ug/L), Nutrients (mg/L), Turbidity (NTU=Nephelometric turbidity units), Taxa richness and diversity values are for macroinvertebrates (Diversity = Shannon-Weaver H').
I = Value reported is < the minimum quantitation limit, and ? the minimum detection limit
U = Material analyzed for but not detected; value reported is the minimum detection limit
ND = No Data

Control Site 2

Percentile Distribution

Parameter	5%	10%	20%	30%	40%	50%	60%	70%	80%	90%	95%	Measured
Phytoplankton Chlorophyll *a*	0.80	1.71	2.88	4.28	10.06	13.40	20.00	30.10	47.20	65.44	113.90	64
Dredge Diversity	0.71	0.97	1.43	1.74	1.98	2.12	2.21	2.59	2.85	3.15	3.17	1.81
Dredge Taxa Richness	3.00	5.00	6.50	7.00	9.00	10.00	11.00	13.00	15.00	17.00	21.00	5
TKN	0.36	0.49	0.67	0.83	1.08	1.26	1.40	1.51	1.68	2.11	3.46	1.7
NH3+NH4	0.01	0.02	0.02	0.03	0.04	0.06	0.08	0.12	0.15	0.21	0.28	0.014 I
NO2-NO3	0.00	0.00	0.01	0.01	0.01	0.02	0.04	0.05	0.10	0.14	0.23	0.004 U
Total Phosphorus	0.01	0.02	0.02	0.03	0.05	0.07	0.09	0.11	0.14	0.23	0.42	0.12
Ortho-Phosphate	0.00	0.01	0.01	0.02	0.03	0.04	0.05	0.06	0.08	0.21	0.32	0.01
Turbidity	1.00	1.25	1.55	2.05	2.75	4.50	6.45	9.60	14.10	26.00	40.00	ND

Units: Phytoplankton Chlorophyll *a* (ug/L), Nutrients (mg/L), Turbidity (NTU=Nephelometric turbidity units), Taxa richness and diversity values are for macroinvertebrates (Diversity = Shannon-Weaver H').
I = Value reported is < the minimum quantitation limit, and ? the minimum detection limit
U = Material analyzed for but not detected; value reported is the minimum detection limit
ND = No Data

Test Site 1

Percentile Distribution

Parameter	5%	10%	20%	30%	40%	50%	60%	70%	80%	90%	95%	Measured
Phytoplankton Chlorophyll *a*	0.80	1.71	2.88	4.28	10.06	13.40	20.00	30.10	47.20	**65.44**	113.90	**73**
Dredge Diversity	0.71	0.97	1.43	1.74	1.98	2.12	2.21	2.59	**2.85**	3.15	3.17	**2.88**
Dredge Taxa Richness	3.00	5.00	6.50	7.00	9.00	10.00	11.00	13.00	15.00	17.00	**21.00**	**30**
TKN	0.36	0.49	0.67	0.83	1.08	1.26	1.40	1.51	**1.68**	2.11	3.46	**1.7**
NH3+NH4	**0.01**	0.02	0.02	0.03	0.04	0.06	0.08	0.12	0.15	0.21	0.28	**0.012 I**
NO2-NO3	0.00	**0.00**	0.01	0.01	0.01	0.02	0.04	0.05	0.10	0.14	0.23	**0.004 U**
Total Phosphorus	0.01	0.02	0.02	0.03	0.05	0.07	0.09	**0.11**	0.14	0.23	0.42	**0.12**
Ortho-Phosphate	**0.00**	0.01	0.01	0.02	0.03	0.04	0.05	0.06	0.08	0.21	0.32	**0.007**
Turbidity	1.00	1.25	1.55	2.05	2.75	4.50	6.45	9.60	14.10	26.00	40.00	**ND**

Units: Phytoplankton Chlorophyll *a* (ug/L), Nutrients (mg/L), Turbidity (NTU=Nephelometric turbidity units), Taxa richness and diversity values are for macroinvertebrates (Diversity = Shannon-Weaver H').
I = Value reported is < the minimum quantitation limit, and ? the minimum detection limit
U = Material analyzed for but not detected; value reported is the minimum detection limit
ND = No Data

Test Site 2

Percentile Distribution

Parameter	5%	10%	20%	30%	40%	50%	60%	70%	80%	90%	95%	Measured
Phytoplankton Chlorophyll *a*	0.80	1.71	2.88	4.28	10.06	13.40	20.00	30.10	47.20	**65.44**	113.90	**73**
Dredge Diversity	0.71	0.97	**1.43**	1.74	1.98	2.12	2.21	2.59	2.85	3.15	3.17	**1.54**
Dredge Taxa Richness	3.00	5.00	6.50	**7.00**	9.00	10.00	11.00	13.00	15.00	17.00	21.00	**8**
TKN	0.36	0.49	0.67	0.83	1.08	1.26	1.40	1.51	1.68	**2.11**	3.46	**2.3**
NH3+NH4	**0.01**	0.02	0.02	0.03	0.04	0.06	0.08	0.12	0.15	0.21	0.28	**0.013 I**
NO2-NO3	0.00	**0.00**	0.01	0.01	0.01	0.02	0.04	0.05	0.10	0.14	0.23	**0.004 U**
Total Phosphorus	0.01	0.02	0.02	0.03	0.05	0.07	0.09	0.11	**0.14**	0.23	0.42	**0.14**
Ortho-Phosphate	0.00	0.01	**0.01**	0.02	0.03	0.04	0.05	0.06	0.08	0.21	0.32	**0.013**
Turbidity	1.00	1.25	1.55	2.05	2.75	4.50	6.45	9.60	14.10	26.00	40.00	**ND**

Units: Phytoplankton Chlorophyll *a* (ug/L), Nutrients (mg/L), Turbidity (NTU=Nephelometric turbidity units), Taxa richness and diversity values are for macroinvertebrates (Diversity = Shannon-Weaver H').
I = Value reported is < the minimum quantitation limit, and ? the minimum detection limit
U = Material analyzed for but not detected; value reported is the minimum detection limit
ND = No Data

Test Site 3

Percentile Distribution

Parameter	5%	10%	20%	30%	40%	50%	60%	70%	80%	90%	95%	Measured
Phytoplankton Chlorophyll *a*	0.80	1.71	2.88	4.28	10.06	13.40	20.00	**30.10**	47.20	65.44	113.90	**46**
Dredge Diversity	0.71	0.97	**1.43**	1.74	1.98	2.12	2.21	2.59	2.85	3.15	3.17	**1.61**
Dredge Taxa Richness	**3.00**	5.00	6.50	7.00	9.00	10.00	11.00	13.00	15.00	17.00	21.00	**4**
TKN	0.36	0.49	0.67	0.83	1.08	1.26	1.40	1.51	1.68	**2.11**	3.46	**2.2**
NH3+NH4	**0.01**	0.02	0.02	0.03	0.04	0.06	0.08	0.12	0.15	0.21	0.28	**0.015 I**
NO2-NO3	0.00	**0.00**	0.01	0.01	0.01	0.02	0.04	0.05	0.10	0.14	0.23	**0.004 U**
Total Phosphorus	0.01	0.02	0.02	0.03	0.05	0.07	0.09	0.11	**0.14**	0.23	0.42	**0.14**
Ortho-Phosphate	**0.00**	0.01	0.01	0.02	0.03	0.04	0.05	0.06	0.08	0.21	0.32	**0.007 I**
Turbidity	1.00	1.25	1.55	2.05	2.75	4.50	6.45	9.60	14.10	26.00	40.00	**ND**

Units: Phytoplankton Chlorophyll *a* (ug/L), Nutrients (mg/L), Turbidity (NTU=Nephelometric turbidity units), Taxa richness and diversity values are for macroinvertebrates (Diversity = Shannon-Weaver H').
I = Value reported is < the minimum quantitation limit, and ? the minimum detection limit
U = Material analyzed for but not detected; value reported is the minimum detection limit
ND = No Data

Test Site 4

Percentile Distribution

Parameter	5%	10%	20%	30%	40%	50%	60%	70%	80%	90%	95%	Measured
Phytoplankton Chlorophyll *a*	0.80	1.71	2.88	4.28	10.06	13.40	20.00	30.10	**47.20**	65.44	113.90	**64**
Dredge Diversity	0.71	0.97	1.43	**1.74**	1.98	2.12	2.21	2.59	2.85	3.15	3.17	**1.83**
Dredge Taxa Richness	3.00	5.00	6.50	**7.00**	9.00	10.00	11.00	13.00	15.00	17.00	21.00	**8**
TKN	0.36	0.49	0.67	0.83	1.08	1.26	1.40	1.51	**1.68**	2.11	3.46	**2.0**
NH3+NH4	**0.01**	0.02	0.02	0.03	0.04	0.06	0.08	0.12	0.15	0.21	0.28	**0.015 I**
NO2-NO3	0.00	**0.00**	0.01	0.01	0.01	0.02	0.04	0.05	0.10	0.14	0.23	**0.004 U**
Total Phosphorus	0.01	0.02	0.02	0.03	0.05	0.07	0.09	0.11	**0.14**	0.23	0.42	**0.14**
Ortho-Phosphate	**0.00**	0.01	0.01	0.02	0.03	0.04	0.05	0.06	0.08	0.21	0.32	**0.004 I**
Turbidity	1.00	1.25	1.55	2.05	2.75	4.50	6.45	9.60	14.10	26.00	40.00	**ND**

Units: Phytoplankton Chlorophyll *a* (ug/L), Nutrients (mg/L), Turbidity (NTU=Nephelometric turbidity units), Taxa richness and diversity values are for macroinvertebrates (Diversity = Shannon-Weaver H').
I = Value reported is < the minimum quantitation limit, and ? the minimum detection limit
U = Material analyzed for but not detected; value reported is the minimum detection limit
ND = No Data

Appendix 6

Additional physical, chemical, toxicological and microbiological results

Data recorded during the 48-hour acute screening bioassays of a sample of effluent from the C.D. McIntosh Power Plant, 3030 East Parker Drive, Lakeland, Polk County, Florida, NPDES# FL0026301, performed from 27 to 30 May 2003.

Facility:	**CD McIntosh Power Plant**		**NPDES #:**	**FL0026301**	Facility Type:	**Industrial Waste**	**Analysts:** Jacquelyn Brynda
Location:	3030 East Lake Parker Drive, Lakeland		Contact/District:	Pillsbury / SW			Joshua Ayres
County:	Polk		Test type:	static acute screen			James Daniels
Sample Collection Date:	5/27/2003	Time: 1045	# tests:	2	Receiving Water:	Lake Parker	Marshall Faircloth
Test Beginning Date:	5/28/2003	Time: 1430	Chlorination Type:	non-chlorinated			
Test Ending Date:	5/30/2003	Time: 1330	FDEP SOP#:	TA07_01 / 02		**Page 1 of 1**	**Reviewer:** Rob Buda

Organism: ***Ceriodaphnia dubia*** (water flea) Life stage: <24 hours Chamber size: 30 mL [A] Feeding: YCT/Algae Food Batch #: 1/13

	Sample/Diluent	SURVIVAL # Alive			pH			Temperature (°C)			Diss. Oxygen (mg/L)			[B] Conductivity	
Concentrations	Volume(mL)	0 hr	24 hr	48 hr	0 hour	24 hour	48 hour	0 hour	24 hour	48 hour	0 hour	24 hour	48 hour	0 hour	48 hour
Control A	0/20	5	5	5	8.2	-	8.2	25.2	-	23.6	7.4	-	7.8	215	190
Control B	0/20	5	5	5	-	-	8.2	-	-	23.4	-	-	7.8	-	190
Control C	0/20	5	5	5	-	-	8.2	-	-	23.2	-	-	7.8	-	200
Control D	0/20	5	5	5	-	-	8.2	-	-	23.2	-	-	7.7	-	190
100% A	20/0	5	5	5	9.1	-	8.3	25.1	-	23.3	7.4	-	7.8	195	205
100% B	20/0	5	5	5	-	-	8.3	-	-	23.3	-	-	7.9	-	200
100% C	20/0	5	5	5	-	-	8.3	-	-	23.2	-	-	8.0	-	200
100% D	20/0	5	5	5	-	-	8.3	-	-	23.1	-	-	8.1	-	200
pH 100% A	20/0	5	5	5	7.8	-	8.3	25.2	-	23.2	7.4	-	8.1	200	220
pH 100% B	20/0	5	5	5	-	-	8.3	-	-	23.3	-	-	8.1	-	210
pH 100% C	20/0	5	5	5	-	-	8.3	-	-	23.3	-	-	8.1	-	210
pH 100% D	20/0	5	5	5	-	-	8.3	-	-	23.1	-	-	8.1	-	220

[A] Organisms fed prior to testing.

Temperatures of room and test incubator were continuously recorded on a strip chart recorder.
Room Temperature range for the test period was 25-26.5°C.
Incubator # 3 temperature range for the test period was 24-25.0°C.

Light Intensity during the test was 50-100 foot candles.
Photoperiod during the test was 16 hours of light : 8 hours of dark.
[B] Conductivity value is uncorrected µmhos/cm.

Organism: ***Cyprinella leedsi*** (fish) Life stage: 11 days Chamber size: 1000 mL [C] Feeding: *Artemia* Food Batch #: 01940425G

	Sample/Diluent	SURVIVAL # Alive			pH			Temperature (°C)			Diss. Oxygen (mg/L)			[D] Conductivity	
Concentrations	Volume(mL)	0 hr	24 hr	48 hr	0 hour	24 hour	48 hour	0 hour	24 hour	48 hour	0 hour	24 hour	48 hour	0 hour	48 hour
Control A	0/500	5	5	5	7.9	8.3	8.4	24.7	23.5	24.2	7.6	8.0	7.7	285	275
Control B	0/500	5	5	5	7.9	8.3	8.4	24.6	23.2	24.2	7.6	8.0	7.8	275	280
Control C	0/500	5	5	5	7.9	8.3	8.4	24.5	23.4	24.0	7.6	8.2	7.8	275	280
Control D	0/500	5	5	5	7.9	8.3	8.4	24.3	24.2	23.9	7.6	8.0	7.8	270	275
100% A	500/0	5	5	5	9.3	8.4	8.1	24.6	23.6	24.5	7.6	7.9	7.7	180	205
100% B	500/0	5	5	5	9.3	8.4	8.1	24.5	23.7	23.8	7.6	7.9	7.7	175	190
100 % C	500/0	5	5	5	9.3	8.4	8.1	24.5	23.4	24.2	7.6	7.9	7.8	180	185
100% D	500/0	5	5	5	9.3	8.4	8.1	24.4	23.6	23.7	7.6	8.2	7.7	180	190
pH 100% A	500/0	5	5	5	7.8	8.0	8.2	25.1	23.8	24.0	7.6	8.0	8.0	200	215
pH 100% B	500/0	5	5	5	7.8	8.0	8.2	24.9	23.5	24.3	7.5	8.1	8.1	195	200
pH 100% C	500/0	5	5	5	7.8	8.0	8.2	24.9	23.9	24.3	7.5	8.1	7.9	190	210
pH 100% D	500/0	5	5	5	7.8	8.0	8.2	24.5	23.5	24.3	7.5	8.0	7.8	190	205

[A] Organisms fed prior to testing.

Temperatures of room and test incubator were continuously recorded on a strip chart recorder.
Room Temperature range for the test period was 25-26.5°C.
Incubator # 3 temperature range for the test period was 24-25.0°C.

Light Intensity during the test was 50-100 foot candles.
Photoperiod during the test was 16 hours of light : 8 hours of dark.
[B] Conductivity value is uncorrected µmhos/cm.

LIMS	
Job number:	TLH-2003-05-28-55
sample number:	677137

Data Transcription Verification	
date:	10/6/2003
by:	Cathy Oaks
	Brad Richardson

Total Residual CL2	mg/L	Method
Field:	-	-
Lab:	<0.03	Hach

Ammonia	Total (mg/L)	Unionized (mg/L)
Control water: (water flea):	<0.017	<0.017
Control water: (fish)	<0.017	<0.017
100% Sample:	<0.017	<0.017

Alk & Hardness	Alkalinity (mg/L)	Hardness (mg/L)
Control water: (water flea):	85	87
Control water: (fish)	140	140
100% Sample:	53	65

Mortality	Percent
Control water (water flea):	0%
100% (water flea):	0%
pH 100% (water flea):	0%
Control water (fish):	0%
100 % (fish):	0%
pH 100% (fish):	0%

Appendix 7

Habitat Assessment Field Sheets

State of Florida
Department of Environmental Protection
Composite Lake Sampling Form (<1000 acres)

Effluent wall/gate

Date: 5/27/03 Name of Lake: Parker Gear used: (PONAR) EKMAN OTHER

Comments:

	Drop #	Depth (m)	Sediment Type (circle all that apply)	Drop #	Depth (m)	Sediment Type (circle all that apply)
A	1	2.5	ANAEROBIC SMELL (sand) silt/clay, CPOM, muck, SAV	7A²	1.9	(sand) silt/clay, CPOM, muck, SAV mostly smell
B	2	2.0	ANAEROBIC SMELL (sand) silt/clay, CPOM, muck, SAV	8C²	not measured	sand, silt/clay, CPOM, muck, SAV
C	3	2.1	(sand) silt/clay, (CPOM) (muck) SAV smell	INTAKE 9		(sand) silt/clay (CPOM) muck, SAV
D	4	1.7	mostly (sand) silt/clay (CPOM) muck, SAV smell	10		sand, silt/clay, CPOM, muck, SAV
E	5	1.8	mostly (sand) silt/clay, (CPOM) muck, SAV smell	11		sand, silt/clay, CPOM, muck, SAV
F	6	2.2	mostly (sand) silt/clay, (CPOM) muck, SAV smell	12		sand, silt/clay, CPOM, muck, SAV

CPOM = Coarse particulate organic matter, SAV = Submerged aquatic vegetation

A = ~~28° 4' 42.5" / 81° 55' 32.2"~~ = ~18ppb

Site 1 B = 28° 4' 42.3" / 81° 55' 32.3" = ~18ppb

C = ~~28° 4' 38.7" / 81° 55' 33.3"~~

Site 3 D = 28° 4' 36.3" / 81° 55' 33.8" = ~10ppb

Site 4 E = 28° 4' 33.6" / 81° 55' 33.0" ~4ppb

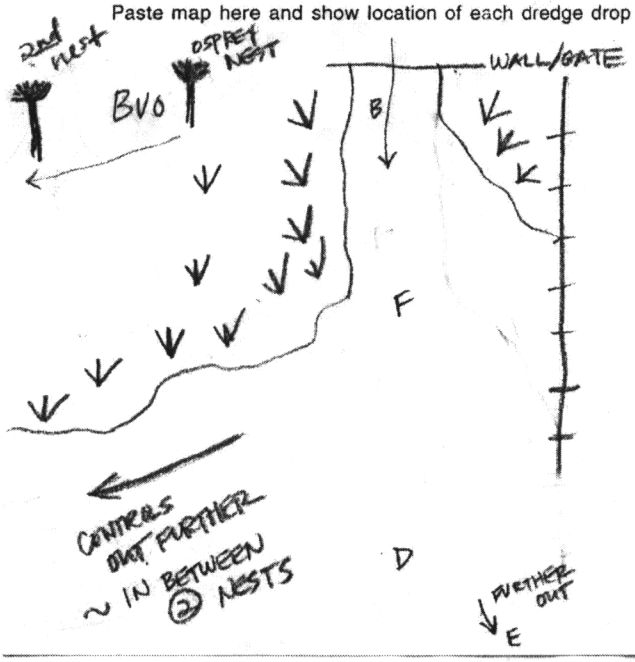
Site 2 F = 28° 4' 39.5" / 81° 55' 32.5" = ppb between D & B or

A² Control 1 = 28° 4' 29.8" / 81° 55' 42.9"

C² Control 2 = 28° 4' 30.3" / 81° 55' 41.1"

CONTROLS

Paste map here and show location of each dredge drop and where water chemistry parameters were collected.



NOT TO SCALE!!

~~38.7 33.3 = C~~

Appendix 8a

Benthic macroinvertebrates collected in ponar samples from Lake Parker adjacent to the Lakeland Electric McIntosh facility (May 28, 2003). Taxa collected and density (average number of individuals/m^2) rounded to the nearest individual (n = 3 samples/site). See SOP LT 7100 sect. 4.2.1 for method on collapsing taxa.

	Control Site 1	Control Site 2	Intake	Test Site 1	Test Site 2	Test Site 3	Test Site 4
Annelida							
Hirundinea							
Mooreobdella sp.	-	-	-	42	-	-	-
Helobdella stagnalis	-	-	-	2,361	-	-	14
Oligochaeta							
Allonais paraguayensis	-	-	-	111	-	-	-
Bratislavia unidentata	-	-	-	10,556	-	-	-
Dero digitata complex	-	-	-	667	-	-	-
Haemonais waldvogeli	-	-	-	1,000	-	-	-
Limnodrilus sp.	2,208	2,528	56	4,639	1,917	347	1,431
Nais communis complex	-	-	-	111	-	-	-
Pristina aequiseta	-	-	-	1,364	-	-	-
Pristina breviseta	-	-	-	-	14	-	-
Pristina leidyi	-	-	-	303	-	-	-
Arthropoda							
Crustacea							
Amphipoda							
Hyalella azteca	-	-	-	5,153	14	-	-
Insecta							
Coleoptera							
Stenelmis sp.	-	-	-	14	14	-	-
Diptera							
Ceratopogonidae	-	-	-	28	-	-	14
Chaoborus sp.	125	83	319	14	500	181	111
Chironomus sp.	-	-	-	14	-	-	-
Chironomus crassicaudatus	569	500	14	-	-	-	208
Coelotanypus sp.	889	667	42	14	736	167	778
Cryptochironomus sp.	-	-	-	56	-	-	-
Dicrotendipes simpsoni	-	-	-	28	-	-	-
Einfeldia natchitocheae	-	-	-	-	-	14	-
Glyptotendipes paripes	389	1,917	-	1,147	-	-	125
Goeldichironomus carus	-	-	-	630	-	-	-
Parachironomus directus	-	-	-	14	-	-	-
Polypedilum halterale grp.	-	-	-	28	-	-	-
Procladius sp.	-	-	-	-	14	-	28
Ephemeroptera							
Caenis sp.	-	-	-	111	-	-	-
Heteroptera							
Ranatra sp.	-	-	-	14	-	-	-
Odonata							
Coenagrionidae	-	-	-	97	-	-	-
Libellulidae	-	-	-	14	-	-	-
Trichoptera							
Oecetis sp. f Floyd	-	-	-	194	-	-	-
Mollusca							
Gastropoda							
Hydrobiidae	-	-	-	37	28	-	-
Planorbella sp.	-	-	-	74	-	-	-
Platyhelminthes							
Undetermined Platyhelminthes	-	-	-	28	-	-	-

Appendix 8b

Benthic macroinvertebrates collected in ponar samples from Lake Parker adjacent to the Lakeland Electric McIntosh facility (May 28, 2003). Taxa collected and total number of individuals counted (n = 3 samples/site).

	Control Site 1	Control Site 2	Intake	Test Site 1	Test Site 2	Test Site 3	Test Site 4
Annelida							
Hirudinea							
Mooreobdella sp.	-	-	-	3	-	-	-
Helobdella stagnalis	-	-	-	170	-	-	1
Oligochaeta							
Allonais paraguayensis	-	-	-	8	-	-	-
Bratislavia unidentata	-	-	-	760	-	-	-
Dero digitata complex	-	-	-	48	-	-	-
Haemonais waldvogeli	-	-	-	72	-	-	-
Limnodrilus sp.	159	182	4	334	138	25	103
Nais communis complex	-	-	-	8	-	-	-
Pristina sp.	-	-	-	32	-	-	-
Pristina aequiseta	-	-	-	72	-	-	-
Pristina breviseta	-	-	-	-	1	-	-
Pristina leidyi	-	-	-	16	-	-	-
Arthropoda							
Crustacea							
Amphipoda							
Hyalella azteca	-	-	-	370	1	-	-
Undetermined Amphipoda	-	-	-	1	-	-	-
Insecta							
Coleoptera							
Stenelmis sp.	-	-	-	1	1	-	-
Diptera							
Ceratopogonidae	-	-	-	2	-	-	1
Chaoborus sp.	9	6	23	1	36	13	8
Chironomidae	-	-	-	1	-	-	-
Chironomus sp.	-	-	-	1	-	-	-
Chironomus crassicaudatus	41	36	1	-	-	-	15
Coelotanypus sp.	64	48	3	1	53	12	56
Cryptochironomus sp.	-	-	-	4	-	-	-
Dicrotendipes simpsoni	-	-	-	2	-	-	-
Einfeldia natchitocheae	-	-	-	-	-	1	-
Glyptotendipes sp.	-	1	-	62	-	-	-
Glyptotendipes paripes	28	137	-	20	-	-	9
Goeldichironomus sp.	-	-	-	5	-	-	-
Goeldichironomus carus	-	-	-	40	-	-	-
Parachironomus directus	-	-	-	1	-	-	-
Polypedilum halterale grp.	-	-	-	2	-	-	-
Procladius sp.	-	-	-	-	1	-	2
Ephemeroptera							
Caenis sp.	-	-	-	8	-	-	-
Heteroptera							
Ranatra sp.	-	-	-	1	-	-	-
Odonata							
Coenagrionidae	-	-	-	7	-	-	-
Libellulidae	-	-	-	1	-	-	-
Trichoptera							
Oecetis sp. f F loyd	-	-	-	14	-	-	-
Mollusca							
Gastropoda							
Hydrobiidae	-	-	-	2	1	-	-
Planorbella sp.	-	-	-	4	-	-	-
Undetermined Gastropoda	-	-	-	2	1	-	-
Platyhelminthes							
Undetermined Platyhelminthes	-	-	-	2	-	-	-

The Bioassay of Lakeland Electric McIntosh plant effluent sampled on May 27, 2003 NPDES #FL0026301.

Fill Out This Section For All Surface Water Discharger Inspections(CEI, CSI, CBI, PAI, XSI-RI Optional)

Transaction Code	NPDES NUMBER	YR/MO/DA	Insp Type	Inspector	Fac Type
1 N 2 5	3 F L 0 0 2 6 3 0 1 11 12	0 3 0 6 2 7	18 B	19 S	20 2

Remarks

66

The Priority Pollutants Analysis for Bioassay of Lakeland Electric plant effluent sampled on May 27, 2003 NPDES #FL0026301.

Fill Out This Section For All Surface Water Discharger Inspections(CEI, CSI, CBI, PAI, XSI-RI Optional)

Transaction Code	NPDES NUMBER	YR/MO/DA	Insp Type	Inspector	Fac Type
1 N 2 5	3 F L 0 0 2 6 3 0 1 11 12	0 3 0 6 2 7	18 X	19 S	20 2

Remarks

66