

Bioassays of

Lake Tippecanoe Owners Association, Inc.

Sarasota County

NPDES #FL0188981

Sampled July 17, 2006

November 2006

Biology Section
Bureau of Laboratories
Division of Resource Assessment and Management

Quality Manual No. 870346G
NELAC Certification No. E31780

Lake Tippecanoe Owners Association, Inc., 4636 Tippecanoe Trail, Sarasota, Sarasota County, Florida, NPDES #FL0188981. Effluent samples for this facility were collected on July 17, 2006.

Introduction

The Lake Tippecanoe Owners Association, Inc. is a Reverse Osmosis (RO) water treatment plant which provides potable water to residents of Lake Tippecanoe Condominiums. The water plant uses the RO process to remove minerals from water, and these minerals are discharged in the concentrate to an on-site stormwater pond at a maximum daily flow of 0.014 million gallons per day (MGD). The facility had a monthly average daily flow into the stormwater pond of 0.00875 MGD from July 2005 through June 2006. The concentrate is diluted by the stormwater in the pond, and the degree of dilution varies depending upon the antecedent rainfall conditions. The concentrate receives no additional treatment. Any overflow from the pond (Outfall D-001) is discharged through a 0.91 m (36 inch) diameter concrete pipe to a perimeter roadside ditch along Bliss Road, and then drains to the Class III Freshwaters of Philippe Creek, thence into Little Sarasota Bay. Outfall D-001 is located approximately at latitude 27º 17" 21" N, longitude 82º 28' 37" W. The facility was not discharging at the time of the sampling event nor was it expected to discharge in the absence of a significant rainfall event.

There is no Administrative Order (AO) or Consent Order (CO) for this facility. The facility has no mixing zones. During July 2005, the facility had one exceedance (5.4 pCi/L) of the permit limit for combined radium 226 and radium 228 (5.0 pCi/L). (Facility information provided by Lori Pillsbury of FDEP Southwest District.)

Methods

Samples were collected from the stormwater pond near the EFF-1 sampling point for Outfall D-001 and from FLW-1, the point of RO concentrate discharge into the pond, by Lori Pillsbury and Peter Wenner (FDEP Southwest District) following DEP-SOP-001/01 FS 2400 Wastewater Sampling. All DEP SOPs are available on the web at: http://www.floridadep.org/labs/qa/sops.htm.

See Appendix A for the completed chain of custody form.

The 48-hour acute screening toxicity tests and Algal Growth Potential (AGP) test were performed following internal DEP SOPs TA07_01, TA07_02, and TA08_01 through TA08_09. All internal DEP SOPs are available on the web at: http://www.floridadep.org/labs/cgi-bin/sop/biosop.asp. While the 48-hour acute screening toxicity test does not reflect the permit required conditions, the Department uses it to provide reasonable assurance that the facility does not adversely affect waters of the state.

This facility's permitted sampling point for toxicity tests is EFF-1, the discharge (Outfall D-001) from the stormwater pond. This sampling event was designed to determine the chemical components and potential toxicity of water in the stormwater pond. The toxicity and algal growth potential test samples were collected from the on-site stormwater pond just prior to where the pond overflows at the permitted sampling point. The EPA suite of chemical analyses was performed on both the stormwater pond samples and RO concentrate samples collected from FLW-1, the point of RO concentrate discharge into the pond.

Toxicity Test Results

Tests were performed July 18-20, 2006.

Ceriodaphnia dubia 48-hour acute screening bioassay –	LC_{50} > 100%, 0% mortality* in 100% sample at 48 hours

Cyprinella leedsi 48-hour acute screening bioassay –	LC_{50} > 100%, 0% mortality* in 100% sample at 48 hours

The bioassay sample was not acutely toxic to the test organisms.

See Appendix B for bioassay bench sheets. See Appendix C for results of the last 20 standard reference toxicant (SRT) tests and the bench sheets and statistical analyses of the SRT tests that correspond to these facility tests. See Appendix D for test organism receipts.

*NOTE: In a 48-hour acute screening test of 100% effluent, mortality of <20% provides reasonable assurance that the effluent meets the acute toxicity criterion of Florida's Surface Water Quality Standards (Rule 62-302.500 (1)(a)4, F.A.C.). Mortality between 20-50% indicates low to moderate levels of toxicity, and further action may be required. Mortality of >50% provides reasonable assurance that the effluent fails to meet the minimum requirement to discharge to waters of the state (Rule 62-4.244(3)(a), F.A.C.).

Algal Growth Potential

The effluent Algal Growth Potential (AGP) of the stormwater pond sample was less than the laboratory method detection limit (MDL) of 0.300 mg dry wt/L of the unicellular green alga, *Pseudokirchneriella subcapitata*, formerly known as *Selenastrum capricornutum*. Raschke and Shultz (1987) found that AGP values above 5.0 mg dry weight/L represent a "problem" threshold for fresh receiving waters, implying nutrient enrichment. The analytical chemistry results for total nitrogen and total phosphorus suggest that the effluent is phosphorus limited. Ortho-phosphate (OP) was not detected; therefore, AGP could not be predicted for OP (Table 1; Miller et al. 1978).

See Table 1 for AGP results.

Chemistry Results

Total residual chlorine and total ammonia were not detected in the bioassay sample (collected from the stormwater pond) in the laboratory. The total ammonia concentrations in the stormwater pond sample and the RO concentrate sample that were collected and preserved for chemical analysis were 0.034 mg/L and 1.7 mg/L, respectively. Based on the pH, salinity, and temperature of the samples as collected, the calculated unionized ammonia concentrations were < 0.02 mg/L and 0.02 mg/L, respectively.

Copper was detected in the stormwater pond sample at a level that complied with Class III fresh water quality criteria. Arsenic, iron, and zinc were detected between the laboratory method detection limits (MDL) and practical quantitation limits (PQL). Aluminum was also detected in the stormwater pond sample.

Arsenic, copper, and iron, were detected in the RO concentrate at levels between the MDLs and PQLs. Concentrations of total alpha (31.2 pCi/L) and combined radium 226+228 (24.3 pCi/L) in the RO concentrate exceeded Class III freshwater quality criteria of ≤15 pCi/L (62-302.530(58)(b), F.A.C.) and ≤5 pCi/L (62-302.530(58)(a), F.A.C.), respectively. The specific conductance measured in the field (1,454 µmhos-cm) and in the lab (2,730 µmhos/cm) exceeded the Class III freshwater criterion of 1,275 µmhos/cm (62-302.530(23), F.A.C.). These levels are not considered exceedances because the RO concentrate is discharged within the facility and does not have applicable limits.

The difference between the field (1,454 µmhos-cm) and laboratory (2,730 µmhos-cm) specific conductance of the RO concentrate was attributed to variation in the composition of the RO concentrate over the period of sample collection. Samples were taken approximately 5 minutes apart from a tap. Quality control procedures indicated that there were no problems with the field

or laboratory conductivity meters (personal communication with Lori Pillsbury of the SW District and Colin Wright of the DEP Labs).

See Table 2 for results of analytes detected in the stormwater pond, and corresponding limits. See Table 2 for results of analytes detected in the RO concentrate. See Appendix E for a complete list of chemical analyses performed.

Conclusion

The sample collected from the stormwater pond for this facility on July 17, 2006, was not acutely toxic to either test species during the 48-hour acute screen bioassays. The stormwater pond AGP result was less than the "problem" threshold for fresh receiving waters. Water quality samples from the stormwater pond did not exceed any applicable water quality standards or violate any permit conditions.

Literature Cited

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.

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.

Table 1. Measured and predicted algal growth potential (AGP; mg dry weight/L) of the freshwater species Pseudokirchneriella subcapitata *for ortho phosphate (OP) and total phosphorus (TP) limitation and ratios of nitrogen to phosphorous for samples collected from Lake Tippecanoe Owners Association, Inc., Reverse Osmosis WTP on July 17, 2006.*

Location	AGP (measured)	Predicted AGP (OP) ± 20%	Predicted AGP (TP) ± 20%	Inorganic N:P ratio	Total N:P ratio
Effluent Samples	0.300 U	NC	16.77 ± 3.354	NC	26.79

NC- Not calculable because orthophosphate was not detected in the sample
U - Material analyzed for but not detected; value reported is the minimum detection limit

Table 2. Effluent limits, Class III Freshwater Criteria, and chemical data for samples collected from Lake Tippecanoe Owners Association, Inc., Reverse Osmosis Water Treatment Plant on July 17, 2006.

Lake Tippecanoe Homeowners Association, Inc. NPDES # FL0188981	Class III Freshwater Stds (Stormwater Pond)	Effluent Limits (Stormwater Pond Overflow)	Stormwater Pond	RO Concentrate
Organic Constituents (µg/L)				
None Detected	-	-	-	-
Metals (µg/L unless otherwise noted)				
Aluminum	-	-	157	4 U
Arsenic	-	-	1.7 I	1.9 I
Cadmium	≤ 2.7 b	-	0.05 U	0.1 U
Calcium (mg/L)	-	-	54.2 f	347 f
Chromium-III	≤ 215 b	-	0.3 U	0.3 U
Copper	≤ 24.2 b	-	11.8	0.83 I
Iron	≤ 1,000	-	7.1 I	8.2 I
Lead	≤ 13.2 b	-	0.2 U	0.4 U
Magnesium (mg/L)	-	-	41.3 f	146 f
Nickel	≤ 134.1 b	-	1 U	1 U
Selenium	≤ 5	-	0.5 U	1 U
Silver	≤ 0.07	-	0.025 U	0.05 U
Zinc	≤ 308.6 b	-	4.4 I	3 U
Nutrients (mg/L)				
Ortho-phosphate	-	-	0.004 U	0.12
Total Phosphorus	-	-	0.039 I	0.42
Ammonia	-	-	0.034	1.7
Unionized Ammonia	≤ 0.02	-	≤ 0.02 c	0.02 c
Nitrate+Nitrite	-	-	0.045	0.004 U
Total Kjeldahl Nitrogen	-	-	1	3.3
Organic Nitrogen	-	-	0.97 c	1.6 c
Total Nitrogen	-	-	1.04 c	3.3 c
General Physical and Chemical Parameters				
Alpha, Total (pCi/L)	≤15.0	≤15.0	4.1	31.2
Alpha-Counting Error (pCi/L)	-	-	1.2	6.2
Radium 226 (pCi/L)	-	-	3	24.3
Radium 226-Counting Error (pCi/L)	-	-	0.3	0.7
Radium 228 (pCi/L)	-	-	0.9 U	0.9 U
Radium 228-Counting Error (pCi/L)	-	-	0.6	0.6
Radium 226 + 228 (Total pCi/L)	≤ 5.0	-	0.3	24.8 c
TSS (mg/L)	-	-	4 U	4 U
Turbidity (NTU)	≤ 29 t	-	1.8	0.65
Dissolved Oxygen (mg/L)	≥ 5	≥ 5	6.6	3
pH (S.U.)	-	6.0 - 8.5	7.9	7.2
Specific Conductance (umhos/cm) field	≤ 1,275	≤ 1,275	825	1,454
Specific Conductance (umhos/cm) lab	≤ 1,275	≤ 1,275	806	2,730
Temperature (C)	-	-	30.8	26
CBOD, 5-day (mg/L)	-	-	0.33 I	0.44 I
Flow (MGD)	-	≤ 0.014	-	0.00875 a
Hardness (mg/L)	-	-	305.4 c	1,467.7 c

Value exceeds the Class III Fresh Water Quality Criteria (62-302, F.A.C.) or permit limits.

a - Monthly average daily flow

b - Value is calculated based on hardness of the stormwater pond sample

c - Calculated value

f - Analyte detected in blank between the method detection linit and the practical quantitation limit

t - Shall not exceed 29 NTUs above background

A - Value reported is the mean of two or more determinations

I - The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.

U - Material analyzed for but not detected; value reported is the method detection limit

Florida Department of Environmental Protection

Central Laboratory Sample Submittal Form

Event ID *

Request Number: RQ-2006-07-17-42
Lake Tippecanoe RO WTP

Requester: Shannan Bogdanov
Field Report Prepared By: L Pillsbury
Collected By: L Pillsbury, P. Wenner
Send Final Report To Ilia Balcom
Sampling Agency: FDEP

Customer: SW-DIST
Project ID: FYI3
PMAS: 1163

Lab ID *	Location	Comp / Grab	Collection (begin) Date Time Eastern/Central	Collection (end) Date Time Eastern Central	Bottle Group(s)**
	ON-SITE POND	☐ Comp ☑ Grab	Date 07/17/06 Time 1005 Eastern Central	Date Time Eastern Central	A
	Field ID 33895	Tot Res Chlorine (mg/L)	Diss Oxygen (mg/L) 6.64	Storet Station Number	
	Matrix (Include type e.g. Salt, Fresh, etc) FRESH	Temp (C) 30.76	pH 7.92	Sample Depth ☑ m ☐ ft 0.52	☑ Salinity (PPTh) 0.40/825 ☑ Sp Conductance (umho/cm)	NPDES Number
	Latitude N 27° 17 22.5	Longitude W 082° 28 30.8	Comments AP		

Lab ID *	Location	Comp / Grab	Collection (begin) Date Time Eastern/Central	Collection (end) Date Time Eastern Central	Bottle Group(s)**
	RO CONCENTRATE	☐ Comp ☑ Grab	Date 07/17/06 Time 0933 Eastern Central	Date Time Eastern Central	A
	Field ID 33896	Tot Res Chlorine (mg/L)	Diss Oxygen (mg/L) 3.02	Storet Station Number	
	Matrix (Include type e.g. Salt, Fresh, etc) FRESH	Temp (C) 25.96	pH 7.18	Sample Depth ☐ m ☐ ft TAP	☑ Salinity (PPTh) 0.73/1454 ☑ Sp Conductance (umho/cm)	NPDES Number
	Latitude o ' "	Longitude o ' "	Comments		

Lab ID *	Location	Comp / Grab	Collection (begin) Date Time Eastern/Central	Collection (end) Date Time Eastern Central	Bottle Group(s)**
	ON-SITE POND	☐ Comp ☑ Grab	Date 07/17/06 Time 1005 Eastern Central	Date Time Eastern Central	C
	Field ID 33897	Tot Res Chlorine (mg/L)	Diss Oxygen (mg/L) 6.64	Storet Station Number	
	Matrix (Include type e.g. Salt, Fresh, etc) Fresh	Temp (C) 30.76	pH 7.92	Sample Depth ☑ m ☐ ft 0.52	☑ Salinity (PPTh) 0.40/825 ☐ Sp Conductance (umho/cm)	NPDES Number
	Latitude o ' "	Longitude o ' "	Comments AP Toxicity samples		

Lab ID *	Location	Comp / Grab	Collection (begin) Date Time Eastern/Central	Collection (end) Date Time Eastern Central	Bottle Group(s)**
	FIELD BLANK	☐ Comp ☑ Grab	Date 07/17/06 Time 0945 Eastern Central	Date Time Eastern Central	B
	Field ID 33898	Tot Res Chlorine (mg/L)	Diss Oxygen (mg/L)	Storet Station Number	
	Matrix (Include type e.g. Salt, Fresh, etc) Fresh	Temp (C)	pH	Sample Depth ☐ m ☐ ft	☐ Salinity (PPTh) ☐ Sp Conductance (umho/cm)	NPDES Number
	Latitude o ' "	Longitude o ' "	Comments 2 bottles Lead Dissolved 1800 7/17/06		

Relinquished By:	Date/Time	Shipping Method:	Received By:	Date/Time	Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	07/17/06 1530	DHL	ABP	7-18-06 8:50				

* Shaded Areas for Lab use only.

** Please see reverse side for Bottle Group information.

last revised October 1, 2003

FDEP Biology Section - Acute Screen Bioassay Bench Sheets

Facility: Lake Tippecanoe Owners Association, Inc.
Address: 4630 Tippecanoe Trail
City: Sarasota County: Sarasota
Contact/District: Lori Pillsbury / Southwest District
NPDES Permit #: FL 0188981
LIMS Job #: TLH-2006-07-18-11 LIMS Sample #: 936188
Lims Data Entry: 7-21-06 SP Data Entry Verification: 7-21-06 SP

Sample Collection: Date: 7-17-06 Time: 10:05
Hold Time Start: Date: 7-17-06 Time: 10:05

Comments:

Instructions (for below): Circle appropriate wording. If yes is circled, complete blanks.

Test Type: Screen
(Static) Static Renewal / Flow-through
Test Duration: (48) 96 Hours.
Light Intensity : 50 - 100 ft. candles.
Photoperiod : 16 hours light 8 hours dark.

Test 1 validation: **Test 1:** SOP TA 07 01
Control survival ≥90%: (Yes) No
Temperature Range ≤3°C: (Yes) No

Test 2 validation: **Test 2:** SOP TA 07 02
Control survival ≥90%: (Yes) No
Temperature Range ≤3°C: (Yes) No

Initial sample handling:
PH adjustment : yes (no) Initial pH: ____ NaOH N HCl N ____ Drops mL Final pH: ____
Aeration : yes (no) Initial DO: ____mg/L Final DO: ____mg/L Duration: ____minutes Rate: ~ ____bubbles/min
Salinity adjusted (Test 1): yes (no) Initial Salinity: ____ Final Salinity: ____ Salts Hypersaline brine
Salinity adjusted (Test 2): yes (no) Initial Salinity: ____ Final Salinity: ____ Salts Hypersaline brine
Dechlorination: yes (no) ____mL of 0.025N Sodium Thiosulfate per liter of sample. Final TRC: ____

Temperature Range °C
Incubator # 2 Range 23.9 - 24.1
Room B246: 25.0 - 25.8
Waterbath: N/E

Sample Validation:
Temperature: Shipped ≤6°C (Yes) No Hand Delivered: Cooling (received °C < collected °C) Yes No
Holding Time: ≤36 Hours (Yes) No (Composite-end of collection; grab-when collected; 4 in 24 - time last sample collected)

Investigators' Signatures
Sarah Pritchard
Bruce Abraham
Erin Berry
Jason Daniel

Nicole Weibrecht
REVIEWER

Water Quality Parameters	20% DMW	Moderately Hard Water/ (Well Water)	Salt Water ASW NSW Test 1	Salt Water ASW NSW Test 2	Other:	Original Sample	Method	Measured by	Verified by
Field Total Residual Cl2 (mg/L):	N/A	N/A	N/A	N/A		not measured	-		SP
Lab Total Residual Cl2 (mg/L):	<0.03	<0.03				<0.03	HACH	BA/aw	SP
Alkalinity (mg/L as $CaCO_3$):	88	151				136	HACH	aw	SP
Hardness (mg/L as $CaCO_3$):	97	129				298	HACH	aw	SP
Total Ammonia (mg/L as N):	<0.017	<0.017				<0.017	DENVER	BA	SP
Salinity (ppth):	<1	<1				<1	YSI / Mettler	SP	SA

V 1.4 9/12/05

Appendix B. (continued)

FDEP Biology Section - Bioassay Survival Sheet

LIMS Sample #: 936188 Test #: 1 of 2 Test Started: Date 7-18-06 Time: 11:40

Organism: C. dubia SOP #: TA 07_ 01 Test Ended: Date 7-20-06 Time: 10 45

Organism Batch: 30-06 Diluent/ Batch: DMW 1 19-06

Organism Age: <24 hrs Food: YCT *P. subcapitata* *Artemia*

Chamber Size: 30 mL Batch: 7-06 4 26-06 BK –

Test Volume: 20 mL Feeding: (Prior to test) Prior to renewal - Daily

Concentration	Replicate	Chamber #	Test Hour 0 hr	24 hr	48 hr BR	48 hr AR	72 hr	96 hr
Ctrl	A	A	5	5	5			
	B	B	5	5	5			
	C	C	5	5	5			
	D	D	5	5	5			
100%	A	A	5	5	5			
	B	B	5	5	5			
	C	C	5	5	5			
	D	D	5	5	5			
Organisms loaded by: BA		Checked by:		BA	BA			

Loading Verified by: BP

Comments: –

m = missing d = dead BR = before renewal AR = after renewal

Test Results:

% mortality in 100% sample: 0%

LC_{50}: >100% If Calculated: 95% CI________ Method:________

Screening Tests:

Report LC50 as >100%, =100%, or <100%.

Substitue highest test concentration used if other than 100% (example: Ocean outfall tested at 30% concentration).

V 2.1 11/01/2005

Page 000062

Appendix B. (continued)

FDEP Biology Section - Bioassay Survival Sheet

LIMS Sample #: 936188 Test #: 2 of 2 Test Started: Date 7-18-06 Time: 1140
Organism: C. tedsi SOP #: TA 07_02 Test Ended: Date 7-20-06 Time: 10:30
Organism Batch: 16-06 Diluent/ Batch: well H2O/ 7-17-06
Organism Age: 13days Food: YCT P. subcapitata Artemia
Chamber Size: 1000 mL Batch: — — GSL-536-90
Test Volume: 600 mL Feeding: (Prior to test) Prior to renewal - Daily

Concentration	Replicate	Chamber #	Test Hour 0 hr	24 hr	48 hr BR	48 hr AR	72 hr	96 hr
Ctrl	A	~~F1~~ F2	5	5	5			
	B	~~F2~~ F4	5	5	5			
	C	~~F3~~ F6	5	5	5			
	D	~~F4~~ F8	5	5	5			
100%	A	~~F5~~ F1	5	5	5			
	B	~~F6~~ F3	5	5	5			
	C	~~F7~~ F5	5	5	5			
	D	~~F8~~ F7	5	5	5			

Organisms loaded by: SP Checked by: [redacted] DD BA
Loading Verified by: BA
m = missing d = dead BR = before renewal AR = after renewal

Comments:

Test Results:
% mortality in 100% sample: 0%
LC_{50}: >100% If Calculated: 95% CI_____ Method:_____

Screening Tests:
Report LC50 as >100%, =100%, or <100%.
Substitue highest test concentration used if other than 100% (example: Ocean outfall tested at 30% concentration).

V 2.1 11/01/2005

Page 000063

FDEP Biology Section - Bioassay Parameter Sheet

LIMS Sample # : 9360188 Test #: 1 of 2

TEST SOP #: TA07_01 Test Species: (Ceriodaphnia dubia) Cyprinella leedsi Pimephales promelas Americamysis bahia Menidia beryllina Other:_____

Concentration Ctrl	0 Hr.	24 Hr.	48 Hr. before renewal	48 Hr. after renewal	72 Hr.	96 Hr.
Replicate	A		B			
pH (S.U.)	8.1		8.2			
Temperature °C	25.9		24.6			
Dissolved Oxygen mg/L	7.9		7.9			
Conductivity (µmhos) mmhos	210		231			
(initials) Measured by:	[illegible]		[illegible]			
(initials) Recorded by:	[illegible]		[illegible]			

Comments:

Concentration 100%	0 Hr.	24 Hr.	48 Hr. before renewal	48 Hr. after renewal	72 Hr.	96 Hr.
Replicate	A		B			
pH (S.U.)	8.0		8.4			
Temperature °C	25.7		24.5			
Dissolved Oxygen mg/L	7.7		7.9			
Conductivity (µmhos) mmhos	814		871			
(initials) Measured by:	[illegible]		[illegible]			
(initials) Recorded by:	[illegible]		[illegible]			

Comments:

Concentration	0 Hr.	24 Hr.	48 Hr. before renewal	48 Hr. after renewal	72 Hr.	96 Hr.
Replicate						
pH (S.U.)						
Temperature °C						
Dissolved Oxygen mg/L						
Conductivity µmhos mmhos						
(initials) Measured by:						
(initials) Recorded by:						

Comments:

Concentration	0 Hr.	24 Hr.	48 Hr. before renewal	48 Hr. after renewal	72 Hr.	96 Hr.
Replicate						
pH (S.U.)						
Temperature °C						
Dissolved Oxygen mg/L						
Conductivity µmhos mmhos						
(initials) Measured by:						
(initials) Recorded by:						

Comments:

V 2.0 2/24/04

FDEP Biology Section - Bioassay Parameter Sheet

LIMS Sample # : 9361883 **Test #:** 2 of 2

TEST SOP #: TA07_02 **Test Species:** *Ceriodaphnia dubia* (*Cyprinella leedsi*) *Pimephales promelas* *Americamysis bahia* *Menidia beryllina* Other:_____

Concentration Ctrl	0 Hr.	24 Hr.	48 Hr. before renewal	48 Hr. after renewal	72 Hr.	96 Hr.
Replicate	A	B	C			
pH (S.U.)	8.0	8.2	8.2			
Temperature °C	25.5	25.0	25.0			
Dissolved Oxygen mg/L	7.6	7.2	7.9			
Conductivity (µmhos) mmhos	314	316	300			
(initials) Measured by:	[illegible]	[illegible]	[illegible]			
(initials) Recorded by:	[illegible]	[illegible]	[illegible]			

Comments:

Concentration 100%	0 Hr.	24 Hr.	48 Hr. before renewal	48 Hr. after renewal	72 Hr.	96 Hr.
Replicate	A	B	C			
pH (S.U.)	8.0	8.1	8.1			
Temperature °C	25.5	24.6	24.8			
Dissolved Oxygen mg/L	7.8	7.0	7.3			
Conductivity (µmhos) mmhos	811	830	854			
(initials) Measured by:	[illegible]	[illegible]	[illegible]			
(initials) Recorded by:	[illegible]	[illegible]	[illegible]			

Comments:

Concentration	0 Hr.	24 Hr.	48 Hr. before renewal	48 Hr. after renewal	72 Hr.	96 Hr.
Replicate						
pH (S.U.)						
Temperature °C						
Dissolved Oxygen mg/L						
Conductivity µmhos mmhos						
(initials) Measured by:						
(initials) Recorded by:						

Comments:

Concentration	0 Hr.	24 Hr.	48 Hr. before renewal	48 Hr. after renewal	72 Hr.	96 Hr.
Replicate						
pH (S.U.)						
Temperature °C						
Dissolved Oxygen mg/L						
Conductivity µmhos mmhos						
(initials) Measured by:						
(initials) Recorded by:						

Comments:

V 2.0 2/24/04

Appendix C. SRT Bench Sheets and Statistical Analysis

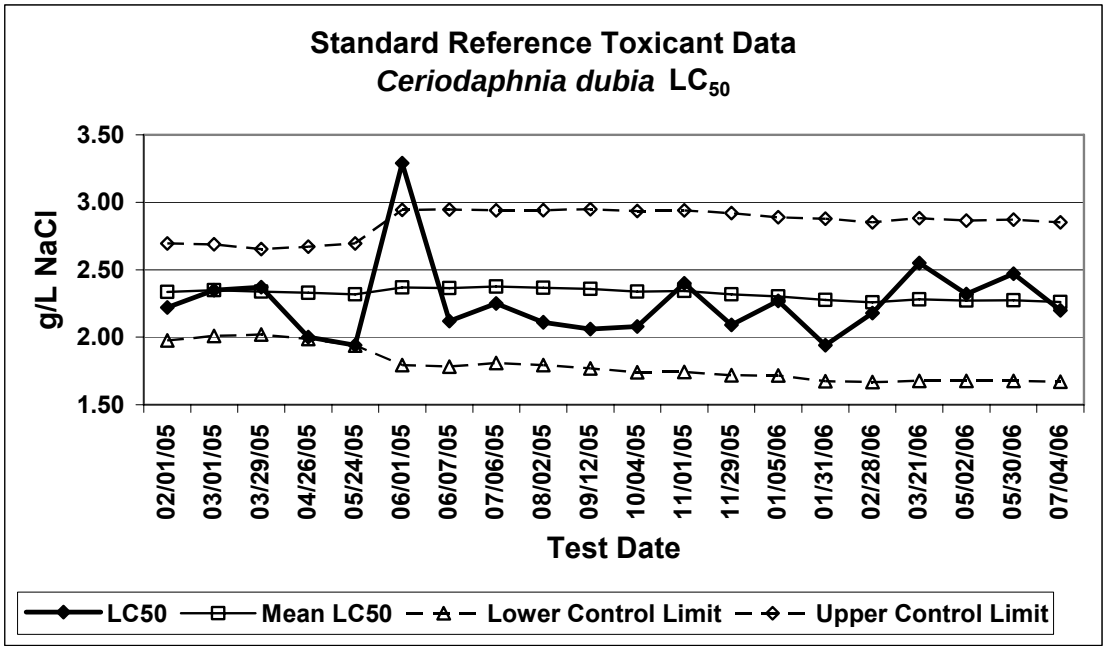
Florida Department of Environmental Protection
Bureau of Laboratories

Standard Reference Toxicant (SRT) Test Data - 48-hour Acute Toxicity
Ceriodaphnia dubia (water flea) - Sodium Chloride (NaCl)

Date	LC50	Mean LC50	Std Dev	Lower Control Limit	Upper Control Limit
02/01/05	2.22	2.34	0.18	1.98	2.70
03/01/05	2.35	2.35	0.17	2.01	2.69
03/29/05	2.37	2.34	0.16	2.02	2.65
04/26/05	2.00	2.33	0.17	1.99	2.67
05/24/05	1.94	2.32	0.19	1.94	2.70
06/01/05	3.29	2.37	0.29	1.79	2.94
06/07/05	2.12	2.36	0.29	1.78	2.95
07/06/05	2.25	2.37	0.28	1.81	2.94
08/02/05	2.11	2.37	0.29	1.79	2.94
09/12/05	2.06	2.36	0.29	1.77	2.95
10/04/05	2.08	2.34	0.30	1.74	2.94
11/01/05	2.40	2.34	0.30	1.74	2.94
11/29/05	2.09	2.32	0.30	1.72	2.92
01/05/06	2.27	2.30	0.29	1.72	2.89
01/31/06	1.94	2.28	0.30	1.67	2.88
02/28/06	2.18	2.26	0.30	1.67	2.85
03/21/06	2.55	2.28	0.30	1.68	2.88
05/02/06	2.32	2.27	0.30	1.68	2.87
05/30/06	2.47	2.27	0.30	1.68	2.87
07/04/06	2.20	2.26	0.30	1.67	2.85

Means are of the last 20 SRT tests.
Lower Confidence Limit = mean - 2 * Std Dev
Upper Confidence Limit = mean + 2 * Std Dev

CV = 13.08
EPA reference 75th quartile CV = 29%



Appendix C. (continued)

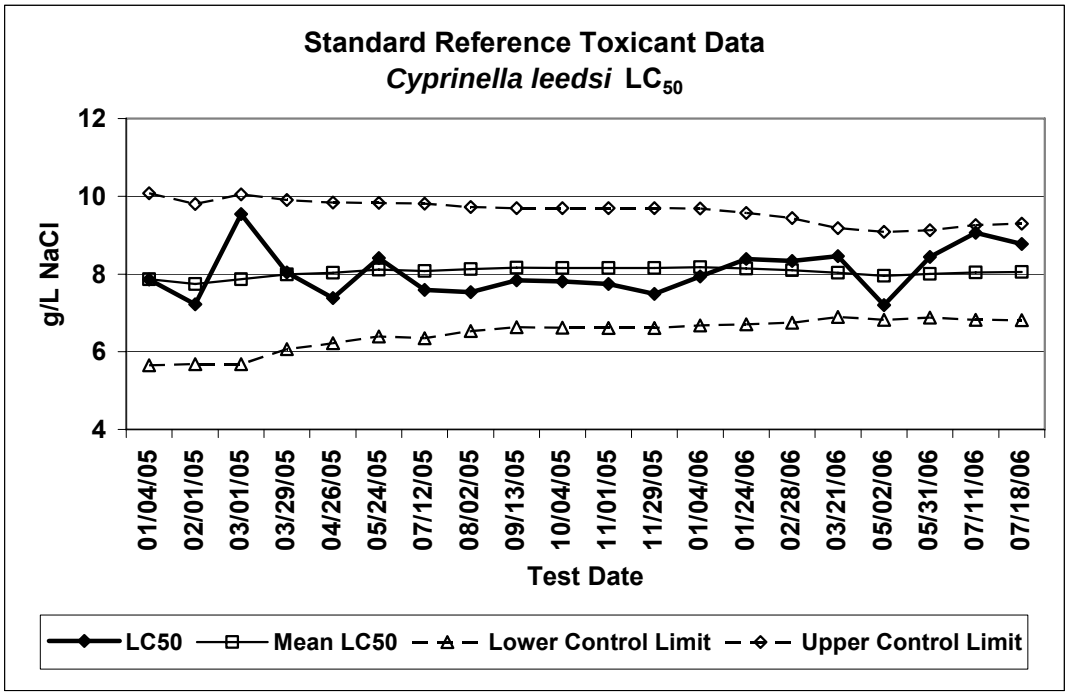
Florida Department of Environmental Protection
Bureau of Laboratories

Standard Reference Toxicant (SRT) Test Data - 48-hour Acute Toxicity
Cyprinella leedsi (bannerfin shiner) - Sodium Chloride (NaCl)

Date	LC50	Mean LC50	Std Dev	Lower Control Limit	Upper Control Limit
01/04/05	7.86	7.87	1.11	5.65	10.08
02/01/05	7.22	7.74	1.03	5.68	9.80
03/01/05	9.54	7.87	1.09	5.68	10.05
03/29/05	8.04	7.99	0.96	6.07	9.91
04/26/05	7.38	8.03	0.90	6.22	9.84
05/24/05	8.41	8.11	0.86	6.40	9.83
07/12/05	7.59	8.08	0.86	6.35	9.81
08/02/05	7.53	8.13	0.80	6.53	9.72
09/13/05	7.84	8.16	0.77	6.63	9.70
10/04/05	7.81	8.16	0.77	6.62	9.69
11/01/05	7.74	8.15	0.77	6.61	9.69
11/29/05	7.49	8.15	0.77	6.61	9.69
01/04/06	7.94	8.18	0.75	6.67	9.68
01/24/06	8.39	8.14	0.72	6.71	9.57
02/28/06	8.34	8.09	0.67	6.75	9.44
03/21/06	8.46	8.04	0.57	6.89	9.18
05/02/06	7.2	7.95	0.57	6.82	9.09
05/31/06	8.44	8.00	0.56	6.88	9.13
07/11/06	9.06	8.04	0.61	6.82	9.26
07/18/06	8.77	8.05	0.62	6.81	9.29

Means are of the last 20 SRT tests.
Lower Confidence Limit = mean - 2 * Std Dev
Upper Confidence Limit = mean + 2 * Std Dev

CV = 7.70
EPA reference 75th quartile CV = 19%



Appendix C. (continued)

FDEP Biology Section - Acute SRT Bench Sheet

Test Organism: Americamysis bahia / Menidia beryllina / Hyalella azteca / Cyprinodontidae diptera / Cyprinella leedsi / Pimephales promelas / Other: _____

Method from EPA-821-R-02-012
Test Type: Definitive
Static / Static Renewal
Test Page 1 of 2

Diluent/ Batch#: DMW / 17-06
Toxicant/ Batch#: NaCl / 8-06

Test Beginning: Date: 7-4-06 Time: 11:45
Test Ending: Date: 7-8-06 Time: 0910

Water Quality Parameters:	Diluent	Method	Initials
Total Residual Cl_2 (mg/L):	<0.03	Hach	SS
Alkalinity (mg/L as $CaCO_3$):	83	Hach	BA
Hardness (mg/L as $CaCO_3$):	860	Hach	BA
Total Ammonia (mg/L as N):	<0.017	Denver	MF
Salinity (ppth):	<1	Mettler	BA

Organism Batch # Age: 28-06 / <24hrs
Feeding: Prior to start / Before renewals / Daily
Food: YCT / P.subcapitata / Artemia
Food Batch: 1-06 / 3-06 / —
Chamber size: 30 mL
Test volume: 20 mL per replicate

Conc. (%)	Rep.	Chamber#	Number Live 0 hr / 24 hr / 48 hr	pH (SU) 0 hr / 24 hr / 48 hr	Temperature (° C) 0 hr / 24 hr / 48 hr	D.O. (mg/l) 0 hr / 24 hr / 48 hr	UNCORRECTED Cond (umhos/cm) 0 hr / 24 hr / 48 hr
Control	A	A	5 / 5 / 5	8.2 / / 8.2	24.1 / / 24.0	7.7 / / 7.9	0.182 / / 0.207
	B	B	5 / 5 / 5				
	C	C	5 / 5 / 5				
	D	D	5 / 5 / 5				
1.5	A	A	5 / 5 / 5	8.1 / / 8.1	24.2 / / 24.0	7.2 / / 7.3	2.97 / / 3.26
	B	B	5 / 5 / 5				
	C	C	5 / 5 / 5				
	D	D	5 / 5 / 5				
2.0	A	A	5 / 5 / 5	8.1 / / 8.1	24.2 / / 24.0	7.1 / / 7.0	3.83 / / 4.27
	B	B	5 / 4[1D] / 3[1D]				
	C	C	5 / 5 / 5				
	D	D	5 / 5 / 5				
2.5	A	A	5 / 5 / 1[1D]	8.1 / / 8.1	24.0 / / 24.0	7.2 / / 7.0	4.71 / / 5.21
	B	B	5 / 4[1D] / 0[1D]				
	C	C	5 / 3[1D] / 0[1D]				
	D	D	5 / 5 / 0[1D]				
3.0	A	A	5 / 1[1D] / 0[1D]	8.1 / / 8.1	24.0 / / 24.1	7.2 / / 6.9	5.57 / / 6.11
	B	B	5 / 3[1D] / 0[1D]				
	C	C	5 / 0[1D] / —				
	D	D	5 / 2[1D] / 0[1D]				
4.0	A	A	5 / 0[1D] / -	8.1 / 8.1 / -	24.0 / 24.3 / —	7.0 / 6.8 / —	7.24 / 7.45 / —
	B	B	5 / 0[1D] / -				
	C	C	5 / 0[1D] / -				
	D	D	5 / 0[1D] / -				
	A						
	B						
	C						
	D						
Loaded / measured by:			BA / BA / BA	BA / BA / BA	BA / BA / BA	BA / BA / BA	BA / BA / BA
Recorded by:			SD / BA / SD	BA / BA / BA	BA / BA / BA	BA / BA / BA	BA / BA / BA

Investigators' Signatures
Chris Daniels
Jane Daniels
Heidi Viehman
Marshall Brown
Kristi Williams
REVIEWER

Concentrations prepared by: BA
Loading verified by: SD
Light Intensity: 50-100 Ft. candles
Photoperiod: 16 hours Light / 8 hours dark
Temperature Range °C:
Incubator # 2: min. 24.1 max. 25.0 mean 24.4
Incubator #: min. ____ max. ____ mean ____
Room B246: min. 25.0 max. 25.1 mean 25.6

Remarks:

Statistical Results: Method: Spearman-Karber
96 hour LC50: 2.20 2.12 and 2.28
95% Confidence Interval: lower 2.12 upper 2.29

Page 000072

Appendix C. (continued)

FDEP Biology Section - Acute SRT Bench Sheet

Test Organism: *Americamysis bahia* (Method 2007.0) / *Menidia beryllina* (Method 2006.0) / *Hyalella azteca* (Method 100.1 EPA-600/4-90-027) / *Ceriodaphnia dubia* (Method 2002.0) / *Cyprinella leedsi* (Method 2000.0) / *Pimephales promelas* (Method 2000.0) / Other: _____

Method from EPA-821-R-02-012
Test Type: Definitive
Static / Static Renewal
Test Page 2 of 2

Diluent: Batch#: DMW 117-06
Toxicant: Batch#: NaCl 18-06

Test Beginning: Date: 7-4-06 Time: 1145
Test Ending: Date: 7-8-06 Time: 0910

Water Quality Parameters:	Diluent	Method	Initials
Total Residual Cl (mg/L):	<0.03	Hach	GP
Alkalinity (mg/L as $CaCO_3$):	83	Hach	BA
Hardness (mg/L as $CaCO_3$):	80	Hach	BA
Total Ammonia (mg/L as N):	<0.07	Denver	MF
Salinity (ppt):	<1	Mettler	GA

Organism Batch #/ Age: 2306 / <24 hrs
Feeding: Prior to test / Prior to renewal / Daily
Food: YCT P.subcapitata Artemia
Food Batch: 1-06 3-06 —
Chamber size: 30 mL
Test volume: 20 mL per replicate

Conc. (ppt)	Rep.	Chamber#	Number Live 24 hr	Number Live 48 hr	Number Live 96 hr	pH (SU) 0 hr	pH (SU) 48 hr	pH (SU) 96 hr	Temperature (°C) 0 hr	Temperature (°C) 48 hr	Temperature (°C) 96 hr	D.O. (mg/l) 0 hr	D.O. (mg/l) 48 hr	D.O. (mg/l) 96 hr	UNCORRECTED Cond. (mmhos/cm) 0 hr	UNCORRECTED Cond. (mmhos/cm) 48 hr	UNCORRECTED Cond. (mmhos/cm) 96 hr
Control	A	A	5	5	4 D	8.2		8.2	24.7		24.5	7.9		7.6	0.84		0.210
	B	B	6	5	5												
	C	C	5	5	5												
	D	D	5	5	4 D												
1.5	A	A	5	5	5	8.1		8.1	25.3		24.6	7.4		7.5	2.82		3.20
	B	B	5	5	5												
	C	C	5	5	5												
	D	D	5	5	4 D												
3.0	A	A	5	5	3 D	8.1		8.1	25.1		24.5	7.2		7.5	2.80		4.01
	B	B	3	3	2 D												
	C	C	5	4 D	4												
	D	D	5	5	4 D												
2.5	A	A	1	0 D	-	8.1	8.1	—	25.4	24.6	—	7.2	7.3	—	4.49	4.95	—
	B	B	-	-	-												
	C	C	-	-	-												
	D	D	-	-	-												
3.5	A	A	-	-	-	-		-	-		-	-		-	-		-
	B	B	-	-	-												
	C	C	-	-	-												
	D	D	-	-	-												
4.0	A	A	-	-	-	-		-	-		-	-		-	-		-
	B	B	-	-	-												
	C	C	-	-	-												
	D	D	-	-	-												
	A																
	B																
	C																
	D																
Loaded / measured by:			BA	BA	MF	BA	DA	MF	BA	BA	MF	DA	GA	MF	BA	BA	MF
Recorded by:			BA	BA	MF	BA	BA	MF	GA	BA	MF	GA	GA	MF	BA	BA	MF

Investigators' Signatures
Laurel Gilbert
Brian Abbott
Mark Hubert
Jason Jones
Nicole Williams
REVIEWER

Concentrations prepared by: GA
Loading verified by: MF
Light Intensity: 50-100 Ft. candles
Photoperiod: 16 hours Light / 8 hours dark
Temperature Range °C:
Incubator #2 min 25.1 max 25.7 mean 25.4
Incubator # ___ min ___ max ___ mean ___
Room B246 min 25.2 max 25.9 mean 25.6

Remarks:

Statistical Results: Method: Spearman-Karber
48 (96) hour LC50: 2.07
95% Confidence Interval: lower 1.97 upper 2.18

Page 000073

Appendix C. (continued)

FDEP Biology Section - Acute SRT Bench Sheet

Test Organism: *Americamysis bahia* (Method 2007.0) *Menidia beryllina* (Method 2006.0) *Hyalella azteca* (Method 100.1 EPA-600-R-99-064) *Ceriodaphnia dubia* (Method 2002.0) *Cyprinella leedsi* (Method 2000.0) *Pimephales promelas* (Method 2000.0) Other:

Method from EPA-821-R-02-012
Test Type: Definitive
Static / Static Renewal
Test Page 1 of 2

Diluent/ Batch#: Well H20 / 7-17-06
Toxicant/ Batch# NaCl / 9-06

Test Beginning: Date: 7-18-06 Time: 1230
Test Ending: Date: 7-22-06 Time: 1315

Water Quality Parameters:	Diluent	Method	Initials
Total Residual Cl_2 (mg/L):	<0.03	Hach	GW
Alkalinity (mg/L as $CaCO_3$):	151	Hach	GW
Hardness (mg/L as CaCO3):	129	Hach	GW
Total Ammonia (mg/L as N):	<0.017	Denver	BA
Salinity (ppth):	<1	Mettler	BA

Organism Batch #/ Age: 16-06 / 13days
Feeding: Prior to test / Prior to renewal / Daily
Food: YCT P.subcapitata Artemia
Food Batch: — — GSL536090
Chamber size: 1000 mL
Test volume: 500 mL per replicate

Conc. µg/L (g/L)	Rep.	Chamber#	Number Live 0 hr (48 hr)	Number Live 24 hr (72 hr)	Number Live 48 hr (96 hr)	pH (SU) 0 hr (48 hr)	pH (SU) 24 hr (72 hr)	pH (SU) 48 hr (96 hr)	Temperature (°C) 0 hr (48 hr)	Temperature (°C) 24 hr (72 hr)	Temperature (°C) 48 hr (96 hr)	D.O. (mg/l) 0 hr (48 hr)	D.O. (mg/l) 24 hr (72 hr)	D.O. (mg/l) 48 hr (96 hr)	UNCORRECTED Cond. (mmhos/cm) Cond. (µmhos/cm) 0 hr (48 hr)	UNCORRECTED 24 hr (72 hr)	UNCORRECTED 48 hr (96 hr)
Control	A	D13	10	10	10	7.9		8.2	25.3		24.8	7.5		6.4	0.288		0.320
	B	D14	10	10	10		8.0			24.9			7.0			0.294	
	C																
	D																
6.0	A	D15	10	10	10	7.8		8.1	25.4		25.0	7.8		6.5	10.5		10.3
	B	D16	10	10	9		7.9			24.8			6.4			10.2	
	C																
	D																
7.0	A	D17	10	10	10	7.8		8.1	25.4		24.9	7.8		6.6	12.3		12.5
	B	D18	10	10	10		7.9			24.5			6.5			12.2	
	C																
	D																
8.0	A	D19	10	8[30]	8	7.9		8.1	25.4		24.8	7.8		6.7	13.8		14.1
	B	D20	10	10	10		7.9			24.6			6.5			13.8	
	C																
	D																
9.0	A	D21	10	7[30]	7	7.9		8.1	25.5		24.6	7.8		6.7	15.5		15.7
	B	D22	10	1[30]	1		7.9			24.7			6.3			15.4	
	C																
	D																
10.0	A	D23	10	0[30]	—	7.8		—	25.5		—	7.8		—	17.0		—
	B	D24	10	0[30]	—		7.9	—		24.8			6.0			17.0	
	C																
	D																
	A																
	B																
	C																
	D																
Loaded / measured by:			SP	JD	BA	SP	BA	JD	SP	JD	BA	SP	BA	JD	SP	BA	JD
Recorded by:			SP	JD	BA	SP	BA	JD	SP	JD	BA	SP	BA	JD	SP	BA	JD

Investigators' Signatures
Sarah Fairchild
James Dennis
Bill Mills
Bruce Absher
Nicole Wellendorf
REVIEWER

Concentrations prepared by: SP
Loading verified by: JD
Light Intensity: 50-100 Ft. candles
Photoperiod: 16 hours Light / 8 hours dark
Temperature Range °C:
Incubator # 2 min. 23.8 max. 26.0 mean 25.0
Incubator # ___ min. ___ max. ___ mean ___
Room B246 min. 24.4 max. 25.8 mean 25.5

Remarks:

Statistical Results: Method: Spearman-Karber
48 / 96 hour LC50: 8.77
95% Confidence Interval: lower 8.56 upper 9.05

Revised 02/21/06

Page 000010

Appendix C. (continued)

FDEP Biology Section - Acute SRT Bench Sheet

Test Organism: *Americamysis bahia* (Method 2007.0) *Menidia beryllina* (Method 2006.0) *Hyalella azteca* (Method 100.1 EPA-600-R-99-064)
Ceriodaphnia dubia (Method 2002.0) *Cyprinella leedsi* (Method 2000.0) *Pimephales promelas* (Method 2000.0) Other:_____

Method from EPA-821-R-02-012
Test Type: Definitive
Static (Static Renewal)
Test Page 2 of 2

Diluent/ Batch#: Well H_2O / 7-17-06
Toxicant/ Batch# NaCl / 9-06

Test Beginning: Date: 7-18-06 Time: 1230
Test Ending: Date: 7-22-06 Time: 1315

Water Quality Parameters:	Diluent	Method	Initials
Total Residual Cl_2 (mg/L):	<0.03	Hach	CA
Alkalinity (mg/L as $CaCO_3$):	151	Hach	CA
Hardness (mg/L as CaCO3):	129	Hach	CA
Total Ammonia (mg/L as N):	<0.017	Denver	BA
Salinity (ppth):	<1	Mettler	BA

Organism Batch #/ Age: 16-06 / 13 days
Feeding: Prior to test / Prior to renewal / Daily
Food: YCT P.*subcapitata* Artemia
Food Batch: — — GSL-536-90
Chamber size: 1000 mL
Test volume: 500 mL per replicate

Conc. µg/L (B/L)	Rep.	Chamber#	Number Live 0 hr / 24 hr / 48 hr			pH (SU) 0 hr / 24 hr / 48 hr			Temperature (° C) 0 hr / 24 hr / 48 hr			D.O. (mg/l) 0 hr / 24 hr / 48 hr			UNCORRECTED Cond. (mmhos/cm) 0 hr / 24 hr / 48 hr		
			48 hr	72 hr	96 hr	48 hr	72 hr	96 hr	48 hr	72 hr	96 hr	48 hr	72 hr	96 hr	48 hr	72 hr	96 hr
Control	A	D13	10	10	10	8.0		8.0	24.6		25.1	7.2		7.3	0.271		0.295
	B	D14	10	10	10		8.1			24.3			7.0			0.319	
	C																
	D																
6.0	A	D15	~~10~~ 9	9	9	8.0		8.1	24.7		25.1	6.5		7.0	10.6		10.7
	B	D16	~~10~~ 9	9	9		8.0			24.7			6.8			10.7	
	C																
	D															(A)	
7.0	A	D17	10	10	10	8.0		8.0	24.7		25.0	6.7		6.9	~~13.7~~ 13.3	14.0	14.0
	B	D18	10	10	10		8.0			24.6			6.5			14.0	
	C																
	D																
8.0	A	D19	8	8	8	8.0		8.0	24.7		24.9	6.8		6.7	14.0		14.3
	B	D20	10	10	10		7.9			24.7			6.1			14.1	
	C																
	D																
9.0	A	D21	7	7	7	8.0		8.0	24.6		24.9	7.0		6.2	15.7		15.9
	B	D22	1	1	1		8.0			24.7			6.3			15.8	
	C																
	D																
10.0	A	D23	-	-	-	-		-	-		-	-		-	-		-
	B	D24	-	-	-		-			-			-			-	
	C																
	D																
	A																
	B																
	C																
	D	-															
Loaded / measured by:			BA	BA	JD	DA	BA	JD	BA	DA	JD	BA	BA	JD	BA	BA	DA
Recorded by:			BA	BA	JD	BA	BA	JD	BA	DA	JD	BA	BA	JD	BA	BA	JD

Investigators' Signatures
Janet Richard
James Daniel
Erin Lange
Brent Alexander
Nicki Wetterhorst
REVIEWER

Concentrations prepared by: SP
Loading verified by: N/A
Light Intensity: 50-100 Ft. candles
Photoperiod: 16 hours Light / 8 hours dark
Temperature Range °C:
Incubator # 2 min. 23.9 max. 26.0 mean 25.0
Incubator # ___ min. ___ max. ___ mean ___
Room B246 min. 24.9 max. 25.9 mean 25.5

Remarks: (A) The 0.5ppth increase in Salinity of the 7.0ppth concentration was likely due to a lab error, the exact cause was not determined. Per conversation with lab personnel 8-11-06 M Faircloth

Statistical Results: Method: Spearman-Karber
48 / (96) hour LC50: 8.78
95% Confidence Interval: lower 8.49 upper 9.08

Revised 02/21/06

Page 000011

Appendix C. (continued)

Ceriodaphnia dubia Acute Standard Reference Toxicant Test

DATE: 07-04-06 DURATION: 48 h TOXICANT : NaCl
SPECIES: *C. dubia*

RAW DATA: Concentration (g/L)	Number Exposed	Mortalities
0.00	20	0
1.50	20	0
2.00	20	2
2.50	20	19
3.00	20	20
4.00	20	20

SPEARMAN-KARBER TRIM: .00%

SPEARMAN-KARBER ESTIMATES: LC_{50}: 2.20
95% LOWER CONFIDENCE: 2.12
95% UPPER CONFIDENCE: 2.29

Cyprinella leedsi Acute Standard Reference Toxicant Test

DATE: 07-18-06 DURATION: 48 h TOXICANT : NaCl
SPECIES: *C.leedsi*

RAW DATA: Concentration (g/L)	Number Exposed	Mortalities
0.00	20	0
6.00	20	1
7.00	20	0
8.00	20	2
9.00	20	12
10.00	20	20

SPEARMAN-KARBER TRIM: 2.50%

SPEARMAN-KARBER ESTIMATES: LC_{50}: 8.77
95% LOWER CONFIDENCE: 8.50
95% UPPER CONFIDENCE: 9.05

NOTE: MORTALITY PROPORTIONS WERE NOT MONOTONICALLY INCREASING. ADJUSTMENTS WERE MADE PRIOR TO SPEARMAN-KARBER ESTIMATION.

Appendix D. Test Organism Receipt

MBL Aquaculture
4569 Samuel Street
Sarasota, Florida 34233
TEL: (800) 889-0384
FAX: (941) 922-3874
EMAIL: sales@mblaquaculture.com
WEB: www.MBLAquaculture.com

NELAC Accredited

Organism Shipment Record

State of Florida Aquaculture Certificate Number AQ0668007

Date: 7/10/06

Shipped to: FDEP

P.O. No: _____

Species	Quantity	Age	Brood Number	Temperature	Salinity
Mysidopsis bahia	400+	4 Days	MS060706	25°C	19.5‰
Menidia beryllina	400+	13 Days	SS060612	25°C	19.0‰
Cyprinella leedsi	400+	11 Days	CL060629	25°C	
Pimephales promelas	400+	10 Days	FM060630-1050	25°C	

Packed by: Frank Gonzi

Shipped Via: FedEx

Notes: _____

Thank you for your order.

Gonzi

Appendix D. Continued

MBL Aquaculture
4569 Samuel Street
Sarasota, Florida 34233
TEL: (800) 889-0384
FAX: (941) 922-3874
EMAIL: sales@mblaquaculture.com
WEB: www.MBLAquaculture.com

NELAC Accredited

Organism Shipment Record

State of Florida Aquaculture Certificate Number AQ0668007

Date: 7/17/06

Shipped to: FSEP

P.O. No: _____

Species	Quantity	Age	Brood Number	Temperature	Salinity
Mysidopsis bahia	300+	4 Days	MS060713	25°C	~30‰
Menidia beryllina	300+	9 Days	SS060708	25°C	~30‰
Cyprinella leedsi	200+	12 Days	CL060705	25°C	
Pimephales promelas					

Packed by: Frank Gauyi

Shipped Via: FedEx

Notes: _____

Thank you for your order.

Appendix E. Chemical Analyses performed on the effluent from the Lake Tippecanoe Owners Association, Inc. stormwater pond and RO concentrate (FLW-1), sampled on July 17, 2006.

Date Sampled	Location	Analysis Group	Component	Result	Units	Remark	MDL	PQL
7/17/2006 10:05	On-Site Pond	Bio-AGP/LimNut	Algal Growth Potential	0.3	mg DryWt/L	U	0.3	0.9
7/17/2006 10:05	On-Site Pond	Bio-BOD	Biochemical Oxygen Demand-5 Day,N-Inhib	0.33	mg/L	I		
7/17/2006 10:05	On-Site Pond	Bio-Chl-a	Chlorophyll-A, Monochromatic, Water	0.85	ug/L	U	0.85	2.6
7/17/2006 10:05	On-Site Pond	Bio-Chl-a	Phaeophytin-A, Monochromatic, Water	1.5	ug/L	U	1.5	4.5
7/17/2006 10:05	On-Site Pond	BNA-Water	1,2,4-Trichlorobenzene	0.95	ug/L	U	0.95	3.8
7/17/2006 10:05	On-Site Pond	BNA-Water	1,2-Dichlorobenzene	0.95	ug/L	U	0.95	3.8
7/17/2006 10:05	On-Site Pond	BNA-Water	1,3-Dichlorobenzene	0.95	ug/L	U	0.95	3.8
7/17/2006 10:05	On-Site Pond	BNA-Water	1,4-Dichlorobenzene	0.95	ug/L	U	0.95	3.8
7/17/2006 10:05	On-Site Pond	BNA-Water	2,4,6-Trichlorophenol	0.95	ug/L	U	0.95	3.8
7/17/2006 10:05	On-Site Pond	BNA-Water	2,4-Dichlorophenol	0.95	ug/L	U	0.95	3.8
7/17/2006 10:05	On-Site Pond	BNA-Water	2,4-Dimethylphenol	48	ug/L	U	48	190
7/17/2006 10:05	On-Site Pond	BNA-Water	2,4-Dinitrophenol	14	ug/L	U	14	57
7/17/2006 10:05	On-Site Pond	BNA-Water	2,4-Dinitrotoluene	0.95	ug/L	U	0.95	3.8
7/17/2006 10:05	On-Site Pond	BNA-Water	2,6-Dinitrotoluene	0.95	ug/L	U	0.95	3.8
7/17/2006 10:05	On-Site Pond	BNA-Water	2-Chloronaphthalene	0.95	ug/L	U	0.95	3.8
7/17/2006 10:05	On-Site Pond	BNA-Water	2-Chlorophenol	0.95	ug/L	U	0.95	3.8
7/17/2006 10:05	On-Site Pond	BNA-Water	2-Methyl-4,6-dinitrophenol	2.9	ug/L	U	2.9	11
7/17/2006 10:05	On-Site Pond	BNA-Water	2-Nitrophenol	0.95	ug/L	U	0.95	3.8
7/17/2006 10:05	On-Site Pond	BNA-Water	3,3'-Dichlorobenzidine	38	ug/L	UJ	38	150
7/17/2006 10:05	On-Site Pond	BNA-Water	4,4'-DDD	1.4	ug/L	U	1.4	5.7
7/17/2006 10:05	On-Site Pond	BNA-Water	4,4'-DDE	1.4	ug/L	U	1.4	5.7
7/17/2006 10:05	On-Site Pond	BNA-Water	4,4'-DDT	1.4	ug/L	UJ	1.4	5.7
7/17/2006 10:05	On-Site Pond	BNA-Water	4-Bromophenyl phenyl ether	0.95	ug/L	U	0.95	3.8
7/17/2006 10:05	On-Site Pond	BNA-Water	4-Chloro-3-methylphenol	0.95	ug/L	U	0.95	3.8
7/17/2006 10:05	On-Site Pond	BNA-Water	4-Chlorophenyl phenyl ether	1.9	ug/L	U	1.9	7.6
7/17/2006 10:05	On-Site Pond	BNA-Water	4-Nitrophenol	14	ug/L	U	14	57
7/17/2006 10:05	On-Site Pond	BNA-Water	Acenaphthene	0.95	ug/L	U	0.95	3.8
7/17/2006 10:05	On-Site Pond	BNA-Water	Acenaphthylene	0.95	ug/L	U	0.95	3.8
7/17/2006 10:05	On-Site Pond	BNA-Water	Aldrin	1.4	ug/L	U	1.4	5.7
7/17/2006 10:05	On-Site Pond	BNA-Water	Anthracene	0.95	ug/L	U	0.95	3.8
7/17/2006 10:05	On-Site Pond	BNA-Water	Benzidine	95	ug/L	U	95	380
7/17/2006 10:05	On-Site Pond	BNA-Water	Benzo(a)anthracene	0.95	ug/L	U	0.95	3.8

Appendix E. Chemical Analyses (continued)

Date Sampled	Location	Analysis Group	Component	Result	Units	Remark	MDL	PQL
7/17/2006 10:05	On-Site Pond	BNA-Water	Benzo(a)pyrene	0.95	ug/L	U	0.95	3.8
7/17/2006 10:05	On-Site Pond	BNA-Water	Benzo(b)fluoranthene	0.95	ug/L	U	0.95	3.8
7/17/2006 10:05	On-Site Pond	BNA-Water	Benzo(g,h,i)perylene	0.95	ug/L	U	0.95	3.8
7/17/2006 10:05	On-Site Pond	BNA-Water	Benzo(k)fluoranthene	0.95	ug/L	U	0.95	3.8
7/17/2006 10:05	On-Site Pond	BNA-Water	Bis(2-chloroethoxy)methane	0.95	ug/L	U	0.95	3.8
7/17/2006 10:05	On-Site Pond	BNA-Water	Bis(2-chloroethyl)ether	0.95	ug/L	U	0.95	3.8
7/17/2006 10:05	On-Site Pond	BNA-Water	Bis(2-chloroisopropyl)ether	2.9	ug/L	U	2.9	11
7/17/2006 10:05	On-Site Pond	BNA-Water	Bis(2-ethylhexyl)phthalate	14	ug/L	U	14	57
7/17/2006 10:05	On-Site Pond	BNA-Water	Butyl benzyl phthalate	4.8	ug/L	U	4.8	19
7/17/2006 10:05	On-Site Pond	BNA-Water	Chrysene	0.95	ug/L	U	0.95	3.8
7/17/2006 10:05	On-Site Pond	BNA-Water	Di-n-butyl phthalate	4.8	ug/L	U	4.8	19
7/17/2006 10:05	On-Site Pond	BNA-Water	Di-n-octyl phthalate	0.95	ug/L	U	0.95	3.8
7/17/2006 10:05	On-Site Pond	BNA-Water	Dibenzo(a,h)anthracene	0.95	ug/L	U	0.95	3.8
7/17/2006 10:05	On-Site Pond	BNA-Water	Dieldrin	1.4	ug/L	U	1.4	5.7
7/17/2006 10:05	On-Site Pond	BNA-Water	Diethyl phthalate	0.95	ug/L	U	0.95	3.8
7/17/2006 10:05	On-Site Pond	BNA-Water	Dimethyl phthalate	48	ug/L	U	48	190
7/17/2006 10:05	On-Site Pond	BNA-Water	Endosulfan I	3.8	ug/L	U	3.8	15
7/17/2006 10:05	On-Site Pond	BNA-Water	Endosulfan II	3.8	ug/L	U	3.8	15
7/17/2006 10:05	On-Site Pond	BNA-Water	Endosulfan sulfate	1.4	ug/L	UJ	1.4	5.7
7/17/2006 10:05	On-Site Pond	BNA-Water	Endrin	1.4	ug/L	UJ	1.4	5.7
7/17/2006 10:05	On-Site Pond	BNA-Water	Endrin aldehyde	3.8	ug/L	U	3.8	15
7/17/2006 10:05	On-Site Pond	BNA-Water	Fluoranthene	0.95	ug/L	U	0.95	3.8
7/17/2006 10:05	On-Site Pond	BNA-Water	Fluorene	0.95	ug/L	U	0.95	3.8
7/17/2006 10:05	On-Site Pond	BNA-Water	Heptachlor	1.4	ug/L	U	1.4	5.7
7/17/2006 10:05	On-Site Pond	BNA-Water	Heptachlor epoxide	1.4	ug/L	U	1.4	5.7
7/17/2006 10:05	On-Site Pond	BNA-Water	Hexachlorobenzene	0.95	ug/L	U	0.95	3.8
7/17/2006 10:05	On-Site Pond	BNA-Water	Hexachlorobutadiene	2.9	ug/L	UJ	2.9	11
7/17/2006 10:05	On-Site Pond	BNA-Water	Hexachlorocyclopentadiene	2.9	ug/L	UJ	2.9	11
7/17/2006 10:05	On-Site Pond	BNA-Water	Hexachloroethane	2.9	ug/L	U	2.9	11
7/17/2006 10:05	On-Site Pond	BNA-Water	Indeno(1,2,3-cd)pyrene	0.95	ug/L	U	0.95	3.8
7/17/2006 10:05	On-Site Pond	BNA-Water	Isophorone	0.95	ug/L	U	0.95	3.8
7/17/2006 10:05	On-Site Pond	BNA-Water	N-Nitrosodi-n-propylamine	1.9	ug/L	U	1.9	7.6
7/17/2006 10:05	On-Site Pond	BNA-Water	N-Nitrosodimethylamine	1.9	ug/L	U	1.9	7.6
7/17/2006 10:05	On-Site Pond	BNA-Water	N-Nitrosodiphenylamine	2.9	ug/L	UJ	2.9	11
7/17/2006 10:05	On-Site Pond	BNA-Water	Naphthalene	0.95	ug/L	U	0.95	3.8

Appendix E. Chemical Analyses (continued)

Date Sampled	Location	Analysis Group	Component	Result	Units	Remark	MDL	PQL
7/17/2006 10:05	On-Site Pond	BNA-Water	Nitrobenzene	1.9	ug/L	U	1.9	7.6
7/17/2006 10:05	On-Site Pond	BNA-Water	Pentachlorophenol	2.9	ug/L	U	2.9	11
7/17/2006 10:05	On-Site Pond	BNA-Water	Phenanthrene	0.95	ug/L	U	0.95	3.8
7/17/2006 10:05	On-Site Pond	BNA-Water	Phenol	0.95	ug/L	U	0.95	3.8
7/17/2006 10:05	On-Site Pond	BNA-Water	Pyrene	0.95	ug/L	U	0.95	3.8
7/17/2006 10:05	On-Site Pond	BNA-Water	alpha-BHC	1.4	ug/L	U	1.4	5.7
7/17/2006 10:05	On-Site Pond	BNA-Water	beta-BHC	1.4	ug/L	U	1.4	5.7
7/17/2006 10:05	On-Site Pond	BNA-Water	delta-BHC	1.4	ug/L	U	1.4	5.7
7/17/2006 10:05	On-Site Pond	BNA-Water	gamma-BHC	1.4	ug/L	U	1.4	5.7
7/17/2006 10:05	On-Site Pond	GC-Water	Alachlor	0.57	ug/L	UJ	0.57	2.3
7/17/2006 10:05	On-Site Pond	GC-Water	Ametryn	0.048	ug/L	U	0.048	0.19
7/17/2006 10:05	On-Site Pond	GC-Water	Atrazine	0.048	ug/L	U	0.048	0.19
7/17/2006 10:05	On-Site Pond	GC-Water	Azinphos Methyl	0.19	ug/L	U	0.19	0.76
7/17/2006 10:05	On-Site Pond	GC-Water	Bromacil	0.19	ug/L	U	0.19	0.76
7/17/2006 10:05	On-Site Pond	GC-Water	Butylate	0.19	ug/L	UJ	0.19	0.76
7/17/2006 10:05	On-Site Pond	GC-Water	Chlorpyrifos Ethyl	0.048	ug/L	U	0.048	0.19
7/17/2006 10:05	On-Site Pond	GC-Water	Chlorpyrifos Methyl	0.095	ug/L	U	0.095	0.38
7/17/2006 10:05	On-Site Pond	GC-Water	Diazinon	0.048	ug/L	U	0.048	0.19
7/17/2006 10:05	On-Site Pond	GC-Water	Ethion	0.048	ug/L	U	0.048	0.19
7/17/2006 10:05	On-Site Pond	GC-Water	Ethoprop	0.095	ug/L	U	0.095	0.38
7/17/2006 10:05	On-Site Pond	GC-Water	Fenamiphos	0.19	ug/L	U	0.19	0.76
7/17/2006 10:05	On-Site Pond	GC-Water	Fonofos	0.095	ug/L	U	0.095	0.38
7/17/2006 10:05	On-Site Pond	GC-Water	Hexazinone	0.095	ug/L	U	0.095	0.38
7/17/2006 10:05	On-Site Pond	GC-Water	Malathion	0.14	ug/L	U	0.14	0.56
7/17/2006 10:05	On-Site Pond	GC-Water	Metalaxyl	0.24	ug/L	U	0.24	0.96
7/17/2006 10:05	On-Site Pond	GC-Water	Metolachlor	0.48	ug/L	U	0.48	1.9
7/17/2006 10:05	On-Site Pond	GC-Water	Metribuzin	0.095	ug/L	U	0.095	0.38
7/17/2006 10:05	On-Site Pond	GC-Water	Mevinphos	0.19	ug/L	U	0.19	0.76
7/17/2006 10:05	On-Site Pond	GC-Water	Naled	0.76	ug/L	U	0.76	3
7/17/2006 10:05	On-Site Pond	GC-Water	Norflurazon	0.14	ug/L	U	0.14	0.56
7/17/2006 10:05	On-Site Pond	GC-Water	Parathion Ethyl	0.14	ug/L	U	0.14	0.56
7/17/2006 10:05	On-Site Pond	GC-Water	Parathion Methyl	0.095	ug/L	U	0.095	0.38
7/17/2006 10:05	On-Site Pond	GC-Water	Phorate	0.048	ug/L	U	0.048	0.19
7/17/2006 10:05	On-Site Pond	GC-Water	Prometryn	0.14	ug/L	UJ	0.14	0.56
7/17/2006 10:05	On-Site Pond	GC-Water	Simazine	0.048	ug/L	U	0.048	0.19

Appendix E. Chemical Analyses (continued)

Date Sampled	Location	Analysis Group	Component	Result	Units	Remark	MDL	PQL
7/17/2006 10:05	On-Site Pond	Metals-Water	Aluminum	157	ug/L		4	16
7/17/2006 10:05	On-Site Pond	Metals-Water	Arsenic	1.7	ug/L	I	0.5	2
7/17/2006 10:05	On-Site Pond	Metals-Water	Cadmium	0.05	ug/L	U	0.05	0.2
7/17/2006 10:05	On-Site Pond	Metals-Water	Calcium	54.2	mg/L		0.02	0.08
7/17/2006 10:05	On-Site Pond	Metals-Water	Chromium	0.3	ug/L	U	0.3	1.2
7/17/2006 10:05	On-Site Pond	Metals-Water	Copper	11.8	ug/L		0.2	0.8
7/17/2006 10:05	On-Site Pond	Metals-Water	Iron	7.1	ug/L	I	5	20
7/17/2006 10:05	On-Site Pond	Metals-Water	Lead	0.2	ug/L	U	0.2	0.8
7/17/2006 10:05	On-Site Pond	Metals-Water	Magnesium	41.3	mg/L		0.005	0.02
7/17/2006 10:05	On-Site Pond	Metals-Water	Nickel	1	ug/L	U	1	4
7/17/2006 10:05	On-Site Pond	Metals-Water	Selenium	0.5	ug/L	U	0.5	2
7/17/2006 10:05	On-Site Pond	Metals-Water	Silver	0.025	ug/L	U	0.025	0.1
7/17/2006 10:05	On-Site Pond	Metals-Water	Zinc	4.4	ug/L	I	3	12
7/17/2006 10:05	On-Site Pond	Nutrients-Liquid	Ammonia-N	0.034	mg N/L		0.01	0.02
7/17/2006 10:05	On-Site Pond	Nutrients-Liquid	Kjeldahl Nitrogen	1	mg N/L		0.08	0.2
7/17/2006 10:05	On-Site Pond	Nutrients-Liquid	NO2NO3-N	0.045	mg N/L		0.004	0.01
7/17/2006 10:05	On-Site Pond	Nutrients-Liquid	O-Phosphate-P	0.004	mg P/L	U	0.004	0.01
7/17/2006 10:05	On-Site Pond	Nutrients-Liquid	Specific_Conductance	806	umhos/cm		2	8
7/17/2006 10:05	On-Site Pond	Nutrients-Liquid	TSS	4	mg/L	U	4	16
7/17/2006 10:05	On-Site Pond	Nutrients-Liquid	Total-P	0.039	mg P/L	I	0.02	0.06
7/17/2006 10:05	On-Site Pond	Nutrients-Liquid	Turbidity	1.8	NTU		0.05	0.05
7/17/2006 10:05	On-Site Pond	Overflow	Alpha, Total	4.1	pCi/L			
7/17/2006 10:05	On-Site Pond	Overflow	Alpha-Counting Error	1.2	pCi/L			
7/17/2006 10:05	On-Site Pond	Overflow	Radium 226	3	pCi/L			
7/17/2006 10:05	On-Site Pond	Overflow	Radium 226-Counting Error	0.3	pCi/L			
7/17/2006 10:05	On-Site Pond	Overflow	Radium 228	0.9	pCi/L	U		
7/17/2006 10:05	On-Site Pond	Overflow	Radium 228-Counting Error	0.6	pCi/L			
7/17/2006 9:38	RO Concentrate	Bio-BOD	Biochemical Oxygen Demand-5 Day,N-Inhib	0.44	mg/L	I		
7/17/2006 9:38	RO Concentrate	Metals-Water	Aluminum	4	ug/L	U	4	16
7/17/2006 9:38	RO Concentrate	Metals-Water	Arsenic	1.9	ug/L	I	1	4
7/17/2006 9:38	RO Concentrate	Metals-Water	Cadmium	0.1	ug/L	U	0.1	0.4
7/17/2006 9:38	RO Concentrate	Metals-Water	Calcium	347	mg/L		0.02	0.08
7/17/2006 9:38	RO Concentrate	Metals-Water	Chromium	0.3	ug/L	U	0.3	1.2
7/17/2006 9:38	RO Concentrate	Metals-Water	Copper	0.83	ug/L	I	0.4	1.6
7/17/2006 9:38	RO Concentrate	Metals-Water	Iron	8.2	ug/L	I	5	20

Appendix E. Chemical Analyses (continued)

Date Sampled	Location	Analysis Group	Component	Result	Units	Remark	MDL	PQL
7/17/2006 9:38	RO Concentrate	Metals-Water	Lead	0.4	ug/L	U	0.4	1.6
7/17/2006 9:38	RO Concentrate	Metals-Water	Magnesium	146	mg/L		0.005	0.02
7/17/2006 9:38	RO Concentrate	Metals-Water	Nickel	1	ug/L	U	1	4
7/17/2006 9:38	RO Concentrate	Metals-Water	Selenium	1	ug/L	U	1	4
7/17/2006 9:38	RO Concentrate	Metals-Water	Silver	0.05	ug/L	U	0.05	0.2
7/17/2006 9:38	RO Concentrate	Metals-Water	Zinc	3	ug/L	U	3	12
7/17/2006 9:38	RO Concentrate	Nutrients-Liquid	Ammonia-N	1.7	mg N/L		0.25	0.5
7/17/2006 9:38	RO Concentrate	Nutrients-Liquid	Kjeldahl Nitrogen	3.3	mg N/L		0.08	0.2
7/17/2006 9:38	RO Concentrate	Nutrients-Liquid	NO2NO3-N	0.004	mg N/L	U	0.004	0.01
7/17/2006 9:38	RO Concentrate	Nutrients-Liquid	O-Phosphate-P	0.12	mg P/L		0.004	0.01
7/17/2006 9:38	RO Concentrate	Nutrients-Liquid	Specific_Conductance	2,730	umhos/cm		2	8
7/17/2006 9:38	RO Concentrate	Nutrients-Liquid	TSS	4	mg/L	U	4	16
7/17/2006 9:38	RO Concentrate	Nutrients-Liquid	Total-P	0.42	mg P/L		0.02	0.06
7/17/2006 9:38	RO Concentrate	Nutrients-Liquid	Turbidity	0.65	NTU		0.05	0.05
7/17/2006 9:38	RO Concentrate	Overflow	Alpha, Total	31.2	pCi/L			
7/17/2006 9:38	RO Concentrate	Overflow	Alpha-Counting Error	6.2	pCi/L			
7/17/2006 9:38	RO Concentrate	Overflow	Radium 226	24.3	pCi/L			
7/17/2006 9:38	RO Concentrate	Overflow	Radium 226-Counting Error	0.7	pCi/L			
7/17/2006 9:38	RO Concentrate	Overflow	Radium 228	0.9	pCi/L	U		
7/17/2006 9:38	RO Concentrate	Overflow	Radium 228-Counting Error	0.6	pCi/L			
7/17/2006 10:05	On-Site Pond	Bio-Toxicology	Bioassay-Acute-Screen-FW-C.dubia, LC50	100	LC50	L		
7/17/2006 10:05	On-Site Pond	Bio-Toxicology	Bioassay-Acute-Screen-FW-Fish, LC50	100	LC50	L		
7/17/2006 9:45	Field Blank	BNA-Water	1,2,4-Trichlorobenzene	0.95	ug/L	U	0.95	3.8
7/17/2006 9:45	Field Blank	BNA-Water	1,2-Dichlorobenzene	0.95	ug/L	U	0.95	3.8
7/17/2006 9:45	Field Blank	BNA-Water	1,3-Dichlorobenzene	0.95	ug/L	U	0.95	3.8
7/17/2006 9:45	Field Blank	BNA-Water	1,4-Dichlorobenzene	0.95	ug/L	U	0.95	3.8
7/17/2006 9:45	Field Blank	BNA-Water	2,4,6-Trichlorophenol	0.95	ug/L	U	0.95	3.8
7/17/2006 9:45	Field Blank	BNA-Water	2,4-Dichlorophenol	0.95	ug/L	U	0.95	3.8
7/17/2006 9:45	Field Blank	BNA-Water	2,4-Dimethylphenol	48	ug/L	U	48	190
7/17/2006 9:45	Field Blank	BNA-Water	2,4-Dinitrophenol	14	ug/L	U	14	57
7/17/2006 9:45	Field Blank	BNA-Water	2,4-Dinitrotoluene	0.95	ug/L	U	0.95	3.8
7/17/2006 9:45	Field Blank	BNA-Water	2,6-Dinitrotoluene	0.95	ug/L	U	0.95	3.8
7/17/2006 9:45	Field Blank	BNA-Water	2-Chloronaphthalene	0.95	ug/L	U	0.95	3.8
7/17/2006 9:45	Field Blank	BNA-Water	2-Chlorophenol	0.95	ug/L	U	0.95	3.8
7/17/2006 9:45	Field Blank	BNA-Water	2-Methyl-4,6-dinitrophenol	2.9	ug/L	U	2.9	11

Appendix E. Chemical Analyses (continued)

Date Sampled	Location	Analysis Group	Component	Result	Units	Remark	MDL	PQL
7/17/2006 9:45	Field Blank	BNA-Water	2-Nitrophenol	0.95	ug/L	U	0.95	3.8
7/17/2006 9:45	Field Blank	BNA-Water	3,3'-Dichlorobenzidine	38	ug/L	UJ	38	150
7/17/2006 9:45	Field Blank	BNA-Water	4,4'-DDD	1.4	ug/L	U	1.4	5.7
7/17/2006 9:45	Field Blank	BNA-Water	4,4'-DDE	1.4	ug/L	U	1.4	5.7
7/17/2006 9:45	Field Blank	BNA-Water	4,4'-DDT	1.4	ug/L	UJ	1.4	5.7
7/17/2006 9:45	Field Blank	BNA-Water	4-Bromophenyl phenyl ether	0.95	ug/L	U	0.95	3.8
7/17/2006 9:45	Field Blank	BNA-Water	4-Chloro-3-methylphenol	0.95	ug/L	U	0.95	3.8
7/17/2006 9:45	Field Blank	BNA-Water	4-Chlorophenyl phenyl ether	1.9	ug/L	U	1.9	7.6
7/17/2006 9:45	Field Blank	BNA-Water	4-Nitrophenol	14	ug/L	U	14	57
7/17/2006 9:45	Field Blank	BNA-Water	Acenaphthene	0.95	ug/L	U	0.95	3.8
7/17/2006 9:45	Field Blank	BNA-Water	Acenaphthylene	0.95	ug/L	U	0.95	3.8
7/17/2006 9:45	Field Blank	BNA-Water	Aldrin	1.4	ug/L	U	1.4	5.7
7/17/2006 9:45	Field Blank	BNA-Water	Anthracene	0.95	ug/L	U	0.95	3.8
7/17/2006 9:45	Field Blank	BNA-Water	Benzidine	95	ug/L	U	95	380
7/17/2006 9:45	Field Blank	BNA-Water	Benzo(a)anthracene	0.95	ug/L	U	0.95	3.8
7/17/2006 9:45	Field Blank	BNA-Water	Benzo(a)pyrene	0.95	ug/L	U	0.95	3.8
7/17/2006 9:45	Field Blank	BNA-Water	Benzo(b)fluoranthene	0.95	ug/L	U	0.95	3.8
7/17/2006 9:45	Field Blank	BNA-Water	Benzo(g,h,i)perylene	0.95	ug/L	U	0.95	3.8
7/17/2006 9:45	Field Blank	BNA-Water	Benzo(k)fluoranthene	0.95	ug/L	U	0.95	3.8
7/17/2006 9:45	Field Blank	BNA-Water	Bis(2-chloroethoxy)methane	0.95	ug/L	U	0.95	3.8
7/17/2006 9:45	Field Blank	BNA-Water	Bis(2-chloroethyl)ether	0.95	ug/L	U	0.95	3.8
7/17/2006 9:45	Field Blank	BNA-Water	Bis(2-chloroisopropyl)ether	2.9	ug/L	U	2.9	11
7/17/2006 9:45	Field Blank	BNA-Water	Bis(2-ethylhexyl)phthalate	14	ug/L	U	14	57
7/17/2006 9:45	Field Blank	BNA-Water	Butyl benzyl phthalate	4.8	ug/L	U	4.8	19
7/17/2006 9:45	Field Blank	BNA-Water	Chrysene	0.95	ug/L	U	0.95	3.8
7/17/2006 9:45	Field Blank	BNA-Water	Di-n-butyl phthalate	4.8	ug/L	U	4.8	19
7/17/2006 9:45	Field Blank	BNA-Water	Di-n-octyl phthalate	0.95	ug/L	U	0.95	3.8
7/17/2006 9:45	Field Blank	BNA-Water	Dibenzo(a,h)anthracene	0.95	ug/L	U	0.95	3.8
7/17/2006 9:45	Field Blank	BNA-Water	Dieldrin	1.4	ug/L	U	1.4	5.7
7/17/2006 9:45	Field Blank	BNA-Water	Diethyl phthalate	0.95	ug/L	U	0.95	3.8
7/17/2006 9:45	Field Blank	BNA-Water	Dimethyl phthalate	48	ug/L	U	48	190
7/17/2006 9:45	Field Blank	BNA-Water	Endosulfan I	3.8	ug/L	U	3.8	15
7/17/2006 9:45	Field Blank	BNA-Water	Endosulfan II	3.8	ug/L	U	3.8	15
7/17/2006 9:45	Field Blank	BNA-Water	Endosulfan sulfate	1.4	ug/L	UJ	1.4	5.7
7/17/2006 9:45	Field Blank	BNA-Water	Endrin	1.4	ug/L	UJ	1.4	5.7

Appendix E. Chemical Analyses (continued)

Date Sampled	Location	Analysis Group	Component	Result	Units	Remark	MDL	PQL
7/17/2006 9:45	Field Blank	BNA-Water	Endrin aldehyde	3.8	ug/L	U	3.8	15
7/17/2006 9:45	Field Blank	BNA-Water	Fluoranthene	0.95	ug/L	U	0.95	3.8
7/17/2006 9:45	Field Blank	BNA-Water	Fluorene	0.95	ug/L	U	0.95	3.8
7/17/2006 9:45	Field Blank	BNA-Water	Heptachlor	1.4	ug/L	U	1.4	5.7
7/17/2006 9:45	Field Blank	BNA-Water	Heptachlor epoxide	1.4	ug/L	U	1.4	5.7
7/17/2006 9:45	Field Blank	BNA-Water	Hexachlorobenzene	0.95	ug/L	U	0.95	3.8
7/17/2006 9:45	Field Blank	BNA-Water	Hexachlorobutadiene	2.9	ug/L	UJ	2.9	11
7/17/2006 9:45	Field Blank	BNA-Water	Hexachlorocyclopentadiene	2.9	ug/L	UJ	2.9	11
7/17/2006 9:45	Field Blank	BNA-Water	Hexachloroethane	2.9	ug/L	U	2.9	11
7/17/2006 9:45	Field Blank	BNA-Water	Indeno(1,2,3-cd)pyrene	0.95	ug/L	U	0.95	3.8
7/17/2006 9:45	Field Blank	BNA-Water	Isophorone	0.95	ug/L	U	0.95	3.8
7/17/2006 9:45	Field Blank	BNA-Water	N-Nitrosodi-n-propylamine	1.9	ug/L	U	1.9	7.6
7/17/2006 9:45	Field Blank	BNA-Water	N-Nitrosodimethylamine	1.9	ug/L	U	1.9	7.6
7/17/2006 9:45	Field Blank	BNA-Water	N-Nitrosodiphenylamine	2.9	ug/L	UJ	2.9	11
7/17/2006 9:45	Field Blank	BNA-Water	Naphthalene	0.95	ug/L	U	0.95	3.8
7/17/2006 9:45	Field Blank	BNA-Water	Nitrobenzene	1.9	ug/L	U	1.9	7.6
7/17/2006 9:45	Field Blank	BNA-Water	Pentachlorophenol	2.9	ug/L	U	2.9	11
7/17/2006 9:45	Field Blank	BNA-Water	Phenanthrene	0.95	ug/L	U	0.95	3.8
7/17/2006 9:45	Field Blank	BNA-Water	Phenol	0.95	ug/L	U	0.95	3.8
7/17/2006 9:45	Field Blank	BNA-Water	Pyrene	0.95	ug/L	U	0.95	3.8
7/17/2006 9:45	Field Blank	BNA-Water	alpha-BHC	1.4	ug/L	U	1.4	5.7
7/17/2006 9:45	Field Blank	BNA-Water	beta-BHC	1.4	ug/L	U	1.4	5.7
7/17/2006 9:45	Field Blank	BNA-Water	delta-BHC	1.4	ug/L	U	1.4	5.7
7/17/2006 9:45	Field Blank	BNA-Water	gamma-BHC	1.4	ug/L	U	1.4	5.7
7/17/2006 9:45	Field Blank	GC-Water	Alachlor	0.57	ug/L	UJ	0.57	2.3
7/17/2006 9:45	Field Blank	GC-Water	Ametryn	0.048	ug/L	U	0.048	0.19
7/17/2006 9:45	Field Blank	GC-Water	Atrazine	0.048	ug/L	U	0.048	0.19
7/17/2006 9:45	Field Blank	GC-Water	Azinphos Methyl	0.19	ug/L	U	0.19	0.76
7/17/2006 9:45	Field Blank	GC-Water	Bromacil	0.19	ug/L	U	0.19	0.76
7/17/2006 9:45	Field Blank	GC-Water	Butylate	0.19	ug/L	UJ	0.19	0.76
7/17/2006 9:45	Field Blank	GC-Water	Chlorpyrifos Ethyl	0.048	ug/L	U	0.048	0.19
7/17/2006 9:45	Field Blank	GC-Water	Chlorpyrifos Methyl	0.095	ug/L	U	0.095	0.38
7/17/2006 9:45	Field Blank	GC-Water	Diazinon	0.048	ug/L	U	0.048	0.19
7/17/2006 9:45	Field Blank	GC-Water	Ethion	0.048	ug/L	U	0.048	0.19
7/17/2006 9:45	Field Blank	GC-Water	Ethoprop	0.095	ug/L	U	0.095	0.38

Appendix E. Chemical Analyses (continued)

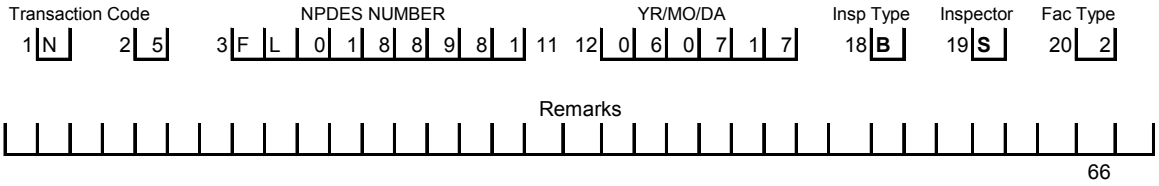
Date Sampled	Location	Analysis Group	Component	Result	Units	Remark	MDL	PQL
7/17/2006 9:45	Field Blank	GC-Water	Fenamiphos	0.19	ug/L	U	0.19	0.76
7/17/2006 9:45	Field Blank	GC-Water	Fonofos	0.095	ug/L	U	0.095	0.38
7/17/2006 9:45	Field Blank	GC-Water	Hexazinone	0.095	ug/L	U	0.095	0.38
7/17/2006 9:45	Field Blank	GC-Water	Malathion	0.14	ug/L	U	0.14	0.56
7/17/2006 9:45	Field Blank	GC-Water	Metalaxyl	0.24	ug/L	U	0.24	0.96
7/17/2006 9:45	Field Blank	GC-Water	Metolachlor	0.48	ug/L	U	0.48	1.9
7/17/2006 9:45	Field Blank	GC-Water	Metribuzin	0.095	ug/L	U	0.095	0.38
7/17/2006 9:45	Field Blank	GC-Water	Mevinphos	0.19	ug/L	U	0.19	0.76
7/17/2006 9:45	Field Blank	GC-Water	Naled	0.76	ug/L	U	0.76	3
7/17/2006 9:45	Field Blank	GC-Water	Norflurazon	0.14	ug/L	U	0.14	0.56
7/17/2006 9:45	Field Blank	GC-Water	Parathion Ethyl	0.14	ug/L	U	0.14	0.56
7/17/2006 9:45	Field Blank	GC-Water	Parathion Methyl	0.095	ug/L	U	0.095	0.38
7/17/2006 9:45	Field Blank	GC-Water	Phorate	0.048	ug/L	U	0.048	0.19
7/17/2006 9:45	Field Blank	GC-Water	Prometryn	0.14	ug/L	UJ	0.14	0.56
7/17/2006 9:45	Field Blank	GC-Water	Simazine	0.048	ug/L	U	0.048	0.19
7/17/2006 9:45	Field Blank	Metals-Water	Aluminum	4	ug/L	U	4	16
7/17/2006 9:45	Field Blank	Metals-Water	Arsenic	0.5	ug/L	U	0.5	2
7/17/2006 9:45	Field Blank	Metals-Water	Cadmium	0.05	ug/L	U	0.05	0.2
7/17/2006 9:45	Field Blank	Metals-Water	Calcium	0.022	mg/L	I	0.02	0.08
7/17/2006 9:45	Field Blank	Metals-Water	Chromium	0.3	ug/L	U	0.3	1.2
7/17/2006 9:45	Field Blank	Metals-Water	Copper	0.2	ug/L	U	0.2	0.8
7/17/2006 9:45	Field Blank	Metals-Water	Iron	5	ug/L	U	5	20
7/17/2006 9:45	Field Blank	Metals-Water	Lead	0.2	ug/L	U	0.2	0.8
7/17/2006 9:45	Field Blank	Metals-Water	Magnesium	0.0089	mg/L	I	0.005	0.02
7/17/2006 9:45	Field Blank	Metals-Water	Nickel	1	ug/L	U	1	4
7/17/2006 9:45	Field Blank	Metals-Water	Selenium	0.5	ug/L	U	0.5	2
7/17/2006 9:45	Field Blank	Metals-Water	Silver	0.025	ug/L	U	0.025	0.1
7/17/2006 9:45	Field Blank	Metals-Water	Zinc	3	ug/L	U	3	12
7/17/2006 9:45	Field Blank	Nutrients-Liquid	Ammonia-N	0.01	mg N/L	U	0.01	0.02
7/17/2006 9:45	Field Blank	Nutrients-Liquid	Kjeldahl Nitrogen	0.08	mg N/L	U	0.08	0.2
7/17/2006 9:45	Field Blank	Nutrients-Liquid	NO2NO3-N	0.004	mg N/L	U	0.004	0.01
7/17/2006 9:45	Field Blank	Nutrients-Liquid	O-Phosphate-P	0.004	mg P/L	U	0.004	0.01
7/17/2006 9:45	Field Blank	Nutrients-Liquid	Total-P	0.02	mg P/L	U	0.02	0.06
7/17/2006 9:45	Field Blank	Overflow	Alpha, Total	0.7	pCi/L	U		
7/17/2006 9:45	Field Blank	Overflow	Alpha-Counting Error	0.4	pCi/L			

Appendix E. Chemical Analyses (continued)

Date Sampled	Location	Analysis Group	Component	Result	Units	Remark	MDL	PQL
7/17/2006 9:45	Field Blank	Overflow	Radium 226	0.1	pCi/L	U		
7/17/2006 9:45	Field Blank	Overflow	Radium 226-Counting Error	0.1	pCi/L			
7/17/2006 9:45	Field Blank	Overflow	Radium 228	0.9	pCi/L	U		
7/17/2006 9:45	Field Blank	Overflow	Radium 228-Counting Error	0.5	pCi/L			

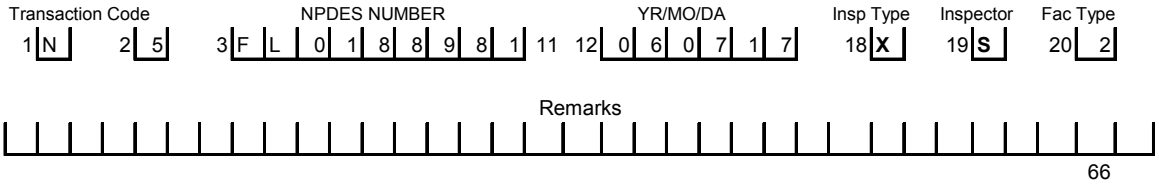
The Bioassay of Lake Tippecanoe Owners Association, Inc. effluent sampled on July 17, 2006. NPDES #FL0188981.

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



The Priority Pollutants Analysis of Lake Tippecanoe Owners Association, Inc. effluent sampled on July 17, 2006. NPDES #FL0188981.

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



Biological Analyses of Lake Tippecanoe Owners Association, Inc. effluent sampled on July 17, 2006. NPDES #FL0188981.

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

