

Effluent Quality Assessment of

Flagler Beach WWTF

Flagler County

NPDES #FL0026611

Sampled April 1 and 2, 2007

June 2007

Biology Section
Bureau of Laboratories
Division of Resource Assessment and Management

Quality Manual No. 870346G
NELAC Certification No. E31780

Flagler Beach WWTF, 2000 Avenue A, Flagler Beach, Flagler County, Florida 32316, NPDES #FL0026611. Effluent samples for this facility were collected on April 1 and 2, 2007.

Introduction

The Flagler Beach WWTF (Wastewater Treatment Facility) uses the extended-aeration process to treat domestic wastewater. The facility has a design flow of 1.0 million gallons per day (MGD) annual average daily flow (AADF). The AADF from April 1, 2006, through March 31, 2007, was 0.5374 MGD. The facility consists of an influent structure with a manually cleaned bar screen, one oxidation ditch, two secondary clarifiers, one chlorine contact chamber, one dechlorination chamber, one sludge holding tank, eight sludge drying beds, and one Parshall flume effluent flow meter. Chlorine gas is used for disinfection. Sodium bisulfide gas is used for dechlorination. Treated effluent is discharged through Outfall D-001 to the Class III Marine waters of the Intracoastal Waterway near the intersection of State Road 210 and State Road 100 in Flagler Beach. Outfall D-001 is approximately 9.14 m (30 feet) in length and discharges at a depth of approximately 1.22 m (4 feet). Outfall D-001 is located approximately at latitude 29º 28' 20" N, longitude 81º 08' 33" W. Residuals are treated to Class B stabilization requirements and land applied.

There are no Administrative Orders or Consent Orders for this facility. The facility has no mixing zones. A review of discharge monitoring report (DMR) data revealed a permit limit violation for total suspended solids (value 81% removal, limit ≥ 85% removal) in April 2006. The DMRs reveal no noticeable trend in operating conditions. (Facility information provided by Joseph Emery of FDEP Northeast District.)

Methods

Samples were collected from the EFD-1 NPDES sampling point (after dechlorination but before discharge to the Intracoastal Waterway) for Outfall D-001 by Joseph Emery (FDEP Northeast 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 96-hour acute screening toxicity tests and algal growth potential test were performed following internal DEP SOPs TA07_03, TA07_04, 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. Bioassays were performed on each of four samples which were collected over a 24-hour period (one sample every six hours). The bioassays were performed in accordance with permit requirements.

The bioassay samples were salinity-adjusted per permit requirements from apparent salinities of approximately 4 parts per thousand (ppth) to salinities of approximately 12 ppth using 40 Fathoms® artificial sea salts for the *Americamysis bahia* tests. The salinities of the bioassay samples were not adjusted for the *Menidia beryllina* tests. The salt control used for the *A. bahia* tests was prepared by diluting 20 ppth artificial seawater (ASW) with well water to a salinity of 4 ppth then salting this solution with artificial sea salts to match the salinity of the test solutions (approximately 12 ppth). The purpose of the salt control was to confirm that there was no effect of adding artificial sea salts to the sample. There was no mortality in the salt controls of the four *Americamysis bahia* tests.

The AGP test was salinity-adjusted to meet the minimum salinity requirement of the marine test species.

Toxicity Test Results

Tests were performed April 3 - 7, 2007.

Americamysis bahia 96-hour acute screening bioassay – Sample 1	LC_{50} > 100%, 0% mortality in 100% sample at 96 hours
Menidia beryllina 96-hour acute screening bioassay – Sample 1	LC_{50} > 100%, 5% mortality in 100% sample at 96 hours
Americamysis bahia 96-hour acute screening bioassay – Sample 2	LC_{50} > 100%, 0% mortality in 100% sample at 96 hours
Menidia beryllina 96-hour acute screening bioassay – Sample 2	LC_{50} > 100%, 10% mortality in 100% sample at 96 hours
Americamysis bahia 96-hour acute screening bioassay – Sample 3	LC_{50} > 100%, 0% mortality in 100% sample at 96 hours
Menidia beryllina 96-hour acute screening bioassay – Sample 3	LC_{50} > 100%, 10% mortality in 100% sample at 96 hours
Americamysis bahia 96-hour acute screening bioassay – Sample 4	LC_{50} > 100%, 5% mortality in 100% sample at 96 hours
Menidia beryllina 96-hour acute screening bioassay – Sample 4	LC_{50} > 100%, 0% mortality in 100% sample at 96 hours

The bioassay samples were not acutely toxic to the test organisms according to the permit conditions.

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.

Algal Growth Potential

The effluent Algal Growth Potential (AGP) was 184 mg dry wt/L of the saltwater species *Dunaliella tertiolecta.* Raschke and Shultz found that AGP values above 10.0 mg dry weight/L represent a “problem” threshold for marine receiving waters, implying nutrient enrichment (personal communication with Ron Raschke USEPA Region 4, 1987). The analytical chemistry suggests that the effluent is nitrogen-limited (Maloney et al., 1974).

See Table 1 for AGP results.

Chemistry Results

Total residual chlorine was not detected in the four bioassay samples in the laboratory. Total ammonia was not detected in bioassay sample 1 but was detected in bioassay sample 2 (0.370 mg/L), bioassay sample 3 (0.227 mg/L), and bioassay sample 4 (0.419 mg/L) in the laboratory. Based on the pH, salinity, and temperature of the effluent as collected, the calculated unionized ammonia concentrations in the bioassay samples were < 0.02 mg/L. The total ammonia concentration in the sample collected and preserved for chemical analysis was 0.26 mg/L. Based on the pH, salinity, and temperature of the effluent as collected, the calculated unionized ammonia concentration was < 0.02 mg/L.

Aluminum, iron, zinc, and combined radium 226 and 228 were detected in the effluent at levels that comply with Class III marine water quality criteria (62-302.530, F.A.C.). Arsenic, copper, lead, and selenium were detected between the laboratory method detection limits (MDL) and practical quantitation limits (PQL). Atrazine was also detected in the effluent, though the results were estimated.

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

Conclusion

The effluent samples collected from the EFD-1 sampling point for Outfall D-001 for this facility on April 1-2, 2007, were not acutely toxic to either test species during the 96-hour acute screening bioassays. The effluent AGP result exceeded the "problem" threshold for marine receiving waters. Effluent water quality samples did not exceed any applicable water quality standards or violate any permit conditions.

Literature Cited

Maloney, T. E., W. E. Miller, and D. T. Specht. 1974. The Marine Algal Assay Procedure: Bottle Test. National Environmental Research Center Office of Research and Development. U. S. EPA, Corvallis, Oregon. 43 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. Algal growth potential (AGP; mg dry weight/L) of the saltwater species* Dunaliella tertiolecta *and ratios of nitrogen to phosphorus for samples collected from Flagler Beach Wastewater Treatment Facility on April 2, 2007.

Location	AGP (measured)	Inorganic N:P ratio	Total N:P ratio
Effluent Samples	184	4.8	4.7

Table 1. Effluent limits, Class III Criteria for predominantly marine waters and chemical and microbiological data for samples collected from Flagler Beach Wastewater Treatment Facility on April 1 - 2, 2007.

Flagler Beach WWTF NPDES# FL0026611	Class III Stds	Effluent Limits	Effluent	Bioassay Sample 1	Bioassay Sample 2	Bioassay Sample 3	Bioassay Sample 4
Organic Constituents (µg/L)							
Atrazine	-	-	0.34 J	-	-	-	-
Metals (µg/L unless otherwise noted)							
Aluminum	≤ 1,500	-	315	-	-	-	-
Arsenic	≤ 50	-	2.7 I	-	-	-	-
Cadmium	< 8.8	-	0.15 U	-	-	-	-
Calcium (mg/L)	-	-	97.6	-	-	-	-
Chromium-III	-	-	0.3 U	-	-	-	-
Copper	≤ 3.7	-	1.3 If	-	-	-	-
Iron	≤ 300	-	57 Vf	-	-	-	-
Lead	≤ 8.5	-	0.82 I	-	-	-	-
Magnesium (mg/L)	-	-	147	-	-	-	-
Nickel	≤ 8.3	-	1 U	-	-	-	-
Selenium	≤ 71	-	2.6 I	-	-	-	-
Silver	≤ 2.3	-	0.075 U	-	-	-	-
Zinc	≤ 86	-	41	-	-	-	-
Nutrients (mg/L)							
Ortho-phosphate	-	-	1.1 JA	-	-	-	-
Total Phosphorus	-	Report	1.4	-	-	-	-
Total Ammonia	-	Report	0.26	-	-	-	-
Un-ionized Ammonia	≤ 0.02	-	≤ 0.02 c	-	-	-	-
Nitrate and Nitrite	-	-	5 f	-	-	-	-
Total Kjeldahl Nitrogen	-	-	1.6	-	-	-	-
Organic Nitrogen	-	Report	1.34 c	-	-	-	-
Total Nitrogen	-	-	6.6 c	-	-	-	-
General Physical and Chemical Parameters							
Dissolved Oxygen (mg/L)	≥ 4.0	≥ 5.0 s	7.4	7.7	7.4	7.4	7.9
pH (SU)	6.5 - 8.5	6.5 - 8.5 s	6.2	6.6	6.5	6.7	6.7
Conductivity (µmhos/cm)	-	-	7,468	7,838	7,730	7,468	7,273
Temperature °C	-	-	22.6	23.0	22.9	22.6	22.9
Total Residual Chlorine (mg/L)	≤ 0.01	≤ 0.01 s	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Total Suspended Solids (mg/L)	-	≤ 60 s	8 Ip	-	-	-	-
CBOD, 5 day (mg/L), N - inhibited	-	≤ 60 s	4.3 Qp	-	-	-	-
Chloride (mg/L)	d	Report	2,300	-	-	-	-
Sulfide (mg/L)	-	-	0.25 UQ	-	-	-	-
Alpha, Total (pCi/L)	≤ 15	-	10.3 U	-	-	-	-
Alpha-Counting Error (pCi/L)	-	-	6.3	-	-	-	-
Radium 226 (pCi/L)	-	-	0.3	-	-	-	-
Radium 226-Counting Error (pCi/L)	-	-	0.1	-	-	-	-
Radium 228 (pCi/L)	-	-	0.9 U	-	-	-	-
Radium 228-Counting Error (pCi/L)	-	-	0.5	-	-	-	-
Radium 226 + 228 (pCi/L)	≤ 5	-	0.3 c	-	-	-	-
Flow (MGD)	-	≤ 1 a	0.537 a	-	-	-	-
Hardness (mg $CaCO_3$)	-	-	849.05 c	-	-	-	-
Microbiology (Number of counts/100ml)							
Fecal Coliforms	≤ 800 s	≤ 800 s	28 AB*	-	-	-	-

Value exceeds the Class III Water Quality Criteria or permit limits

a - Annual average
b - Value is calculated based on hardness
c - Value is calculated
d - Shall not exceed background + 10% of background
f - Analyte was detected in both sample and field blank
p - Permit limit is based on an 8-hour flow proportioned composite sample
s - Single sample
A - Value reported is the mean of two or more determinations
B - Results based on colony counts outside the acceptance range
I - The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit
J - Estimated value
Q - Sample held beyond normal holding time
U - Material analyzed for but not detected; value reported is the method detection limit
V - Analyte was detected in both sample and method blank
* - Analysis performed in FDEP Northeast District Laboratory

Florida Department of Environmental Protection

Central Laboratory Sample Submittal Form

Event ID *

Request Number: RQ-2007-04-02-38
Flagler Beach WWTF

Requester: Shannan Bogdanov
Field Report Prepared By:

Customer: NE-DIST
Project ID: FYI3
PMAS: 1143

Collected By:
Send Final Report To: Melissa Long

Sampling Agency:

Lab ID *	Location	Comp / Grab	Collection (begin) Eastern Central	Collection (end) Eastern Central	Bottle Group(s)**
	Flagler Beach WWTF (ESS)	☐ Comp ☑ Grab	Date 4-1-07 Time 14:00	Date 4-1-07 Time 18:05	C
	Field ID	Tot Res Chlorine (mg/L) 0.01	Diss Oxygen (mg/L) 7.65 mg/L	Storet Station Number	
	Matrix (Include type e.g. Salt, Fresh, etc) WW	Temp (C) 23.01	pH 6.56	Sample Depth 0.16 ☑ m ☐ ft	☐ Salinity (PPTh) 4.39 ☑ Sp Conductance (umho/cm) 7934	NPDES Number
	Latitude o ' "	Longitude o ' "	Comments		

Lab ID *	Location	Comp / Grab	Collection (begin) Eastern Central	Collection (end) Eastern Central	Bottle Group(s)**
	Flagler Beach WWTF (ESS)	☐ Comp ☑ Grab	Date 4-2-07 Time 8:05	Date 4-2-07 Time 12:15	C
	Field ID	Tot Res Chlorine (mg/L) 0.01	Diss Oxygen (mg/L) 7.37	Storet Station Number	
	Matrix (Include type e.g. Salt, Fresh, etc) WW	Temp (C) 22.49	pH 6.51	Sample Depth 0.134 ☑ m ☐ ft	☑ Salinity (PPTh) 4.25 ☑ Sp Conductance (umho/cm) 7730	NPDES Number
	Latitude o ' "	Longitude o ' "	Comments		

Lab ID *	Location	Comp / Grab	Collection (begin) Eastern Central	Collection (end) Eastern Central	Bottle Group(s)**
	Flagler Beach WWTF (ESS)	☐ Comp ☑ Grab	Date 4-2-07 Time 6:00	Date 4-2-07 Time 6:10	C
	Field ID	Tot Res Chlorine (mg/L) 0.01	Diss Oxygen (mg/L) 7.43	Storet Station Number	
	Matrix (Include type e.g. Salt, Fresh, etc) WW	Temp (C) 22.57	pH 6.65	Sample Depth 0.091 ☑ m ☐ ft	☐ Salinity (PPTh) 4.12 ☑ Sp Conductance (umho/cm) 7456	NPDES Number
	Latitude o ' "	Longitude o ' "	Comments		

Lab ID *	Location	Comp / Grab	Collection (begin) Eastern Central	Collection (end) Eastern Central	Bottle Group(s)**
	Flagler Beach WWTF (CSS)	☐ Comp ☑ Grab	Date 4-2-07 Time 6:13	Date 4-2-07 Time 6:30	A
	Field ID	Tot Res Chlorine (mg/L) 0.01	Diss Oxygen (mg/L) 7.45	Storet Station Number	
	Matrix (Include type e.g. Salt, Fresh, etc) WW	Temp (C) 22.57	pH 6.61	Sample Depth 0.091 ☑ m ☐ ft	☐ Salinity (PPTh) 4.11 ☑ Sp Conductance (umho/cm) 7469	NPDES Number
	Latitude o ' "	Longitude o ' "	Comments B Bussey 10:15 4.3.07 Jana Reid		

Relinquished By:	Date/Time	Shipping Method:	Received By:	Date/Time	Relinquished By:	Date/Time	Received By:	Date/Time
			ADA	4-3-07 09:08				

* Shaded Areas for Lab use only.

** Please see reverse side for Bottle Group information.

last revised October 1, 2003

Florida Department of Environmental Protection

Central Laboratory Sample Submittal Form

Request Number: RQ-2007-04-02-38
Flagler Beach WWTF

Event ID *

Requester: Shannan Bogdanov

Field Report Prepared By:

Customer: NE-DIST

Collected By:

Send Final Report To Melissa Long

Project ID: FYI3

Sampling Agency:

PMAS: 1143

Lab ID *	Location			Comp / Grab	Collection (begin) Eastern Central	Collection (end) Eastern Central	Bottle Group(s)**
	Flagler Beach Blank			☐ Comp ☑ Grab	Date 4-4-07 Time 1201	Date 4-4-07 Time 1215	B
	Field ID			Tot Res Chlorine (mg/L)	Diss Oxygen (mg/L)	Storet Station Number	
	Matrix (Include type e.g. Salt, Fresh, etc	Temp (C)	pH	Sample Depth ☐ m ☐ ft	☐ Salinity (PPTh) ☐ Sp Conductance (umho/cm)	NPDES Number	
	Latitude o ' "	Longitude o ' "		Comments	Ran out of Acid in the field		

Lab ID *	Location			Comp / Grab	Collection (begin) Eastern Central	Collection (end) Eastern Central	Bottle Group(s)**
	Flagler Beach WWTF Blank			☐ Comp ☑ Grab	Date 4-4-07 Time 1205	Date 4-4-07 Time 1213	C
	Field ID			Tot Res Chlorine (mg/L) 0.01	Diss Oxygen (mg/L) 7.94	Storet Station Number	
	Matrix (Include type e.g. Salt, Fresh, etc Water	Temp (C) 22.4	pH 6.64	Sample Depth ☑ m 0.169 ☐ ft	☑ Salinity (PPTh) 4.01 ☑ Sp Conductance (umho/cm) 7273	NPDES Number	
	Latitude o ' "	Longitude o ' "		Comments			

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

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

Relinquished By:	Date/Time	Shipping Method:	Received By:	Date/Time	Relinquished By:	Date/Time	Received By:	Date/Time
			ABP	4-5-07 0950				

* Shaded Areas for Lab use only.

** Please see reverse side for Bottle Group information.

last revised October 1, 2003

FDEP Biology Laboratory - Acute Screen 4/24 Bioassay Bench Sheets

Facility: FLAGLER BEACH WWTF

Address: 2000 AVENUE A

City: FLAGLER BEACH County: FLAGLER

Contact/District: Joseph Emory / NORTHEAST

NPDES Permit #: FL 0026611

LIMS Job #: TCH-2007-04-03-06-01 LIMS Sample #: 997884

Lims Data Entry: 4-11-07 MF Data Entry Verification: 4.11.07 JD

Sample Collection: Date: 4/1/07 Time: 1800

Hold Time Start: Date: 4/1/07 Time: 1800

Sample: 1 of 4

Comments: Per Permit.
Sample for mysid test salinity adjusted w artificial seasalts up by 8 parts per thousand from original sample salinity. Menidia test sample not adjusted. Control water prepared by diluting Artificial Seawater (20 ppth salinity) with well water to approximate the test salinity. Salted Control prepared by adding artificial seasalts to 4 ppth salinity ASW to approximate the test salinity of the mysid test (12 ppth). MF 4-4-07

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_03

Control survival ≥90%: (Yes) No

Temperature Range ≤3°C: (Yes) No

Test 2 validation: Test 2: SOP TA 07_04

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: ~4.0 Final Salinity: ~12.0 (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: ____

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)

Light Intensity : 50 - 100 ft. candles

Photoperiod : 16 light 8 dark

Temperature Range °C:

Incubator # 2 min. 25.7 max. 26.3 mean 26.0

Incubator # ____ min. ____ max. ____ mean ____

Room B246 min. 24.9 max. 26.3 mean 25.6

Investigators' Signatures

Teresa Lichaj

Bryce Roberts

James Daniels

Marshall Faircloth

Heidi Wellendorf
REVIEWER

Water Quality Parameters	20% DMW	Moderately Hard Water/ Well Water	Salt Water (ASW) NSW Test 1	Salt Water (ASW) NSW Test 2	Other: Salted Sample Test 1	Original Sample	Method	Measured by	Verified by
Field Total Residual Cl_2 (mg/L):	N/A	N/A	N/A	N/A	N/A	0.01	Hach	Plant Operator	MF
Lab Total Residual Cl_2 (mg/L):	~~0.05~~	—	<0.03	<0.03	—	<0.03	HACH	BA	PDV
Alkalinity (mg/L as $CaCO_3$):	—	—	172	~~155~~ 155	—	72	HACH	~~PDV~~	BA
Hardness (mg/L as $CaCO_3$):	—	—	—	—	—	—	HACH	~~PDV~~	BA
Total Ammonia (mg/L as N):	—	—	<0.034	<0.017	—	<0.017	DENVER	MF	~~PDV~~
Salinity (ppth):	—	—	~12 ppth	~4 ppth	~12	~4	~~YSI~~ Mettler	MF	~~PDV~~

MF Mettler used 4/19/07

V 2.0 4/12/05

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Appendix B. (continued)

FDEP Biology Laboratory - Bioassay Survival Bench Sheet

LIMS Sample #: 997884 Test #: 1/2 SOP#:TA 07 03 Test Started: Date 4/3/07 Time: 1300
Organism/Batch/Age: A.bahia / A-3-07 / 5 days Test Ended: Date 4/7/07 Time: 0930
Chamber/Test Volume: 1000 / 500 ml Diluent/ Batch: ASW / 3-13-07
Food/Batch: YCT — P.sub — Artemia 0hr 40-07 24hr 41-07 48hr 42-07 72hr 43-07 Artemia Lot# GSL-536-90
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	C1	5	5	5	5	5	5
	B	C2	5	5	5	5	5	5
	C	C3	5	5	5	5	5	5
	D	C4	5	5	5	5	5	5
100%	A	C5	5	5	5	5	5	5
	B	C6	5	5	5	5	5	5
	C	C7	5	5	5	5	5	5
	D	C8	5	5	5	5	5	5
Salt Ctrl	A	C9	5	5	5	5	5	5
	B	C10	5	5	5	5	5	5
	C	C11	5	5	5	5	5	5
	D	C12	5	5	5	5	5	5
			JD	JD	JD	JD	JD	PPV

Loaded/Verified by: JD/ DK Checked by:
m = missing d = dead BR/AR = Before/After Renewal
Test Results:
Screening Tests: Report LC50 as >100%, =100%, or <100%.
% mortality in 100% sample: 0 LC50: >100%
If Calculated: 95% CI_____ Method_____
Substitue highest test concentration used if other than 100% (example: Ocean outfall tested at 30% concentration).

Comments:

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Appendix B. (continued)

FDEP Biology Laboratory - Bioassay Survival Bench Sheet

LIMS Sample #: 997884 Test #: 2/2 SOP#:TA 07 04 Test Started: Date 4/3/07 Time: 15:00

Organism/Batch/Age: M. beryllina / 4-3-07 / 12 DAYS Test Ended: Date 4/7/07 Time: 0900

Chamber/Test Volume: 1000 / 500 ml Diluent/ Batch: ASW / 3-13-07

Food/Batch: YCT — P.sub — Artemia 0hr 40-07 24hr — 48hr 42-07 72hr — Artemia Lot# ESL-556-90

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	C13	5	5	5	5	5	5
	B	C14	5	5	5	5	5	5
	C	C15	5	5	5	5	5	5
	D	C16	5	5	5	5	5	5
100%	A	C17	5	5	5	5	5	5
	B	C18	5	5	5	5	5	5
	C	C19	5	5	5	5	4/D	4
	D	C20	5	5	5	5	5	5
			BA	BA	JD	JD	JD	NV

Loaded/Verified by: BA/JD Checked by:

m = missing d = dead BR/AR = Before/After Renewal

Comments:

Test Results:

Screening Tests: Report LC50 as >100%, =100%, or <100%.

% mortality in 100% sample: 5% LC50: >100%

If Calculated: 95% CI_____ Method_____

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

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FDEP Biology Laboratory - Bioassay Parameter Bench Sheet



LIMS Sample # : 497884 Test #: 1 of 2

TEST SOP #: TA07_ 03 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	C	D	A
pH (S.U.)	8.3	8.0	7.8	8.3	7.7	7.8
Temperature °C	24.9	24.5	25.1	24.0	24.1	25.7
Dissolved Oxygen mg/L	7.5	4.7	5.1	6.1	4.4	5.0
Conductivity µmhos (mmhos)	20.1	20.8	21.5	20.7	20.4	21.0
(initials) Measured by:	JD	BA	JD	JD	JD	BA
(initials) Recorded by:	JD	BA	JD	JD	JD	BA

Comments:

Concentration 100%	0 Hr.	24 Hr.	48 Hr. before renewal	48 Hr. after renewal	72 Hr.	96 Hr.
Replicate	A	B	C	C	D	A
pH (S.U.)	7.5	7.4	7.6	7.5	7.4	7.7
Temperature °C	24.9	24.2	24.9	24.2	24.5	25.2
Dissolved Oxygen mg/L	7.5	5.1	5.3	6.6	4.6	5.1
Conductivity µmhos (mmhos)	20.2	21.0	20.5	20.3	20.3	21.0
(initials) Measured by:	JD	BA	JD	JD	JD	BA
(initials) Recorded by:	JD	BA	JD	JD	JD	BA

Comments:

Concentration Salt Ctrl	0 Hr.	24 Hr.	48 Hr. before renewal	48 Hr. after renewal	72 Hr.	96 Hr.
Replicate	A	B	C	C	D	A
pH (S.U.)	8.3	8.0	8.0	8.3	7.9	7.9
Temperature °C	25.0	25.3	25.9	24.0	24.1	24.6
Dissolved Oxygen mg/L	7.4	5.2	4.9	6.2	4.6	5.0
Conductivity µmhos (mmhos)	20.2	20.9	20.9	20.0	20.8	20.9
(initials) Measured by:	JD	BA	JD	JD	JD	BA
(initials) Recorded by:	JD	BA	JD	JD	JD	BA

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:

FDEP Biology Laboratory - Bioassay Parameter Bench Sheet

LIMS Sample # : 997884 **Test #:** 2 of 2

TEST SOP #: TA07_ 04 **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	C	D	A
pH (S.U.)	8.0	8.1	8.1	8.3	7.6	7.6
Temperature °C	24.8	25.5	24.5	24.2	25.0	24.0
Dissolved Oxygen mg/L	7.6	6.4	7.3	7.3	5.9	7.4
Conductivity µmhos (mmhos)	7.40	7.63	7.71	7.31	7.46	7.55
(initials) Measured by:	BA	BA	PDV/JD	PDV	PDV/JD	BA
(initials) Recorded by:	BA	BA	PDV/JD	PDV	PDV/JD	BA

Comments:

Concentration 100%	0 Hr.	24 Hr.	48 Hr. before renewal	48 Hr. after renewal	72 Hr.	96 Hr.
Replicate	A	B	C	C	D	A
pH (S.U.)	6.9	7.5	7.6	6.8	7.2	7.5
Temperature °C	24.9	24.9	24.6	24.5	24.7	24.1
Dissolved Oxygen mg/L	7.8	6.2	6.9	7.3	5.9	7.1
Conductivity µmhos (mmhos)	7.90	8.16	8.07	7.89	8.06	8.15
(initials) Measured by:	BA	BA	PDV/JD	PDV	PDV/JD	BA
(initials) Recorded by:	BA	BA	PDV/JD	PDV	PDV/JD	BA

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:

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V 2.0 2/24/04

FDEP Biology Laboratory - Acute Screen 4/24 Bioassay Bench Sheets

Facility: FLAGLER BEACH WWTF

Address : 2000 AVENUE A

City: FLAGLER BEACH County: FLAGLER

Contact/District: JOSEPH ELIERY / NORTHEAST

NPDES Permit #: FL0026611

LIMS Job #: TLH-2007-04-03-06-02 LIMS Sample #: 997885

Lims Data Entry: 4-11-07 MF Data Entry Verification: 4.11.07 DD

Sample Collection: Date: 4/2/07 Time: 1205 AM 0005 hours: minutes

Hold Time Start: Date: 4/2/07 Time: 1205 AM 0005 hours: minutes

Sample: 2 of 4

Comments: Per Permit: Sample Salinity adjusted for the mysid test – Sample Salinity not adjusted for the menidia test. See Comments on Page 21 (Test 1). MF 4-4-07 SAmple

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

Test 1 validation:
Control survival ≥90%: (Yes) No
Temperature Range ≤3°C: (Yes) No
Test 1: SOP TA 07_03

Test 2 validation:
Control survival ≥90%: (Yes) No
Temperature Range ≤3°C: (Yes) No
Test 2: SOP TA 07_04

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: ~4 ppth Final Salinity: ~12 ppth (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: ____

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

Patsy Vichaikal

Bruce Fleharty

James Danoy

Marshall Faircloth

Nijoli Wellendorf

REVIEWER

Water Quality Parameters	Original Sample	Method	Measured by	Verified by
Field Total Residual Cl_2 (mg/L):	0.01	~~Hach~~	Plant Operator	MF
Lab Total Residual Cl_2 (mg/L):	<0.03	HACH	BA	PPV
Alkalinity (mg/L as $CaCO_3$):	~~PPC 155 TT~~	HACH	PPV	BA
Hardness (mg/L as $CaCO_3$):	—	HACH	PPV	BA
Total Ammonia (mg/L as N):	0.370	DENVER	MF	~~PPV~~
Salinity (ppth):	~4	~~YSI~~ Mettler	MF	~~PPV~~

Mettler used 4/18/07

V 2.0 4/12/05

Appendix B. (continued)

FDEP Biology Laboratory - Bioassay Survival Bench Sheet

LIMS Sample #: 997885 Test #: 1/2 SOP#:TA 07 03 Test Started: Date 4/3/07 Time: 1355

Organism/Batch/Age: A.BAHIA/4-3-07/5 DAYS Test Ended: Date 4/3/07 Time: 0935

Chamber/Test Volume: 1000 / 500 ml Diluent/ Batch: ASW / 3-13-07

Food/Batch: YCT — P.sub — Artemia 0hr 40-07 24hr 41-07 48hr 42-07 72hr 43-07 Artemia Lot# ESL-536-90

Feeding: Prior to Test Prior to Renewal (Daily)

Concentration	Replicate	Chamber #	0 hr	24 hr	48 hr BR	48 hr AR	72 hr	96 hr
CTRL	A	D1	5	5	5	5	5	5
	B	D2	5	5	5	5	5	5
	C	D3	5	5	5	5	5	5
	D	D4	5	5	5	5	5	5
100%	A	D5	5	5	5	5	5	5
	B	D6	5	5	5	5	5	5
	C	D7	5	5	5	5	5	5
	D	D8	5	5	5	5	5	5
SALT CTRL	A	D9	5	5	5	5	5	5
	B	D10	5	5	5	5	5	5
	C	D11	5	5	5	5	5	5
	D	D12	5	5	5	5	5	5
Loaded/Verified by: JJ / JA		Checked by:	JJ	JJ	JJ	JJ	JJ	PW

m = missing d = dead BR/AR = Before/After Renewal

Comments:

Test Results:

Screening Tests: Report LC50 as >100%, =100%, or <100%.

% mortality in 100% sample: Ø LC50: >100%

If Calculated: 95% CI__________ Method__________

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

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Appendix B. (continued)

FDEP Biology Laboratory - Bioassay Survival Bench Sheet

LIMS Sample #: 997885 Test #: 2/2 SOP#:TA 07 04 Test Started: Date 4/3/07 Time: 1455
Organism/Batch/Age: M. BERYLLINA/4-3-07/12 DAYS Test Ended: Date 4/7/07 Time: 0905
Chamber/Test Volume: 1000/ 500 ml Diluent/ Batch: ASW /3-13-07
Food/Batch: YCT — P.sub — Artemia 0hr 40-07 24hr — 48hr 42-07 72hr — Artemia Lot# GSL-536-90
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	C21	5	5	5	5	5	5
	B	C22	5	5	5	5	5	5
	C	C23	5	5	5	5	5	5
	D	C24	5	4 ID	4	4	4	4
100%	A	E21	5	5	5	5	4 ID	4
	B	E22	5	5	5	5	4 ID	4
	C	E23	5	5	5	5	5	5
	D	E24	5	5	5	5	5	5
Loaded/Verified by: BA JD		Checked by:	BA	BA	JD	JD	JD	PDV

m = missing d = dead BR/AR = Before/After Renewal
Test Results:
Screening Tests: Report LC50 as >100%, =100%, or <100%.
% mortality in 100% sample: 10 % LC50: >100%
If Calculated: 95% CI_____ Method_____
Substitue highest test concentration used if other than 100% (example: Ocean outfall tested at 30% concentration).

Comments:

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FDEP Biology Laboratory - Bioassay Parameter Bench Sheet

LIMS Sample # : 997885 **Test #:** 1 of 2

TEST SOP #: TA07_ 03 **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	C	D	A
pH (S.U.)	8.4	7.8	7.9	8.3	7.9	7.8
Temperature °C	24.9	26.0	24.9	24.0	25.9	24.0
Dissolved Oxygen mg/L	7.4	4.5	4.9	6.3	4.9	5.2
Conductivity µmhos (mmhos)	20.1	21.1	21.7	22.0	20.6	20.7
(initials) Measured by:	JD	BA	JD	JD	JD	BA
(initials) Recorded by:	BA	BA	JD	JD	JD	BA

Comments:

Concentration 100%	0 Hr.	24 Hr.	48 Hr. before renewal	48 Hr. after renewal	72 Hr.	96 Hr.
Replicate	A	B	C	C	D	A
pH (S.U.)	7.3	7.6	7.6	7.4	7.4	7.6
Temperature °C	25.3	26.0	25.9	24.1	25.0	25.0
Dissolved Oxygen mg/L	7.5	5.4	5.3	6.3	7.4 (4.9)	5.1
Conductivity µmhos (mmhos)	19.9	21.3	21.4	20.4	20.1	21.4
(initials) Measured by:	JD	BA	JD	JD	JD	BA
(initials) Recorded by:	BA	BA	JD	JD	JD	BA

Comments:

Concentration Salt Ctrl	0 Hr.	24 Hr.	48 Hr. before renewal	48 Hr. after renewal	72 Hr.	96 Hr.
Replicate	A	B	C	C	D	A
pH (S.U.)	8.3	8.1	8.1	8.3	8.0	7.8
Temperature °C	24.9	26.0	25.9	24.7	25.4	24.1
Dissolved Oxygen mg/L	7.4	5.3	4.9	6.3	4.9	5.0
Conductivity µmhos (mmhos)	20.2	21.2	21.3	20.3	20.6	21.0
(initials) Measured by:	JD	BA	JD	JD	JD	BA
(initials) Recorded by:	BA	BA	JD	JD	JD	BA

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: ① transcription error J.D.

000029

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FDEP Biology Laboratory - Bioassay Parameter Bench Sheet

LIMS Sample # : 997885 **Test #:** 2 of 2

TEST SOP #: TA07_ 04 **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	C	D	A
pH (S.U.)	7.8	8.0	8.1	8.3	7.5	7.5
Temperature °C	24.7	24.7	24.6	24.1	24.9	24.1
Dissolved Oxygen mg/L	7.9	6.8	7.1	7.1	6.1	6.3
Conductivity µmhos (mmhos)	7.41	7.71	7.68	7.33	7.48	7.5
(initials) Measured by:	BA	BA	PDV/JD	PDV	PDV/JD	BA
(initials) Recorded by:	BA	BA	PDV/JD	PDV	PDV/JD	BA

Comments:

Concentration 100%	0 Hr.	24 Hr.	48 Hr. before renewal	48 Hr. after renewal	72 Hr.	96 Hr.
Replicate	A	B	C	C	D	A
pH (S.U.)	6.8	7.4	7.6	6.9	7.3	7.5
Temperature °C	25.0	24.7	24.6	24.2	24.6	24.3
Dissolved Oxygen mg/L	7.9	5.9	7.1	7.1	6.2	6.1
Conductivity µmhos (mmhos)	7.80	8.04	8.03	7.80	8.05	8.09
(initials) Measured by:	BA	BA	PDV/JD	PDV	PDV/JD	BA
(initials) Recorded by:	BA	BA	PDV/JD	PDV	PDV/JD	BA

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:

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V 2.0 2/24/04

FDEP Biology Laboratory - Acute Screen 4/24 Bioassay Bench Sheets

Facility: FLAGLER BEACH WWTF

Address : 2000 AVENUE A

City: FLAGLER BEACH **County:** FLAGLER

Contact/District: JOSEPH EMERY / NORTHEAST

NPDES Permit #: FL 0026611

LIMS Job #: TLH-2007-04-03-06-03 **LIMS Sample #:** 9978886

Lims Data Entry: 4-11-07 MF Data Entry Verification: 4.11.07 JD

Sample Collection: Date: 4/2/07 Time: 0600

Hold Time Start: Date: 4/2/07 Time: 0600

Sample: 3 of 4

Comments: Per Permit; Sample Salinity adjusted for the mysid tost - Sample salinity not adjusted for the menidia tost. See comments on page 21 (tost Sample 1). MF 4-4-07

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

Test 1 validation:
Control survival ≥90%: (Yes) No
Temperature Range ≤3°C: (Yes) No
Test 1: SOP TA 07_ 03

Test 2 validation:
Control survival ≥90%: (Yes) No
Temperature Range ≤3°C: (Yes) No
Test 2: SOP TA 07_ 04

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: ~4 Final Salinity: ~12 (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: ____

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
Patsy Vichailak
Brad Acree
Marshall Faircloth
James Dean

Nicki Wellendorf
REVIEWER

Water Quality Parameters	Original Sample	Method	Measured by	Verified by
Field Total Residual Cl_2 (mg/L):	0.01	Hach	Plant Operator	MF
Lab Total Residual Cl_2 (mg/L):	<0.03	HACH	BA	PDV
Alkalinity (mg/L as $CaCO_3$):	81	HACH	PDV	BA
Hardness (mg/L as $CaCO_3$):	—	HACH	PDV	BA
Total Ammonia (mg/L as N):	0.2265	DENVER	MF	PDV
Salinity (ppth):	~4	(YSI) Mettler	MF	PDV

MF Mettler used 4-18-07

V.2.0 4/12/05

Appendix B. (continued)

[redacted]

FDEP Biology Laboratory - Bioassay Survival Bench Sheet

LIMS Sample #: 9978860 Test #: 1/2 SOP#:TA 07 03 Test Started: Date 4/3/07 Time: 1345
Organism/Batch/Age: Atalia / 4-3-07 / 5 DAS Test Ended: Date 4/7/07 Time: 0940
Chamber/Test Volume: 1000 / 500 ml Diluent/ Batch: ASW / 3-13-07
Food/Batch: YCT — P.sub — Artemia 0hr 40-07 24hr 41-07 48hr 42-07 72hr 43 07 Artemia Lot# GSL S3690
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	D13	5	5	5	5	5	5
	B	D14	5	5	5	5	5	5
	C	D15	5	5	5	5	5	5
	D	D16	5	5	5	5	5	5
100%	A	D17	5	5	5	5	5	5
	B	D18	5	5	5	5	5	5
	C	D19	5	5	5	5	5	5
	D	D20	5	5	5	5	5	5
SALT CTRL	A	D21	5	5	5	5	5	5
	B	D22	5	5	5	5	5	5
	C	D23	5	5	5	5	5	5
	D	D24	5	5	5	5	5	5
Loaded/Verified by: JD / DK	Checked by:		JD	JD	JD	JD	JD	PEV

m = missing d = dead BR/AR = Before/After Renewal
Comments:

Test Results:
Screening Tests: Report LC50 as >100%, =100%, or <100%.
% mortality in 100% sample: 0 LC50: >100%
If Calculated: 95% CI_____ Method_____
Substitue highest test concentration used if other than 100% (example: Ocean outfall tested at 30% concentration).

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Appendix B. (continued)

FDEP Biology Laboratory - Bioassay Survival Bench Sheet

LIMS Sample #: 997886 Test #: 2/2 SOP#:TA 07 04 Test Started: Date 4/3/07 Time: 14:30

Organism/Batch/Age: M. Beryllina / 4-3-07 / 12 Days Test Ended: Date 4/7/07 Time: 0910

Chamber/Test Volume: 1000 / 500 ml Diluent/ Batch: ASW / 3-13-07

Food/Batch: YCT — P.sub — Artemia 0hr 40-07 24hr 41-07 48hr 42-07 72hr — Artemia Lot# CSL-536-90

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	E13	5	5	5	5	5	5
	B	E14	5	5	5	5	5	5
	C	E15	5	5	5	5	4 1D	4
	D	E16	5	5	5	5	5	5
100%	A	E17	5	5	5	5	5	5
	B	E18	5	4 1D	4	4	3 1D	3
	C	E19	5	5	5	5	5	5
	D	E20	5	5	5	5	5	5
Loaded/Verified by: BA / JD		Checked by:	BA	BA	JD	JD	JD	[illegible]

m = missing d = dead BR/AR = Before/After Renewal

Comments:

Test Results:

Screening Tests: Report LC50 as >100%, =100%, or <100%.

% mortality in 100% sample: 10% LC50: > 100%

If Calculated: 95% CI______ Method______

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

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FDEP Biology Laboratory - Bioassay Parameter Bench Sheet

LIMS Sample # : 997886 Test #: 1 of 2

TEST SOP #: TA07_ 03 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	C	D	A
pH (S.U.)	8.1	7.9	7.8	8.3	8.0	8.0
Temperature °C	~~24.9~~ 25.1 DD	24.7	25.5	24.0	24.5	24.0
Dissolved Oxygen mg/L	7.3	5.5	4.9	5.7	5.2	5.7
Conductivity µmhos (mmhos)	20.1	20.5	21.7	19.9	20.4	20.6
(initials) Measured by:	JD	BA	JD	JD	JD	BA
(initials) Recorded by:	BA	BA	JD	JD	JD	BA

Comments:

Concentration 100%	0 Hr.	24 Hr.	48 Hr. before renewal	48 Hr. after renewal	72 Hr.	96 Hr.
Replicate	A	B	C	C	D	A
pH (S.U.)	7.5	7.6	7.6	8.3	7.6	7.6
Temperature °C	25.1 DD ~~25.8~~	24.7	25.9	24.1	24.8	24.0
Dissolved Oxygen mg/L	7.5	4.7	5.3	5.9	5.4	5.8
Conductivity µmhos (mmhos)	19.8	20.6	20.9	20.3	20.5	20.6
(initials) Measured by:	JD	BA	JD	JD	JD	BA
(initials) Recorded by:	BA	BA	JD	JD	JD	BA

Comments:

Concentration Salt ctrl	0 Hr.	24 Hr.	48 Hr. before renewal	48 Hr. after renewal	72 Hr.	96 Hr.
Replicate	A	B	C	C	D	A
pH (S.U.)	8.3	8.1	8.0	7.4	8.1	7.9
Temperature °C	24.9	24.1	24.8	24.7	24.4	24.0
Dissolved Oxygen mg/L	7.4	5.0	5.3 DD	6.3	5.4	5.7
Conductivity µmhos (mmhos)	20.2	20.8	20.5	20.1	20.6	20.9
(initials) Measured by:	JD	BA	JD	JD	JD	BA
(initials) Recorded by:	BA	BA	JD	JD	JD	BA

Comments:
DO Interference effect JD

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:

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FDEP Biology Laboratory - Bioassay Parameter Bench Sheet

LIMS Sample # : 997886 **Test #:** 2 of 2

TEST SOP #: TA07_ 04 **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	C	D	A
pH (S.U.)	7.8	7.9	8.2	8.3	7.5	7.5
Temperature °C	24.2	24.8	24.3	24.2	25.0	24.0
Dissolved Oxygen mg/L	7.8 BA	7.5	7.5	7.0	5.6	6.9
Conductivity µmhos (mmhos)	7.44	7.72	7.69	7.35	7.49	7.47
(initials) Measured by:	BA	BA	PDV/JD	PDV	PDV/JD	BA
(initials) Recorded by:	BA	BA	PDV/JD	PDV	PDV/JD	BA

Comments:

Concentration 100%	0 Hr.	24 Hr.	48 Hr. before renewal	48 Hr. after renewal	72 Hr.	96 Hr.
Replicate	A	B	C	C	D	A
pH (S.U.)	6.9	7.5	7.7	7.0	7.4	7.4
Temperature °C	24.6	24.6	24.5	24.3	24.7	24.1
Dissolved Oxygen mg/L	7.2 BA 6.9	6.6	7.4	7.1	5.8	6.3
Conductivity µmhos (mmhos)	7.43	7.59	7.54	7.52	7.606	7.76
(initials) Measured by:	BA	BA	PDV/JD	PDV	PDV/JD	BA
(initials) Recorded by:	BA	BA	PDV/JD	PDV	PDV/JD	BA

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:

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FDEP Biology Laboratory - Acute Screen 4/24 Bioassay Bench Sheets

Facility: FLAGLER BEACH WWTF

Address: 2000 AVENUE A

City: FLAGLER BEACH County: FLAGLER

Contact/District: JOSEPH EMERY / NORTHEAST

NPDES Permit #: FL 0026611

LIMS Job #: TLH-2007-04-03C6C4 LIMS Sample #: 997887

Lims Data Entry: 4-11-07 MF Data Entry Verification: 4/4/07 JD

Sample Collection: Date: 4/2/07 Time: 1205

Hold Time Start: Date: 4/2/07 Time: 1205

Sample: 4 of 4

Comments: Per Permit: Sample Salinity adjusted for the mysid test. Sample salinity not adjusted for the menidia test, See comments on Page 21 for sample 1 tests. MF 4-4-07

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

Test 1 validation:
Control survival ≥90%: (Yes) No
Temperature Range ≤3°C: (Yes) No
Test 1: SOP TA 07_ 03

Test 2 validation:
Control survival ≥90%: (Yes) No
Temperature Range ≤3°C: (Yes) No
Test 2: SOP TA 07_ 04

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: ~4 Final Salinity: ~12 (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: ____

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
Patsy Vickaile
Bill Keen
Marshall Faircloth
James Paul

Nicole Wilkerson
REVIEWER

Water Quality Parameters	Original Sample	Method	Measured by	Verified by
Field Total Residual Cl_2 (mg/L):	0.01	Hach	Plant operator	MF
Lab Total Residual Cl_2 (mg/L):	<0.03	HACH	BA	PPV
Alkalinity (mg/L as $CaCO_3$):	93	HACH	~~PPV~~	BA
Hardness (mg/L as $CaCO_3$):	—	HACH	~~PPV~~	BA
Total Ammonia (mg/L as N):	0.419	DENVER	MF	~~PPV~~
Salinity (ppth):	~4	~~YSI~~/ Mettler	MF	~~PPV~~

Mettler used MF 4-11-07 MF

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Appendix B. (continued)

FDEP Biology Laboratory - Bioassay Survival Bench Sheet

LIMS Sample #: 997887 Test #: 1/2 SOP#:TA 07 03 Test Started: Date 4/3/07 Time: 1400
Organism/Batch/Age: A.Bahia / 4-3-07 / SDAS Test Ended: Date 4/7/07 Time: 0945
Chamber/Test Volume: 1000 / 500 ml Diluent/ Batch: ASW / 3-15-07
Food/Batch: YCT — P.sub — Artemia 0hr 4007 24hr 41-07 48hr 42-07 72hr 43-07 Artemia Lot# ESL-S36 40
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	E1	5	5	5	5	5	5
	B	E2	5	5	5	5	5	5
	C	E3	5	5	5	5	5	5
	D	E4	5	5	5	5	5	5
100%	A	E5	5	5	5	5	4/0	4
	B	E6	5	5	5	5	5	5
	C	E7	5	5	5	5	5	5
	D	E8	5	5	5	5	5	5
SALT CTRL	A	E9	5	5	5	5	5	5
	B	E10	5	5	5	5	5	5
	C	E11	5	5	5	5	5	5
	D	E12	5	5	5	5	5	5
Loaded/Verified by: JB / BAD		Checked by:	JB	JB	JB	JB	JB	PAV

m = missing d = dead BR/AR = Before/After Renewal
Test Results:
Screening Tests: Report LC50 as >100%, =100%, or <100%.
% mortality in 100% sample: NOT 5% LC50: >100%
If Calculated: 95% CI_____ Method_____
Substitue highest test concentration used if other than 100% (example: Ocean outfall tested at 30% concentration).

Comments:

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Appendix B. (continued)

FDEP Biology Laboratory - Bioassay Survival Bench Sheet

LIMS Sample #: 997887 Test #: 2/2 SOP#:TA 0704 Test Started: Date 4/3/07 Time: 14:45

Organism/Batch/Age: M. Beryllina / 4-3-07 / 12 Days Test Ended: Date 4/7/07 Time: 0915

Chamber/Test Volume: 1000 / 500 ml Diluent/ Batch: ASW / 3-13-07

Food/Batch: YCT — P.sub — Artemia 0hr 4-6-07 24hr — 48hr 4-2-07 72hr — Artemia Lot# GSL-S3690

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	A17	5	5	5	5	5	5
	B	A18	5	5	5	5	5	5
	C	A19	5	5	5	5	5	5
	D	A20	5	5	5	5	5	5
100%	A	A21	5	5	5	5	5	5
	B	A22	5	5	5	5	5	5
	C	A23	5	5	5	5	5	5
	D	A24	5	5	5	5	5	5
Loaded/Verified by: BA JD		Checked by:	BA	BA	JD	JD	JD	PAV

m = missing d = dead BR/AR = Before/After Renewal

Comments:

Test Results:

Screening Tests: Report LC50 as >100%, =100%, or <100%.

% mortality in 100% sample: Ø LC50: >100%

If Calculated: 95% CI_____ Method_____

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

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FDEP Biology Laboratory - Bioassay Parameter Bench Sheet

LIMS Sample # : 997887 Test #: 1 of 2

TEST SOP #: TA07_ 03 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	C	D	A
pH (S.U.)	8.4	8.1	7.8	8.2	8.0	7.8
Temperature °C	24.9	25.3	24.5	24.0	24.3	24.0
Dissolved Oxygen mg/L	7.3	6.6	5.2	6.3	5.3	6.4
Conductivity µmhos (mmhos)	20.1	20.6	20.8	20.1	20.1	20.7
(initials) Measured by:	JD	BA	JD	JD	JD	BA
(initials) Recorded by:	BA	BA	JD	JD	JD	BA

Comments:

Concentration 100%	0 Hr.	24 Hr.	48 Hr. before renewal	48 Hr. after renewal	72 Hr.	96 Hr.
Replicate	A	B	C	C	D	A
pH (S.U.)	7.5	7.5	7.6	8.3	7.6	7.6
Temperature °C	25.0	25.5	24.0	24.0	24.5	24.0
Dissolved Oxygen mg/L	7.5	5.6	5.2	6.2	5.2	5.1
Conductivity µmhos (mmhos)	20.1	20.7	20.9	20.5	20.5	20.8
(initials) Measured by:	JD	BA	JD	JD	JD	BA
(initials) Recorded by:	BA	BA	JD	JD	JD	BA

Comments:

Concentration Salt Ctrl	0 Hr.	24 Hr.	48 Hr. before renewal	48 Hr. after renewal	72 Hr.	96 Hr.
Replicate	A	B	C	C	D	A
pH (S.U.)	8.4	8.0	8.0	7.5	8.0	7.7
Temperature °C	24.9	25.0	25.9	24.1	24.5	24.0
Dissolved Oxygen mg/L	7.3	5.5	4.9	6.3	5.2	5.3
Conductivity µmhos (mmhos)	20.2	20.6	21.5	20.3	20.8	20.9
(initials) Measured by:	JD	BA	JD	JD	JD	BA
(initials) Recorded by:	BA	BA	JD	JD	JD	BA

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:

FDEP Biology Laboratory - Bioassay Parameter Bench Sheet

LIMS Sample # : 997887 **Test #:** 2 of 2

TEST SOP #: TA07_04 **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	C	D	A
pH (S.U.)	7.9	8.1	8.2	8.3	7.6	7.5
Temperature °C	24.1	24.7	24.8	24.1	24.6	24.0
Dissolved Oxygen mg/L	8.6	6.3	7.4	7.7	6.8	6.3
Conductivity µmhos (mmhos)	7.46	7.96	7.77	7.35	7.54	7.55
(initials) Measured by:	BA	BA	DDV / JD	DDV	DDV / JD	BA
(initials) Recorded by:	BA	BA	DDV / JD	DDV	DDV / JD	BA

Comments:

Concentration: 100%	0 Hr.	24 Hr.	48 Hr. before renewal	48 Hr. after renewal	72 Hr.	96 Hr.
Replicate	A	BA	C	C	D	A
pH (S.U.)	7.0	7.5	7.8	7.1	7.5	7.5
Temperature °C	24.6	25.0	24.5	24.2	24.7	24.0
Dissolved Oxygen mg/L	8.9	5.5	7.4	7.8	6.7	6.4
Conductivity µmhos (mmhos)	7.42	7.81	7.51	7.40	7.53	7.68
(initials) Measured by:	BA	BA	DDV / JD	DDV	DDV / JD	BA
(initials) Recorded by:	BA	BA	DDV / JD	DDV	DDV / JD	BA

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:

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Appendix C. SRT Bench Sheets and Statistical Analysis

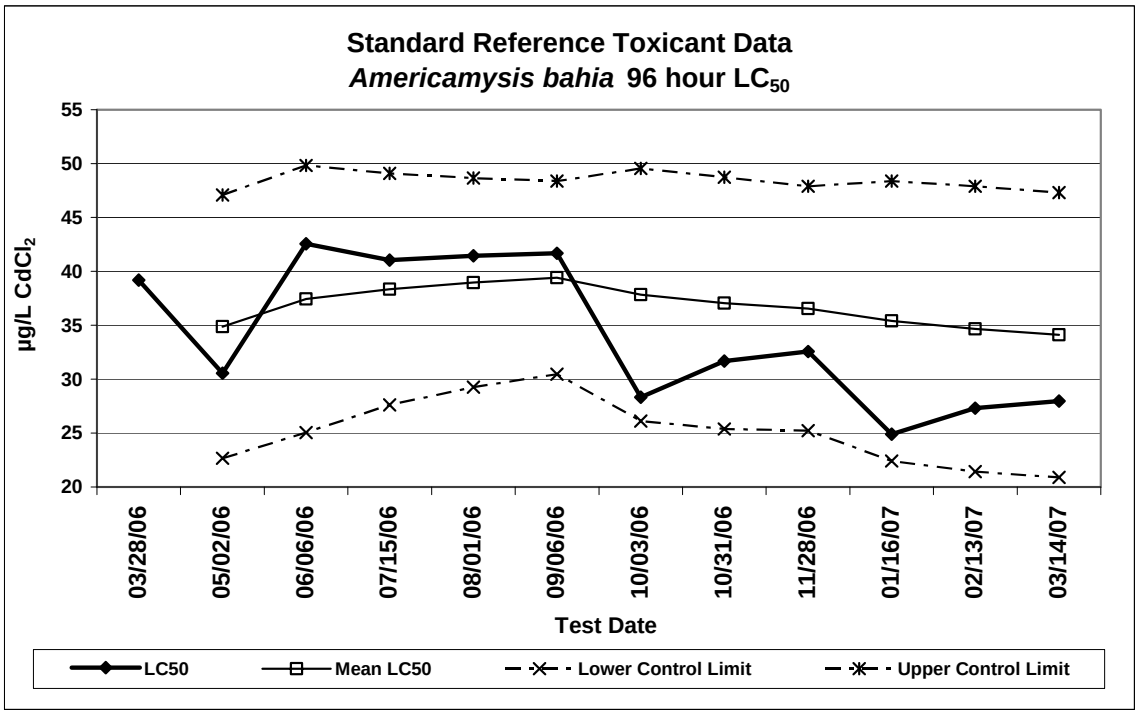
Florida Department of Environmental Protection
Bureau of Laboratories

Standard Reference Toxicant (SRT) Test Data - 96-hour Acute Toxicity
Americamysis bahia (mysid shrimp) - Cadmium Chloride ($CdCl_2$)

Date	LC50	Mean LC50	Std Dev	Lower Control Limit	Upper Control Limit
03/28/06	39.19				
05/02/06	30.56	34.88	6.10	22.67	47.08
06/06/06	42.57	37.44	6.19	25.05	49.83
07/15/06	41.04	38.34	5.37	27.60	49.08
08/01/06	41.44	38.96	4.85	29.26	48.66
09/06/06	41.68	39.41	4.48	30.46	48.37
10/03/06	28.33	37.83	5.85	26.12	49.54
10/31/06	31.68	37.06	5.84	25.38	48.74
11/28/06	32.57	36.56	5.66	25.24	47.89
01/16/07	24.91	35.40	6.49	22.42	48.37
02/13/07	27.31	34.66	6.62	21.41	47.90
03/14/07	27.97	34.10	6.60	20.90	47.31

Lower Confidence Limit = mean - 2 * Std Dev
Upper Confidence Limit = mean + 2 * Std Dev

CV = 19.36
EPA reference 75th quartile CV = 26%



*Fewer than 20 points are charted due to recent initiation of SRT testing using $CdCl_2$.

Appendix C. (continued)

Florida Department of Environmental Protection
Bureau of Laboratories

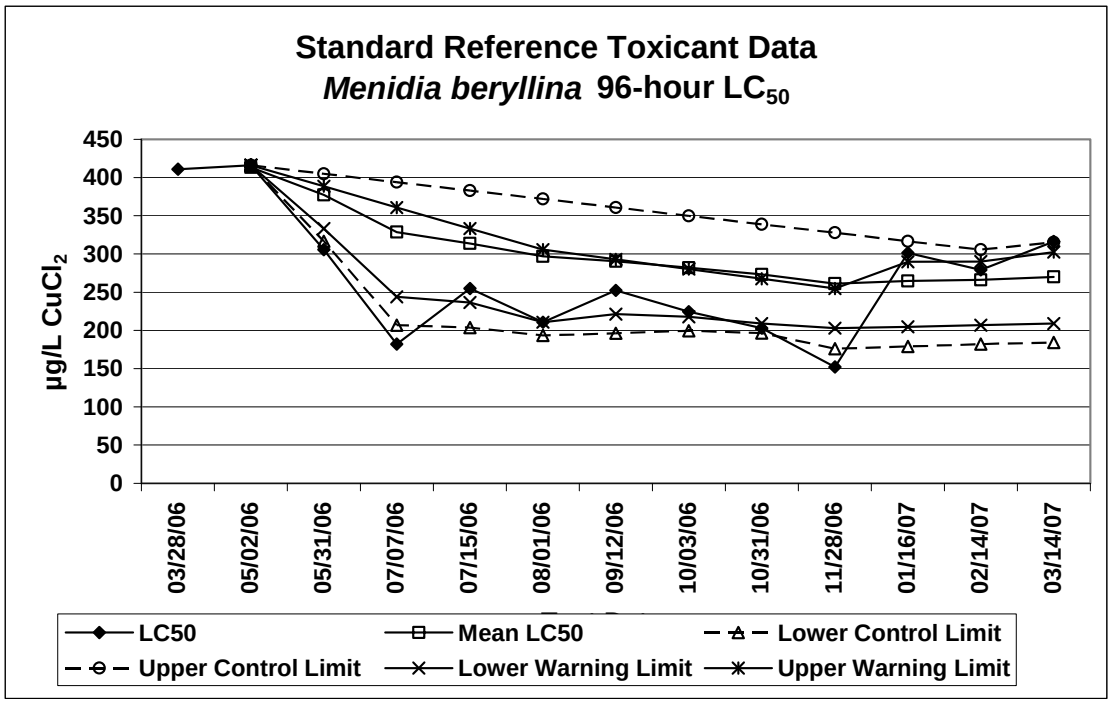
Standard Reference Toxicant (SRT) Test Data - 96-hour Acute Toxicity
Menidia beryllina (inland silverside) - Copper Chloride ($CuCl_2$)

Date	LC50	Mean LC50	Std Dev	Lower Control Limit	Upper Control Limit
03/28/06	410.71				
05/02/06	416.01	413.36	3.75	405.86	420.86
05/31/06	305.64	377.45	62.25	252.96	501.95
07/07/06	181.98	328.59	110.16	108.26	548.91
07/15/06	254.77	313.82	100.95	111.92	515.73
08/01/06	210.80	296.65	99.61	97.43	495.87
09/12/06	252.39	290.33	92.46	105.41	475.24
10/03/06	224.51	282.10	88.71	104.69	459.51
10/31/06	202.88	273.30	87.08	99.15	447.45
11/28/06	152.17	261.19	90.59	80.00	442.37
01/16/07	301.29	264.83	86.79	91.25	438.41
02/14/07	279.18	266.03	82.86	100.32	431.74
03/14/07	316.16	269.88	80.54	108.81	430.96

Fewer than 20 data points due to 96-hour SRTs beginning in 2006

CV = 29.84
EPA reference 75th quartile CV = 21%

Upper warning and control limits are the 75th and 90th percentiles, respectively, of the LC50s.
Lower warning and control limits are the 25th and 10th percentiles, respectively, of the LC50s.



Appendix C. (continued)

FDEP Biology Laboratory - 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: 48 hour non-renewal (96 hour renewal)
Test Page 1 of 2

Diluent/ Batch #: ASW 13-7-07
Toxicant/ Batch#: $CaCl_2$ 13-19-07

Test Beginning: Date: 3/14/07 Time: 1215
Test Ending: Date: 3-18-07 Time: 1235

Water Quality Parameters	Diluent	Method	Initials
Total Residual Cl_2 (mg/L):	<0.03	Hach	BA
Alkalinity (mg/L as $CaCO_3$):	104	Hach	PPV
Hardness (mg.L as $CaCO_3$):	—	Hach	PPV
Total Ammonia (mg/L as N):	<0.034	Denver	IN F
Salinity (ppth):	~20	Mettler	BA

Organism Batch #/ Age: 3-13-07 / 5 days
Feeding: (Prior to test) / Prior to renewal) Daily
Food: YCT *P.subcapitata* Artemia: Lot # GSL-S36-90
Food Batch: — — 0hr 21-07 24hr 20-0748hr 21-07 72hr 22-07
Chamber size: 1000 mL
Test volume: 500 mL per replicate

Conc. (40%) mg/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 Conductivity µmhom/cm (mmhos/cm) 0 hr (48 hr)	Uncorrected Conductivity 24 hr (72 hr)	Uncorrected Conductivity 48 hr (96 hr)
Control	A	B1	5	5	5	8.4			24.0			7.1			31.9		
	B	B2	5	5	5		8.2			24.2			5.6			33.0	
	C	B3	5	5	5			8.1			25.2			5.7			33.1
	D	B4	5	5	5												
20	A	B5	5	5	5	8.4			24.0			7.1			32.1		
	B	B6	5	5	5		8.2			24.7			5.5			32.8	
	C	B7	5	5	5			8.0			24.8			5.6			33.1
	D	B8	5	5	5												
30	A	B9	5	5	5	8.4			24.1			7.1			32.1		
	B	B10	5	4D	4		8.2			24.4			5.5			33.1	
	C	B11	5	5	5			8.0			24.7			5.6			33.3
	D	B12	5	5	5												
45	A	B13	5	5	@ 4/4D	8.4			24.1			7.1			32.1		
	B	B14	5	5	5		8.2			24.4			5.6			32.9	
	C	B15	5	5	4D			8.0			24.9			5.5			33.3
	D	B16	5	5	5												
67	A	B17	5	5	2D	8.3			24.1			6.9			31.8		
	B	B18	5	5	5		8.2			24.8			5.6			32.6	
	C	B19	5	5	4D			8.0			24.8			5.6			32.9
	D	B20	5	5	2D												
100	A	B21	5	5	0 5D	8.3			24.2			7.1			32.2		
	B	B22	5	4D	0 4D		8.2			24.5			5.5			32.8	
	C	B23	5	4D	1 3D			8.1			24.9			5.4			33.1
	D	B24	5	5	0 5D												
	A																
	B																
	C																
	D																
Loaded / measured by:			JD	JD	JD	JD	BA	PPV	JD	JD	JD	JD	BA	PPV	JD	BA	PPV
Recorded by:			JD	JD	JD	JD	BA	PPV	JD	JD	JD	JD	BA	PPV	JD	BA	PPV

Investigators' Signatures
Patsy Vicinelli
James Smith
Brad Peterson
Marshall Faircloth
Nikki Wellendorf
REVIEWER

Concentrations prepared by: JD
Loading verified by: PPV
Light Intensity: 50-100 Ft. candles
Photoperiod: 16 hours Light / 8 hours dark
Temperature Range °C:
Incubator # 2 min 25.7 max 26.2 mean 26.0
Incubator # ___ min ___ max ___ mean ___
Room B246 min 25.0 max 26.1 mean 25.6

Comments:
@ 45A 48hr-4ID- J.D. 3/16/07

Statistics: Method: Spearman-Karber
(48) 96 hour LC_{50}: 70.07
95% Confidence Interval: lower 62.39 upper 76.70

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revised 09/24/06 SP

Appendix C. (continued)

FDEP Biology Laboratory - 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: 48 hour non-renewal / (96 hour renewal)
Test Page 2 of 2

Diluent/ Batch #: ASW 13-7-07
Toxicant/ Batch#: CdCl2 13-14-07

Test Beginning: Date: 3/14/07 Time: 1215
Test Ending: Date: 3-18-07 Time: 1235

Water Quality Parameters	Diluent	Method	Initials
Total Residual Cl_2 (mg/L):	0.08	Hach	BA
Alkalinity (mg/L as $CaCO_3$):	104	Hach	PW
Hardness (mg.L as $CaCO_3$):	—	Hach	PW
Total Ammonia (mg/L as N):	0.03	Denver	MF
Salinity (ppth):	~20	Mettler	BA

Organism Batch #/ Age: 3-13-07 / 5 days
Feeding: (Prior to test) (Prior to renewal) Daily
Food: YCT — P.subcapitata — Artemia: Lot #ESL-536-10
Food Batch: _____ — _____ 0hr 24-07 24hr 30-07 48hr 31-07 72hr 32-07
Chamber size: 1000 mL
Test volume: 500 mL per replicate

Conc. (%) mg/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 Conductivity µmhom/cm (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	B1	5	5	5			7.8			24.4			4.1			33.6
	B	B2	5	5	5												
	C	B3	5	5	5	8.3			24.6			6.7			31.4		
	D	B4	5	5	5		8.1			24.9			5.0			32.6	
20	A	B5	5	5	4 1D			7.9			24.5			4.3			32.8
	B	B6	5	5	4 1D												
	C	B7	5	5	5	8.3			24.5			6.6			32.0		
	D	B8	5	5	4 1D		8.1			24.9			4.6			32.5	
30	A	B9	5	5	2 3D			8.0			25.0			4.3			33.2
	B	B10	4	4	2 2D												
	C	B11	5	5	2 3D	8.3			24.5			6.6			32.4		
	D	B12	5	4 1D	2 2D		8.1			24.9			4.4			32.1	
45	A	B13	4	4	0 4D			8.0			25.0			4.2			32.9
	B	B14	5	2 3D	0 2D												
	C	B15	4	2 2D	1 1D	8.3			24.5			6.6			32.4		
	D	B16	5	2 3D	1 1D		8.1			25.1			4.5			32.6	
67	A	B17	2	0 2D	—			—			—			—			—
	B	B18	5	2 3D	0 2D			8.0			24.8			4.5			32.8
	C	B19	4	2 2D	0 2D	8.3			24.5			6.6			32.1		
	D	B20	2	0 2D	—		8.1			25.1			4.3			32.3	
100	A	B21	—	—	—												
	B	B22	—	—	—												
	C	B23	1	0 1D	—	8.3	8.2	—	24.5	25.2	—	6.6	4.6	—	32.3	32.6	—
	D	B24	—	—	—					24.8			4.6				
	A																
	B																
	C																
	D																
Loaded / measured by:			JD	BA	MF	JD	BA	MF	JD	BA	MF	JD	BA	MF	JD	BA	MF
Recorded by:			JD	BA	MF	JD	BA	MF	JD	BA	MF	JD	BA	MF	JD	BA	MF

Investigators' Signatures
Peter Vichaidis
Jason Smith
Bruce Nelson
Marshall Faircloth
Nicki Wellborn
REVIEWER

Concentrations prepared by: JD
Loading verified by: PW
Light Intensity: 50-100 Ft. candles
Photoperiod: 16 hours Light / 8 hours dark
Temperature Range °C:
Incubator # 8 min. 25.7 max. 26.2 mean 26.0
Incubator # ___ min. _____ max. _____ mean _____
Room B246 min 25.0 max. 26.1 mean 25.6

Comments:

Statistics: Method: Spearman-Karber
48 (96) hour LC_{50}: 27.97
95% Confidence Interval: lower 24.41 upper 32.05

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Appendix C. (continued)

FDEP Biology Laboratory - 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: 48 hour non-renewal / (96 hour renewal)
Test Page 1 of 2

Diluent/ Batch #: ASW 13-7-07
Toxicant/ Batch#: $CuCl_2$ 13-14-07

Test Beginning: Date: 3/14/07 Time: 1300
Test Ending: Date: 3-18-07 Time: 1220

Water Quality Parameters	Diluent	Method	Initials
Total Residual Cl_2 (mg/L):	<0.03	Hach	BA
Alkalinity (mg/L as $CaCO_3$):	109	Hach	PRV
Hardness (mg/L as $CaCO_3$):	—	Hach	PRV
Total Ammonia (mg/L as N):	<0.34	Denver	MF
Salinity (ppth):	~20	Mettler	BA

Organism Batch #/ Age: 3-13-07 I 13d 5
Feeding: (Prior to test) (Prior to renewal) Daily
Food: YCT *P.subcapitata* Artemia: Lot #ESL-536-10
Food Batch: — — 0hr 29-07 24hr — 48hr 31-07 72hr —
Chamber size: 1000 mL
Test volume: 500 mL per replicate

Conc µg/L (mg/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 Conductivity µmhom/cm (mmhos/cm) 0 hr (48 hr)	24 hr (72 hr)	48 hr (96 hr)
Control	A	A1	10	10	10	8.4		8.2	24.1		25.6	7.0		5.8	32.1		33.1
	B	A2	10	9 D	9		8.2			24.9			5.7			32.5	
	C																
	D																
100	A	A3	10	10	10	8.3		8.2	24.2		25.3	6.9		5.8	31.9		33.4
	B	A4	10	10	10		8.2			25.1			5.7			32.7	
	C																
	D																
200	A	A5	10	9 D	8 D	8.3		8.2	24.2		25.1	7.2		5.9	32.1		33.3
	B	A6	10	10	10		8.2			25.0			5.8			32.7	
	C																
	D																
300	A	A7	10	7 D	7	8.3		8.2	24.3		25.1	7.2		6.0	32.1		33.0
	B	A8	10	10	9 D		8.2			25.0			5.8			32.5	
	C																
	D																
400	A	A9	10	9 D	0 D	8.3		8.2	24.3		24.8	7.2		6.2	32.1		33.0
	B	A10	10	9 D	1		8.2			25.3			5.8			32.6	
	C																
	D																
500	A	A11	10	0 D	—	8.3		—	24.3		—	7.3		—	32.1		—
	B	A12	10	0 D	—		8.2			25.4			5.8			32.7	
	C																
	D																
	A																
	B																
	C																
	D																
Loaded / measured by:			PRV	JD	JD	JD	BA	JD	JD	JD	JD	JD	BA	JD	JD	BA	JD
Recorded by:			PRV	JD	JD	JD	BA	JD	JD	JD	JD	JD	BA	JD	JD	BA	JD

Investigators' Signatures
James Daniels
Patsy Vichaikse
Bruce Alexander
Marshall Faircloth
Nicole Wellendorf
REVIEWER

Concentrations prepared by: PRV
Loading verified by: JD
Light Intensity: 50-100 Ft. candles
Photoperiod: 16 hours Light / 8 hours dark
Temperature Range °C:
Incubator # 2 min 25.7 max 26.7 mean 26.0
Incubator # ___ min ___ max ___ mean ___
Room B248 min 25.0 max 26.1 mean 25.6

Comments:
(PRV) LOWER CONFIDENCE ~~346.1~~ 288.38
UPPER CONFIDENCE 346.62;
TRANSCRIPTION ERRORS.

Statistics: 316.10 Method: Spearman-Karber
(48)/ 96 hour LC_{50}: ~~360.44~~ PRV
95% Confidence Interval: lower ~~324.19~~ PRV upper ~~400.32~~ PRV

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Appendix C. (continued)

FDEP Biology Laboratory - Acute SRT Bench Sheet

Test Organism: *Americamysis bahia* Method 2007.0 (*Menidia beryllina* Method 2008.0) *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: 48 hour non-renewal (96 hour renewal)

Test Page 2 of 2

Diluent/ Batch #: ASW 13-7-07
Toxicant/ Batch#: $CuCl_2$ 13-19-07

Test Beginning: Date: 3/14/07 Time: 1300
Test Ending: Date: 3-18-07 Time: 1220

Water Quality Parameters	Diluent	Method	Initials
Total Residual Cl_2 (mg/L):	<0.03	Hach	BA
Alkalinity (mg/L as $CaCO_3$):	104	Hach	PP
Hardness (mg/L as $CaCO_3$):	—	Hach	PP
Total Ammonia (mg/L as N):	<0.034	Denver	MF
Salinity (ppth):	~20	Mettler	BA

Organism Batch #/ Age: 3-13-07 / 13 hrs
Feeding: (Prior to test) Prior to renewal / Daily
Food: YCT *P.subcapitata* Artemia: Lot # GSL-S26-90
Food Batch: — — 0hr 21-0724hr — 48hr 31-0772hr —
Chamber size: 1000 mL
Test volume: 500 mL per replicate

Conc. µg/L (mg/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 h)	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 Conductivity µmhom/cm (mmhos/cm) 0 hr (48 hr)	Uncorrected Conductivity 24 hr (72 hr)	Uncorrected Conductivity 48 hr (96 hr)
Control	A	A1	10	10	10	8.3		8.0	24.4		24.8	6.7		5.1	32.6		33.2
	B	A2	9	9	9		8.0			24.1			6.1			32.1	
	C																
	D																
100	A	A3	10	10	10	8.3		8.0	24.4		25.1	6.7		5.0	32.6		33.2
	B	A4	10	10	10		8.1			24.0			6.2			32.4	
	C																
	D																
200	A	A5	8	8	8	8.3		8.1	24.4		25.3	6.9		5.3	32.5		33.2
	B	A6	10	10	10		8.2			24.0			6.2			32.5	
	C																
	D																
300	A	A7	7	7	7	8.3		8.1	24.4		25.0	7.0		5.5	32.4		32.8
	B	A8	9	9	9		8.2			24.1			6.1			32.5	
	C																
	D										MF was 25.0 3-13-07						
400	A	A9	—	—	—	8.3		~	24.4		~~25.3~~	7.0		—	31.9		—
	B	A10	1	1	1		8.2	8.1		24.0	25.3		6.3	5.6		32.1	32.6
	C																
	D																
500	A	A11	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	B	A12	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	C																
	D																
	A																
	B																
	C																
	D																
Loaded / measured by:			JD	BA	MF	JD	PP	MF	JD	PP	MF	JD	PP	MF	JD	PP	MF
Recorded by:			JD	BA	MF	JD	PP	MF	JD	PP	MF	JD	PP	MF	JD	PP	MF

Investigators' Signatures
Patsy Vichaiwong
James Dennis
Steve Poole
Marshall Faircloth
Najeli Wellendorf
REVIEWER

Concentrations prepared by: PP
Loading verified by: JD
Light Intensity: 50-100 Ft. candles
Photoperiod: 16 hours Light / 8 hours dark
Temperature Range °C:
Incubator # 2 min. 23.7 max. 26.2 mean 26.0
Incubator # ___ min. _____ max. _____ mean _____
Room B246 min. 25.0 max. 26.1 mean 25.6

Comments:
TRANSCRIPTION ERRORS; LOWER CONFIDENCE IS 288.58 AND UPPER CONFIDENCE IS 346.62.

Statistics: Method: Spearman-Karber
48 / 96 hour LC_{50}: ~~360.44~~ 316.16 PP
95% Confidence Interval: lower ~~324.48~~ PP upper ~~406.32~~ PP

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Appendix C. (continued)

***Americamysis bahia* Acute Standard Reference Toxicant Test**

DATE: 03/14/07 DURATION: 96 Hr. TOXICANT : CdCl2
SPECIES: *Americyamsis bahia*

RAW DATA: Concentration (µg/L)	Number Exposed	Mortalities
0.00	20	0
20.00	20	3
30.00	20	12
45.00	20	18
67.00	20	20
100.00	20	20

SPEARMAN-KARBER TRIM: 15.00%

SPEARMAN-KARBER ESTIMATES: **LC50: 27.97**
95% LOWER CONFIDENCE: 24.41
95% UPPER CONFIDENCE: 32.05

***Menidia Beryllina* Acute Standard Reference Toxicant Test**

DATE: 03/14/07 DURATION: 96 Hr. TOXICANT : CuCl2
SPECIES: *Menidia beryllina*

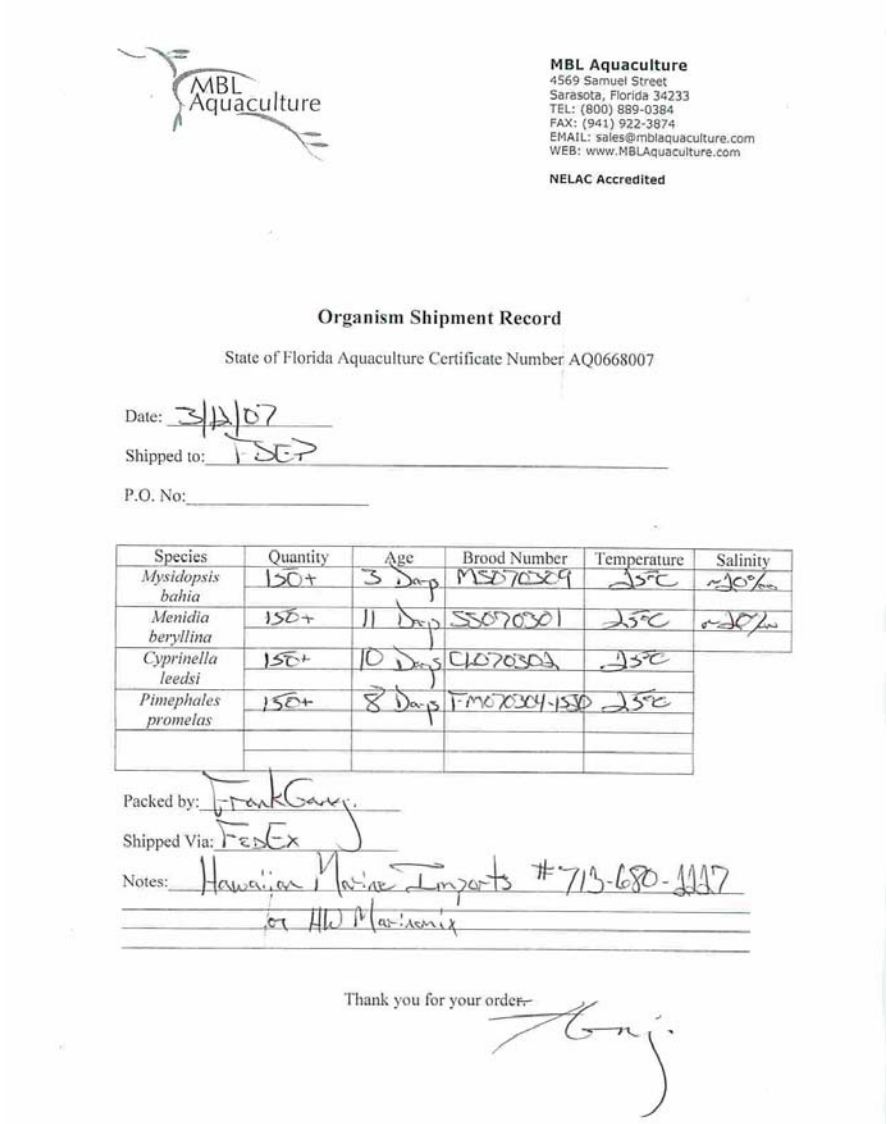
RAW DATA: Concentration (µg/L)	Number Exposed	Mortalities
0.00	20	1
100.00	20	0
200.00	20	2
300.00	20	4
400.00	20	19
500.00	20	20

SPEARMAN-KARBER TRIM: 0.00%

SPEARMAN-KARBER ESTIMATES: **LC50: 316.16**
95% LOWER CONFIDENCE: 288.38
95% UPPER CONFIDENCE: 346.62

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

Appendix D. Test Organism Receipts



MBL Aquaculture

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: 3/12/07

Shipped to: TSU

P.O. No:

Species	Quantity	Age	Brood Number	Temperature	Salinity
Mysidopsis bahia	150+	3 Days	MS070329	25°C	~30‰
Menidia beryllina	150+	11 Days	SS070301	25°C	~30‰
Cyprinella leedsi	150+	10 Days	CL070309	25°C	
Pimephales promelas	150+	8 Days	FM070304-1530	25°C	

Packed by: Frank Gary

Shipped Via: FedEx

Notes: Hawaiian Marine Imports #713-680-1117
or HW Marinemix

Thank you for your order.

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: 4/2/07

Shipped to: FDEP

P.O. No: _____

Species	Quantity	Age	Brood Number	Temperature	Salinity
Mysidopsis bahia	2400+	4 Days	MS070319	25°C	~15 ppt
Menidia beryllina	1200+	11 Days	SS070322	25°C	~15 ppt
Cyprinella leedsi	150+	11 Days	CL070321	25°C	
Pimephales promelas	150+	8 Days	FM070315-150	25°C	

Packed by: Frank Gary

Shipped Via: FedEx

Notes: _____

Thank you for your order

Appendix E. Chemical Analyses performed on the effluent from the Flagler Beach Wastewater Treatment Facility Outfall D-001, sampled on April 2, 2007.

Date Sampled	Field ID	Analysis Group	Component	Result	Remarks	Units	MDL	PQL
4/2/2007 6:13	Effluent	AGP/LN	Algal Growth Potential - Saltwater	184		mg DryWt/L	3	3
4/2/2007 6:13	Effluent	Chlorophyll/Grain Size/BOD	Biochemical Oxygen Demand-5 Day,N-Inhib	4.3	Q	mg/L	0.2	2
4/2/2007 6:13	Effluent	Chlorophyll/Grain Size/BOD	Chlorophyll-A, Monochromatic, Water	0.85	U	ug/L	0.85	2.6
4/2/2007 6:13	Effluent	Chlorophyll/Grain Size/BOD	Phaeophytin-A, Monochromatic, Water	1.5	U	ug/L	1.5	4.5
4/2/2007 6:13	Effluent	Metals	Aluminum	315		ug/L	4	16
4/2/2007 6:13	Effluent	Metals	Calcium	97.6		mg/L	0.02	0.08
4/2/2007 6:13	Effluent	Metals	Chromium	0.3	U	ug/L	0.3	1.2
4/2/2007 6:13	Effluent	Metals	Iron	57	V	ug/L	5	20
4/2/2007 6:13	Effluent	Metals	Magnesium	147		mg/L	0.05	0.2
4/2/2007 6:13	Effluent	Metals	Nickel	1	U	ug/L	1	4
4/2/2007 6:13	Effluent	Metals	Zinc	41		ug/L	5	20
4/2/2007 6:13	Effluent	Metals	Arsenic	2.7	I	ug/L	1.5	6
4/2/2007 6:13	Effluent	Metals	Cadmium	0.15	U	ug/L	0.15	0.6
4/2/2007 6:13	Effluent	Metals	Copper	1.3	I	ug/L	0.6	2.4
4/2/2007 6:13	Effluent	Metals	Lead	0.82	I	ug/L	0.6	2.4
4/2/2007 6:13	Effluent	Metals	Selenium	2.6	I	ug/L	1.5	6
4/2/2007 6:13	Effluent	Metals	Silver	0.075	U	ug/L	0.075	0.3
4/2/2007 6:13	Effluent	Nutrients	Chloride	2300		mg Cl/L	40	100
4/2/2007 6:13	Effluent	Nutrients	Specific_Conductance	6170		umhos/cm	2	8
4/2/2007 6:13	Effluent	Nutrients	Ammonia-N	0.26		mg N/L	0.1	0.2
4/2/2007 6:13	Effluent	Nutrients	NO2NO3-N	5		mg N/L	0.04	0.1
4/2/2007 6:13	Effluent	Nutrients	O-Phosphate-P	1.1	JA	mg P/L	0.04	0.1
4/2/2007 6:13	Effluent	Nutrients	Sulfide	0.25	UQ	mg S/L	0.25	1
4/2/2007 6:13	Effluent	Nutrients	Kjeldahl Nitrogen	1.6		mg N/L	0.16	0.4
4/2/2007 6:13	Effluent	Nutrients	Total-P	1.4		mg P/L	0.04	0.12
4/2/2007 6:13	Effluent	Nutrients	TSS	8	I	mg/L	4	16
4/2/2007 6:13	Effluent	Overflow	Alpha, Total	10.3	U	pCi/L		
4/2/2007 6:13	Effluent	Overflow	Alpha-Counting Error	6.3		pCi/L		
4/2/2007 6:13	Effluent	Overflow	Radium 226	0.3		pCi/L		
4/2/2007 6:13	Effluent	Overflow	Radium 226-Counting Error	0.1		pCi/L		
4/2/2007 6:13	Effluent	Overflow	Radium 228	0.9	U	pCi/L		

Appendix E. (continued)

Date Sampled	Field ID	Analysis Group	Component	Result	Remarks	Units	MDL	PQL
4/2/2007 6:13	Effluent	Overflow	Radium 228-Counting Error	0.5		pCi/L		
4/2/2007 6:13	Effluent	Pesticides	Alachlor	0.6	U	ug/L	0.6	2.4
4/2/2007 6:13	Effluent	Pesticides	Ametryn	0.05	U	ug/L	0.05	0.2
4/2/2007 6:13	Effluent	Pesticides	Atrazine	0.34	J	ug/L	0.05	0.2
4/2/2007 6:13	Effluent	Pesticides	Azinphos Methyl	0.2	U	ug/L	0.2	0.8
4/2/2007 6:13	Effluent	Pesticides	Bromacil	0.2	U	ug/L	0.2	0.8
4/2/2007 6:13	Effluent	Pesticides	Butylate	0.2	U	ug/L	0.2	0.8
4/2/2007 6:13	Effluent	Pesticides	Chlorpyrifos Ethyl	0.05	U	ug/L	0.05	0.2
4/2/2007 6:13	Effluent	Pesticides	Chlorpyrifos Methyl	0.1	UJ	ug/L	0.1	0.4
4/2/2007 6:13	Effluent	Pesticides	Diazinon	0.05	U	ug/L	0.05	0.2
4/2/2007 6:13	Effluent	Pesticides	Ethion	0.05	U	ug/L	0.05	0.2
4/2/2007 6:13	Effluent	Pesticides	Ethoprop	0.1	UJ	ug/L	0.1	0.4
4/2/2007 6:13	Effluent	Pesticides	Fenamiphos	0.2	U	ug/L	0.2	0.8
4/2/2007 6:13	Effluent	Pesticides	Fonofos	0.1	U	ug/L	0.1	0.4
4/2/2007 6:13	Effluent	Pesticides	Hexazinone	0.1	U	ug/L	0.1	0.4
4/2/2007 6:13	Effluent	Pesticides	Malathion	0.15	U	ug/L	0.15	0.6
4/2/2007 6:13	Effluent	Pesticides	Metalaxyl	0.25	U	ug/L	0.25	1
4/2/2007 6:13	Effluent	Pesticides	Metolachlor	0.5	UJ	ug/L	0.5	2
4/2/2007 6:13	Effluent	Pesticides	Metribuzin	0.1	U	ug/L	0.1	0.4
4/2/2007 6:13	Effluent	Pesticides	Mevinphos	0.2	U	ug/L	0.2	0.8
4/2/2007 6:13	Effluent	Pesticides	Naled	0.8	UJ	ug/L	0.8	3.2
4/2/2007 6:13	Effluent	Pesticides	Norflurazon	0.15	U	ug/L	0.15	0.6
4/2/2007 6:13	Effluent	Pesticides	Parathion Ethyl	0.15	U	ug/L	0.15	0.6
4/2/2007 6:13	Effluent	Pesticides	Parathion Methyl	0.1	U	ug/L	0.1	0.4
4/2/2007 6:13	Effluent	Pesticides	Phorate	0.05	U	ug/L	0.05	0.2
4/2/2007 6:13	Effluent	Pesticides	Prometryn	0.15	U	ug/L	0.15	0.6
4/2/2007 6:13	Effluent	Pesticides	Simazine	0.05	U	ug/L	0.05	0.2
4/2/2007 6:13	Effluent	Priority Organic Pollutants	1,2,4-Trichlorobenzene	0.95	U	ug/L	0.95	3.8
4/2/2007 6:13	Effluent	Priority Organic Pollutants	1,2-Dichlorobenzene	0.95	U	ug/L	0.95	3.8
4/2/2007 6:13	Effluent	Priority Organic Pollutants	1,3-Dichlorobenzene	0.95	U	ug/L	0.95	3.8
4/2/2007 6:13	Effluent	Priority Organic Pollutants	1,4-Dichlorobenzene	0.95	U	ug/L	0.95	3.8
4/2/2007 6:13	Effluent	Priority Organic Pollutants	2,4,6-Trichlorophenol	0.95	U	ug/L	0.95	3.8

Appendix E. (continued)

Date Sampled	Field ID	Analysis Group	Component	Result	Remarks	Units	MDL	PQL
4/2/2007 6:13	Effluent	Priority Organic Pollutants	2,4-Dichlorophenol	0.95	U	ug/L	0.95	3.8
4/2/2007 6:13	Effluent	Priority Organic Pollutants	2,4-Dimethylphenol	9.5	U	ug/L	9.5	38
4/2/2007 6:13	Effluent	Priority Organic Pollutants	2,4-Dinitrophenol	14	U	ug/L	14	57
4/2/2007 6:13	Effluent	Priority Organic Pollutants	2,4-Dinitrotoluene	0.95	U	ug/L	0.95	3.8
4/2/2007 6:13	Effluent	Priority Organic Pollutants	2,6-Dinitrotoluene	0.95	U	ug/L	0.95	3.8
4/2/2007 6:13	Effluent	Priority Organic Pollutants	2-Chloronaphthalene	0.95	U	ug/L	0.95	3.8
4/2/2007 6:13	Effluent	Priority Organic Pollutants	2-Chlorophenol	0.95	U	ug/L	0.95	3.8
4/2/2007 6:13	Effluent	Priority Organic Pollutants	2-Methyl-4,6-dinitrophenol	2.9	U	ug/L	2.9	11
4/2/2007 6:13	Effluent	Priority Organic Pollutants	2-Nitrophenol	0.95	U	ug/L	0.95	3.8
4/2/2007 6:13	Effluent	Priority Organic Pollutants	3,3'-Dichlorobenzidine	38	UJ	ug/L	38	150
4/2/2007 6:13	Effluent	Priority Organic Pollutants	4,4'-DDD	1.4	U	ug/L	1.4	5.7
4/2/2007 6:13	Effluent	Priority Organic Pollutants	4,4'-DDE	1.4	U	ug/L	1.4	5.7
4/2/2007 6:13	Effluent	Priority Organic Pollutants	4,4'-DDT	1.4	U	ug/L	1.4	5.7
4/2/2007 6:13	Effluent	Priority Organic Pollutants	4-Bromophenyl phenyl ether	0.95	U	ug/L	0.95	3.8
4/2/2007 6:13	Effluent	Priority Organic Pollutants	4-Chloro-3-methylphenol	0.95	U	ug/L	0.95	3.8
4/2/2007 6:13	Effluent	Priority Organic Pollutants	4-Chlorophenyl phenyl ether	1.9	U	ug/L	1.9	7.6
4/2/2007 6:13	Effluent	Priority Organic Pollutants	4-Nitrophenol	14	U	ug/L	14	57
4/2/2007 6:13	Effluent	Priority Organic Pollutants	Acenaphthene	0.95	U	ug/L	0.95	3.8
4/2/2007 6:13	Effluent	Priority Organic Pollutants	Acenaphthylene	0.95	U	ug/L	0.95	3.8
4/2/2007 6:13	Effluent	Priority Organic Pollutants	Aldrin	1.4	U	ug/L	1.4	5.7
4/2/2007 6:13	Effluent	Priority Organic Pollutants	Anthracene	0.95	U	ug/L	0.95	3.8
4/2/2007 6:13	Effluent	Priority Organic Pollutants	Benzidine	95	U	ug/L	95	380
4/2/2007 6:13	Effluent	Priority Organic Pollutants	Benzo(a)anthracene	0.95	U	ug/L	0.95	3.8
4/2/2007 6:13	Effluent	Priority Organic Pollutants	Benzo(a)pyrene	0.95	U	ug/L	0.95	3.8
4/2/2007 6:13	Effluent	Priority Organic Pollutants	Benzo(b)fluoranthene	0.95	U	ug/L	0.95	3.8
4/2/2007 6:13	Effluent	Priority Organic Pollutants	Benzo(g,h,i)perylene	0.95	U	ug/L	0.95	3.8
4/2/2007 6:13	Effluent	Priority Organic Pollutants	Benzo(k)fluoranthene	0.95	U	ug/L	0.95	3.8
4/2/2007 6:13	Effluent	Priority Organic Pollutants	Bis(2-chloroethoxy)methane	0.95	U	ug/L	0.95	3.8
4/2/2007 6:13	Effluent	Priority Organic Pollutants	Bis(2-chloroethyl)ether	0.95	U	ug/L	0.95	3.8
4/2/2007 6:13	Effluent	Priority Organic Pollutants	Bis(2-chloroisopropyl)ether	2.9	U	ug/L	2.9	11
4/2/2007 6:13	Effluent	Priority Organic Pollutants	Bis(2-ethylhexyl)phthalate	14	U	ug/L	14	57
4/2/2007 6:13	Effluent	Priority Organic Pollutants	Butyl benzyl phthalate	4.8	U	ug/L	4.8	19
4/2/2007 6:13	Effluent	Priority Organic Pollutants	Chrysene	0.95	U	ug/L	0.95	3.8
4/2/2007 6:13	Effluent	Priority Organic Pollutants	Di-n-butyl phthalate	4.8	U	ug/L	4.8	19

Appendix E. (continued)

Date Sampled	Field ID	Analysis Group	Component	Result	Remarks	Units	MDL	PQL
4/2/2007 6:13	Effluent	Priority Organic Pollutants	Di-n-octyl phthalate	0.95	U	ug/L	0.95	3.8
4/2/2007 6:13	Effluent	Priority Organic Pollutants	Dibenzo(a,h)anthracene	0.95	U	ug/L	0.95	3.8
4/2/2007 6:13	Effluent	Priority Organic Pollutants	Dieldrin	1.4	U	ug/L	1.4	5.7
4/2/2007 6:13	Effluent	Priority Organic Pollutants	Diethyl phthalate	0.95	U	ug/L	0.95	3.8
4/2/2007 6:13	Effluent	Priority Organic Pollutants	Dimethyl phthalate	48	U	ug/L	48	190
4/2/2007 6:13	Effluent	Priority Organic Pollutants	Endosulfan I	3.8	U	ug/L	3.8	15
4/2/2007 6:13	Effluent	Priority Organic Pollutants	Endosulfan II	3.8	U	ug/L	3.8	15
4/2/2007 6:13	Effluent	Priority Organic Pollutants	Endosulfan sulfate	1.4	U	ug/L	1.4	5.7
4/2/2007 6:13	Effluent	Priority Organic Pollutants	Endrin	1.4	U	ug/L	1.4	5.7
4/2/2007 6:13	Effluent	Priority Organic Pollutants	Endrin aldehyde	3.8	U	ug/L	3.8	15
4/2/2007 6:13	Effluent	Priority Organic Pollutants	Fluoranthene	0.95	U	ug/L	0.95	3.8
4/2/2007 6:13	Effluent	Priority Organic Pollutants	Fluorene	0.95	U	ug/L	0.95	3.8
4/2/2007 6:13	Effluent	Priority Organic Pollutants	Heptachlor	1.4	U	ug/L	1.4	5.7
4/2/2007 6:13	Effluent	Priority Organic Pollutants	Heptachlor epoxide	1.4	U	ug/L	1.4	5.7
4/2/2007 6:13	Effluent	Priority Organic Pollutants	Hexachlorobenzene	0.95	U	ug/L	0.95	3.8
4/2/2007 6:13	Effluent	Priority Organic Pollutants	Hexachlorobutadiene	2.9	U	ug/L	2.9	11
4/2/2007 6:13	Effluent	Priority Organic Pollutants	Hexachlorocyclopentadiene	2.9	U	ug/L	2.9	11
4/2/2007 6:13	Effluent	Priority Organic Pollutants	Hexachloroethane	2.9	U	ug/L	2.9	11
4/2/2007 6:13	Effluent	Priority Organic Pollutants	Indeno(1,2,3-cd)pyrene	0.95	U	ug/L	0.95	3.8
4/2/2007 6:13	Effluent	Priority Organic Pollutants	Isophorone	0.95	U	ug/L	0.95	3.8
4/2/2007 6:13	Effluent	Priority Organic Pollutants	N-Nitrosodi-n-propylamine	1.9	U	ug/L	1.9	7.6
4/2/2007 6:13	Effluent	Priority Organic Pollutants	N-Nitrosodimethylamine	1.9	U	ug/L	1.9	7.6
4/2/2007 6:13	Effluent	Priority Organic Pollutants	N-Nitrosodiphenylamine/ Diphenylamine	2.9	U	ug/L	2.9	11
4/2/2007 6:13	Effluent	Priority Organic Pollutants	Naphthalene	0.95	U	ug/L	0.95	3.8
4/2/2007 6:13	Effluent	Priority Organic Pollutants	Nitrobenzene	1.9	U	ug/L	1.9	7.6
4/2/2007 6:13	Effluent	Priority Organic Pollutants	Pentachlorophenol	2.9	U	ug/L	2.9	11
4/2/2007 6:13	Effluent	Priority Organic Pollutants	Phenanthrene	0.95	U	ug/L	0.95	3.8
4/2/2007 6:13	Effluent	Priority Organic Pollutants	Phenol	0.95	U	ug/L	0.95	3.8
4/2/2007 6:13	Effluent	Priority Organic Pollutants	Pyrene	0.95	U	ug/L	0.95	3.8
4/2/2007 6:13	Effluent	Priority Organic Pollutants	alpha-BHC	1.4	U	ug/L	1.4	5.7
4/2/2007 6:13	Effluent	Priority Organic Pollutants	beta-BHC	1.4	U	ug/L	1.4	5.7
4/2/2007 6:13	Effluent	Priority Organic Pollutants	delta-BHC	1.4	U	ug/L	1.4	5.7
4/2/2007 6:13	Effluent	Priority Organic Pollutants	gamma-BHC	1.4	U	ug/L	1.4	5.7
4/2/2007 6:13	Effluent	Field Parameters	Dissolved Oxygen	1.43		mg/L		

Appendix E. (continued)

Date Sampled	Field ID	Analysis Group	Component	Result	Remarks	Units	MDL	PQL
4/2/2007 6:13	Effluent	Field Parameters	Sample Depth	0.041		m		
4/2/2007 6:13	Effluent	Field Parameters	Specific Conductance	7468		umhos/cm		
4/2/2007 6:13	Effluent	Field Parameters	Temperature	22.57		C		
4/2/2007 6:13	Effluent	Nutrients	pH	6.21				
4/2/2007 1:48	Equipment Blank	Metals	Aluminum	5.9	IV	ug/L	4	16
4/2/2007 1:48	Equipment Blank	Metals	Calcium	0.041	IV	mg/L	0.02	0.08
4/2/2007 1:48	Equipment Blank	Metals	Chromium	0.3	U	ug/L	0.3	1.2
4/2/2007 1:48	Equipment Blank	Metals	Iron	16	IV	ug/L	5	20
4/2/2007 1:48	Equipment Blank	Metals	Magnesium	0.005	U	mg/L	0.005	0.02
4/2/2007 1:48	Equipment Blank	Metals	Nickel	1	U	ug/L	1	4
4/2/2007 1:48	Equipment Blank	Metals	Zinc	5	U	ug/L	5	20
4/2/2007 1:48	Equipment Blank	Metals	Arsenic	0.5	U	ug/L	0.5	2
4/2/2007 1:48	Equipment Blank	Metals	Cadmium	0.05	U	ug/L	0.05	0.2
4/2/2007 1:48	Equipment Blank	Metals	Copper	0.26	I	ug/L	0.2	0.8
4/2/2007 1:48	Equipment Blank	Metals	Lead	0.2	U	ug/L	0.2	0.8
4/2/2007 1:48	Equipment Blank	Metals	Selenium	0.5	U	ug/L	0.5	2
4/2/2007 1:48	Equipment Blank	Metals	Silver	0.025	U	ug/L	0.025	0.1
4/2/2007 1:48	Equipment Blank	Nutrients	Chloride	0.2	U	mg Cl/L	0.2	0.5
4/2/2007 1:48	Equipment Blank	Nutrients	Ammonia-N	0.1	U	mg N/L	0.1	0.2
4/2/2007 1:48	Equipment Blank	Nutrients	NO2NO3-N	0.005	I	mg N/L	0.004	0.01
4/2/2007 1:48	Equipment Blank	Nutrients	O-Phosphate-P	0.004	U	mg P/L	0.004	0.01
4/2/2007 1:48	Equipment Blank	Nutrients	Sulfide	0.25	UQ	mg S/L	0.25	1
4/2/2007 1:48	Equipment Blank	Nutrients	Kjeldahl Nitrogen	0.08	U	mg N/L	0.08	0.2
4/2/2007 1:48	Equipment Blank	Nutrients	Total-P	0.02	U	mg P/L	0.02	0.06
4/2/2007 1:48	Equipment Blank	Overflow	Alpha, Total	0.5	Y	pCi/L		
4/2/2007 1:48	Equipment Blank	Overflow	Alpha-Counting Error	0.4		pCi/L		
4/2/2007 1:48	Equipment Blank	Overflow	Radium 226	0.2	Y	pCi/L		
4/2/2007 1:48	Equipment Blank	Overflow	Radium 226-Counting Error	0.1		pCi/L		
4/2/2007 1:48	Equipment Blank	Overflow	Radium 228	0.9	UY	pCi/L		
4/2/2007 1:48	Equipment Blank	Overflow	Radium 228-Counting Error	0.6		pCi/L		
4/2/2007 1:48	Equipment Blank	Pesticides	Alachlor	0.57	U	ug/L	0.57	2.3
4/2/2007 1:48	Equipment Blank	Pesticides	Ametryn	0.048	U	ug/L	0.048	0.19

Appendix E. (continued)

Date Sampled	Field ID	Analysis Group	Component	Result	Remarks	Units	MDL	PQL
4/2/2007 1:48	Equipment Blank	Pesticides	Atrazine	0.048	U	ug/L	0.048	0.19
4/2/2007 1:48	Equipment Blank	Pesticides	Azinphos Methyl	0.19	U	ug/L	0.19	0.76
4/2/2007 1:48	Equipment Blank	Pesticides	Bromacil	0.19	U	ug/L	0.19	0.76
4/2/2007 1:48	Equipment Blank	Pesticides	Butylate	0.19	U	ug/L	0.19	0.76
4/2/2007 1:48	Equipment Blank	Pesticides	Chlorpyrifos Ethyl	0.048	U	ug/L	0.048	0.19
4/2/2007 1:48	Equipment Blank	Pesticides	Chlorpyrifos Methyl	0.095	UJ	ug/L	0.095	0.38
4/2/2007 1:48	Equipment Blank	Pesticides	Diazinon	0.048	U	ug/L	0.048	0.19
4/2/2007 1:48	Equipment Blank	Pesticides	Ethion	0.048	U	ug/L	0.048	0.19
4/2/2007 1:48	Equipment Blank	Pesticides	Ethoprop	0.095	UJ	ug/L	0.095	0.38
4/2/2007 1:48	Equipment Blank	Pesticides	Fenamiphos	0.19	U	ug/L	0.19	0.76
4/2/2007 1:48	Equipment Blank	Pesticides	Fonofos	0.095	U	ug/L	0.095	0.38
4/2/2007 1:48	Equipment Blank	Pesticides	Hexazinone	0.095	U	ug/L	0.095	0.38
4/2/2007 1:48	Equipment Blank	Pesticides	Malathion	0.14	U	ug/L	0.14	0.56
4/2/2007 1:48	Equipment Blank	Pesticides	Metalaxyl	0.24	U	ug/L	0.24	0.96
4/2/2007 1:48	Equipment Blank	Pesticides	Metolachlor	0.48	UJ	ug/L	0.48	1.9
4/2/2007 1:48	Equipment Blank	Pesticides	Metribuzin	0.095	U	ug/L	0.095	0.38
4/2/2007 1:48	Equipment Blank	Pesticides	Mevinphos	0.19	U	ug/L	0.19	0.76
4/2/2007 1:48	Equipment Blank	Pesticides	Naled	0.76	UJ	ug/L	0.76	3
4/2/2007 1:48	Equipment Blank	Pesticides	Norflurazon	0.14	U	ug/L	0.14	0.56
4/2/2007 1:48	Equipment Blank	Pesticides	Parathion Ethyl	0.14	U	ug/L	0.14	0.56
4/2/2007 1:48	Equipment Blank	Pesticides	Parathion Methyl	0.095	U	ug/L	0.095	0.38
4/2/2007 1:48	Equipment Blank	Pesticides	Phorate	0.048	U	ug/L	0.048	0.19
4/2/2007 1:48	Equipment Blank	Pesticides	Prometryn	0.14	U	ug/L	0.14	0.56
4/2/2007 1:48	Equipment Blank	Pesticides	Simazine	0.048	U	ug/L	0.048	0.19
4/2/2007 1:48	Equipment Blank	Priority Organic Pollutants	1,2,4-Trichlorobenzene	1	U	ug/L	1	4
4/2/2007 1:48	Equipment Blank	Priority Organic Pollutants	1,2-Dichlorobenzene	1	U	ug/L	1	4
4/2/2007 1:48	Equipment Blank	Priority Organic Pollutants	1,3-Dichlorobenzene	1	U	ug/L	1	4
4/2/2007 1:48	Equipment Blank	Priority Organic Pollutants	1,4-Dichlorobenzene	1	U	ug/L	1	4
4/2/2007 1:48	Equipment Blank	Priority Organic Pollutants	2,4,6-Trichlorophenol	1	U	ug/L	1	4
4/2/2007 1:48	Equipment Blank	Priority Organic Pollutants	2,4-Dichlorophenol	1	U	ug/L	1	4
4/2/2007 1:48	Equipment Blank	Priority Organic Pollutants	2,4-Dimethylphenol	10	U	ug/L	10	40
4/2/2007 1:48	Equipment Blank	Priority Organic Pollutants	2,4-Dinitrophenol	15	U	ug/L	15	61
4/2/2007 1:48	Equipment Blank	Priority Organic Pollutants	2,4-Dinitrotoluene	1	U	ug/L	1	4
4/2/2007 1:48	Equipment Blank	Priority Organic Pollutants	2,6-Dinitrotoluene	1	U	ug/L	1	4

Appendix E. (continued)

Date Sampled	Field ID	Analysis Group	Component	Result	Remarks	Units	MDL	PQL
4/2/2007 1:48	Equipment Blank	Priority Organic Pollutants	2-Chloronaphthalene	1	U	ug/L	1	4
4/2/2007 1:48	Equipment Blank	Priority Organic Pollutants	2-Chlorophenol	1	U	ug/L	1	4
4/2/2007 1:48	Equipment Blank	Priority Organic Pollutants	2-Methyl-4,6-dinitrophenol	3	U	ug/L	3	12
4/2/2007 1:48	Equipment Blank	Priority Organic Pollutants	2-Nitrophenol	1	U	ug/L	1	4
4/2/2007 1:48	Equipment Blank	Priority Organic Pollutants	3,3'-Dichlorobenzidine	40	UJ	ug/L	40	160
4/2/2007 1:48	Equipment Blank	Priority Organic Pollutants	4,4'-DDD	1.5	U	ug/L	1.5	6.1
4/2/2007 1:48	Equipment Blank	Priority Organic Pollutants	4,4'-DDE	1.5	U	ug/L	1.5	6.1
4/2/2007 1:48	Equipment Blank	Priority Organic Pollutants	4,4'-DDT	1.5	U	ug/L	1.5	6.1
4/2/2007 1:48	Equipment Blank	Priority Organic Pollutants	4-Bromophenyl phenyl ether	1	U	ug/L	1	4
4/2/2007 1:48	Equipment Blank	Priority Organic Pollutants	4-Chloro-3-methylphenol	1	U	ug/L	1	4
4/2/2007 1:48	Equipment Blank	Priority Organic Pollutants	4-Chlorophenyl phenyl ether	2	U	ug/L	2	8.1
4/2/2007 1:48	Equipment Blank	Priority Organic Pollutants	4-Nitrophenol	15	U	ug/L	15	61
4/2/2007 1:48	Equipment Blank	Priority Organic Pollutants	Acenaphthene	1	U	ug/L	1	4
4/2/2007 1:48	Equipment Blank	Priority Organic Pollutants	Acenaphthylene	1	U	ug/L	1	4
4/2/2007 1:48	Equipment Blank	Priority Organic Pollutants	Aldrin	1.5	U	ug/L	1.5	6.1
4/2/2007 1:48	Equipment Blank	Priority Organic Pollutants	Anthracene	1	U	ug/L	1	4
4/2/2007 1:48	Equipment Blank	Priority Organic Pollutants	Benzidine	100	U	ug/L	100	400
4/2/2007 1:48	Equipment Blank	Priority Organic Pollutants	Benzo(a)anthracene	1	U	ug/L	1	4
4/2/2007 1:48	Equipment Blank	Priority Organic Pollutants	Benzo(a)pyrene	1	U	ug/L	1	4
4/2/2007 1:48	Equipment Blank	Priority Organic Pollutants	Benzo(b)fluoranthene	1	U	ug/L	1	4
4/2/2007 1:48	Equipment Blank	Priority Organic Pollutants	Benzo(g,h,i)perylene	1	U	ug/L	1	4
4/2/2007 1:48	Equipment Blank	Priority Organic Pollutants	Benzo(k)fluoranthene	1	U	ug/L	1	4
4/2/2007 1:48	Equipment Blank	Priority Organic Pollutants	Bis(2-chloroethoxy)methane	1	U	ug/L	1	4
4/2/2007 1:48	Equipment Blank	Priority Organic Pollutants	Bis(2-chloroethyl)ether	1	U	ug/L	1	4
4/2/2007 1:48	Equipment Blank	Priority Organic Pollutants	Bis(2-chloroisopropyl)ether	3	U	ug/L	3	12
4/2/2007 1:48	Equipment Blank	Priority Organic Pollutants	Bis(2-ethylhexyl)phthalate	15	U	ug/L	15	61
4/2/2007 1:48	Equipment Blank	Priority Organic Pollutants	Butyl benzyl phthalate	5.1	U	ug/L	5.1	20
4/2/2007 1:48	Equipment Blank	Priority Organic Pollutants	Chrysene	1	U	ug/L	1	4
4/2/2007 1:48	Equipment Blank	Priority Organic Pollutants	Di-n-butyl phthalate	5.1	U	ug/L	5.1	20
4/2/2007 1:48	Equipment Blank	Priority Organic Pollutants	Di-n-octyl phthalate	1	U	ug/L	1	4
4/2/2007 1:48	Equipment Blank	Priority Organic Pollutants	Dibenzo(a,h)anthracene	1	U	ug/L	1	4
4/2/2007 1:48	Equipment Blank	Priority Organic Pollutants	Dieldrin	1.5	U	ug/L	1.5	6.1
4/2/2007 1:48	Equipment Blank	Priority Organic Pollutants	Diethyl phthalate	1	U	ug/L	1	4
4/2/2007 1:48	Equipment Blank	Priority Organic Pollutants	Dimethyl phthalate	51	U	ug/L	51	200

Appendix E. (continued)

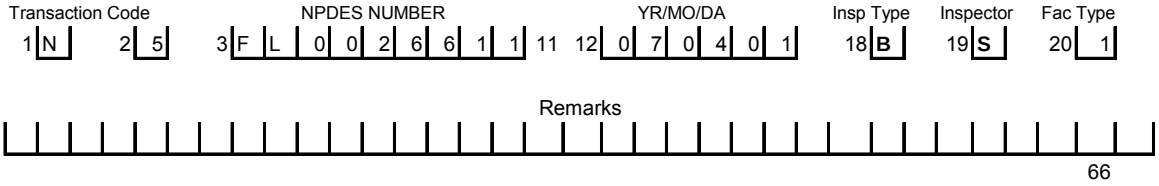
Date Sampled	Field ID	Analysis Group	Component	Result	Remarks	Units	MDL	PQL
4/2/2007 1:48	Equipment Blank	Priority Organic Pollutants	Endosulfan I	4	U	ug/L	4	16
4/2/2007 1:48	Equipment Blank	Priority Organic Pollutants	Endosulfan II	4	U	ug/L	4	16
4/2/2007 1:48	Equipment Blank	Priority Organic Pollutants	Endosulfan sulfate	1.5	U	ug/L	1.5	6.1
4/2/2007 1:48	Equipment Blank	Priority Organic Pollutants	Endrin	1.5	U	ug/L	1.5	6.1
4/2/2007 1:48	Equipment Blank	Priority Organic Pollutants	Endrin aldehyde	4	U	ug/L	4	16
4/2/2007 1:48	Equipment Blank	Priority Organic Pollutants	Fluoranthene	1	U	ug/L	1	4
4/2/2007 1:48	Equipment Blank	Priority Organic Pollutants	Fluorene	1	U	ug/L	1	4
4/2/2007 1:48	Equipment Blank	Priority Organic Pollutants	Heptachlor	1.5	U	ug/L	1.5	6.1
4/2/2007 1:48	Equipment Blank	Priority Organic Pollutants	Heptachlor epoxide	1.5	U	ug/L	1.5	6.1
4/2/2007 1:48	Equipment Blank	Priority Organic Pollutants	Hexachlorobenzene	1	U	ug/L	1	4
4/2/2007 1:48	Equipment Blank	Priority Organic Pollutants	Hexachlorobutadiene	3	U	ug/L	3	12
4/2/2007 1:48	Equipment Blank	Priority Organic Pollutants	Hexachlorocyclopentadiene	3	U	ug/L	3	12
4/2/2007 1:48	Equipment Blank	Priority Organic Pollutants	Hexachloroethane	3	U	ug/L	3	12
4/2/2007 1:48	Equipment Blank	Priority Organic Pollutants	Indeno(1,2,3-cd)pyrene	1	U	ug/L	1	4
4/2/2007 1:48	Equipment Blank	Priority Organic Pollutants	Isophorone	1	U	ug/L	1	4
4/2/2007 1:48	Equipment Blank	Priority Organic Pollutants	N-Nitrosodi-n-propylamine	2	U	ug/L	2	8.1
4/2/2007 1:48	Equipment Blank	Priority Organic Pollutants	N-Nitrosodimethylamine	2	U	ug/L	2	8.1
4/2/2007 1:48	Equipment Blank	Priority Organic Pollutants	N-Nitrosodiphenylamine/ Diphenylamine	3	U	ug/L	3	12
4/2/2007 1:48	Equipment Blank	Priority Organic Pollutants	Naphthalene	1	U	ug/L	1	4
4/2/2007 1:48	Equipment Blank	Priority Organic Pollutants	Nitrobenzene	2	U	ug/L	2	8.1
4/2/2007 1:48	Equipment Blank	Priority Organic Pollutants	Pentachlorophenol	3	U	ug/L	3	12
4/2/2007 1:48	Equipment Blank	Priority Organic Pollutants	Phenanthrene	1	U	ug/L	1	4
4/2/2007 1:48	Equipment Blank	Priority Organic Pollutants	Phenol	1	U	ug/L	1	4
4/2/2007 1:48	Equipment Blank	Priority Organic Pollutants	Pyrene	1	U	ug/L	1	4
4/2/2007 1:48	Equipment Blank	Priority Organic Pollutants	alpha-BHC	1.5	U	ug/L	1.5	6.1
4/2/2007 1:48	Equipment Blank	Priority Organic Pollutants	beta-BHC	1.5	U	ug/L	1.5	6.1
4/2/2007 1:48	Equipment Blank	Priority Organic Pollutants	delta-BHC	1.5	U	ug/L	1.5	6.1
4/2/2007 1:48	Equipment Blank	Priority Organic Pollutants	gamma-BHC	1.5	U	ug/L	1.5	6.1
4/1/2007 18:00	Bioassay Sample 1	Toxicology	Bioassay-Acute-Screen-SW-Fish, LC50	100	L	LC50		
4/1/2007 18:00	Bioassay Sample 1	Toxicology	Bioassay-Acute-Screen-SW-Mysid, LC50	100	L	LC50		
4/2/2007 0:05	Bioassay Sample 2	Toxicology	Bioassay-Acute-Screen-SW-Fish, LC50	100	L	LC50		
4/2/2007 0:05	Bioassay Sample 2	Toxicology	Bioassay-Acute-Screen-SW-Mysid, LC50	100	L	LC50		
4/2/2007 6:00	Bioassay Sample 3	Toxicology	Bioassay-Acute-Screen-SW-Fish, LC50	100	L	LC50		

Appendix E. (continued)

Date Sampled	Field ID	Analysis Group	Component	Result	Remarks	Units	MDL	PQL
4/2/2007 6:00	Bioassay Sample 3	Toxicology	Bioassay-Acute-Screen-SW-Mysid, LC50	100	L	LC50		
4/2/2007 12:05	Bioassay Sample 4	Toxicology	Bioassay-Acute-Screen-SW-Fish, LC50	100	L	LC50		
4/2/2007 12:05	Bioassay Sample 4	Toxicology	Bioassay-Acute-Screen-SW-Mysid, LC50	100	L	LC50		
4/1/2007 18:00	Bioassay Sample 1	Field Parameters	Dissolved Oxygen	7.68		mg/L		
4/1/2007 18:00	Bioassay Sample 1	Field Parameters	Sample Depth	0.166		m		
4/1/2007 18:00	Bioassay Sample 1	Field Parameters	Specific Conductance	7838		umhos/cm		
4/1/2007 18:00	Bioassay Sample 1	Field Parameters	Temperature	23		C		
4/1/2007 18:00	Bioassay Sample 1	Field Parameters	pH	6.56				
4/2/2007 0:05	Bioassay Sample 2	Field Parameters	Dissolved Oxygen	7.37		mg/L		
4/2/2007 0:05	Bioassay Sample 2	Field Parameters	Sample Depth	0.134		m		
4/2/2007 0:05	Bioassay Sample 2	Field Parameters	Specific Conductance	7730		umhos/cm		
4/2/2007 0:05	Bioassay Sample 2	Field Parameters	Temperature	22.89		C		
4/2/2007 0:05	Bioassay Sample 2	Field Parameters	Total Residual Chlorine	0.01		mg/L		
4/2/2007 0:05	Bioassay Sample 2	Field Parameters	pH	6.51				
4/2/2007 6:00	Bioassay Sample 3	Field Parameters	Dissolved Oxygen	7.43		mg/L		
4/2/2007 6:00	Bioassay Sample 3	Field Parameters	Sample Depth	0.091		m		
4/2/2007 6:00	Bioassay Sample 3	Field Parameters	Specific Conductance	7468		umhos/cm		
4/2/2007 6:00	Bioassay Sample 3	Field Parameters	Temperature	22.57		C		
4/2/2007 6:00	Bioassay Sample 3	Field Parameters	Total Residual Chlorine	0.01		mg/L		
4/2/2007 6:00	Bioassay Sample 3	Field Parameters	pH	6.65				
4/2/2007 12:05	Bioassay Sample 4	Field Parameters	Dissolved Oxygen	7.94		mg/L		
4/2/2007 12:05	Bioassay Sample 4	Field Parameters	Sample Depth	0.169		m		
4/2/2007 12:05	Bioassay Sample 4	Field Parameters	Specific Conductance	7273		umhos/cm		
4/2/2007 12:05	Bioassay Sample 4	Field Parameters	Temperature	22.91		C		
4/2/2007 12:05	Bioassay Sample 4	Field Parameters	pH	6.69				

The Bioassays of Flagler Beach WWTF effluent sampled on April 1-2, 2007. NPDES #FL0026611.

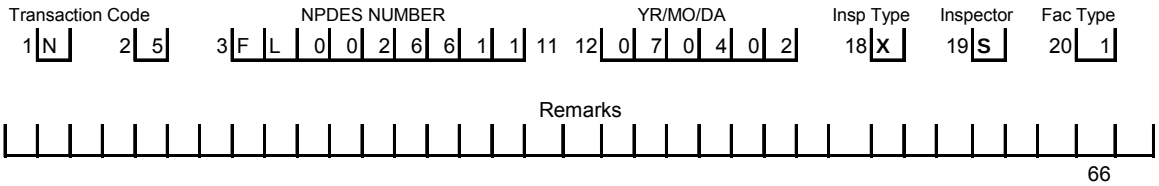
Fill Out This Section For All Surface Water Discharger Inspections(CEI, CSI, CBI, PAI, XSI-RI Optional)



Remarks

The Priority Pollutants Analysis of Flagler Beach WWTF effluent sampled on April 2, 2007. NPDES #FL0026611.

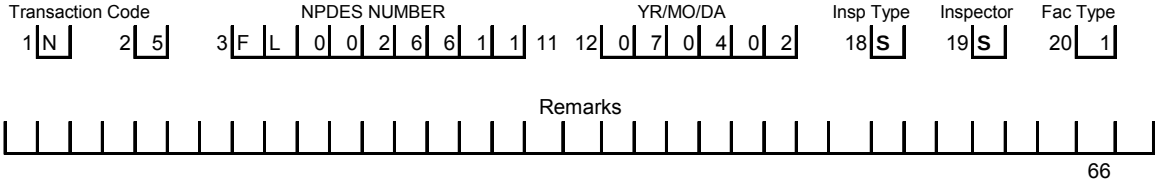
Fill Out This Section For All Surface Water Discharger Inspections(CEI, CSI, CBI, PAI, XSI-RI Optional)



Remarks

Biological Analyses of Flagler Beach WWTF effluent sampled on April 2, 2007. NPDES #FL0026611.

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



Remarks