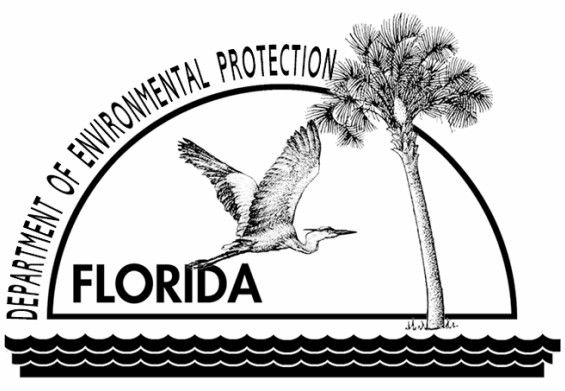


Effluent Quality Assessment

Whitehall Condominium Association, Inc.

(Whitehall Condominium Once-Through Non-Contact Cooling Water Discharge Facility)

Palm Beach County

NPDES #FL0035181

Sampled November 3, 2008

February 2009

Biology Section
Bureau of Laboratories
Division of Environmental Assessment and Restoration

Quality Manual No. 870346G
NELAC Certification No. E31780

Whitehall Condominium Association, Inc., 2000 South Ocean Boulevard, Boca Raton, Palm Beach County, Florida, 33432. NPDES #FL0035181. Effluent samples for this facility were collected on November 3, 2008.

Introduction

Whitehall Condominium Association, Inc., (Whitehall Condominium Once-Through Non-Contact Cooling Water Discharge Facility) is a condominium building with 164 residential units. Once-through non-contact cooling water is discharged in the building's HVAC heat exchanger operation. Wastewater treatment is not provided nor normally required of the heat exchanger discharge. The heat exchanger removes heat from the heated closed-loop (fresh) cooling-water circulating through the individual and central air conditioner systems. Cooling-water intake for the heat exchanger is supplied by an onsite brackish groundwater well that is about 29.9 m (98 feet) deep. Chemical additives are not used in the heat exchanger. The heat exchanger discharge enters an onsite storm drain (Outfall D-001). The storm drain also receives surface runoff in the area and runoff from other areas carried into it by a storm sewer. The storm drain discharges through a submerged pipeline into the Atlantic Ocean, with the outfall end-of-pipe reportedly being several hundred feet offshore. The point of discharge is located approximately at latitude 26º 19' 42" N, longitude 80º 04' 26" W. The facility is permitted for a maximum daily discharge of 1.584 million gallons per day (MGD). The monthly average daily flow from September 1, 2007, through September 1, 2008, was 1.5 MGD.

The facility has no Administrative Orders, Consent Orders or mixing zones. A review of Discharge Monitoring Report (DMR) data for the past year, revealed no permit violations. There was a problem (now resolved) regarding failure to turn in DMR reports on time. (Facility information provided by Lisa Gatch of FDEP Southeast District and the facility's NPDES permit.)

The facility has no permitted toxicity test requirements; however, a 48-hour acute screening test can provide confidence that the effluent meets the acute toxicity criterion of Florida's Surface Water Quality Standards (Rule 62-302.500 (1)(a)4, F.A.C.) if the mortality in 100% effluent is less than 20%.

Methods

Samples were collected from the EFF-01 NPDES sampling point for Outfall D-001 by Terry Davis (FDEP Southeast District) following DEP-SOP-001/01 FS 2400 Wastewater Sampling. All DEP SOPs are available on the web at: http://www.floridadep.org/labs/qa/sops.htm.

See Appendix A for the completed chain of custody form.

The 48-hour 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.

Toxicity Test Results

Tests were performed November 4 - 6, 2008.

Americamysis bahia 48-hour acute screening bioassay –	LC_{50} > 100%, 0% mortality* in 100% sample at 48 hours
Menidia beryllina 48-hour acute screening bioassay –	LC_{50} > 100%, 0% mortality* in 100% sample at 48 hours

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

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

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

Algal Growth Potential

The effluent Algal Growth Potential (AGP) was 4.9 A (A - value reported is the mean of two or more determinations) 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, Marshall Faircloth, et. al. FDEP, with Ron Raschke USEPA Region 4 1987). The analytical chemistry suggests that the effluent is nitrogen-limited (Table 1; Maloney et al. 1974).

Chemistry Results

Total residual chlorine was detected in the bioassay sample in the bioassay laboratory at a concentration of 0.05 mg/L. This was thought to be the result of interferences within the sample since the effluent is not treated. Total ammonia was not detected in the bioassay sample in the bioassay laboratory. The total ammonia concentration in the sample collected and preserved for chemical analysis was 0.2 mg/L. Based on the pH, salinity, and temperature of the effluent as collected, the calculated unionized ammonia concentration was < 0.02 mg/L.

The effluent dissolved oxygen (DO) as measured in the field (1.9 mg/L) (calculated value based on 28.5% saturation at a temperature of 29.11º C and a salinity of 24.9 parts per thousand) violated the DO criteria for Class III marine waters (≥ 4.0 mg/L; 62-302.530(30), F.A.C.).

No substances of concern were detected in the effluent at levels that did not comply with Class III marine water quality criteria (62-302.530, F.A.C.). Arsenic, chromium-III, copper, iron, lead, nickel and zinc were detected between the laboratory method detection limits (MDL) and practical quantitation limits (PQL).

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. See Appendix F for bioassay lab equipment.

Conclusion

The effluent sample collected from the EFF-01 NPDES sampling point for Outfall D-001 for this facility on November 3, 2008, was not acutely toxic to either test species during the 48-hour acute screening bioassays. The effluent AGP result was less than the "problem" threshold for marine receiving waters. The effluent dissolved oxygen as measured in the field (1.9 mg/L) violated the DO criteria for Class III marine waters (≥ 4.0 mg/L; 62-302.530(30), F.A.C.). Other effluent water quality parameters or analytes 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. Measured algal growth potential (AGP; mg dry weight/L) of the saltwater species *Dunaliella tertiolecta* and ratios of nitrogen to phosphorus for samples collected from the Whitehall Condominium Association, Inc., facility on November 3, 2008.

Whitehall Condominium Association, Inc.			
Location	AGP (measured)	Inorganic N:P ratio	Total N:P ratio
Effluent	4.9 A	4.2	6.4

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

Table 2. Effluent limits, Class III Criteria for predominantly marine waters and chemical data for samples collected from the Whitehall Condominium Association, Inc., facility on November 3, 2008.

Whitehall Condominium Association, Inc. NPDES# FL0035181	Class III Criteria	Effluent Limits	Effluent	
Organic Constituents (µg/L)				
Bis(2-ethylhexyl)phthalate	-	-	14	Uf
Metals (µg/L unless otherwise noted)				
Aluminum	≤ 1,500	-	180	U
Arsenic	≤ 50	-	1.4	I
Cadmium	≤ 8.8	-	0.09	U
Calcium (mg/L)	-	-	321	
Chromium-III	-	-	1.9	I
Copper	≤ 3.7	-	4.3	I
Iron	≤ 300	-	300	I
Lead	≤ 8.5	-	1.3	I
Magnesium (mg/L)	-	-	886	
Nickel	≤ 8.3	-	0.8	I
Selenium	≤ 71	-	0.6	U
Silver	≤ 2.3	-	0.03	U
Zinc	≤ 86	-	31	I
Nutrients (mg/L)				
Ortho-phosphate	-	-	0.053	
Total Phosphorus	-	-	0.066	
Total Ammonia	-	-	0.2	
Un-ionized Ammonia	-	-	≤ 0.02	c
Nitrate and Nitrite	-	-	0.022 F	
Total Kjeldahl Nitrogen	-	-	0.4	UJ
Organic Nitrogen	-	-	0.2	Uc
Total Nitrogen	-	-	0.222	Uc
General Physical and Chemical Parameters				
Dissolved Oxygen (mg/L)	≥ 4.0	-	1.9	c
pH (SU)	6.5 - 8.5	6.5 - 8.5 s	7.3	
Conductivity (µmhos/cm)	-	-	36,950	
Temperature °C	-	37.8 a	29.1	
Salinity	-	-	21.4	c
Sample Depth (m)	-	-	0.01	
Total Residual Chlorine (mg/L)	≤ 0.01	-	0	
Chlorophyll a (µg/L) - Corrected	-	-	0.55	U
Phaeophytin (µg/L)	-	-	0.24	U
Flow (MGD)	-	1.584 a	1.5	a
Hardness (mg $CaCO_3$)	-	-	4450.09	c

Value exceeds the Class III Water Quality Criteria or permit limits

a - Annual average
c - Value is calculated
f - Analyte was detected in the field blank but not in the effluent
s - Single sample
A - Value reported is the mean of two or more determinations
I - The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit
J - Estimated value
U - Material analyzed for but not detected; value reported is the method detection limit

Florida Department of Environmental Protection

Central Laboratory Sample Submittal Form

Event ID *

Request Number: RQ-2008-11-03-28
Whitehall Condominium Association, Incorporated

Requester: Jennifer Paris

Field Report Prepared By: T Davis

Customer: SE-DIST

Collected By: T. Davis

Send Final Report To ~~Todd Brown~~ T. Davis

Project ID: FYI5

Sampling Agency: SE Dist

PMAS: 1143

Lab ID *	Location / Field ID / Matrix / Lat / Long	Collection (begin) Eastern Central	Collection (end) Eastern Central	Bottle Group(s)**
	Location: Discharge line Field ID: 51-WC-1 Matrix: water, salt Temp (C): ~~28.11~~ 29.11 pH: 7.34 Latitude: o ' " . Longitude: o ' " .	☐ Comp ☒ Grab Date: 3/6/08 Time: 1040 Tot Res Chlorine (mg/L): Diss Oxygen (mg/L): ~~5.3~~ 28.5 ~~5.3~~ 30 sat. Sample Depth: ☒ m ☐ ft: .01 ☐ Salinity (PPTh) ☒ Sp Conductance (umho/cm): 36,950 Comments:	Date: Time: Storet Station Number: NPDES Number:	A
	Location: Blank Field ID: 51-WC-2 Matrix: Water, d. i. Temp (C): pH: Latitude: o ' " . Longitude: o ' " .	☐ Comp ☐ Grab Date: Time: 1050 Tot Res Chlorine (mg/L): Diss Oxygen (mg/L): Sample Depth: ☐ m ☐ ft ☐ Salinity (PPTh) ☐ Sp Conductance (umho/cm): Comments:	Date: Time: Storet Station Number: NPDES Number:	D
	Location: Field ID: Matrix: Temp (C): pH: Latitude: o ' " . Longitude: o ' " .	☐ Comp ☐ Grab Date: Time: Tot Res Chlorine (mg/L): Diss Oxygen (mg/L): Sample Depth: ☐ m ☐ ft ☐ Salinity (PPTh) ☐ Sp Conductance (umho/cm): Comments:	Date: Time: Storet Station Number: NPDES Number:	
	Location: Field ID: Matrix: Temp (C): pH: Latitude: o ' " . Longitude: o ' " .	☐ Comp ☐ Grab Date: Time: Tot Res Chlorine (mg/L): Diss Oxygen (mg/L): Sample Depth: ☐ m ☐ ft ☐ Salinity (PPTh) ☐ Sp Conductance (umho/cm): Comments: 2 Dissolved Reg Vol 1 @ 11:43 11-4-08	Date: Time: Storet Station Number: NPDES Number:	

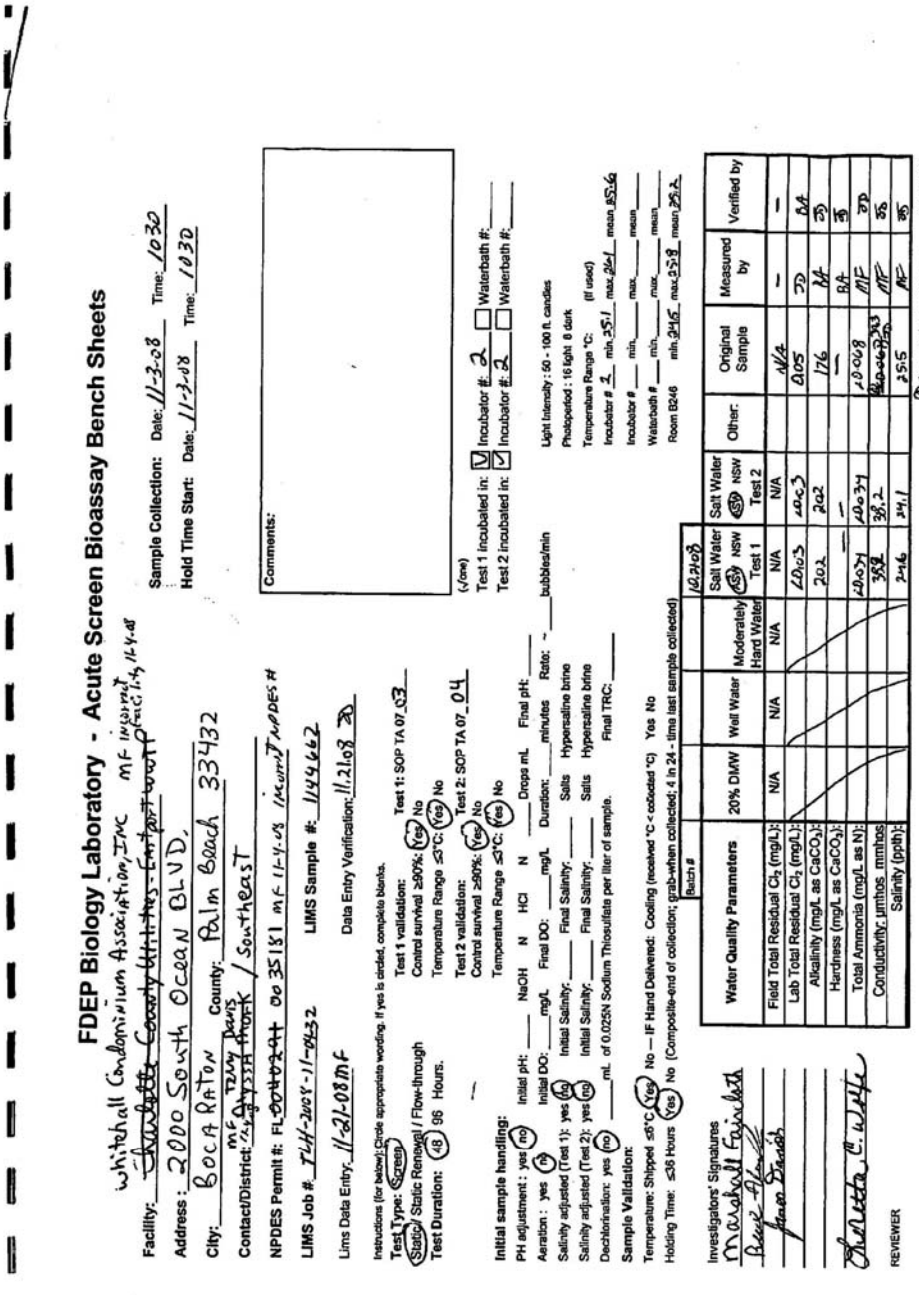
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* Shaded Areas for Lab use only.

** Please see reverse side for Bottle Group information.

last revised October 1, 2003

Appendix B. Bench Sheets



FDEP Biology Laboratory - Acute Screen Bioassay Bench Sheets

Facility: Whitehall Condominium Association, Inc MF inverts Sample Collection: Date: 11-3-08 Time: 1030

Address: 2000 South Ocean BLVD. Hold Time Start: Date: 11-3-08 Time: 1030

City: Boca Raton County: Palm Beach 33432

Contact/District: mf Tracy Davis / Southeast

NPDES Permit #: FL0010294 00 35181 MF 11-4-08 inverts MPDES #

LIMS Job #: TKH-2008-11-0432 LIMS Sample #: 1149662

Lims Data Entry: 11-21-08MF Data Entry Verification: 11.21.08 20

Comments:

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

Test Type: Screen

Static / Static Renewal / Flow-through

Test Duration: 48 96 Hours.

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

(√one)

Test 1 incubated in: ☑ Incubator #: 2 ☐ Waterbath #:

Test 2 incubated in: ☑ Incubator #: 2 ☐ Waterbath #:

Initial sample handling:

PH adjustment : yes no Initial pH: ____ NaOH N HCl N ____Drops mL Final pH: ____

Aeration : yes no Initial DO: ____mg/L Final DO: ____mg/L Duration: ____minutes Rate: ~____bubbles/min

Salinity adjusted (Test 1): yes no Initial Salinity: ____ Final Salinity: ____ Salts Hypersaline brine

Salinity adjusted (Test 2): yes no Initial Salinity: ____ Final Salinity: ____ Salts Hypersaline brine

Dechlorination: yes no ____mL of 0.025N Sodium Thiosulfate per liter of sample. Final TRC: ____

Light Intensity : 50 - 100 ft. candles

Photoperiod : 16 light 8 dark

Temperature Range °C: (if used)

Incubator # 2 min. 25.1 max. 26.1 mean 25.46

Incubator # ___ min. ___ max. ___ mean ___

Waterbath # ___ min. ___ max. ___ mean ___

Room B246 min. 24.5 max. 25.8 mean 25.2

Sample Validation:

Temperature: Shipped ≤6°C Yes No — IF Hand Delivered: Cooling (received °C < collected °C) Yes No

Holding Time: ≤36 Hours Yes No (Composite-end of collection; grab-when collected; if in 24 - time last sample collected)

Batch # 10.21.08

Water Quality Parameters	20% DMW	Well Water	Moderately Hard Water	Salt Water NSW Test 1	Salt Water NSW Test 2	Other:	Original Sample	Measured by	Verified by
Field Total Residual Cl_2 (mg/L):	N/A	N/A	N/A	N/A	N/A		N/A	—	—
Lab Total Residual Cl_2 (mg/L):				20.03	20.03		0.05	TD	BA
Alkalinity (mg/L as $CaCO_3$):				202	202		176	BA	TD
Hardness (mg/L as $CaCO_3$):				—	—		—	BA	TD
Total Ammonia (mg/L as N):				20.034	20.034		20.048	MF	TD
Conductivity: µmhos mmhos				36.2	38.2		36.243 36.250	MF	BA
Salinity (ppth):				34.6	34.1		35.5	MF	BA

Investigators' Signatures

Marshall Fairchild

Tracy Davis

Roberta M. Hupp

REVIEWER

Transcription error 10.28.08

V1.6 Titles

Page 00 007

Appendix B. (continued)

FDEP Biology Laboratory - Bioassay Survival Bench Sheet

LIMS Sample #: 1144662 Test #: 1 SOP#:TA 07 03 Test Started: Date 11-4-08 Time: 14:30
Organism/Batch/Age: Americamysis bahia/11-4-08/5days Test Ended: Date 11-6-08 Time: 12:40
Chamber/Test Volume: 1L / 500 ml Diluent/ Batch: ASW254001 11.4.08 Test Duration: (48 hr) 96 hr
Food/Batch: [ ] YCT____ [ ] P.sub____
[✓] Artemia: 0hr 159 24hr 1600 48hr____ 72hr____ Artemia Lot# 38438
Feeding: [✓] Prior to Test [ ] Prior to Renewal [✓] 0 hr [✓] 24 hr [ ] 48 hr [ ] 72 hr

Concentration	Replicate	Chamber #	Test Hour 0 hr	24 hr	48 hr BR	48 hr AR	72 hr	96 hr
Control	A	B17	5	5	5			
	B	B18	5	5	5			
	C	B19	5	5	4,0			
	D	B20	5	5	4,0			
100%	A	B21	5	5	5			
	B	B22	5	5	5			
	C	B23	5	5	5			
	D	B24	5	5	5			

Loaded/Verified by: [illegible] / MF Checked by: MF | JD | JD

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________

V 2.3 7/15/2008

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

Page 00 008

Appendix B. (continued)

FDEP Biology Laboratory - Bioassay Survival Bench Sheet

LIMS Sample #: 1144662 Test #: 2 SOP#:TA 07_04 Test Started: Date 11-4-08 Time: 1500
Organism/Batch/Age: Menidia beryllina / 11-4-08 / 13 days Test Ended: Date 11-6-08 Time: 1310
Chamber/Test Volume: 1L / 500 ml Diluent/ Batch: ASW 25‰ / 11-4-08 Test Duration: (48 hr) 96 hr
Food/Batch: [ ] YCT____ [ ] P.sub____
[✓] Artemia: 0hr 159 24hr____ 48hr____ 72hr____ Artemia Lot# 38438
Feeding: [✓] Prior to Test [ ] Prior to Renewal [✓] 0 hr [ ] 24 hr [ ] 48 hr [ ] 72 hr

Concentration	Replicate	Chamber #	0 hr	24 hr	48 hr BR	48 hr AR	72 hr	96 hr
Control	A	B9	5	5	5			
	B	B10	5	5	5			
	C	B11	5	5	5			
	D	B12	5	5	5			
100%	A	B13	5	5	5			
	B	B14	5	5	5			
	C	B15	5	5	5			
	D	B16	5	5	5			
Loaded/Verified by: GN / MF		Checked by:	MF	JD	JD			

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________

V 2.3 7/15/2008

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 # : 1144662 Test #: 1 of 2

TEST SOP #: TA07_03 Test Species: ☐ Ceriodaphnia dubia ☐ Cyprinella leedsi ☐ Pimephales promelas

Test aerated: yes (no) (circle one) Check 1: ☑ Americamysis bahia ☐ Menidia beryllina ☐ Other:

Concentration: Control	0 Hr.	24 Hr.	48 Hr. before renewal	48 Hr. after renewal	72 Hr.	96 Hr.
Replicate	A	B	C			
pH (S.U.)	8.4	8.4	8.3			
Temperature °C	24.5	24.1	24.0			
Dissolved Oxygen mg/L aerate if < 4	7.1	7.0	5.8			
Conductivity µmhos (mmhos)	38.9	38.1	38.0			
Salinity ppth	24.6	24.4	24.7			
(initials) Measured by:	MF	JD	JD			
(initials) Recorded by:	MF	JD	JD			

Comments:

Concentration: 100%	0 Hr.	24 Hr.	48 Hr. before renewal	48 Hr. after renewal	72 Hr.	96 Hr.
Replicate	A	B	C			
pH (S.U.)	7.7	8.0	8.1			
Temperature °C	24.9	24.1	24.0			
Dissolved Oxygen mg/L aerate if < 4	5.1	6.9	5.8			
Conductivity µmhos (mmhos)	39.5	39.7	39.2			
Salinity ppth	25.4	25.3	25.7			
(initials) Measured by:	MF	JD	JD			
(initials) Recorded by:	MF	JD	JD			

Comments:

Salinity only needs measuring if saltwater.

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 aerate if < 4						
Conductivity µmhos mmhos						
Salinity ppth						
(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 aerate if < 4						
Conductivity µmhos mmhos						
Salinity ppth						
(initials) Measured by:						
(initials) Recorded by:						

Comments:

00 010

Appendix B. (continued)

FDEP Biology Laboratory - Bioassay Parameter Bench Sheet

LIMS Sample #: 1144662 Test #: 2 of 2

TEST SOP #: TA07_04 Test Species: ☐ *Ceriodaphnia dubia* ☐ *Cyprinella leedsi* ☐ *Pimephales promelas*

Test aerated: yes (no) (circle one) Check 1: ☐ *Americamysis bahia* ☐ *Menidia beryllina* ☐ Other:

Concentration Control	0 Hr.	24 Hr.	48 Hr. before renewal	48 Hr. after renewal	72 Hr.	96 Hr.
Replicate	A	B	C			
pH (S.U.)	8.4	8.5	8.2			
Temperature °C	24.3	24.0	24.0			
Dissolved Oxygen mg/L aerate if < 4	7.0	6.6	5.8			
Conductivity µmhos (mmhos)	38.2	38.1	39.1			
Salinity ppth	34.1	34.3	35.2			
(initials) Measured by:	MC	JB	JB			
(initials) Recorded by:	MC	JB	JB			

Comments:

Concentration 100%	0 Hr.	24 Hr.	48 Hr. before renewal	48 Hr. after renewal	72 Hr.	96 Hr.
Replicate	A	B	C			
pH (S.U.)	7.7	8.1	8.0			
Temperature °C	24.8	24.0	24.1			
Dissolved Oxygen mg/L aerate if < 4	5.8	6.0	5.8			
Conductivity µmhos (mmhos)	39.3	39.4	39.8			
Salinity ppth	35.5	35.3	35.5			
(initials) Measured by:	MC	JB	JB			
(initials) Recorded by:	MC	JB	JB			

Comments:

Salinity only needs measuring if saltwater.

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 aerate if < 4						
Conductivity µmhos mmhos						
Salinity ppth						
(initials) Measured by:						
(initials) Recorded by:						

Comments:

Salinity only needs measuring if saltwater.

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 aerate if < 4						
Conductivity µmhos mmhos						
Salinity ppth						
(initials) Measured by:						
(initials) Recorded by:						

Comments:

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Appendix B. (continued)

Bioassay Instrument ID

Test ID: Whitehall Laboratories, Inc. Dates: November 4 - 6, 2008 MF

METER / DEVICE	ID	SOP	Parameter	Method	√used
YSI Model 58 Dissolved Oxygen Meter	90H018262	TA06_04	Dissolved Oxygen	SM 4500 O G	√
Accumet AR-10 pH Meter	93312105	TA06_23	pH	SM 4500 H+	√
Mettler-Toledo SevenMulti Conductivity Meter	SN 1225117049 Probe H04257	TA06_25	Conductivity	SM 2510 B	√
			Salinity	SM 2520 B	√
Denver Model 225 ISE with ammonia probe	SN K01377	TA06_17	Ammonia	SM 4500 NH3 F	√
Thermometer (DO probe)	YSI 5750 SN 05J1720	TA06_05	Temperature	SM-2530B modified DEP SOP-001/01 FT1400	√
Hach Pocket Colorimeter II	05050C026378	TA06_22	Total Residual Chlorine	EPA 330.5 SM 4500 CL G	√
Alkalinity (Hach Kit)	No SN	TA06_08	Alkalinity	SM 2320 B	√
Hardness (Hach Kit)	No SN	TA06_09	Hardness	SM 2340 C	√
OHAUS Balance 250D	1125481084	TA06_21 TA06_27	Weight	-	
S-Weights	BIO-S-WEIGHTS-01	NA	Balance check	-	

SM-2530B modified to allow use of electronic and non-mercury filled thermometers.
Insert other device information in blank spaces(if used).

Test ID = Facility or SRTs (acute SRT--Chronic SRT)
F: Hall and M: Fathead

V 1.1 6/12/08 MF

PAGE 00 012

Appendix C. SRT Bench Sheets and Statistical Analysis

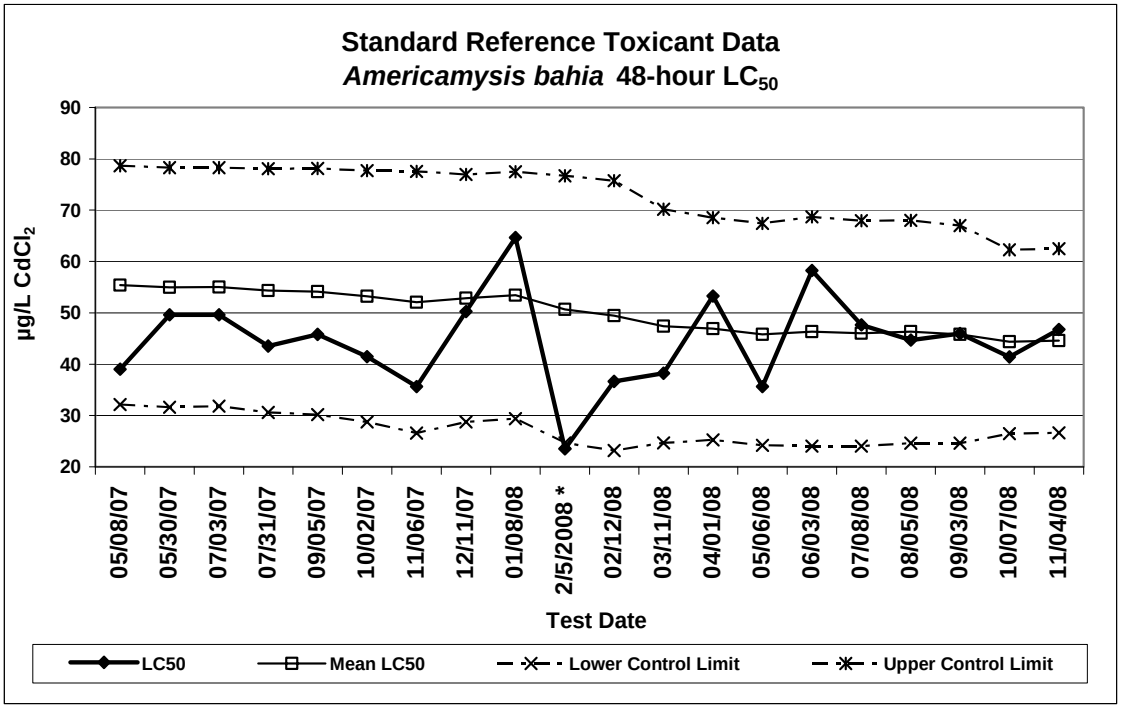
Florida Department of Environmental Protection
Bureau of Laboratories

Standard Reference Toxicant (SRT) Test Data - 48-hour Acute Toxicity
Americamysis bahia (mysid shrimp) - Cadmium Chloride ($CdCl_2$)

Date	LC50	Mean LC50	Std Dev	Lower Control Limit	Upper Control Limit
05/08/07	39.00	55.42	11.63	32.16	78.68
05/30/07	49.64	54.95	11.67	31.62	78.29
07/03/07	49.64	55.04	11.62	31.80	78.27
07/31/07	43.54	54.34	11.88	30.58	78.10
09/05/07	45.79	54.15	11.99	30.17	78.13
10/02/07	41.44	53.25	12.24	28.76	77.73
11/06/07	35.65	52.06	12.76	26.55	77.57
12/11/07	50.27	52.86	12.06	28.75	76.98
01/08/08	64.65	53.42	12.03	29.36	77.48
2/5/2008 *	23.52	50.68	13.02	24.64	76.72
02/12/08	36.63	49.45	13.14	23.17	75.74
03/11/08	38.21	47.42	11.38	24.66	70.19
04/01/08	53.27	46.90	10.82	25.26	68.53
05/06/08	35.65	45.82	10.81	24.19	67.45
06/03/08	58.28	46.36	11.17	24.03	68.69
07/08/08	47.67	46.00	10.99	24.02	67.98
08/05/08	44.68	46.32	10.84	24.63	68.01
09/03/08	45.94	45.82	10.60	24.62	67.02
10/07/08	41.43	44.39	8.96	26.47	62.30
11/04/08	46.75	44.58	8.97	26.64	62.51

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

CV = 20.11
EPA reference 75th quartile CV = 26%



* Test result exceeded control limits on 2/5/2008. Test repeated on 2/12/2008.

Appendix C. (continued)

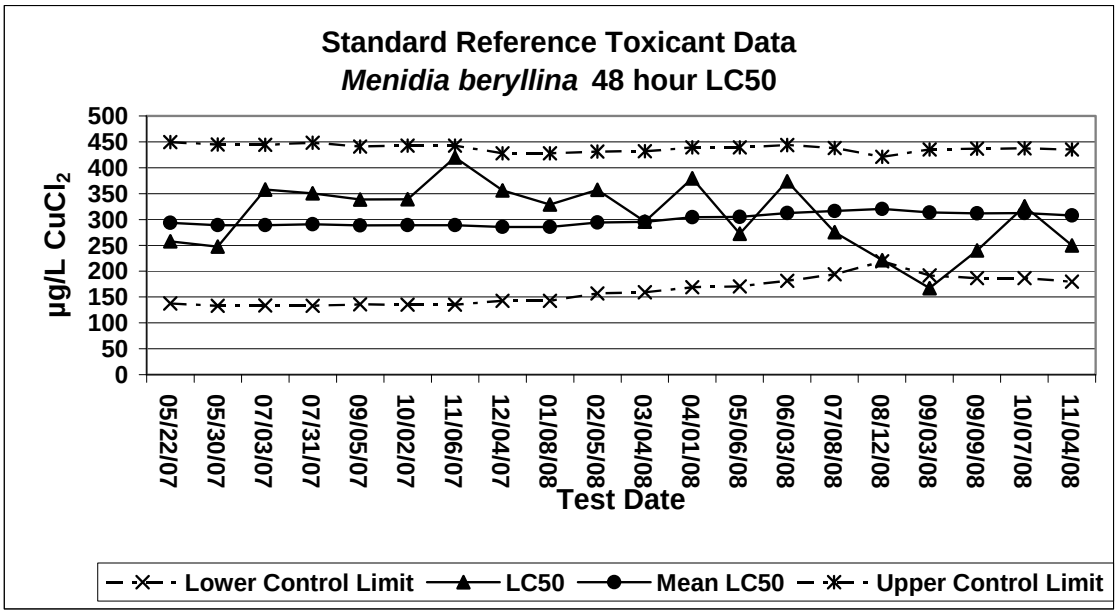
Florida Department of Environmental Protection
Bureau of Laboratories

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

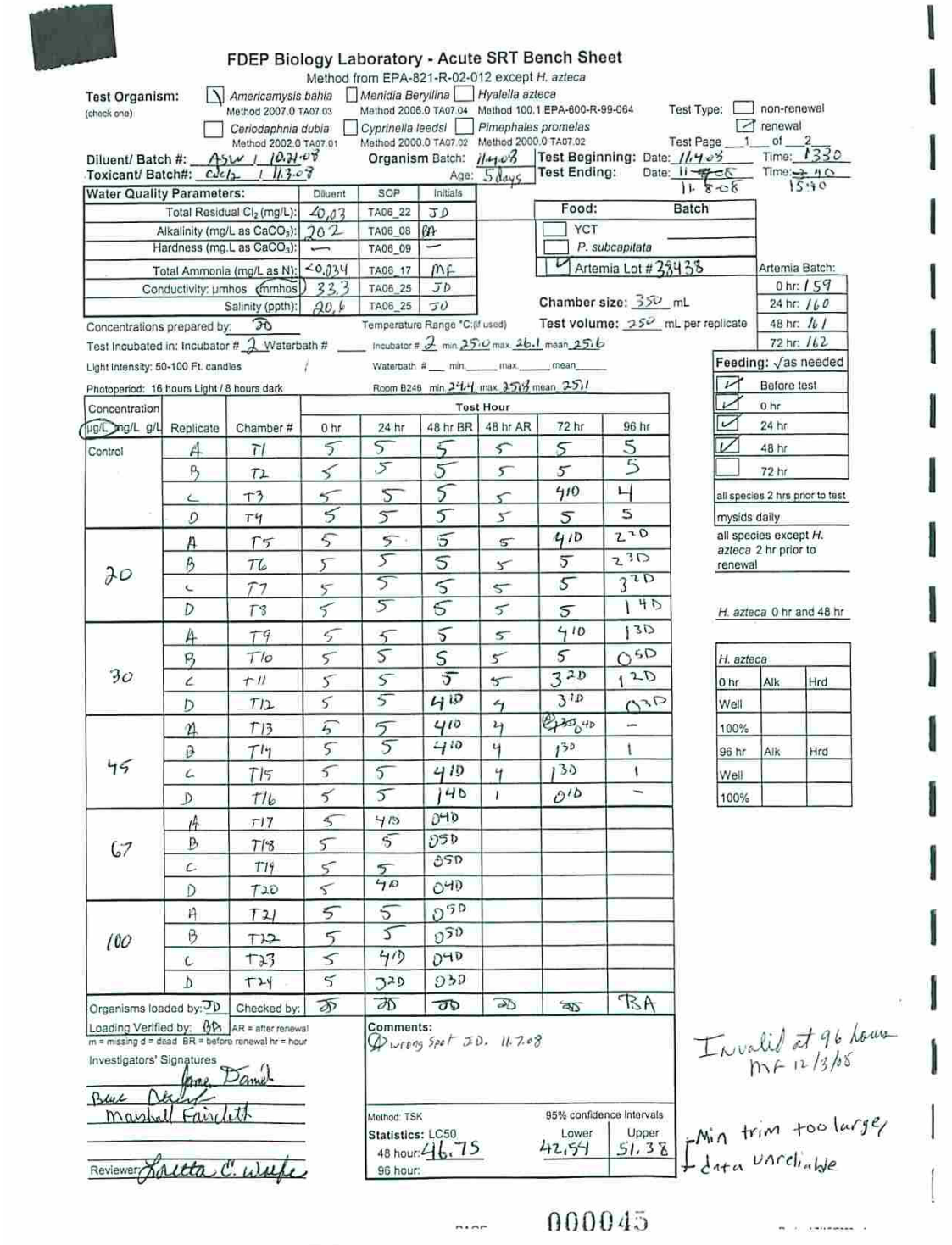
Date	LC50	Mean LC50	Std Dev	Lower Control Limit	Upper Control Limit
05/22/07	257.44	293.42	77.9	137.6	449.3
05/30/07	247.36	289.10	78.0	133.2	445.0
07/03/07	357.65	288.79	77.7	133.4	444.1
07/31/07	350.68	290.88	78.8	133.3	448.5
09/05/07	338.18	288.38	76.3	135.8	441.0
10/02/07	338.90	289.15	76.7	135.7	442.6
11/06/07	419.55	289.15	76.7	135.7	442.6
12/04/07	356.07	285.50	71.3	143.0	428.0
01/08/08	329.03	285.29	71.1	143.0	427.5
02/05/08	357.47	294.07	68.5	157.1	431.0
03/04/08	295.52	295.31	68.1	159.3	431.9
04/01/08	379.50	304.05	67.5	169.0	439.1
05/06/08	272.50	304.73	67.1	170.5	438.9
06/03/08	373.47	312.52	65.5	181.5	443.5
07/08/08	275.20	316.13	61.0	194.2	438.1
08/12/08	221.17	320.17	50.5	219.2	421.1
09/03/08	167.46	313.48	60.9	191.7	435.3
09/09/08	240.07	311.58	62.6	186.3	436.9
10/07/08	325.55	312.05	62.7	186.6	437.5
11/04/08	249.81	307.63	63.9	179.9	435.4

Means are of the last 20 SRT tests.

EPA reference 75th quartile CV = 21% **CV = 20.76**



Appendix C. (continued)



FDEP Biology Laboratory - Acute SRT Bench Sheet

Method from EPA-821-R-02-012 except *H. azteca*

Test Organism: (check one) ☒ *Americamysis bahia* Method 2007.0 TA07.03 ☐ *Menidia Beryllina* Method 2006.0 TA07.04 ☐ *Hyalella azteca* Method 100.1 EPA-600-R-99-064
☐ *Ceriodaphnia dubia* Method 2002.0 TA07.01 ☐ *Cyprinella leedsi* Method 2000.0 TA07.02 ☐ *Pimephales promelas* Method 2000.0 TA07.02

Test Type: ☐ non-renewal ☑ renewal

Test Page 1 of 2

Diluent/ Batch #: ASW 1 10.27.08
Toxicant/ Batch#: $CdCl_2$ 1 11.3.08

Organism Batch: 11.4.08 Age: 5 days

Test Beginning: Date: 11.4.08 Time: 1330
Test Ending: Date: 11-~~7~~-08 / 11.8.08 Time: ~~1540~~ / 1540

Water Quality Parameters:	Diluent	SOP	Initials
Total Residual Cl_2 (mg/L):	0.03	TA06_22	JD
Alkalinity (mg/L as $CaCO_3$):	202	TA06_08	BA
Hardness (mg.L as $CaCO_3$):	—	TA06_09	—
Total Ammonia (mg/L as N):	<0.034	TA06_17	MF
Conductivity: µmhos (mmhos)	33.3	TA06_25	JD
Salinity (ppth):	20.6	TA06_25	JD

Food:	Batch
☐ YCT	
☐ *P. subcapitata*	
☑ Artemia Lot # 384438	

Artemia Batch:
0 hr: 159
24 hr: 160
48 hr: 161
72 hr: 162

Chamber size: 350 mL
Test volume: 250 mL per replicate

Concentrations prepared by: JD
Temperature Range °C:(if used)

Test Incubated in: Incubator # 2 Waterbath # ____ Incubator # 2 min 25.0 max 26.1 mean 25.6
Light Intensity: 50-100 Ft. candles Waterbath # ___ min ____ max ____ mean ____
Photoperiod: 16 hours Light / 8 hours dark Room B248 min 24.4 max 25.3 mean 25.1

Feeding: √as needed

☑	Before test
☑	0 hr
☑	24 hr
☑	48 hr
☐	72 hr

all species 2 hrs prior to test
mysids daily
all species except *H. azteca* 2 hr prior to renewal
H. azteca 0 hr and 48 hr

Concentration µg/L mg/L g/L	Replicate	Chamber #	Test Hour 0 hr	24 hr	48 hr BR	48 hr AR	72 hr	96 hr
Control	A	T1	5	5	5	5	5	5
	B	T2	5	5	5	5	5	5
	C	T3	5	5	5	5	4 1D	4
	D	T4	5	5	5	5	5	5
20	A	T5	5	5	5	5	4 1D	2 2D
	B	T6	5	5	5	5	5	2 3D
	C	T7	5	5	5	5	5	3 2D
	D	T8	5	5	5	5	5	1 4D
30	A	T9	5	5	5	5	4 1D	1 3D
	B	T10	5	5	5	5	5	0 5D
	C	T11	5	5	5	5	3 2D	1 2D
	D	T12	5	5	4 1D	4	3 2D	0 3D
45	A	T13	5	5	4 1D	4	@ 35 0 4D	—
	B	T14	5	5	4 1D	4	1 3D	1
	C	T15	5	5	4 1D	4	1 3D	1
	D	T16	5	5	1 4D	1	0 1D	—
67	A	T17	5	4 1D	0 4D			
	B	T18	5	5	0 5D			
	C	T19	5	5	0 5D			
	D	T20	5	4 0	0 4D			
100	A	T21	5	5	0 5D			
	B	T22	5	5	0 5D			
	C	T23	5	4 1D	0 4D			
	D	T24	5	3 2D	0 3D			
Organisms loaded by: JD	Checked by:		~~5~~	~~5~~	~~0~~	2D	~~5~~	BA

H. azteca		
0 hr	Alk	Hrd
Well		
100%		
96 hr	Alk	Hrd
Well		
100%		

Loading Verified by: BA AR = after renewal
m = missing d = dead BR = before renewal hr = hour

Investigators' Signatures
Jane Daniel
Bruce Ogden
Marshall Faircloth

Reviewer Loretta C. Wolfe

Comments:
@ wrong spot JD. 11.7.08

Invalid at 96 hours MF 12/3/08

Method: TSK
Statistics: LC50 48 hour: 46.75 96 hour:

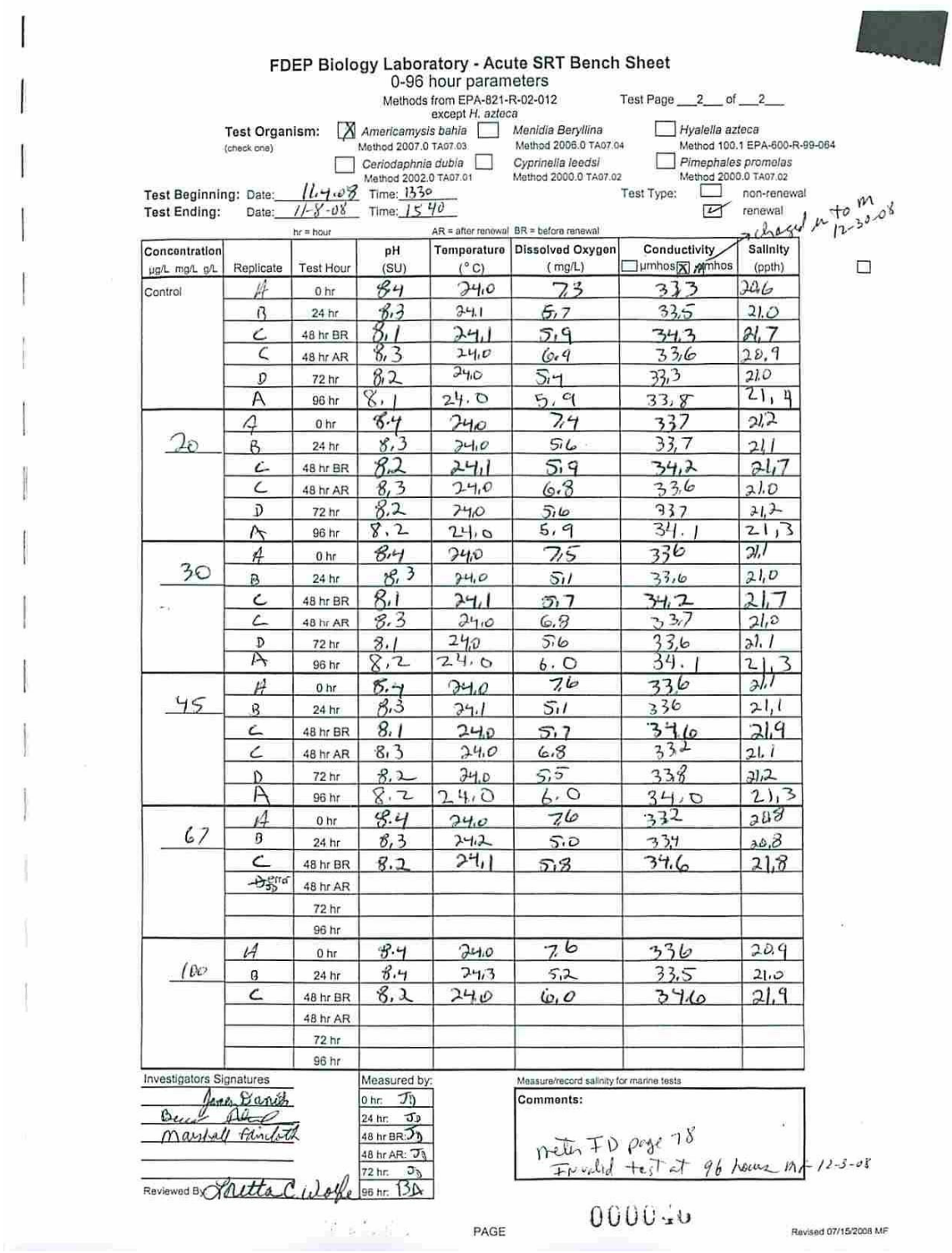
95% confidence intervals

	Lower	Upper
48 hour:	42.54	51.38

Min trim too large / data unreliable

000045

Appendix C. (continued)



FDEP Biology Laboratory - Acute SRT Bench Sheet
0-96 hour parameters
Methods from EPA-821-R-02-012 except *H. azteca*
Test Page 2 of 2

Test Organism: (check one)
- [X] *Americamysis bahia* Method 2007.0 TA07.03
- [ ] *Menidia Beryllina* Method 2006.0 TA07.04
- [ ] *Hyalella azteca* Method 100.1 EPA-600-R-99-064
- [ ] *Ceriodaphnia dubia* Method 2002.0 TA07.01
- [ ] *Cyprinella leedsi* Method 2000.0 TA07.02
- [ ] *Pimephales promelas* Method 2000.0 TA07.02

Test Beginning: Date: 11-4-08 Time: 1330
Test Ending: Date: 11-8-08 Time: 1540
Test Type: [ ] non-renewal [✓] renewal

hr = hour AR = after renewal BR = before renewal

Concentration µg/L mg/L g/L	Replicate	Test Hour	pH (SU)	Temperature (° C)	Dissolved Oxygen (mg/L)	Conductivity [ ] µmhos [X] mmhos	Salinity (ppth)
Control	A	0 hr	8.4	24.0	7.3	33.3	20.6
	B	24 hr	8.3	24.1	5.7	33.5	21.0
	C	48 hr BR	8.1	24.1	5.9	34.3	21.7
	C	48 hr AR	8.3	24.0	6.9	33.6	20.9
	D	72 hr	8.2	24.0	5.4	33.3	21.0
	A	96 hr	8.1	24.0	5.9	33.8	21.4
20	A	0 hr	8.4	24.0	7.4	33.7	21.2
	B	24 hr	8.3	24.0	5.6	33.7	21.1
	C	48 hr BR	8.2	24.1	5.9	34.2	21.7
	C	48 hr AR	8.3	24.0	6.8	33.6	21.0
	D	72 hr	8.2	24.0	5.6	33.7	21.2
	A	96 hr	8.2	24.0	5.9	34.1	21.3
30	A	0 hr	8.4	24.0	7.5	33.6	21.1
	B	24 hr	8.3	24.0	5.1	33.6	21.0
	C	48 hr BR	8.1	24.1	5.7	34.2	21.7
	C	48 hr AR	8.3	24.0	6.8	33.7	21.0
	D	72 hr	8.1	24.0	5.6	33.6	21.1
	A	96 hr	8.2	24.0	6.0	34.1	21.3
45	A	0 hr	8.4	24.0	7.6	33.6	21.1
	B	24 hr	8.3	24.1	5.1	33.6	21.1
	C	48 hr BR	8.1	24.0	5.7	34.6	21.9
	C	48 hr AR	8.3	24.0	6.8	33.2	21.1
	D	72 hr	8.2	24.0	5.5	33.8	21.2
	A	96 hr	8.2	24.0	6.0	34.0	21.3
67	A	0 hr	8.4	24.0	7.6	33.2	20.8
	B	24 hr	8.3	24.2	5.0	33.4	20.8
	C	48 hr BR	8.2	24.1	5.8	34.6	21.8
	~~Dead~~	48 hr AR					
		72 hr					
		96 hr					
100	A	0 hr	8.4	24.0	7.6	33.6	20.9
	B	24 hr	8.4	24.3	5.2	33.5	21.0
	C	48 hr BR	8.2	24.0	6.0	34.6	21.9
		48 hr AR					
		72 hr					
		96 hr					

Investigators Signatures
Jana Davis
Brent Allen
Marshall Finchett

Reviewed By: Anita C. Wolfe

Measured by:
0 hr: JD
24 hr: JD
48 hr BR: JD
48 hr AR: JD
72 hr: JD
96 hr: BA

Measure/record salinity for marine tests

Comments:
meter ID page 78
Invalid test at 96 hours MF 12-3-08

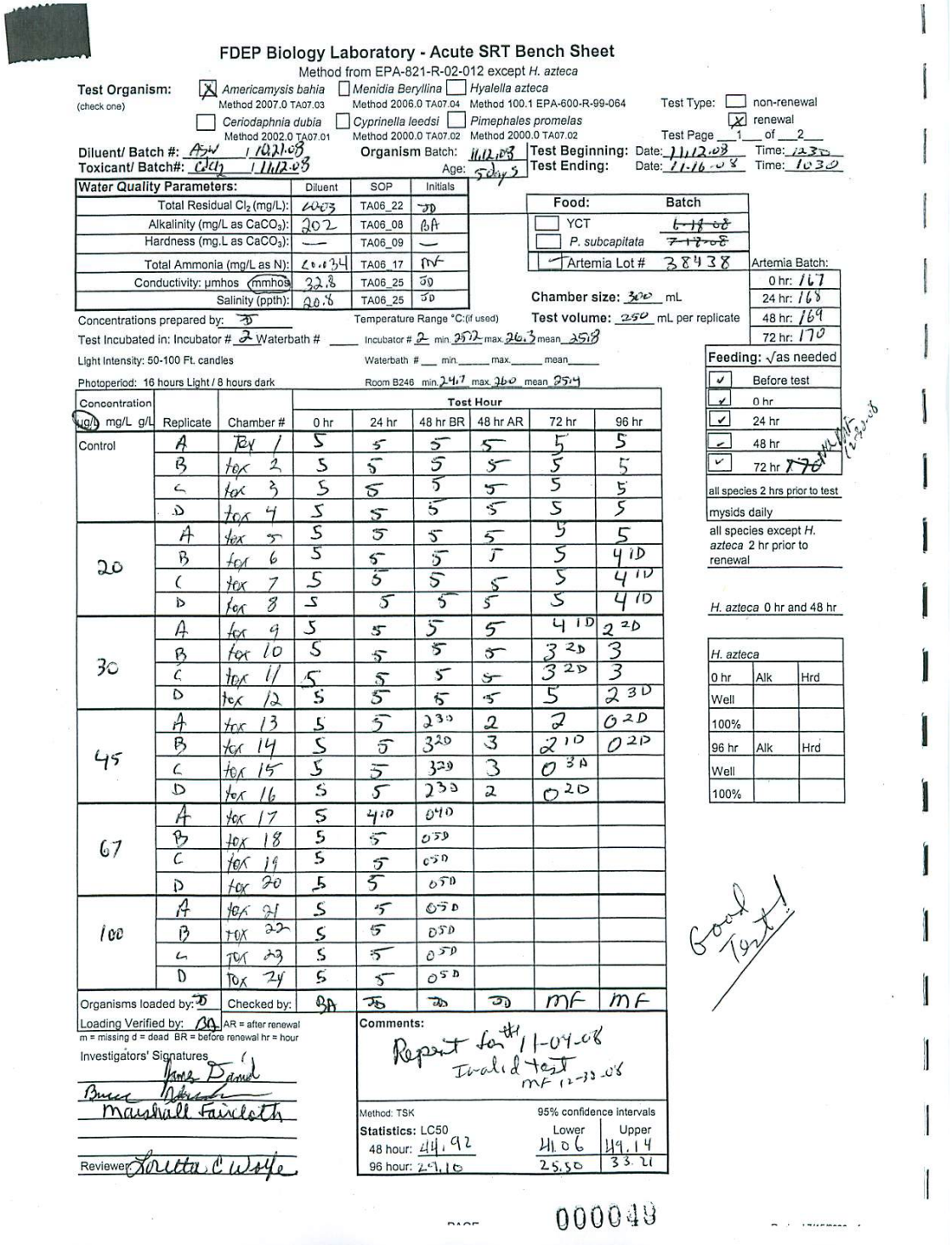
changed to M 12-30-08

0000.16

PAGE

Revised 07/15/2008 MF

Appendix C. (continued)



FDEP Biology Laboratory - Acute SRT Bench Sheet

Method from EPA-821-R-02-012 except *H. azteca*

Test Organism: (check one) [X] *Americamysis bahia* Method 2007.0 TA07.03 [ ] *Menidia Beryllina* Method 2006.0 TA07.04 [ ] *Hyalella azteca* Method 100.1 EPA-600-R-99-064 [ ] *Ceriodaphnia dubia* Method 2002.0 TA07.01 [ ] *Cyprinella leedsi* Method 2000.0 TA07.02 [ ] *Pimephales promelas* Method 2000.0 TA07.02

Test Type: [ ] non-renewal [X] renewal

Test Page 1 of 2

Diluent/ Batch #: ASW / 1021.08

Toxicant/ Batch#: CdCl2 / 1112.08

Organism Batch: 1112.08 Age: 5 day 5

Test Beginning: Date: 11.12.08 Time: 1330

Test Ending: Date: 11.16.08 Time: 1030

Water Quality Parameters:	Diluent	SOP	Initials
Total Residual Cl_2 (mg/L):	0.03	TA06_22	JD
Alkalinity (mg/L as $CaCO_3$):	202	TA06_08	BA
Hardness (mg.L as $CaCO_3$):	—	TA06_09	—
Total Ammonia (mg/L as N):	0.034	TA06_17	MF
Conductivity: µmhos (mmhos)	32.8	TA06_25	JD
Salinity (ppth):	20.8	TA06_25	JD

Food:	Batch
[ ] YCT	~~6-18-08~~
[ ] *P. subcapitata*	~~7-17-08~~
[✓] Artemia Lot #	38438

Artemia Batch:

0 hr:	167
24 hr:	168
48 hr:	169
72 hr:	170

Chamber size: 300 mL

Test volume: 250 mL per replicate

Concentrations prepared by: JD

Temperature Range °C:(if used)

Test Incubated in: Incubator # 2 Waterbath # ____ Incubator # 2 min. 25.2 max. 26.3 mean 25.8

Light Intensity: 50-100 Ft. candles Waterbath # ___ min. ____ max. ____ mean ____

Photoperiod: 16 hours Light / 8 hours dark Room B246 min. 24.7 max. 26.0 mean 25.4

Feeding: √as needed

[✓]	Before test
[✓]	0 hr
[✓]	24 hr
[✓]	48 hr
[✓]	72 hr ~~170~~

all species 2 hrs prior to test

mysids daily

all species except *H. azteca* 2 hr prior to renewal

H. azteca 0 hr and 48 hr

Concentration µg/L mg/L g/L	Replicate	Chamber #	Test Hour 0 hr	24 hr	48 hr BR	48 hr AR	72 hr	96 hr
Control	A	Tox 1	5	5	5	5	5	5
	B	Tox 2	5	5	5	5	5	5
	C	Tox 3	5	5	5	5	5	5
	D	Tox 4	5	5	5	5	5	5
20	A	Tox 5	5	5	5	5	5	5
	B	Tox 6	5	5	5	5	5	4 1D
	C	Tox 7	5	5	5	5	5	4 1D
	D	Tox 8	5	5	5	5	5	4 1D
30	A	Tox 9	5	5	5	5	4 1D	2 2D
	B	Tox 10	5	5	5	5	3 2D	3
	C	Tox 11	5	5	5	5	3 2D	3
	D	Tox 12	5	5	5	5	5	2 3D
45	A	Tox 13	5	5	2 3D	2	2	0 2D
	B	Tox 14	5	5	3 2D	3	2 1D	0 2D
	C	Tox 15	5	5	3 2D	3	0 3A	
	D	Tox 16	5	5	2 3D	2	0 2D	
67	A	Tox 17	5	4 1D	0 4D			
	B	Tox 18	5	5	0 5D			
	C	Tox 19	5	5	0 5D			
	D	Tox 20	5	5	0 5D			
100	A	Tox 21	5	5	0 5D			
	B	Tox 22	5	5	0 5D			
	C	Tox 23	5	5	0 5D			
	D	Tox 24	5	5	0 5D			
Organisms loaded by: JD		Checked by:	BA	JD	JD	JD	MF	MF

Loading Verified by: BA AR = after renewal

m = missing d = dead BR = before renewal hr = hour

H. azteca		
0 hr	Alk	Hrd
Well		
100%		
96 hr	Alk	Hrd
Well		
100%		

Investigators' Signatures

Reviewer: Loretta C Wolfe

Comments:

Repeat for the 11-04-08

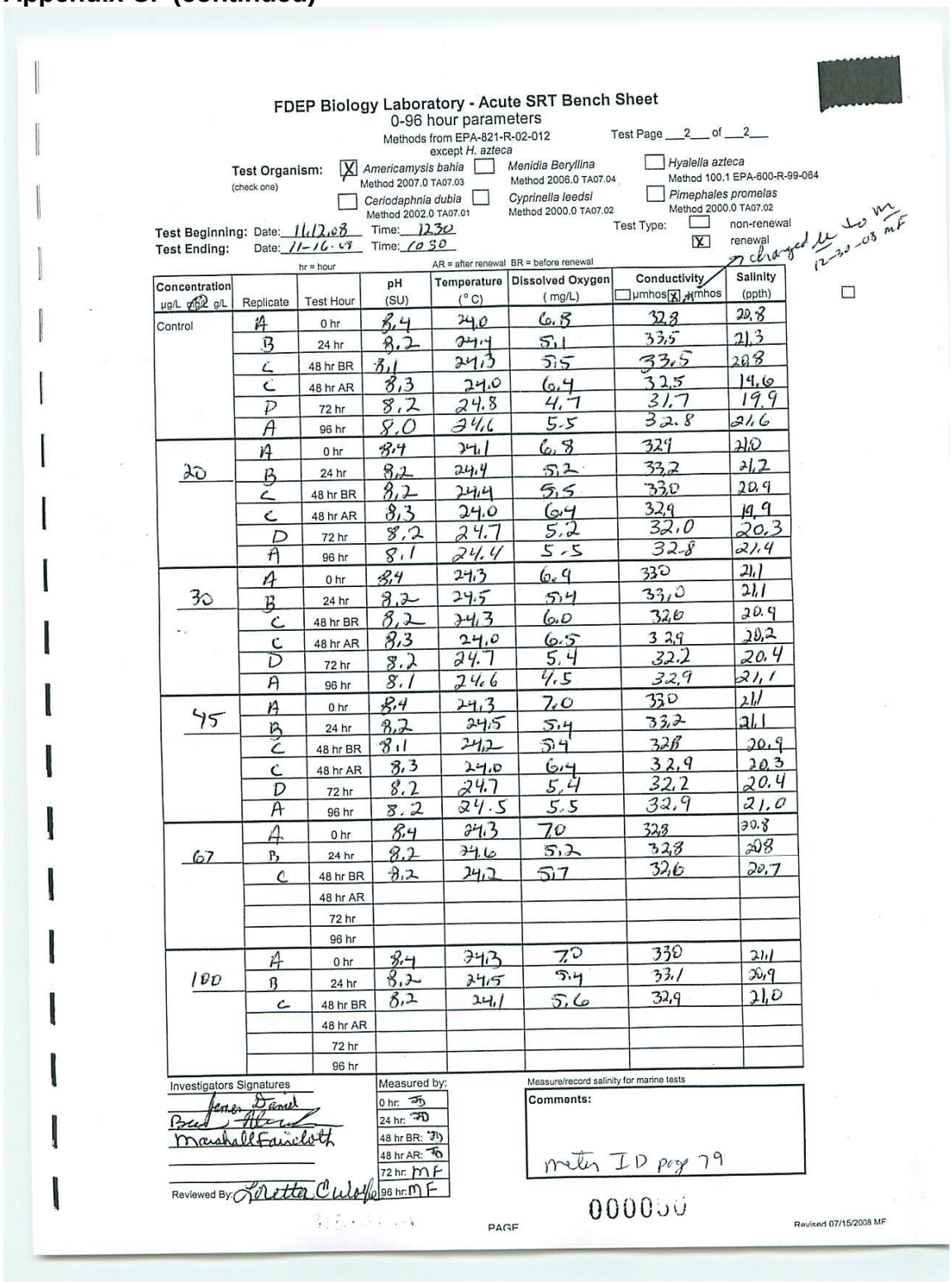
Invalid test MF 12-30-08

Good Test!

Method: TSK	95% confidence intervals	
Statistics: LC50	Lower	Upper
48 hour: 44.92	41.06	49.14
96 hour: 29.10	25.50	33.21

000049

Appendix C. (continued)



FDEP Biology Laboratory - Acute SRT Bench Sheet

0-96 hour parameters

Methods from EPA-821-R-02-012 except *H. azteca*

Test Page 2 of 2

Test Organism: (check one)
- [X] *Americamysis bahia* Method 2007.0 TA07.03
- [ ] *Menidia Beryllina* Method 2006.0 TA07.04
- [ ] *Hyalella azteca* Method 100.1 EPA-600-R-99-064
- [ ] *Ceriodaphnia dubia* Method 2002.0 TA07.01
- [ ] *Cyprinella leedsi* Method 2000.0 TA07.02
- [ ] *Pimephales promelas* Method 2000.0 TA07.02

Test Beginning: Date: 11.12.08 Time: 1230
Test Ending: Date: 11-16-08 Time: 1030

Test Type: [ ] non-renewal [X] renewal

changed to mS 12-30-08 MF

hr = hour AR = after renewal BR = before renewal

Concentration µg/L mg/L g/L	Replicate	Test Hour	pH (SU)	Temperature (° C)	Dissolved Oxygen (mg/L)	Conductivity [ ] µmhos [X] mmhos	Salinity (ppth)
Control	A	0 hr	8.4	24.0	6.8	32.8	20.8
	B	24 hr	8.2	24.4	5.1	33.5	21.3
	C	48 hr BR	8.1	24.3	5.5	33.5	20.8
	C	48 hr AR	8.3	24.0	6.4	32.5	19.6
	D	72 hr	8.2	24.8	4.7	31.7	19.9
	A	96 hr	8.0	24.6	5.5	32.8	21.6
20	A	0 hr	8.4	24.1	6.8	329	21.0
	B	24 hr	8.2	24.4	5.2	33.2	21.2
	C	48 hr BR	8.2	24.4	5.5	33.0	20.9
	C	48 hr AR	8.3	24.0	6.4	32.9	19.9
	D	72 hr	8.2	24.7	5.2	32.0	20.3
	A	96 hr	8.1	24.4	5.5	32.8	21.4
30	A	0 hr	8.4	24.3	6.9	330	21.1
	B	24 hr	8.2	24.5	5.4	33.0	21.1
	C	48 hr BR	8.2	24.3	6.0	32.6	20.9
	C	48 hr AR	8.3	24.0	6.5	32.9	20.2
	D	72 hr	8.2	24.7	5.4	32.2	20.4
	A	96 hr	8.1	24.6	4.5	32.9	21.1
45	A	0 hr	8.4	24.3	7.0	330	21.1
	B	24 hr	8.2	24.5	5.4	33.2	21.1
	C	48 hr BR	8.1	24.2	5.4	32.8	20.9
	C	48 hr AR	8.3	24.0	6.4	32.9	20.3
	D	72 hr	8.2	24.7	5.4	32.2	20.4
	A	96 hr	8.2	24.5	5.5	32.9	21.0
67	A	0 hr	8.4	24.3	7.0	328	20.8
	B	24 hr	8.2	24.6	5.2	32.8	20.8
	C	48 hr BR	8.2	24.2	5.7	32.6	20.7
		48 hr AR					
		72 hr					
		96 hr					
100	A	0 hr	8.4	24.3	7.0	330	21.1
	B	24 hr	8.2	24.5	5.4	33.1	20.9
	C	48 hr BR	8.2	24.1	5.6	32.9	21.0
		48 hr AR					
		72 hr					
		96 hr					

Investigators Signatures
James Daniel
Brad Allen
Marshall Faircloth

Reviewed By: Loretta Culotta

Measured by:
0 hr: JD
24 hr: JD
48 hr BR: JD
48 hr AR: JD
72 hr: MF
96 hr: MF

Measure/record salinity for marine tests

Comments:
metals ID page 79

000050

PAGE

Revised 07/15/2008 MF

Appendix C. (continued)

FDEP Biology Laboratory - Acute SRT Bench Sheet

Method from EPA-821-R-02-012 except *H. azteca*

Test Organism: (check one) ☐ *Americamysis bahia* Method 2007.0 TA07.03 ☒ *Menidia Beryllina* Method 2006.0 TA07.04 ☐ *Hyalella azteca* Method 100.1 EPA-600-R-99-064 ☐ *Ceriodaphnia dubia* Method 2002.0 TA07.01 ☐ *Cyprinella leedsi* Method 2000.0 TA07.02 ☐ *Pimephales promelas* Method 2000.0 TA07.02

Test Type: ☐ non-renewal ☒ renewal

Test Page 1 of 2

Diluent/ Batch #: ASW / 10.21.08 **Toxicant/ Batch#:** CuCl2 / 11.3.08

Organism Batch: 11.4.08 Age: 13 days

Test Beginning: Date: 11.4.08 Time: 1335

Test Ending: Date: 11.8.08 Time: ~~3425~~ 1525 BA

Water Quality Parameters:	Diluent	SOP	Initials
Total Residual Cl_2 (mg/L):	<0.03	TA06_22	JD
Alkalinity (mg/L as $CaCO_3$):	202	TA06_08	BA
Hardness (mg.L as $CaCO_3$):	—	TA06_09	—
Total Ammonia (mg/L as N):	<0.034	TA06_17	mf
Conductivity: µmhos (mmhos)	33.1	TA06_25	JD
Salinity (ppth):	20.7	TA06_25	JD

Food:	Batch
☐ YCT	
☐ *P. subcapitata*	
☑ Artemia Lot #	38438

Artemia Batch:

0 hr:	159
24 hr:	
48 hr:	161
72 hr:	

Chamber size: 1000 mL

Test volume: 500 mL per replicate

Concentrations prepared by: BD

Temperature Range °C:(if used)

Test Incubated in: Incubator # 2 Waterbath # ____ Incubator # 2 min 25.0 max 26.1 mean 25.6

Light Intensity: 50-100 Ft. candles Waterbath # ___ min.____ max.____ mean____

Photoperiod: 16 hours Light / 8 hours dark Room B246 min. 24.4 max. 25.8 mean 25.1

Feeding: √as needed

☑	Before test
☐	0 hr
☐	24 hr
☑	48 hr
☐	72 hr

all species 2 hrs prior to test

mysids daily

all species except *H. azteca* 2 hr prior to renewal

H. azteca 0 hr and 48 hr

Concentration µg/L mg/L g/L	Replicate	Chamber #	Test Hour 0 hr	24 hr	48 hr BR	48 hr AR	72 hr	96 hr
Control	A	C13	10	10	10	10	10	10
	B	C14	10	10	10	10	10	10
100	A	C15	10	10	10	10	10	10
	B	C16	10	10	10	10	10	10
200	A	C17	10	10	10	10	10	10
	B	C18	10	6+9	6	6	6	6
300	A	C19	10	4+6	3+0	3	3	3
	B	C20	10	7+0	3+0	3	3	3
400	A	C21	10	1+0	1	1	1	1
	B	C22	10	4+6	1+0	1	1	1
500	A	C23	10	0+0	—			
	B	C24	10	0+0	—			
Organisms loaded by:		JD	Checked by:	JD	JD	JD	JD	BA
Loading Verified by:		BA	AR = after renewal					

m = missing d = dead BR = before renewal hr = hour

H. azteca		
0 hr	Alk	Hrd
Well		
100%		
96 hr	Alk	Hrd
Well		
100%		

Investigators' Signatures

James Daniel

Bruce Dial

Marshall Faircloth

Reviewer Loretta C Wolfe

Comments:

Method: TSK

Statistics: LC50		95% confidence intervals Lower	Upper
48 hour:	249.81	220.14	283.35
96 hour:	249.81	220.21	283.33

000043

Appendix C. (continued)

FDEP Biology Laboratory - Acute SRT Bench Sheet
0-96 hour parameters
Methods from EPA-821-R-02-012 except *H. azteca*
Test Page 2 of 2

Test Organism: (check one)
- ☐ *Americamysis bahia* Method 2007.0 TA07.03
- ☒ *Menidia Beryllina* Method 2006.0 TA07.04
- ☐ *Hyalella azteca* Method 100.1 EPA-600-R-99-064
- ☐ *Ceriodaphnia dubia* Method 2002.0 TA07.01
- ☐ *Cyprinella leedsi* Method 2000.0 TA07.02
- ☐ *Pimephales promelas* Method 2000.0 TA07.02

Test Beginning: Date: 11.4.08 Time: 1335
Test Ending: Date: 11-8-08 Time: 1525
Test Type: ☐ non-renewal ☑ renewal
hr = hour AR = after renewal BR = before renewal
→ changed to m 12-30-08 MF

Concentration µg/L mg/L g/L	Replicate	Test Hour	pH (SU)	Temperature (°C)	Dissolved Oxygen (mg/L)	Conductivity ☐µmhos ☒mmhos	Salinity (ppth)
Control	A	0 hr	8.4	24.0	7.6	33.1	20.7
	B	24 hr	8.3	24.5	5.8	32.4	20.7
	A	48 hr BR	8.2	24.2	7.1	33.4	21.4
	A	48 hr AR	8.3	24.0	7.1	33.2	20.8
	B	72 hr	8.2	24.0	5.5	33.1	20.8
	A	96 hr	8.2	24.1	6.0	33.4	20.8
100	A	0 hr	8.4	24.0	7.6	33.5	21.2
	B	24 hr	8.3	24.4	5.9	32.9	20.9
	A	48 hr BR	8.2	24.2	6.3	33.4	21.4
	A	48 hr AR	8.3	24.0	6.9	32.9	20.8
	B	72 hr	8.2	24.0	5.5	33.1	20.8
	A	96 hr	8.2	24.0	5.9	33.2	20.8
200	A	0 hr	8.4	24.0	7.6	33.6	21.2
	B	24 hr	8.3	24.4	5.9	33.1	21.0
	A	48 hr BR	8.2	24.4	6.3	33.9	21.6
	A	48 hr AR	8.3	24.0	6.9	33.3	20.9
	B	72 hr	8.2	24.0	5.4	33.2	20.9
	A	96 hr	8.2	24.0	5.8	33.8	21.2
300	A	0 hr	8.4	24.0	7.6	33.6	21.1
	B	24 hr	8.3	24.5	5.8	33.2	21.0
	A	48 hr BR	8.2	24.2	6.3	33.7	21.5
	A	48 hr AR	8.3	24.0	6.9	33.3	20.9
	B	72 hr	8.2	24.0	5.6	33.2	20.9
	A	96 hr	8.2	24.0	5.8	33.8	21.1
400	A	0 hr	8.4	24.0	7.6	33.4	20.9
	B	24 hr	8.3	24.6	5.8	33.2	21.0
	A	48 hr BR	8.3	24.4	6.5	34.0	21.6
	A	48 hr AR	8.3	24.0	6.9	32.9	20.8
	B	72 hr	8.2	24.0	5.7	33.3	21.0
	A	96 hr	8.2	24.0	5.9	33.8	21.3
500	A	0 hr	8.4	24.0	7.6	33.7	21.1
	B	24 hr	8.3	24.5	5.9	33.6	21.2
	C	48 hr BR					21.3
		48 hr AR					
		72 hr					
		96 hr					

Transcription error 11.6.08

Investigators Signatures
James Daniel
Bruce Fleece
Marshall Faircloth

Reviewed By: Loretta C Wolf

Measured by:
0 hr: JD
24 hr: JD
48 hr BR: JD
48 hr AR: JD
72 hr: JD
96 hr: DA

Measure/record salinity for marine tests

Comments:
Meth ID page 78

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Revised 07/15/2008 MF

Appendix C. (continued)

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

DATE: 11-4-08 DURATION: 48 hr TOXICANT: $CdCl_2$
SPECIES: *Americamysis bahia*

RAW DATA: Concentration (ug/L)	Number Exposed	Mortalities
.00	20	0
20.00	20	0
30.00	20	1
45.00	20	7
67.00	20	20
100.00	20	20

SPEARMAN-KARBER TRIM: .00%

SPEARMAN-KARBER ESTIMATES: **LC50: 46.75**
95% LOWER CONFIDENCE: 42.54
95% UPPER CONFIDENCE: 51.38

***Menidia beryllina* Acute Standard Reference Toxicant Test**

DATE: 11-4-08 DURATION: 48 hr TOXICANT : $CuCl_2$
SPECIES: *Menidia beryllina*

RAW DATA: Concentration (ug/L)	Number Exposed	Mortalities
0.00	20	0
100.00	20	0
200.00	20	4
300.00	20	14
400.00	20	18
500.00	20	20

SPEARMAN-KARBER TRIM: .00%

SPEARMAN-KARBER ESTIMATES: **LC50: 249.81**
95% LOWER CONFIDENCE: 220.24
95% UPPER CONFIDENCE: 283.35

Appendix D. Test Organism Receipt(s)

MARINCO BIOASSAY LABORATORY
The Aquatic Toxicology Specialists

NELAP Certification # E84191

Organism Shipment Record

State of Florida Aquaculture Certificate Number AQ0668007

Date: 11/3/08

Shipped to: FDEP

P.O. No:

Species	Quantity	Age	Brood Number	Temp.	pH	Salinity
Mysidopsis bahia	250	4 DAYS	MS081030	25°C	8.1	20 ‰
Menidia beryllina	250	12 DAYS	SS081022	25°C	8.1	20‰
						Hardness
Cyprinella leedsi	150	10 DAYS	CL081024	25°C	7.7	78 mg/L
Pimephales promelas	250	7 DAYS	FM081027	25°C	7.7	78 mg/L

Packed by:

Shipped Via: Fed Ex.

Notes:

Thank you for your order.

4569 Samuel Street · Sarasota, FL 34233 · Tel: 941-925-3594 · Fax: 941-922-3874 · Web: www.biologylab.com

Appendix D. (continued)

MARINCO BIOASSAY LABORATORY
The Aquatic Toxicology Specialists

NELAP Certification # E84191

Organism Shipment Record

State of Florida Aquaculture Certificate Number AQ0668007

Date: 11/11/08

Shipped to: FDEP

P.O. No: _____

Species	Quantity	Age	Brood Number	Temp.	pH	Salinity
Mysidopsis bahia	150	4 DAYS	MS081107	25°C	8.0 s.u	20‰
Menidia beryllina						
						Hardness
Cyprinella leedsi						
Pimephales promelas						

Packed by: _____

Shipped Via: FedEx.

Notes: _____

Thank you for your order.

4569 Samuel Street · Sarasota, FL 34233 · Tel: 941-925-3594 · Fax: 941-922-3874 · Web: www.biologylab.com

Appendix E. Chemical Analyses performed on the effluent from the Whitehall Condominium Association, Inc., facility Outfall D-001, sampled on November 3, 2008.

Date Sampled	Field ID	Analysis	Component	Results	Remark	Units	MDL	PQL
11/3/2008 10:30	Effluent	AGP/LN	Algal Growth Potential	4.85	A	mg DryWt/L	3	3
11/3/2008 10:30	Effluent	Chlorophyll/Grain Size/BOD	Chlorophyll-a, Corrected	0.55	U	ug/L	0.55	1.7
11/3/2008 10:30	Effluent	Chlorophyll/Grain Size/BOD	Phaeophytin-a	0.24	U	ug/L	0.24	0.71
11/3/2008 10:30	Effluent	Toxicology	Bioassay-Acute-Screen-SW-Mysid, LC50	100	L	LC50		
11/3/2008 10:30	Effluent	Toxicology	Bioassay-Acute-Screen-SW-Fish, LC50	100	L	LC50		
11/3/2008 10:30	Effluent	Metals	Lead	1.3	I	ug/L	0.6	2.4
11/3/2008 10:30	Effluent	Metals	Nickel	0.8	I	ug/L	0.75	3
11/3/2008 10:30	Effluent	Metals	Calcium	321		mg/L	3.7	15
11/3/2008 10:30	Effluent	Metals	Cadmium	0.09	U	ug/L	0.09	0.36
11/3/2008 10:30	Effluent	Metals	Copper	4.3	I	ug/L	1.5	6
11/3/2008 10:30	Effluent	Metals	Silver	0.03	U	ug/L	0.03	0.12
11/3/2008 10:30	Effluent	Metals	Aluminum	180	U	ug/L	180	720
11/3/2008 10:30	Effluent	Metals	Magnesium	886		mg/L	2	8
11/3/2008 10:30	Effluent	Metals	Chromium	1.9	I	ug/L	0.6	2.4
11/3/2008 10:30	Effluent	Metals	Selenium	0.6	U	ug/L	0.6	2.4
11/3/2008 10:30	Effluent	Metals	Iron	300	I	ug/L	90	360
11/3/2008 10:30	Effluent	Metals	Arsenic	1.4	I	ug/L	0.75	3
11/3/2008 10:30	Effluent	Metals	Zinc	31	I	ug/L	15	60
11/3/2008 10:30	Effluent	Nutrients	Kjeldahl Nitrogen	0.4	UJ	mg N/L	0.4	1
11/3/2008 10:30	Effluent	Nutrients	Ammonia-N	0.2		mg N/L	0.01	0.02
11/3/2008 10:30	Effluent	Nutrients	O-Phosphate-P	0.053		mg P/L	0.008	0.02
11/3/2008 10:30	Effluent	Nutrients	NO2NO3-N	0.022		mg N/L	0.004	0.01
11/3/2008 10:30	Effluent	Nutrients	Total-P	0.066		mg P/L	0.02	0.06
11/3/2008 10:30	Effluent	Pesticides	Atrazine	0.05	U	ug/L	0.05	0.2
11/3/2008 10:30	Effluent	Pesticides	Parathion Ethyl	0.15	U	ug/L	0.15	0.6
11/3/2008 10:30	Effluent	Pesticides	Fenamiphos	0.2	U	ug/L	0.2	0.8
11/3/2008 10:30	Effluent	Pesticides	Ethion	0.05	U	ug/L	0.05	0.2
11/3/2008 10:30	Effluent	Pesticides	Simazine	0.05	U	ug/L	0.05	0.2
11/3/2008 10:30	Effluent	Pesticides	Norflurazon	0.15	U	ug/L	0.15	0.6
11/3/2008 10:30	Effluent	Pesticides	Metribuzin	0.1	U	ug/L	0.1	0.4
11/3/2008 10:30	Effluent	Pesticides	Malathion	0.15	U	ug/L	0.15	0.6
11/3/2008 10:30	Effluent	Pesticides	Diazinon	0.05	U	ug/L	0.05	0.2
11/3/2008 10:30	Effluent	Pesticides	Azinphos Methyl	0.2	U	ug/L	0.2	0.8

Appendix E. (continued)

Date Sampled	Field ID	Analysis	Component	Results	Remark	Units	MDL	PQL
11/3/2008 10:30	Effluent	Pesticides	Hexazinone	0.1	U	ug/L	0.1	0.4
11/3/2008 10:30	Effluent	Pesticides	Phorate	0.05	U	ug/L	0.05	0.2
11/3/2008 10:30	Effluent	Pesticides	Metolachlor	0.5	U	ug/L	0.5	2
11/3/2008 10:30	Effluent	Pesticides	Fonofos	0.1	U	ug/L	0.1	0.4
11/3/2008 10:30	Effluent	Pesticides	Chlorpyrifos Methyl	0.1	U	ug/L	0.1	0.4
11/3/2008 10:30	Effluent	Pesticides	Butylate	0.2	U	ug/L	0.2	0.8
11/3/2008 10:30	Effluent	Pesticides	Bromacil	0.2	U	ug/L	0.2	0.8
11/3/2008 10:30	Effluent	Pesticides	Ametryn	0.05	U	ug/L	0.05	0.2
11/3/2008 10:30	Effluent	Pesticides	Parathion Methyl	0.1	U	ug/L	0.1	0.4
11/3/2008 10:30	Effluent	Pesticides	Metalaxyl	0.25	U	ug/L	0.25	1
11/3/2008 10:30	Effluent	Pesticides	Chlorpyrifos Ethyl	0.05	U	ug/L	0.05	0.2
11/3/2008 10:30	Effluent	Pesticides	Prometryn	0.15	U	ug/L	0.15	0.6
11/3/2008 10:30	Effluent	Pesticides	Mevinphos	0.2	U	ug/L	0.2	0.8
11/3/2008 10:30	Effluent	Pesticides	Naled	0.8	U	ug/L	0.8	3.2
11/3/2008 10:30	Effluent	Pesticides	Alachlor	0.6	U	ug/L	0.6	2.4
11/3/2008 10:30	Effluent	Pesticides	Ethoprop	0.1	U	ug/L	0.1	0.4
11/3/2008 10:30	Effluent	Priority Organic Pollutants	2,4-Dimethylphenol	9.4	U	ug/L	9.4	38
11/3/2008 10:30	Effluent	Priority Organic Pollutants	2,4-Dinitrophenol	14	U	ug/L	14	57
11/3/2008 10:30	Effluent	Priority Organic Pollutants	3,3'-Dichlorobenzidine	38	UJ	ug/L	38	150
11/3/2008 10:30	Effluent	Priority Organic Pollutants	Bis(2-chloroisopropyl)ether	2.8	U	ug/L	2.8	11
11/3/2008 10:30	Effluent	Priority Organic Pollutants	Butyl benzyl phthalate	4.7	U	ug/L	4.7	19
11/3/2008 10:30	Effluent	Priority Organic Pollutants	Endosulfan II	3.8	U	ug/L	3.8	15
11/3/2008 10:30	Effluent	Priority Organic Pollutants	Hexachloroethane	2.8	U	ug/L	2.8	11
11/3/2008 10:30	Effluent	Priority Organic Pollutants	N-Nitrosodimethylamine	1.9	U	ug/L	1.9	7.5
11/3/2008 10:30	Effluent	Priority Organic Pollutants	Naphthalene	0.94	U	ug/L	0.94	3.8
11/3/2008 10:30	Effluent	Priority Organic Pollutants	2,4,6-Trichlorophenol	0.94	U	ug/L	0.94	3.8
11/3/2008 10:30	Effluent	Priority Organic Pollutants	4,4'-DDE	1.4	U	ug/L	1.4	5.7
11/3/2008 10:30	Effluent	Priority Organic Pollutants	4-Chloro-3-methylphenol	0.94	U	ug/L	0.94	3.8
11/3/2008 10:30	Effluent	Priority Organic Pollutants	4-Chlorophenyl phenyl ether	1.9	U	ug/L	1.9	7.5
11/3/2008 10:30	Effluent	Priority Organic Pollutants	Benzidine	94	U	ug/L	94	380
11/3/2008 10:30	Effluent	Priority Organic Pollutants	Di-n-butyl phthalate	4.7	U	ug/L	4.7	19
11/3/2008 10:30	Effluent	Priority Organic Pollutants	Dieldrin	1.4	U	ug/L	1.4	5.7
11/3/2008 10:30	Effluent	Priority Organic Pollutants	Endosulfan I	3.8	U	ug/L	3.8	15
11/3/2008 10:30	Effluent	Priority Organic Pollutants	Hexachlorocyclopentadiene	2.8	U	ug/L	2.8	11

Appendix E. (continued)

Date Sampled	Field ID	Analysis	Component	Results	Remark	Units	MDL	PQL
11/3/2008 10:30	Effluent	Priority Organic Pollutants	N-Nitrosodi-n-propylamine	1.9	U	ug/L	1.9	7.5
11/3/2008 10:30	Effluent	Priority Organic Pollutants	gamma-BHC	1.4	U	ug/L	1.4	5.7
11/3/2008 10:30	Effluent	Priority Organic Pollutants	2,4-Dichlorophenol	0.94	U	ug/L	0.94	3.8
11/3/2008 10:30	Effluent	Priority Organic Pollutants	2-Chloronaphthalene	0.94	U	ug/L	0.94	3.8
11/3/2008 10:30	Effluent	Priority Organic Pollutants	2-Nitrophenol	0.94	U	ug/L	0.94	3.8
11/3/2008 10:30	Effluent	Priority Organic Pollutants	4-Bromophenyl phenyl ether	0.94	U	ug/L	0.94	3.8
11/3/2008 10:30	Effluent	Priority Organic Pollutants	4-Nitrophenol	14	U	ug/L	14	57
11/3/2008 10:30	Effluent	Priority Organic Pollutants	Acenaphthene	0.94	U	ug/L	0.94	3.8
11/3/2008 10:30	Effluent	Priority Organic Pollutants	Benzo(a)pyrene	0.94	U	ug/L	0.94	3.8
11/3/2008 10:30	Effluent	Priority Organic Pollutants	Diethyl phthalate	0.94	U	ug/L	0.94	3.8
11/3/2008 10:30	Effluent	Priority Organic Pollutants	Endrin aldehyde	3.8	U	ug/L	3.8	15
11/3/2008 10:30	Effluent	Priority Organic Pollutants	Fluoranthene	0.94	U	ug/L	0.94	3.8
11/3/2008 10:30	Effluent	Priority Organic Pollutants	Heptachlor epoxide	1.4	U	ug/L	1.4	5.7
11/3/2008 10:30	Effluent	Priority Organic Pollutants	Isophorone	0.94	U	ug/L	0.94	3.8
11/3/2008 10:30	Effluent	Priority Organic Pollutants	Bis(2-ethylhexyl)phthalate	14	U	ug/L	14	57
11/3/2008 10:30	Effluent	Priority Organic Pollutants	Dibenzo(a,h)anthracene	0.94	U	ug/L	0.94	3.8
11/3/2008 10:30	Effluent	Priority Organic Pollutants	Nitrobenzene	1.9	U	ug/L	1.9	7.5
11/3/2008 10:30	Effluent	Priority Organic Pollutants	Phenol	0.94	U	ug/L	0.94	3.8
11/3/2008 10:30	Effluent	Priority Organic Pollutants	alpha-BHC	1.4	U	ug/L	1.4	5.7
11/3/2008 10:30	Effluent	Priority Organic Pollutants	beta-BHC	1.4	U	ug/L	1.4	5.7
11/3/2008 10:30	Effluent	Priority Organic Pollutants	2,4-Dinitrotoluene	0.94	U	ug/L	0.94	3.8
11/3/2008 10:30	Effluent	Priority Organic Pollutants	Acenaphthylene	0.94	U	ug/L	0.94	3.8
11/3/2008 10:30	Effluent	Priority Organic Pollutants	Di-n-octyl phthalate	0.94	U	ug/L	0.94	3.8
11/3/2008 10:30	Effluent	Priority Organic Pollutants	Fluorene	0.94	U	ug/L	0.94	3.8
11/3/2008 10:30	Effluent	Priority Organic Pollutants	Hexachlorobenzene	0.94	U	ug/L	0.94	3.8
11/3/2008 10:30	Effluent	Priority Organic Pollutants	Indeno(1,2,3-cd)pyrene	0.94	U	ug/L	0.94	3.8
11/3/2008 10:30	Effluent	Priority Organic Pollutants	Phenanthrene	0.94	U	ug/L	0.94	3.8
11/3/2008 10:30	Effluent	Priority Organic Pollutants	2,6-Dinitrotoluene	0.94	U	ug/L	0.94	3.8
11/3/2008 10:30	Effluent	Priority Organic Pollutants	2-Chlorophenol	0.94	U	ug/L	0.94	3.8
11/3/2008 10:30	Effluent	Priority Organic Pollutants	Aldrin	1.4	U	ug/L	1.4	5.7
11/3/2008 10:30	Effluent	Priority Organic Pollutants	Benzo(a)anthracene	0.94	U	ug/L	0.94	3.8
11/3/2008 10:30	Effluent	Priority Organic Pollutants	Benzo(b)fluoranthene	0.94	U	ug/L	0.94	3.8
11/3/2008 10:30	Effluent	Priority Organic Pollutants	Benzo(g,h,i)perylene	0.94	U	ug/L	0.94	3.8
11/3/2008 10:30	Effluent	Priority Organic Pollutants	Benzo(k)fluoranthene	0.94	U	ug/L	0.94	3.8

Appendix E. (continued)

Date Sampled	Field ID	Analysis	Component	Results	Remark	Units	MDL	PQL
11/3/2008 10:30	Effluent	Priority Organic Pollutants	Bis(2-chloroethoxy)methane	0.94	U	ug/L	0.94	3.8
11/3/2008 10:30	Effluent	Priority Organic Pollutants	Bis(2-chloroethyl)ether	0.94	U	ug/L	0.94	3.8
11/3/2008 10:30	Effluent	Priority Organic Pollutants	Chrysene	0.94	U	ug/L	0.94	3.8
11/3/2008 10:30	Effluent	Priority Organic Pollutants	Heptachlor	1.4	U	ug/L	1.4	5.7
11/3/2008 10:30	Effluent	Priority Organic Pollutants	Pentachlorophenol	2.8	U	ug/L	2.8	11
11/3/2008 10:30	Effluent	Priority Organic Pollutants	delta-BHC	1.4	U	ug/L	1.4	5.7
11/3/2008 10:30	Effluent	Priority Organic Pollutants	2-Methyl-4,6-dinitrophenol	2.8	U	ug/L	2.8	11
11/3/2008 10:30	Effluent	Priority Organic Pollutants	4,4'-DDT	1.4	U	ug/L	1.4	5.7
11/3/2008 10:30	Effluent	Priority Organic Pollutants	Anthracene	0.94	U	ug/L	0.94	3.8
11/3/2008 10:30	Effluent	Priority Organic Pollutants	Dimethyl phthalate	9.4	U	ug/L	9.4	38
11/3/2008 10:30	Effluent	Priority Organic Pollutants	Endosulfan sulfate	1.4	U	ug/L	1.4	5.7
11/3/2008 10:30	Effluent	Priority Organic Pollutants	Endrin	1.4	U	ug/L	1.4	5.7
11/3/2008 10:30	Effluent	Priority Organic Pollutants	Hexachlorobutadiene	2.8	U	ug/L	2.8	11
11/3/2008 10:30	Effluent	Priority Organic Pollutants	Pyrene	0.94	U	ug/L	0.94	3.8
11/3/2008 10:30	Effluent	Priority Organic Pollutants	1,2,4-Trichlorobenzene	0.94	U	ug/L	0.94	3.8
11/3/2008 10:30	Effluent	Priority Organic Pollutants	4,4'-DDD	1.4	U	ug/L	1.4	5.7
11/3/2008 10:30	Effluent	Field Parameter	Specific Conductance	36950		umhos/cm		
11/3/2008 10:30	Effluent	Field Parameter	Dissolved Oxygen	1.9	mg/L			
11/3/2008 10:30	Effluent	Field Parameter	Sample Depth	0.01		m		
11/3/2008 10:30	Effluent	Field Parameter	pH	7.34				
11/3/2008 10:30	Effluent	Field Parameter	Temperature	29.11		C		
11/3/2008 10:50	Blank	Metals	Aluminum	60	U	ug/L	60	240
11/3/2008 10:50	Blank	Metals	Cadmium	0.03	U	ug/L	0.03	0.12
11/3/2008 10:50	Blank	Metals	Chromium	0.9	U	ug/L	0.9	3.6
11/3/2008 10:50	Blank	Metals	Magnesium	0.04	U	mg/L	0.04	0.16
11/3/2008 10:50	Blank	Metals	Arsenic	0.25	U	ug/L	0.25	1
11/3/2008 10:50	Blank	Metals	Iron	30	U	ug/L	30	120
11/3/2008 10:50	Blank	Metals	Calcium	0.075	U	mg/L	0.075	0.3
11/3/2008 10:50	Blank	Metals	Zinc	5	U	ug/L	5	20
11/3/2008 10:50	Blank	Metals	Copper	0.5	U	ug/L	0.5	2
11/3/2008 10:50	Blank	Metals	Lead	0.2	U	ug/L	0.2	0.8
11/3/2008 10:50	Blank	Metals	Silver	0.01	U	ug/L	0.01	0.04
11/3/2008 10:50	Blank	Metals	Nickel	0.25	U	ug/L	0.25	1
11/3/2008 10:50	Blank	Metals	Selenium	0.2	U	ug/L	0.2	0.8

Appendix E. (continued)

Date Sampled	Field ID	Analysis	Component	Results	Remark	Units	MDL	PQL
11/3/2008 10:50	Blank	Nutrients	NO2NO3-N	0.038		mg N/L	0.004	0.01
11/3/2008 10:50	Blank	Nutrients	Kjeldahl Nitrogen	0.08	U	mg N/L	0.08	0.2
11/3/2008 10:50	Blank	Nutrients	Total-P	0.02	U	mg P/L	0.02	0.06
11/3/2008 10:50	Blank	Nutrients	O-Phosphate-P	0.004	U	mg P/L	0.004	0.01
11/3/2008 10:50	Blank	Nutrients	Ammonia-N	0.01	U	mg N/L	0.01	0.02
11/3/2008 10:50	Blank	Pesticides	Malathion	0.14	U	ug/L	0.14	0.56
11/3/2008 10:50	Blank	Pesticides	Phorate	0.048	U	ug/L	0.048	0.19
11/3/2008 10:50	Blank	Pesticides	Metalaxyl	0.24	U	ug/L	0.24	0.96
11/3/2008 10:50	Blank	Pesticides	Ethion	0.048	U	ug/L	0.048	0.19
11/3/2008 10:50	Blank	Pesticides	Ametryn	0.048	U	ug/L	0.048	0.19
11/3/2008 10:50	Blank	Pesticides	Norflurazon	0.14	U	ug/L	0.14	0.56
11/3/2008 10:50	Blank	Pesticides	Atrazine	0.048	U	ug/L	0.048	0.19
11/3/2008 10:50	Blank	Pesticides	Azinphos Methyl	0.19	U	ug/L	0.19	0.76
11/3/2008 10:50	Blank	Pesticides	Metolachlor	0.48	U	ug/L	0.48	1.9
11/3/2008 10:50	Blank	Pesticides	Parathion Ethyl	0.14	U	ug/L	0.14	0.56
11/3/2008 10:50	Blank	Pesticides	Parathion Methyl	0.095	U	ug/L	0.095	0.38
11/3/2008 10:50	Blank	Pesticides	Simazine	0.048	U	ug/L	0.048	0.19
11/3/2008 10:50	Blank	Pesticides	Bromacil	0.19	U	ug/L	0.19	0.76
11/3/2008 10:50	Blank	Pesticides	Butylate	0.19	U	ug/L	0.19	0.76
11/3/2008 10:50	Blank	Pesticides	Chlorpyrifos Methyl	0.095	U	ug/L	0.095	0.38
11/3/2008 10:50	Blank	Pesticides	Ethoprop	0.095	U	ug/L	0.095	0.38
11/3/2008 10:50	Blank	Pesticides	Metribuzin	0.095	U	ug/L	0.095	0.38
11/3/2008 10:50	Blank	Pesticides	Mevinphos	0.19	U	ug/L	0.19	0.76
11/3/2008 10:50	Blank	Pesticides	Alachlor	0.57	U	ug/L	0.57	2.3
11/3/2008 10:50	Blank	Pesticides	Diazinon	0.048	U	ug/L	0.048	0.19
11/3/2008 10:50	Blank	Pesticides	Naled	0.76	U	ug/L	0.76	3
11/3/2008 10:50	Blank	Pesticides	Prometryn	0.14	U	ug/L	0.14	0.56
11/3/2008 10:50	Blank	Pesticides	Chlorpyrifos Ethyl	0.048	U	ug/L	0.048	0.19
11/3/2008 10:50	Blank	Pesticides	Fenamiphos	0.19	U	ug/L	0.19	0.76
11/3/2008 10:50	Blank	Pesticides	Fonofos	0.095	U	ug/L	0.095	0.38
11/3/2008 10:50	Blank	Pesticides	Hexazinone	0.095	U	ug/L	0.095	0.38
11/3/2008 10:50	Blank	Priority Organic Pollutants	Endosulfan sulfate	1.4	U	ug/L	1.4	5.7
11/3/2008 10:50	Blank	Priority Organic Pollutants	Indeno(1,2,3-cd)pyrene	0.95	U	ug/L	0.95	3.8
11/3/2008 10:50	Blank	Priority Organic Pollutants	Isophorone	0.95	U	ug/L	0.95	3.8

Appendix E. (continued)

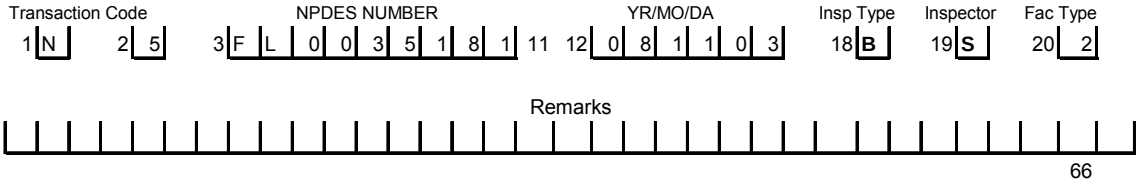
Date Sampled	Field ID	Analysis	Component	Results	Remark	Units	MDL	PQL
11/3/2008 10:50	Blank	Priority Organic Pollutants	Phenol	0.95	U	ug/L	0.95	3.8
11/3/2008 10:50	Blank	Priority Organic Pollutants	2,4,6-Trichlorophenol	0.95	U	ug/L	0.95	3.8
11/3/2008 10:50	Blank	Priority Organic Pollutants	2-Chlorophenol	0.95	U	ug/L	0.95	3.8
11/3/2008 10:50	Blank	Priority Organic Pollutants	2-Methyl-4,6-dinitrophenol	2.9	U	ug/L	2.9	11
11/3/2008 10:50	Blank	Priority Organic Pollutants	4-Chloro-3-methylphenol	0.95	U	ug/L	0.95	3.8
11/3/2008 10:50	Blank	Priority Organic Pollutants	Benzidine	95	U	ug/L	95	380
11/3/2008 10:50	Blank	Priority Organic Pollutants	Naphthalene	0.95	U	ug/L	0.95	3.8
11/3/2008 10:50	Blank	Priority Organic Pollutants	1,2,4-Trichlorobenzene	0.95	U	ug/L	0.95	3.8
11/3/2008 10:50	Blank	Priority Organic Pollutants	2,4-Dichlorophenol	0.95	U	ug/L	0.95	3.8
11/3/2008 10:50	Blank	Priority Organic Pollutants	2-Chloronaphthalene	0.95	U	ug/L	0.95	3.8
11/3/2008 10:50	Blank	Priority Organic Pollutants	Aldrin	1.4	U	ug/L	1.4	5.7
11/3/2008 10:50	Blank	Priority Organic Pollutants	Benzo(a)pyrene	0.95	U	ug/L	0.95	3.8
11/3/2008 10:50	Blank	Priority Organic Pollutants	Chrysene	0.95	U	ug/L	0.95	3.8
11/3/2008 10:50	Blank	Priority Organic Pollutants	N-Nitrosodimethylamine	1.9	U	ug/L	1.9	7.6
11/3/2008 10:50	Blank	Priority Organic Pollutants	gamma-BHC	1.4	U	ug/L	1.4	5.7
11/3/2008 10:50	Blank	Priority Organic Pollutants	4-Bromophenyl phenyl ether	0.95	U	ug/L	0.95	3.8
11/3/2008 10:50	Blank	Priority Organic Pollutants	Acenaphthene	0.95	U	ug/L	0.95	3.8
11/3/2008 10:50	Blank	Priority Organic Pollutants	Benzo(b)fluoranthene	0.95	U	ug/L	0.95	3.8
11/3/2008 10:50	Blank	Priority Organic Pollutants	Di-n-octyl phthalate	0.95	U	ug/L	0.95	3.8
11/3/2008 10:50	Blank	Priority Organic Pollutants	Fluorene	0.95	U	ug/L	0.95	3.8
11/3/2008 10:50	Blank	Priority Organic Pollutants	Heptachlor	1.4	U	ug/L	1.4	5.7
11/3/2008 10:50	Blank	Priority Organic Pollutants	Hexachlorocyclopentadiene	2.9	U	ug/L	2.9	11
11/3/2008 10:50	Blank	Priority Organic Pollutants	Phenanthrene	0.95	U	ug/L	0.95	3.8
11/3/2008 10:50	Blank	Priority Organic Pollutants	alpha-BHC	1.4	U	ug/L	1.4	5.7
11/3/2008 10:50	Blank	Priority Organic Pollutants	beta-BHC	1.4	U	ug/L	1.4	5.7
11/3/2008 10:50	Blank	Priority Organic Pollutants	2-Nitrophenol	0.95	U	ug/L	0.95	3.8
11/3/2008 10:50	Blank	Priority Organic Pollutants	Benzo(a)anthracene	0.95	U	ug/L	0.95	3.8
11/3/2008 10:50	Blank	Priority Organic Pollutants	Dibenzo(a,h)anthracene	0.95	U	ug/L	0.95	3.8
11/3/2008 10:50	Blank	Priority Organic Pollutants	Endosulfan I	3.8	U	ug/L	3.8	15
11/3/2008 10:50	Blank	Priority Organic Pollutants	Endrin	1.4	U	ug/L	1.4	5.7
11/3/2008 10:50	Blank	Priority Organic Pollutants	Hexachlorobenzene	0.95	U	ug/L	0.95	3.8
11/3/2008 10:50	Blank	Priority Organic Pollutants	Nitrobenzene	1.9	U	ug/L	1.9	7.6
11/3/2008 10:50	Blank	Priority Organic Pollutants	Pyrene	0.95	U	ug/L	0.95	3.8
11/3/2008 10:50	Blank	Priority Organic Pollutants	4,4'-DDE	1.4	U	ug/L	1.4	5.7

Appendix E. (continued)

Date Sampled	Field ID	Analysis	Component	Results	Remark	Units	MDL	PQL
11/3/2008 10:50	Blank	Priority Organic Pollutants	4,4'-DDT	1.4	U	ug/L	1.4	5.7
11/3/2008 10:50	Blank	Priority Organic Pollutants	Bis(2-ethylhexyl)phthalate	31	I	ug/L	14	57
11/3/2008 10:50	Blank	Priority Organic Pollutants	Endosulfan II	3.8	U	ug/L	3.8	15
11/3/2008 10:50	Blank	Priority Organic Pollutants	Endrin aldehyde	3.8	U	ug/L	3.8	15
11/3/2008 10:50	Blank	Priority Organic Pollutants	Fluoranthene	0.95	U	ug/L	0.95	3.8
11/3/2008 10:50	Blank	Priority Organic Pollutants	N-Nitrosodi-n-propylamine	1.9	U	ug/L	1.9	7.6
11/3/2008 10:50	Blank	Priority Organic Pollutants	2,4-Dinitrophenol	14	U	ug/L	14	57
11/3/2008 10:50	Blank	Priority Organic Pollutants	2,4-Dinitrotoluene	0.95	U	ug/L	0.95	3.8
11/3/2008 10:50	Blank	Priority Organic Pollutants	Anthracene	0.95	U	ug/L	0.95	3.8
11/3/2008 10:50	Blank	Priority Organic Pollutants	Di-n-butyl phthalate	4.8	U	ug/L	4.8	19
11/3/2008 10:50	Blank	Priority Organic Pollutants	Dimethyl phthalate	9.5	U	ug/L	9.5	38
11/3/2008 10:50	Blank	Priority Organic Pollutants	Hexachloroethane	2.9	U	ug/L	2.9	11
11/3/2008 10:50	Blank	Priority Organic Pollutants	2,4-Dimethylphenol	9.5	U	ug/L	9.5	38
11/3/2008 10:50	Blank	Priority Organic Pollutants	4,4'-DDD	1.4	U	ug/L	1.4	5.7
11/3/2008 10:50	Blank	Priority Organic Pollutants	4-Chlorophenyl phenyl ether	1.9	U	ug/L	1.9	7.6
11/3/2008 10:50	Blank	Priority Organic Pollutants	4-Nitrophenol	14	U	ug/L	14	57
11/3/2008 10:50	Blank	Priority Organic Pollutants	Benzo(k)fluoranthene	0.95	U	ug/L	0.95	3.8
11/3/2008 10:50	Blank	Priority Organic Pollutants	Bis(2-chloroethoxy)methane	0.95	U	ug/L	0.95	3.8
11/3/2008 10:50	Blank	Priority Organic Pollutants	Bis(2-chloroethyl)ether	0.95	U	ug/L	0.95	3.8
11/3/2008 10:50	Blank	Priority Organic Pollutants	Bis(2-chloroisopropyl)ether	2.9	U	ug/L	2.9	11
11/3/2008 10:50	Blank	Priority Organic Pollutants	Diethyl phthalate	0.95	U	ug/L	0.95	3.8
11/3/2008 10:50	Blank	Priority Organic Pollutants	Heptachlor epoxide	1.4	U	ug/L	1.4	5.7
11/3/2008 10:50	Blank	Priority Organic Pollutants	Hexachlorobutadiene	2.9	U	ug/L	2.9	11
11/3/2008 10:50	Blank	Priority Organic Pollutants	Pentachlorophenol	2.9	U	ug/L	2.9	11
11/3/2008 10:50	Blank	Priority Organic Pollutants	delta-BHC	1.4	U	ug/L	1.4	5.7
11/3/2008 10:50	Blank	Priority Organic Pollutants	2,6-Dinitrotoluene	0.95	U	ug/L	0.95	3.8
11/3/2008 10:50	Blank	Priority Organic Pollutants	3,3'-Dichlorobenzidine	38	UJ	ug/L	38	150
11/3/2008 10:50	Blank	Priority Organic Pollutants	Acenaphthylene	0.95	U	ug/L	0.95	3.8
11/3/2008 10:50	Blank	Priority Organic Pollutants	Benzo(g,h,i)perylene	0.95	U	ug/L	0.95	3.8
11/3/2008 10:50	Blank	Priority Organic Pollutants	Butyl benzyl phthalate	4.8	U	ug/L	4.8	19
11/3/2008 10:50	Blank	Priority Organic Pollutants	Dieldrin	1.4	U	ug/L	1.4	5.7

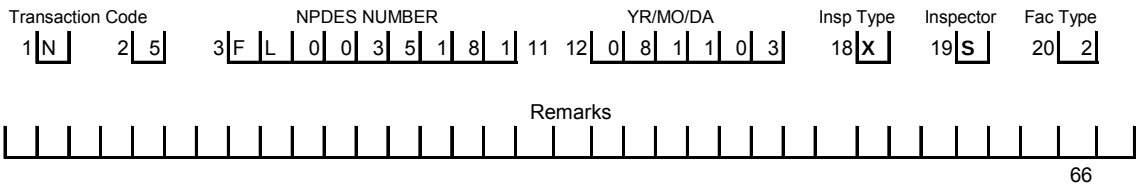
The Bioassay of the Whitehall Condominium Association, Inc., effluent sampled on November 3, 2008. NPDES #FL0035181.

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



The Priority Pollutants Analysis of the Whitehall Condominium Association, Inc., effluent sampled on November 3, 2008. NPDES #FL0035181.

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



Biological Analyses of the Whitehall Condominium Association, Inc., effluent sampled on November 3, 2008. NPDES #FL0035181.

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

