

Bioassays of

Flagler Beach Wastewater Treatment Facility

Flagler County

NPDES #FL0026611

Sampled May 8, 2006

July 2006

Biology Section
Bureau of Laboratories
Division of Resource Assessment and Management

Quality Manual No. 870346G
NELAC Certification No. E31780

Flagler Beach Wastewater Treatment Facility, 2000 Avenue A, Flagler Beach, Flagler County, Florida, NPDES #FL0026611. Effluent samples for this facility were collected on May 8, 2006.

Introduction

The Flagler Beach Wastewater Treatment Facility (WWTF) is a domestic wastewater treatment facility. The facility has a design flow of 1.0 million gallons per day (MGD). The annual average daily flow (AADF) from May 2005 through April 2006 was 0.586 MGD. The facility consists of an influent structure with a manually cleaned bar screen, an 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 into the Class III marine waters of the Intracoastal Waterway. Outfall D-001 is approximately 9.1 m (30 feet) in length and discharges at a depth of approximately 1.2 m (4 feet). D-001 is located approximately at latitude 29º 28' 20" N and longitude 81º 08' 33" W.

The facility has no Administrative Orders (AO) or Consent Orders (CO). The facility has no mixing zones. During the past year, there have been no permit violations or upsets reported on the facility's Discharge Monitoring Report(s). The facility's effluent has been acutely toxic to the species *Americamysis bahia* in routine bioassays. In an effort to determine the cause of toxicity, the facility has recently begun internal inspections as part of a toxicity reduction evaluation (TRE) and is measuring effluent constituents in preparation of initiating major seawater ion-imbalance testing (MSIIT). The facility has identified ammonia as a possible source of toxicity within the effluent. The apparent salinity of the effluent has been attributed to saltwater infiltration and intrusion into the wastewater collection system. (Facility information provided by Joseph Emery and Kimberly Pearce of FDEP Northeast District.)

Methods

Samples were collected from the EFD-1 NPDES sampling point for Outfall D-001 by Tom Kallemeyn (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. All internal DEP SOPs are available on the web at: http://www.floridadep.org/labs/cgi-bin/sop/biosop.asp.

In accordance with permit conditions, the effluent salinity was adjusted from an apparent salinity of 3.5 parts per thousand (ppth) to 11.5 ppth for the *Americamysis bahia* test with artificial seasalts. The salinity of the aliquot used for the *Menidia beryllina* bioassay was not adjusted.

The AGP test was salinity adjusted to meet the minimum salinity requirements of the test species.

Toxicity Test Results

Tests were performed May 9 - 13, 2006.

Americamysis bahia 96-hour acute screening bioassay –	LC_{50} < 100%, 100% mortality in 100% sample at 48 hours
Menidia beryllina 96-hour acute screening bioassay –	LC_{50} > 100%, 0% mortality in 100% sample at 96 hours

The bioassay sample was acutely toxic to the *Americamysis bahia* test organisms but was not toxic to the *Menidia beryllina* test organisms.

The unionized ammonia concentration in the sample exceeded concentrations reported to have produced mortality in *Americamysis bahia* (Miller et al., 1990) (USEPA ECOTOX Database, 2006).

The chemistry results confirmed that the major seawater-ion makeup of the sample, with the exception of calcium, was in seawater proportions and reflected the effluent salinity of 3.5 ppth. The effluent calcium (109 mg/L) at 3.5 ppth salinity (salinity based on conductivity and temperature) is approximately 2.6 times (2.6X) the normal concentration for calcium in seawater of this salinity. The calculated calcium concentration in the salinity-adjusted sample (203 mg/L), as tested with *A. bahia,* was approximately 1.5 times (1.5X) the normal calcium concentration in seawater of this salinity (approximately 11.5 ppth). Previous research conducted by the FDEP Biology Section demonstrated that *A. bahia* is much more sensitive to seawater-ion imbalances than is *M. beryllina* (FDEP, 1995). The reason for the elevated calcium concentration was not determined.

The effluent toxicity is partially attributable to both the effluent's unionized ammonia concentration and elevated calcium concentration. Unidentified constituents in the sample cannot be ruled out as contributing to the observed mortality.

See Appendix B for bioassay bench sheets. See Appendix C for results of the last 20 standard reference toxicant (SRT) tests and 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

An AGP sample was not submitted for this analysis. Analytical chemistry suggests that the effluent is phosphorus-limited.

Chemistry Results

Total residual chlorine was not detected in the effluent in the field nor in the bioassay sample in the laboratory. The effluent total ammonia detected in the bioassay sample was 10.1 mg/L. The total ammonia concentration in the sample collected and preserved for chemical analysis was 9.2 mg/L. Based on the pH, salinity, and temperature of the effluent as collected, the calculated unionized ammonia concentration was 0.036 mg/L.

Aluminum, iron, and zinc were detected in the effluent at levels that comply with Class III marine water quality criteria. Copper and lead were detected between the laboratory method detection limits (MDL) and practical quantitation limits (PQL). Atrazine, 1,4-dichlorobenzene, chlorpyrifos ethyl, and chloroform were detected between the laboratory method detection limits (MDL) and practical quantitation limits (PQL). Bromodichloromethane, bromoform, and dibromchloromethane were also detected in the effluent at levels that comply with Class III marine water quality criteria.

The effluent's bromide, chloride, fluoride, magnesium, potassium, sodium, and sulfate were present in concentrations reflective of the apparent sample salinity of 3.5 ppth. The effluent calcium concentration was approximated 2.6 times the expected calcium concentration for seawater of that salinity.

See Table 1 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 sample collected from the NPDES sampling point for Outfall D-001for this facility on May 8, 2006, was acutely toxic to the *Americamysis bahia* test species, but was not acutely toxic to the *Menidia beryllina* test organisms during the 96-hour acute screen bioassays. The toxicity was attributed in part to the effluent unionized ammonia and calcium. Other unidentified sources of toxicity cannot be ruled out. Effluent water quality samples did not exceed any applicable water quality standards or violate any permit conditions.

Literature Cited

Miller, D.C., S. Poucher, J.A. Cardin, and D. Hansen. 1990. The Acute and Chronic Toxicity of Ammonia to Marine Fish and Invertebrates. *Archives of Environmental Contamination and Toxicology* 19: 40-48.

FDEP. 1995. Protocols for determining Major-Seawater-Ion Toxicity in Membrane-Technology Water-Treatment Concentrate. Biology and Chemistry Section, FDEP Bureau of Laboratories, Tallahassee, Florida. 99 pp.

Table 1. Effluent limits, Class III Marine Criteria and chemical and microbiological data for samples collected from Flagler Beach Wastewater Treatment Facility on May 8, 2006.

Flagler Beach WWTF NPDES# FL0026611	Class III Marine Stds	Effluent Limits	Effluent Samples
Organic Constituents (µg/L)			
1,4-Dichlorobenzene	-	-	0.25 I
Atrazine	-	-	0.11 I
Chlorpyrifos Ethyl	-	-	0.067 I
Bromodichloromethane	≤ 22	-	1.1
Bromoform	≤ 360	-	2.2
Chloroform	≤ 470.8	-	0.53 I
Dibromochloromethane	≤ 34	-	1.9
Metals (µg/L unless otherwise noted)			
Aluminum	≤ 1,500	-	259
Arsenic	≤ 50	-	1 U
Cadmium	≤ 9.3	-	0.1 U
Calcium (mg/L)	-	-	108
Chromium-III	-	-	2 U
Copper	≤ 3.7	-	0.81 I
Iron	≤ 300	-	90
Lead	≤ 8.5	-	0.27 I
Magnesium (mg/L)	-	-	129
Nickel	≤ 8.3	-	1 U
Potassium	-	-	40.8
Selenium	≤ 71	-	1 U
Silver	≤ 2.3	-	0.05 U
Sodium	-	-	988
Zinc	≤ 86	-	22
Nutrients (mg/L)			
Ortho-phosphate	-	Report	0.019
Total Phosphorus	-	Report	0.15 A
Ammonia	-	Report	9.2
Unionized Ammonia	-	-	0.04 c
Nitrate+Nitrite	-	Report	0.043
Total Kjeldahl Nitrogen	-	Report	10 A
Organic Nitrogen	-	Report	0.8 c
Total Nitrogen	-	Report	10.04 c
General Physical and Chemical Parameters			
Dissolved Oxygen (mg/L)	≥ 4	-	6.2
CBOD (mg/L)	-	≤ 60 s	-
pH (S.U.)	6.5-8.5	-	6.8
Temperature (C)	-	-	24.8
Field Specific Conductance (umhos/cm)	-	-	6,750
Total suspended solids (mg/L)	-	≤ 60 s	-
Oil and Grease (mg/L)	≤ 5	-	1.7 UJ
Total residual chlorine (mg/L)	≤ 0.01	≤ 0.01	0.02 U*
Flow (MGD)	-	≤ 1.0 a	0.586 a
Alkalinity	≥ 20	-	109 A
Hardness (mg/L)	-	-	800.9 c
Bromide (mg/L)	-	-	6.1 A
Chloride (mg/L)	-	Report	1,900 A
Cyanide (mg/L)	≤ 1.0	-	0.005 UJ
Fluoride (mg/L)	≤ 5	-	0.15 A
Sulfate (mg/L)	-	-	320 A
Microbiology (# counts/100ml)			
Fecal Coliforms-Membrane Filter	≤ 800 s	≤ 800 s	-

Value exceeds the Class III Marine Water Quality Criteria (62-302, F.A.C.) and/or Effluent Limits

a - Annual average

c - Calculated value

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 minimum detection limit

* - Value reported is field measurement

Florida Department of Environmental Protection

Central Laboratory Sample Submittal Form

Event ID *

Request Number: RQ-2006-05-08-37
Flagler Beach WWTP

Customer: NE-DIST

Project ID: FYI3

PMAS: 1143

Requester: Shannan Bogdanov

Collected By: Tom Kallemeyn

Sampling Agency: NED DEP

Field Report Prepared By: Tom Kallemeyn

Send Final Report To: Melissa Long

Lab ID *	Location	Comp / Grab	Collection (begin) Date Time Eastern Central	Collection (end) Date Time Eastern Central	Bottle Group(s)**
	Flagler WWTP final Effluent	☐ Comp ☒ Grab	Date 5/5/06 Time 0.0 (Eastern) Central	Date Time Eastern Central	A
	Field ID	Tot Res Chlorine (mg/L)	Diss Oxygen (mg/L)	Storet Station Number	
			6.15		
	Matrix (Include type e.g. Salt, Fresh, etc) Temp (C) pH	Sample Depth ☒ m ☐ ft	☐ Salinity (PPTh) ☒ Sp Conductance (umho/cm)	NPDES Number	
	24.80 6.77	0.2	6750		
	Latitude o ' " Longitude o ' "	Comments			
		After Rechlor 0.02 mg/L Chlorine reading			

Lab ID *	Location	Comp / Grab	Collection (begin) Date Time Eastern Central	Collection (end) Date Time Eastern Central	Bottle Group(s)**
	Equipment Blank	☐ Comp ☒ Grab	Date 5/3/06 Time 1030 (Eastern) Central	Date Time Eastern Central	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	
	OI 22.6 6.4	2			
	Latitude o ' " Longitude o ' "	Comments			

Lab ID *	Location	Comp / Grab	Collection (begin) Date Time Eastern Central	Collection (end) Date Time Eastern Central	Bottle Group(s)**
		☐ Comp ☐ Grab	Date Time Eastern Central	Date Time Eastern Central	
	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) Date Time Eastern Central	Collection (end) Date Time Eastern Central	Bottle Group(s)**
		☐ Comp ☐ Grab	Date Time Eastern Central	Date Time Eastern Central	
	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			
		2 Discharge rcvd James Daniels F.D. 1045 5.9.06			

Relinquished By:	Date/Time	Shipping Method:	Received By:	Date/Time	Relinquished By:	Date/Time	Received By:	Date/Time
Kallemeyn	5/9/06 1500	FHC	Tom E	5/9/06 8:50				

* Shaded Areas for Lab use only.

** Please see reverse side for Bottle Group information.

last revised October 1, 2003

FDEP Biology Section - Acute Screen Bioassay Bench Sheets

Facility: Flagler Beach WWTF

Address: 2000 Avenue A

City: Flagler Beach County: Flagler

Contact/District: Tom Kallemeyn / Northeast District

NPDES Permit #: FL 0026611

LIMS Job #: TLH-2006-05-0948 LIMS Sample #: 920794

Lims Data Entry: 5-15-06 MF Data Entry Verification: 5-15-06 MF

Sample Collection: Date: 5-8-06 Time: 1000

Hold Time Start: Date: 5-8-06 Time: 1000

Comments: Sample Salinity adjusted from 3.5 ppth (parts per thousand) to 11.5 ppth with artificial sea salts for the A. bahia test. Sample Salinity not adjusted for menidia test. Salt control prepared by diluting ASW (20ppth) to 3.5ppth then salinity with Artificial Sea salts to 11.5ppth, M.F. 5-5-06 Well water used to dilute the ASW - MF 5-15-06

Americamysis bahia Test terminated at 48 hours due to 100% mortality in the sample MF 5-15-06

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: 3.5 Final Salinity: 11.5 (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)

Temperature Range °C	A. bahia (5.406-5.11.06)
Incubator # 2 Range	24.3-26.8
Room B246	24.0-25.1
Waterbath	N/A

Investigators' Signatures

Sarah Pritchard

Jane Tiong

Brad Archer

Erin Berg

Marshall Faircloth

Nicole Millhollon

REVIEWER

Water Quality Parameters	20% DMW	Moderately Hard Water/ Well Water	Salt Water (ASW) NSW Test 1	Salt Water (ASW) NSW Test 2	Other: Salt CTRL Test	Original Sample	Method	Measured by	Verified by
Field Total Residual Cl2 (mg/L)	N/A	N/A	N/A	N/A	N/A	0.02	unknown	T. Kallemeyn	BP
Lab Total Residual Cl2 (mg/L)			<0.03	<0.03	<0.03	<0.03	HACH	BP	BA
Alkalinity (mg/L as $CaCO_3$)			164	152	176	129	HACH	Gw	BP
Hardness (mg/L as $CaCO_3$)			–	–	–	–	HACH	–	BP
Total Ammonia (mg/L as N)			<0.034	<0.017	<0.034	10.1	DENVER	MF	BP
Salinity (ppth)			11.5	3.5	11.5	3.5	YSI / Metller	BA/JO	BP

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[redacted]

Appendix B. (continued)

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FDEP Biology Section - Bioassay Survival Sheet

LIMS Sample #: 920794 Test #: 1 Test Started: Date 5-9-06 Time: 11:30
Organism: A.bahia SOP #: TA 07_03 Test Ended: Date 5-11-06 Time: 12:30
Organism Batch: 15-06 Diluent/ Batch: ASW / 9-06
Organism Age: 4days Food: YCT P. subcapitata Artemia
Chamber Size: 1000 mL Batch: – – GSL-536-90
Test Volume: 500 mL Feeding: (Prior to test) (Prior to renewal) (Daily)

Concentration	Replicate	Chamber #	Test Hour 0 hr	24 hr	48 hr BR	48 hr AR	72 hr	96 hr
CTRL	A	D9	5	5	5			
	B	D10	5	5	5			
	C	D11	5	5	5			
	D	D12	5	5	5			
Salt CTRL	A	D13	5	5	5			
	B	D14	5	5	5			
	C	D15	5	5	5			
	D	D16	5	5	5			
100%	A	D17	5	4 1D	0 4D			
	B	D18	5	4 1D	0 4D			
	C	D19	5	4 1D	0 4D			
	D	D20	5	3 2D	0 3D			
Organisms loaded by: JD		Checked by: [redacted]		BA	3P			
Loading Verified by: BA								

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

Comments: Test terminated at 48 hours due to 100% mortality in the salinity adjusted 100% sample test concentration MF 5-15-06

Test Results:
% mortality in 100% sample: 100%
LC_{50}: <100% If Calculated: 95% CI _____ Method: _____

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

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Appendix B. (continued)

FDEP Biology Section - Bioassay Survival Sheet

LIMS Sample #: 920794
Organism: M. beryllina
Organism Batch: 16-06
Organism Age: 11 days
Chamber Size: 1000 mL
Test Volume: 500 mL

Test #: 2
SOP #: TA 07_04
Diluent/ Batch: ASW 1 9-06
Food: YCT | P. subcapitata | Artemia
Batch: – | – | GSL 536-9C
Feeding: (Prior to test) (Prior to renewal) - Daily

Test Started: Date 5-9-06 Time: 11:45
Test Ended: Date 5-13-06 Time: 08:15

Concentration	Replicate	Chamber #	Test Hour: 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
Organisms loaded by: JD		Checked by:	[redacted]	BA	SP	JD	JD	MF

Loading Verified by: BA

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

Comments:

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

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

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FDEP Biology Section - Bioassay Parameter Sheet

LIMS Sample # : 920794 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~~ SP		
pH (S.U.)	8.2	8.1	8.0 SP			
Temperature °C	24.1	24.3	25.9			
Dissolved Oxygen mg/L	7.3	7.5	5.4			
Conductivity µmhos (mmhos)	18.9	19.63	19.9			
(initials) Measured by:	JD	BA	SP			
(initials) Recorded by:	JD	BA	SP			

Comments: all Americamysis bahia test organisms were dead in the 100% sample (salinity adjusted) at 48 hours MF 5-16-06

Concentration Salt CTRL	0 Hr.	24 Hr.	48 Hr. before renewal	48 Hr. after renewal	72 Hr.	96 Hr.
Replicate	A	B	C	~~C~~ SP		
pH (S.U.)	8.4	8.2	8.1			
Temperature °C	24.3	24.3	24.6			
Dissolved Oxygen mg/L	7.4	7.2	5.6			
Conductivity µmhos (mmhos)	19.3	19.66	20.3			
(initials) Measured by:	JD	BA	SP			
(initials) Recorded by:	JD	BA	SP			

Comments:

Concentration 100%	0 Hr.	24 Hr.	48 Hr. before renewal	48 Hr. after renewal	72 Hr.	96 Hr.
Replicate	A	B	C	~~C~~ SP		
pH (S.U.)	7.8	8.0	8.0			
Temperature °C	25.1	24.3	24.9			
Dissolved Oxygen mg/L	7.5	7.0	5.6			
Conductivity µmhos (mmhos)	19.6	20.1	20.0			
(initials) Measured by:	JD	BA	SP			
(initials) Recorded by:	JD	BA	SP			

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 Section - Bioassay Parameter Sheet

LIMS Sample # : 920794 Test #: 2 of 2

TEST SOP #: TA07_ OH 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	8.1	8.2	8.0	8.0	8.1
Temperature °C	24.3	24.6	25.3	25.1	25.1	24.1
Dissolved Oxygen mg/L	7.8	6.8	6.8	7.5	6.5	6.7
Conductivity µmhos (mmhos)	6.4	6.71	6.91	6.53	6.67	6.71
(initials) Measured by:	JD	BA	SF	BA	SF	MF
(initials) Recorded by:	JD	BA	SF	BA	SF	MF

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	7.9	8.0	7.3	7.8	7.9
Temperature °C	25.0	24.4	25.7	25.2	26.0	24.4
Dissolved Oxygen mg/L	7.6	6.9	6.5	7.6	5.9	6.5
Conductivity µmhos (mmhos)	6.4	7.21	7.40	6.89	7.02	7.21
(initials) Measured by:	JD	BA	SF	BA	SF	MF
(initials) Recorded by:	JD	BA	SF	BA	SF	MF

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

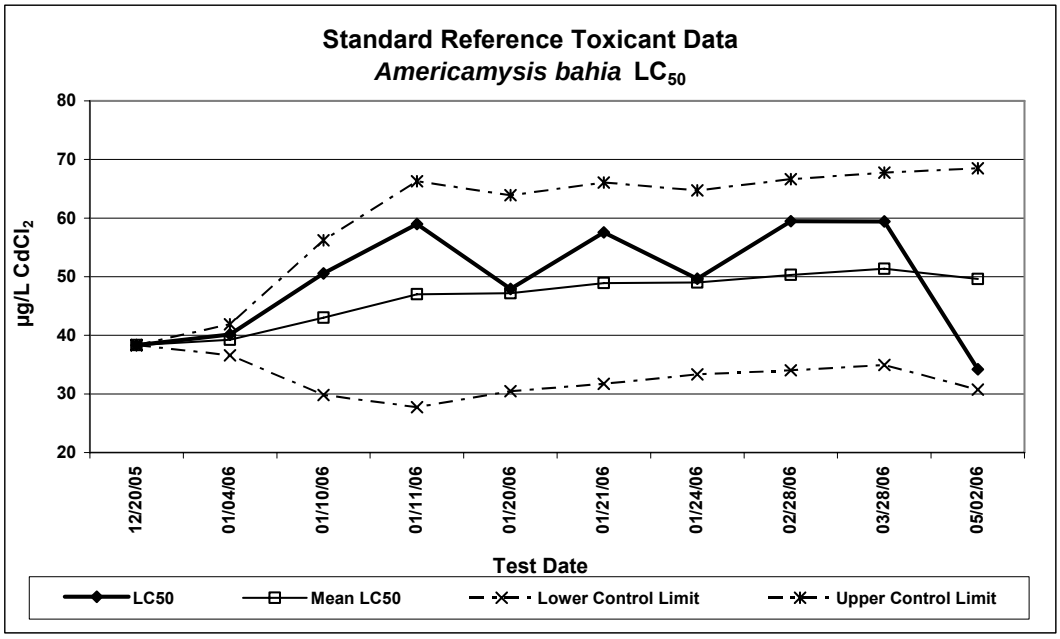
Florida Department of Environmental Protection
Bureau of Laboratories

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

Date	LC50	Mean LC50	Std Dev	Lower Control Limit	Upper Control Limit
12/20/05	38.30	38.30	-	38.30	38.30
01/04/06	40.16	39.23	1.32	36.60	41.86
01/10/06	50.55	43.00	6.60	29.80	56.21
01/11/06	58.98	47.00	9.64	27.72	66.27
01/20/06	47.91	47.18	8.36	30.47	63.89
01/21/06	57.54	48.91	8.59	31.73	66.08
01/24/06	49.65	49.01	7.84	33.32	64.70
02/28/06	59.46	50.32	8.15	34.02	66.61
03/28/06	59.42	51.33	8.20	34.92	67.74
05/02/06	34.19	49.62	9.44	30.73	68.50

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

CV = 19.03
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)

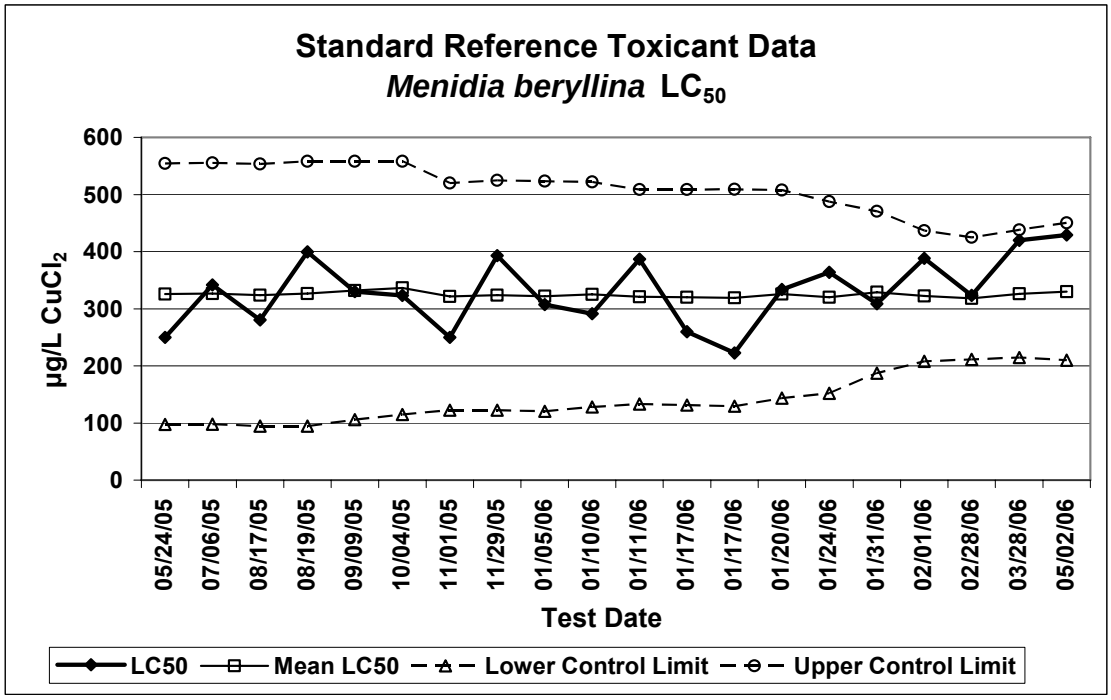
Florida Department of Environmental Protection
Bureau of Laboratories

Standard Reference Toxicant (SRT) Test Data - 48-hour Acute Toxicity
Menidia beryllina (inland silverside) - Copper Chloride ($CuCl_2$)

Date	LC50	Mean LC50	Std Dev	Lower Control Limit	Upper Control Limit
05/24/05	250.00	325.88	114.28	97.32	554.44
07/06/05	341.51	326.46	114.33	97.80	555.12
08/17/05	280.62	324.00	114.78	94.43	553.56
08/19/05	399.46	326.40	115.88	94.63	558.16
09/09/05	329.88	331.94	113.09	105.75	558.13
10/04/05	323.49	336.45	110.73	115.00	557.90
11/01/05	250.00	321.21	99.50	122.21	520.21
11/29/05	392.98	323.59	100.67	122.25	524.94
01/05/06	307.20	321.88	100.64	120.60	523.16
01/10/06	291.06	325.02	98.52	127.97	522.07
01/11/06	386.80	320.91	93.81	133.29	508.53
01/17/06	259.80	319.91	94.38	131.15	508.67
01/17/06	222.49	319.26	95.03	129.21	509.32
01/20/06	333.67	325.74	91.10	143.54	507.94
01/24/06	363.93	319.79	83.89	152.01	487.57
01/31/06	308.77	328.86	70.76	187.34	470.39
02/01/06	388.25	322.40	57.22	207.96	436.83
02/28/06	323.38	318.11	53.47	211.18	425.04
03/28/06	419.55	326.32	55.87	214.58	438.07
05/02/06	429.19	330.10	60.20	209.69	450.51

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

CV = 18.24
EPA reference 75th quartile CV = 21%



Appendix C. (continued)

[redacted]

FDEP Biology Section - Acute SRT Bench Sheet

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

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

Diluent/ Batch#: ASW / ~~8-06~~ BA
Toxicant/ Batch# $CdCl_2$ / 4-06

Test Beginning: Date: 5-2-06 Time: 1235
Test Ending: Date: 5-6-06 Time: 0810

Water Quality Parameters:	Diluent	Method	Initials
Total Residual Cl_2 (mg/L):	<0.03	Hach	SP
Alkalinity (mg/L as $CaCO_3$):	216	Hach	CW
Hardness (mg/L as CaCO3):	–	Hach	–
Total Ammonia (mg/L as N):	<0.034	Denver	mc
Salinity (ppth):	21.01	Mettler	BA

Organism Batch #/ Age: 14-06 / 3days
Feeding: ~~Prior to test~~ ~~Prior to renewal~~ Daily
Food: YCT *P.subcapitata* Artemia
Food Batch: – – GSL 536-76
Chamber size: 1000 mL
Test volume: 500 mL per replicate

Conc. (µg?) g/L	Rep.	Chamber#	Number Live 0 hr ~~48 hr~~	24 hr ~~72 hr~~	48 hr ~~96 hr~~	pH (SU) 0 hr ~~48 hr~~	24 hr ~~72 hr~~	48 hr ~~96 hr~~	Temperature (° C) 0 hr ~~48 hr~~	24 hr ~~72 hr~~	48 hr ~~96 hr~~	D.O. (mg/l) 0 hr ~~48 hr~~	24 hr ~~72 hr~~	48 hr ~~96 hr~~	UNCORRECTED Cond. (~~mmhos/cm~~) Cond. (µmhos/cm) 0 hr ~~48 hr~~	24 hr ~~72 hr~~	48 hr ~~96 hr~~
Control	A	B1	5	5	5	8.4			24.0		~~24.0~~	6.5			33.3		~~34.6~~
	B	B2	5	5	5		8.3			24.6			5.4			34.2	BA
	C	B3	5	5	5			8.1			24.0			6.2			34.1
	D	B4	5	4[10]	4												
20	A	B5	5	5	5	8.4			24.0		~~24.0~~	6.5			33.6		~~34.5~~
	B	B6	5	5	5		8.3			25.0			5.5			33.9	
	C	B7	5	5	4[0]			8.1			24.0			5.1			34.5
	D	B8	5	5	4[0]												
30	A	B9	5	4[10]	3[10]	8.4			24.1		~~24.2~~	6.6			33.7		~~34.8~~
	B	B10	5	5	4[10]		8.3			25.1			5.6			34.1	BA
	C	B11	5	5	2[10]			8.1			24.2			4.9			34.8
	D	B12	5	5	4[10]												
45	A	B13	5	4[10]	0[40]	8.4			24.2			6.3			33.7		
	B	B14	5	5	1[40]		8.3			25.4			5.6			34.3	
	C	B15	5	5	1[40]			8.1			24.2			4.9			33.9
	D	B16	5	5	1[40]												
67	A	B17	5	4[10]	0[40]	8.4			24.3			6.6			33.8		BA
	B	B18	5	4[10]	0[40]		8.3			25.1			5.5			34.1	~~5~~
	C	B19	5	5	1[40]			8.2			24.8			5.3			33.8
	D	B20	5	2[30]	0[30]												
100	A	B21	5	1[40]	0[10]	8.4			24.3			6.5			33.7		
	B	B22	5	1[40]	0[10]		8.3			25.4			5.6			35.2	
	C	B23	5	0[30]	–			8.2			25.3			5.3			35.6
	D	B24	5	2[30]	1[10]												
	A																
	B																
	C																
	D																
Loaded / measured by:			JJ	JJ	JJ	BA	BA	BA	BA	JJ	BA	BA	BA	BA	BA	BA	BA
Recorded by:			SP	JJ	JJ	BA	BA	BA	BA	JJ	BA	BA	BA	BA	BA	BA	BA

Investigators' Signatures
Jodie Daniels
Rachel Pritchard
Eric Mix
Marshall Faircloth
Brian Anthon
Tiffany Willerton
REVIEWER

Concentrations prepared by: BA/JJ
Loading verified by: SP
Light Intensity: 50-100 Ft. candles
Photoperiod: 16 hours Light / 8 hours dark
Temperature Range °C:
Incubator # 2 min. 25.1 max. 26.9 mean 26.2
Incubator # ___ min. ___ max. ___ mean ___
Room B246 min. 24.2 max. 25.1 mean 24.5

Remarks:

Statistical Results: Method: Spearman-Karber
(48) 96 hour LC50: 34.19
95% Confidence Interval: lower 30.22 upper 38.68

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Appendix C. (continued)

FDEP Biology Section - Acute SRT Bench Sheet

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

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

Diluent/ Batch#: ASW / 8-06
Toxicant/ Batch# CdCl2 / 4-06

Test Beginning: Date: 5-2-06 Time: 1235
Test Ending: Date: 5-6-06 Time: 0810

Water Quality Parameters:	Diluent	Method	Initials
Total Residual Cl_2 (mg/L):	<0.03	Hach	SP
Alkalinity (mg/L as $CaCO_3$):	216	Hach	SW
Hardness (mg/L as CaCO3):	—	Hach	—
Total Ammonia (mg/L as N):	<0.034	Denver	MF
Salinity (ppth):	21	Mettler	BA

Organism Batch #/ Age: 14-06 / 3 days
Feeding: ~~Prior to test~~ / Prior to renewal / Daily
Food: YCT P.subcapitata Artemia
Food Batch: — — GSL536 90
Chamber size: 1000 mL
Test volume: 500 mL per replicate

Conc. (ug/L) g/L	Rep.	Chamber#	Number Live 0 hr / 48 hr	24 hr / 72 hr	48 hr / 96 hr	pH (SU) 0 hr / 48 hr	24 hr / 72 hr	48 hr / 96 hr	Temperature (° C) 0 hr / 48 hr	24 hr / 72 hr	48 hr / 96 hr	D.O. (mg/l) 0 hr / 48 hr	24 hr / 72 hr	48 hr / 96 hr	UNCORRECTED Cond. (mmhos/cm) 0 hr / 48 hr	Cond. (µmhom/cm) 24 hr / 72 hr	48 hr / 96 hr
Control	A	B 1	5	5	5	8.2		8.1	24.1		25.0	6.0		5.4	335		350
	B	B 2	5	5	5		8.1			24.9			5.3			33.3	
	C	B 3	5	5	5												
	D	B 4	4	4	4												
20	A	B 5	5	5	5	8.3		8.1	24.3		25.1	6.0		5.4	33.3		35.1
	B	B 6	5	4[10]	4		8.2			25.4			5.5			34.0	
	C	B 7	4	4	4												
	D	B 8	4	4	4												
30	A	B 9	3	3	3	8.3		8.1	24.3		25.8	6.0		5.2	335		347
	B	B 10	"	4	4		8.2			25.7			5.2			35.3	
	C	B 11	2	2	2												
	D	B 12	4	2[10]	2						MF (wrong Plate)						
45	A	B 13	0	—	—	8.3		8.2	24.3		~~24.7~~	6.1		5.4	333		338
	B	B 14	1	0[10]	—		8.2			25.7	↓		5.2			33.9	
	C	B 15	1	0[10]	—												
	D	B 16	1	1	0[10]			8.2			24.7			5.4			338
67	A	B 17	—	—	—	8.3			24.3			6.2			~~24.3~~ 33.1		
	B	B 18	—	—	—		8.2			25.6			5.4			33.4	
	C	B 19	1	0[10]	—			-			—			-			—
	D	B 20	—	—	—												
100	A	B 21	—	—	—	8.3			24.3			6.3			33.6		
	B	B 22	—	—	—		8.2			25.1			5.7			33.6	
	C	B 23	—	—	—												
	D	B 24	1	0[10]	~~0[10]~~	MF wrong Plate -					—			-		4 ~~3~~ 2	~~2~~ 3
	A																
	B																
	C																
	D																
Loaded / measured by:			JD	JD	MF	BA	SP	MF	BA	SP	MF	BA	SP	MF	BA	SP	MF
Recorded by:			JD	JD	MF	BA	SP	MF	BA	SP	MF	BA	SP	MF	BA	SP	MF

Investigators' Signatures
Jonas Diana
Talal Pitchford
MF
Marshall Brown
Brent Bowden
Tizoc Walterhouse
REVIEWER

Concentrations prepared by: JD
Loading verified by: SP
Light Intensity: 50-100 Ft. candles
Photoperiod: 16 hours Light / 8 hours dark
Temperature Range °C:
Incubator # 2 min. 25.1 max. 26.9 mean 26.2
Incubator # ___ min. ___ max. ___ mean ___
Room B246 min. 24.2 max. 25.1 mean 24.5

Remarks: 48 and 72 hr parameters should be in slots C-D respectively BA

Statistical Results: Method: Spearman-Karber
48 (96) hour LC50: 30.56
95% Confidence Interval: lower 27.18 upper 34.35

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Appendix C. (continued)

FDEP Biology Section - Acute SRT Bench Sheet

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

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

Diluent/ Batch#: ASW / 8-06
Toxicant/ Batch# $CuCl_2$ / 4-06

Test Beginning: Date: 5-2-06 Time: 14:00
Test Ending: Date: 5-6-06 Time: 0810

Water Quality Parameters:	Diluent	Method	Initials
Total Residual Cl_2 (mg/L):	<0.03	Hach	SP
Alkalinity (mg/L as $CaCO_3$):	216	Hach	GW
Hardness (mg/L as CaCO3):	–	Hach	–
Total Ammonia (mg/L as N):	<0.034	Denver	MF
Salinity (ppth):	21.01	Mettler	BA

Organism Batch #/ Age: 5-06 / 10 days
Feeding: Prior to test / Prior to renewal / Daily
Food: YCT P.*subcapitata* Artemia
Food Batch: – – GSL 536-90
Chamber size: 1000 mL
Test volume: 500 mL per replicate

Conc. ‰	Rep.	Chamber#	Number Live 0 hr (48 hr)	Number Live 24 hr (72 hr)	Number Live 48 hr (96 hr)	pH (SU) 0 hr (48 hr)	pH (SU) 24 hr (72 hr)	pH (SU) 48 hr (96 hr)	Temperature (° C) 0 hr (48 hr)	Temperature (° C) 24 hr (72 hr)	Temperature (° C) 48 hr (96 hr)	D.O. (mg/l) 0 hr (48 hr)	D.O. (mg/l) 24 hr (72 hr)	D.O. (mg/l) 48 hr (96 hr)	UNCORRECTED Cond. (mmhos/cm) Cond. (µmhom/cm) 0 hr (48 hr)	UNCORRECTED Cond. (mmhos/cm) Cond. (µmhom/cm) 24 hr (72 hr)	UNCORRECTED Cond. (mmhos/cm) Cond. (µmhom/cm) 48 hr (96 hr)
Control	A	C13	10	10	10	8.3		8.2	24.3		24.3	6.8		5.6	33.7		33.7
	B	C14	10	10	10		8.2			24.5			5.8			34.1	
	C																
	D																
100	A	C15	10	10	10	8.3		8.2	24.6		24.3	6.6		5.6	33.6		34.0
	B	C16	10	10	10		8.2			25.5			5.5			34.5	
	C																
	D																
200	A	C17	10	9[10]	9	8.3		8.2	24.6		24.5	6.9		5.8	33.6		33.9
	B	C18	10	10	10		8.2			24.9			5.3			34.1	
	C																
	D																
300	A	C19	10	10	10	8.3		8.2	24.9		24.4	6.9		5.6	33.6		33.9
	B	C20	10	9[10]	9		8.2			24.4			5.5			34.5	
	C																
	D																
400	A	C21	10	8[10]	6	8.3		8.2	25.0		24.3	6.9		5.5	33.5		33.9
	B	C32	10	9[10]	7[10]		8.2			24.8			5.7			34.6	
	C																
	D																
500	A	C23	10	6[10]	2[10]	8.3		8.2	25.1		24.6	6.6		5.6	33.5		34.5
	B	C24	10	2[10]	0[10]		8.2			25.4			5.6			35.2	
	C																
	D																
	A																
	B																
	C																
	D																
Loaded / measured by:			BA	JD	JD	BA	BA	BA	BA	JD	BA	BA	BA	BA	BA	BA	BA
Recorded by:			SP	JD	JD	BA	BA	BA	BA	JD	BA	BA	BA	BA	BA	BA	BA

Investigators' Signatures
James Daniels
Selah Pritchard
Eric Lang
Marshall Faircloth
Brent Fincher
Heidi Mullendy
REVIEWER

Concentrations prepared by: BA / JD
Loading verified by: GW
Light Intensity: 50-100 Ft. candles
Photoperiod: 16 hours Light / 8 hours dark
Temperature Range °C:
Incubator # 2 min. 25.1 max. 26.1 mean 26.2
Incubator # ___ min. ___ max. ___ mean ___
Room B246 min. 24.2 max. 25.1 mean 24.5

Remarks:

Statistical Results: Method: Spearman-Karber
(95) 96 hour LC50: 429.19
95% Confidence Interval: lower 401.2 upper 459.1

Revised 02/21/06

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Appendix C. (continued)

FDEP Biology Section - Acute SRT Bench Sheet

Test Organism: *Americamysis bahia* Method 2007.0 (*Menidia beryllina* Method 2006.0) *Hyalella azteca* Method 100.1 EPA-600-8-99-064
Ceriodaphnia dubia Method 2002.0 *Cyprinella leedsi* Method 2000.0 *Pimephales promelas* Method 2000.0 Other:

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

Diluent/ Batch#: ASW / 8-06
Toxicant/ Batch# $CuCl_2$ / 4-06

Test Beginning: Date: 5-2-06 Time: 1400
Test Ending: Date: 5-6-06 Time: 0510

Water Quality Parameters:	Diluent	Method	Initials
Total Residual Cl_2 (mg/L):	<0.03	Hach	SP
Alkalinity (mg/L as $CaCO_3$):	216	Hach	EW
Hardness (mg/L as CaCO3):	–	Hach	–
Total Ammonia (mg/L as N):	20.034	Denver	MF
Salinity (ppth):	21.01	Mettler	BA

Organism Batch #/ Age: 15-06 / 10 days
Feeding: (Prior to test) / Prior to renewal / Daily
Food: YCT *P.subcapitata* Artemia
Food Batch: – – GSL 536-9c
Chamber size: 1000 mL
Test volume: 500 mL per replicate

Conc. (ug/L)	Rep.	Chamber#	Number Live 0 hr	Number Live 24 hr	Number Live 48 hr	pH (SU) 0 hr	pH (SU) 24 hr	pH (SU) 48 hr	Temperature (° C) 0 hr	Temperature (° C) 24 hr	Temperature (° C) 48 hr	D.O. (mg/l) 0 hr	D.O. (mg/l) 24 hr	D.O. (mg/l) 48 hr	UNCORRECTED Cond. (umhos/cm) 0 hr	UNCORRECTED Cond. (umhos/cm) 24 hr	UNCORRECTED Cond. (umhos/cm) 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	C13	10	10	10	8.3		8.2	24.4		26.0	6.6		5.3	33.2		33.9
	B	C14	10	10	10		8.2			25.2			5.7			33.0	
	C																
	D																
100	A	C15	10	10	10	8.3		8.2	24.6		24.9	6.2		5.4	33.3		33.7
	B	C16	10	10	10		8.2			25.2			5.8			33.6	
	C																
	D																
200	A	C17	9	9	9	8.3		8.2	24.7		25.4	6.2		5.4	33.3		34.0
	B	C18	10	10	10		8.2			25.0			6.0			33.5	
	C																
	D																
300	A	C19	10	10	10	8.3		8.2	24.7		25.2	6.1		5.5	33.2		33.8
	B	C20	9	9	9		8.2			25.1			5.8			33.7	
	C																
	D																
400	A	C21	8	8	7 10	8.3		8.2	24.6		24.6	6.1		5.8	33.2		34.2
	B	C22	7	7	6		8.2			25.4			5.9			33.6	
	C																
	D					(A)	MF	(B)		MF			MF			MF	
500	A	C23	2	2	2	–	8.2	8.2	–	25.0	24.4	–	6.0	6.2	–	33.0	33.2
	B	C24	–	–	–		8.2			25.0			6.0			33.0	
	C																
	D																
	A																
	B																
	C																
	D																
Loaded / measured by:			JD	JD	MF	BA	SP	MF	BA	SP	MF	BA	SP	MF	BA	SP	MF
Recorded by:			JD	JD	MF	BA	SP	MF	BA	SP	MF	BA	SP	MF	BA	SP	MF

Investigators' Signatures
Janet David
Neal Pollard
Eric Snyder
Marshall Faircloth
Barbara Albertson
Ingrid Wollenberg
REVIEWER

Concentrations prepared by: JD
Loading verified by: EW
Light Intensity: 50-100 Ft. candles
Photoperiod: 16 hours Light / 8 hours dark
Temperature Range °C:
Incubator # 2 min. 25.1 max. 26.4 mean 26.2
Incubator # ___ min. ___ max. ___ mean ___
Room B246 min. 24.2 max. 25.1 mean 24.5

Remarks: B – 72 hour data recorded in wrong spaces. corrected data inadvertantly struck through MF 5-11-06
(A) measured but not recorded MF for BA 5-11-06

Statistical Results: Method: Spearman-Karber
48 / 96 hour LC50: 416.01
95% Confidence Interval: lower 386.85 upper 447.37

Revised 02/21/06

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Appendix C. (continued)

Americamysis bahia Acute Standard Reference Toxicant Test

DATE: 5/2/06 DURATION: 96 h* TOXICANT : CdCl2
SPECIES: *A. bahia*

RAW DATA:	Concentration (ug/L)	Number Exposed	Mortalities
	.00	20	1
	20.00	20	3
	30.00	20	9
	45.00	20	20
	67.00	20	20
	100.00	20	20

SPEARMAN-KARBER TRIM: 10.53%
SPEARMAN-KARBER ESTIMATES: LC50: 30.56
95% LOWER CONFIDENCE: 27.18
95% UPPER CONFIDENCE: 34.35

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

Menidia beryllina Acute Standard Reference Toxicant Test

DATE: 5/2/06 DURATION: 96 h* TOXICANT : CuCl2
SPECIES: *M. beryllina*

RAW DATA:	Concentration (ug/L)	Number Exposed	Mortalities
	.00	20	0
	100.00	20	0
	200.00	20	1
	300.00	20	1
	400.00	20	7
	500.00	20	18

SPEARMAN-KARBER TRIM: 10.00%
SPEARMAN-KARBER ESTIMATES: LC50: 416.01
95% LOWER CONFIDENCE: 386.85
95% UPPER CONFIDENCE: 497.37

*NOTE: 48 hour results presented in charts.

Appendix D. Test Organism Receipts

Aquatic Indicators, Inc.
P.O. Box 632 • St. Augustine, FL 32085-0632 • (904) 829-2780

Date 5-1-06

Species:
1. M. bahia
2. M. berylline
3.

Total Supplied:
1. 15C.
2. 15C
3.

Brood Description:
1. EPA
2. EPA
3.

Age:
1. 2 days
2. 9 days
3.

Environmental Regime	Feeding:	Zooplankton Artemia NH✓	Photo:	L 16	D 8
P.H.: 8.1	Temp:	25°C	Salinity:	20‰	

Comments:
Thanks.

Appendix D. (continued)

Aquatic Indicators, Inc.

P.O. Box 632 • St. Augustine, FL 32085-0632 • (904) 829-2780

Date 5-8-06

Species:

1. M. bahia
2. M. beryllina
3.

Total Supplied:

1. 1CC
2. 1CC
3.

Brood Description:

1. EPA
2. EPA
3.

Age:

1. 2 days
2. 10 days
3.

Environmental Regime	Feeding:	Zooplankton Artemia NH✓	Photo:	L 16	D 8
P.H.: 8.1	Temp:	25°C	Salinity:	10‰	

Comments:

Thanks.

Appendix E. Chemical Analyses performed on the effluent from the Flagler Beach Wastewater Treatment Facility Outfall D-001, sampled on May 8, 2006.

Date Sampled	Field ID	Analysis Group	Component	Result	Units	Remark	MDL	PQL
05/08/06 10:00	FLAGLER EFFLUENT	Bio-Toxicology	Bioassay-Acute-Screen-SW-Fish, LC50	100	LC50	L		
05/08/06 10:00	FLAGLER EFFLUENT	Bio-Toxicology	Bioassay-Acute-Screen-SW-Mysid, LC50	100	LC50	K		
05/08/06 10:00	FLAGLER EFFLUENT	BNA-Water	1,2,4-Trichlorobenzene	0.97	ug/L	U	0.97	3.9
05/08/06 10:00	FLAGLER EFFLUENT	BNA-Water	1,2-Dichlorobenzene	0.97	ug/L	U	0.97	3.9
05/08/06 10:00	FLAGLER EFFLUENT	BNA-Water	1,3-Dichlorobenzene	0.97	ug/L	U	0.97	3.9
05/08/06 10:00	FLAGLER EFFLUENT	BNA-Water	1,4-Dichlorobenzene	0.97	ug/L	U	0.97	3.9
05/08/06 10:00	FLAGLER EFFLUENT	BNA-Water	2,4,6-Trichlorophenol	0.97	ug/L	U	0.97	3.9
05/08/06 10:00	FLAGLER EFFLUENT	BNA-Water	2,4-Dichlorophenol	0.97	ug/L	U	0.97	3.9
05/08/06 10:00	FLAGLER EFFLUENT	BNA-Water	2,4-Dimethylphenol	49	ug/L	U	49	190
05/08/06 10:00	FLAGLER EFFLUENT	BNA-Water	2,4-Dinitrophenol	15	ug/L	U	15	58
05/08/06 10:00	FLAGLER EFFLUENT	BNA-Water	2,4-Dinitrotoluene	0.97	ug/L	U	0.97	3.9
05/08/06 10:00	FLAGLER EFFLUENT	BNA-Water	2,6-Dinitrotoluene	0.97	ug/L	U	0.97	3.9
05/08/06 10:00	FLAGLER EFFLUENT	BNA-Water	2-Chloronaphthalene	0.97	ug/L	U	0.97	3.9
05/08/06 10:00	FLAGLER EFFLUENT	BNA-Water	2-Chlorophenol	0.97	ug/L	U	0.97	3.9
05/08/06 10:00	FLAGLER EFFLUENT	BNA-Water	2-Methyl-4,6-dinitrophenol	2.9	ug/L	U	2.9	12
05/08/06 10:00	FLAGLER EFFLUENT	BNA-Water	2-Nitrophenol	0.97	ug/L	U	0.97	3.9
05/08/06 10:00	FLAGLER EFFLUENT	BNA-Water	3,3'-Dichlorobenzidine	39	ug/L	U	39	160
05/08/06 10:00	FLAGLER EFFLUENT	BNA-Water	4,4'-DDD	1.5	ug/L	U	1.5	5.8
05/08/06 10:00	FLAGLER EFFLUENT	BNA-Water	4,4'-DDE	1.5	ug/L	U	1.5	5.8
05/08/06 10:00	FLAGLER EFFLUENT	BNA-Water	4,4'-DDT	1.5	ug/L	UJ	1.5	5.8
05/08/06 10:00	FLAGLER EFFLUENT	BNA-Water	4-Bromophenyl phenyl ether	0.97	ug/L	U	0.97	3.9
05/08/06 10:00	FLAGLER EFFLUENT	BNA-Water	4-Chloro-3-methylphenol	0.97	ug/L	U	0.97	3.9
05/08/06 10:00	FLAGLER EFFLUENT	BNA-Water	4-Chlorophenyl phenyl ether	1.9	ug/L	U	1.9	7.8
05/08/06 10:00	FLAGLER EFFLUENT	BNA-Water	4-Nitrophenol	15	ug/L	U	15	58
05/08/06 10:00	FLAGLER EFFLUENT	BNA-Water	Acenaphthene	0.97	ug/L	U	0.97	3.9
05/08/06 10:00	FLAGLER EFFLUENT	BNA-Water	Acenaphthylene	0.97	ug/L	U	0.97	3.9
05/08/06 10:00	FLAGLER EFFLUENT	BNA-Water	Aldrin	1.5	ug/L	U	1.5	5.8
05/08/06 10:00	FLAGLER EFFLUENT	BNA-Water	alpha-BHC	1.5	ug/L	U	1.5	5.8
05/08/06 10:00	FLAGLER EFFLUENT	BNA-Water	Anthracene	0.97	ug/L	U	0.97	3.9
05/08/06 10:00	FLAGLER EFFLUENT	BNA-Water	Benzidine	97	ug/L	U	97	390
05/08/06 10:00	FLAGLER EFFLUENT	BNA-Water	Benzo(a)anthracene	0.97	ug/L	U	0.97	3.9
05/08/06 10:00	FLAGLER EFFLUENT	BNA-Water	Benzo(a)pyrene	0.97	ug/L	U	0.97	3.9
05/08/06 10:00	FLAGLER EFFLUENT	BNA-Water	Benzo(b)fluoranthene	0.97	ug/L	U	0.97	3.9
05/08/06 10:00	FLAGLER EFFLUENT	BNA-Water	Benzo(g,h,i)perylene	0.97	ug/L	U	0.97	3.9
05/08/06 10:00	FLAGLER EFFLUENT	BNA-Water	Benzo(k)fluoranthene	0.97	ug/L	U	0.97	3.9
05/08/06 10:00	FLAGLER EFFLUENT	BNA-Water	beta-BHC	1.5	ug/L	U	1.5	5.8

Appendix E. Chemical Analyses (continued)

Date Sampled	Field ID	Analysis Group	Component	Result	Units	Remark	MDL	PQL
05/08/06 10:00	FLAGLER EFFLUENT	BNA-Water	Bis(2-chloroethoxy)methane	0.97	ug/L	U	0.97	3.9
05/08/06 10:00	FLAGLER EFFLUENT	BNA-Water	Bis(2-chloroethyl)ether	0.97	ug/L	U	0.97	3.9
05/08/06 10:00	FLAGLER EFFLUENT	BNA-Water	Bis(2-chloroisopropyl)ether	2.9	ug/L	U	2.9	12
05/08/06 10:00	FLAGLER EFFLUENT	BNA-Water	Bis(2-ethylhexyl)phthalate	15	ug/L	U	15	58
05/08/06 10:00	FLAGLER EFFLUENT	BNA-Water	Butyl benzyl phthalate	4.9	ug/L	U	4.9	19
05/08/06 10:00	FLAGLER EFFLUENT	BNA-Water	Chrysene	0.97	ug/L	U	0.97	3.9
05/08/06 10:00	FLAGLER EFFLUENT	BNA-Water	delta-BHC	1.5	ug/L	U	1.5	5.8
05/08/06 10:00	FLAGLER EFFLUENT	BNA-Water	Dibenzo(a,h)anthracene	0.97	ug/L	U	0.97	3.9
05/08/06 10:00	FLAGLER EFFLUENT	BNA-Water	Dieldrin	1.5	ug/L	U	1.5	5.8
05/08/06 10:00	FLAGLER EFFLUENT	BNA-Water	Diethyl phthalate	0.97	ug/L	U	0.97	3.9
05/08/06 10:00	FLAGLER EFFLUENT	BNA-Water	Dimethyl phthalate	49	ug/L	U	49	190
05/08/06 10:00	FLAGLER EFFLUENT	BNA-Water	Di-n-butyl phthalate	4.9	ug/L	U	4.9	19
05/08/06 10:00	FLAGLER EFFLUENT	BNA-Water	Di-n-octyl phthalate	0.97	ug/L	U	0.97	3.9
05/08/06 10:00	FLAGLER EFFLUENT	BNA-Water	Endosulfan I	3.9	ug/L	U	3.9	16
05/08/06 10:00	FLAGLER EFFLUENT	BNA-Water	Endosulfan II	3.9	ug/L	U	3.9	16
05/08/06 10:00	FLAGLER EFFLUENT	BNA-Water	Endosulfan sulfate	1.5	ug/L	U	1.5	5.8
05/08/06 10:00	FLAGLER EFFLUENT	BNA-Water	Endrin	1.5	ug/L	UJ	1.5	5.8
05/08/06 10:00	FLAGLER EFFLUENT	BNA-Water	Endrin aldehyde	3.9	ug/L	U	3.9	16
05/08/06 10:00	FLAGLER EFFLUENT	BNA-Water	Fluoranthene	0.97	ug/L	U	0.97	3.9
05/08/06 10:00	FLAGLER EFFLUENT	BNA-Water	Fluorene	0.97	ug/L	U	0.97	3.9
05/08/06 10:00	FLAGLER EFFLUENT	BNA-Water	gamma-BHC	1.5	ug/L	U	1.5	5.8
05/08/06 10:00	FLAGLER EFFLUENT	BNA-Water	Heptachlor	1.5	ug/L	U	1.5	5.8
05/08/06 10:00	FLAGLER EFFLUENT	BNA-Water	Heptachlor epoxide	1.5	ug/L	U	1.5	5.8
05/08/06 10:00	FLAGLER EFFLUENT	BNA-Water	Hexachlorobenzene	0.97	ug/L	U	0.97	3.9
05/08/06 10:00	FLAGLER EFFLUENT	BNA-Water	Hexachlorobutadiene	2.9	ug/L	U	2.9	12
05/08/06 10:00	FLAGLER EFFLUENT	BNA-Water	Hexachlorocyclopentadiene	2.9	ug/L	U	2.9	12
05/08/06 10:00	FLAGLER EFFLUENT	BNA-Water	Hexachloroethane	2.9	ug/L	U	2.9	12
05/08/06 10:00	FLAGLER EFFLUENT	BNA-Water	Indeno(1,2,3-cd)pyrene	0.97	ug/L	U	0.97	3.9
05/08/06 10:00	FLAGLER EFFLUENT	BNA-Water	Isophorone	0.97	ug/L	U	0.97	3.9
05/08/06 10:00	FLAGLER EFFLUENT	BNA-Water	Naphthalene	0.97	ug/L	U	0.97	3.9
05/08/06 10:00	FLAGLER EFFLUENT	BNA-Water	Nitrobenzene	1.9	ug/L	U	1.9	7.8
05/08/06 10:00	FLAGLER EFFLUENT	BNA-Water	N-Nitrosodimethylamine	1.9	ug/L	U	1.9	7.8
05/08/06 10:00	FLAGLER EFFLUENT	BNA-Water	N-Nitrosodi-n-propylamine	1.9	ug/L	U	1.9	7.8
05/08/06 10:00	FLAGLER EFFLUENT	BNA-Water	N-Nitrosodiphenylamine	2.9	ug/L	UJ	2.9	12
05/08/06 10:00	FLAGLER EFFLUENT	BNA-Water	Pentachlorophenol	2.9	ug/L	U	2.9	12
05/08/06 10:00	FLAGLER EFFLUENT	BNA-Water	Phenanthrene	0.97	ug/L	U	0.97	3.9
05/08/06 10:00	FLAGLER EFFLUENT	BNA-Water	Phenol	0.97	ug/L	U	0.97	3.9

Appendix E. Chemical Analyses (continued)

Date Sampled	Field ID	Analysis Group	Component	Result	Units	Remark	MDL	PQL
05/08/06 10:00	FLAGLER EFFLUENT	BNA-Water	Pyrene	0.97	ug/L	U	0.97	3.9
05/08/06 10:00	FLAGLER EFFLUENT	BNA-Water	TRPH	0.24	mg/L	U	0.24	0.97
05/08/06 10:30	EQUIPMENT BLANK	BNA-Water	1,2,4-Trichlorobenzene	1	ug/L	U	1	4
05/08/06 10:30	EQUIPMENT BLANK	BNA-Water	1,2-Dichlorobenzene	1	ug/L	U	1	4
05/08/06 10:30	EQUIPMENT BLANK	BNA-Water	1,3-Dichlorobenzene	1	ug/L	U	1	4
05/08/06 10:30	EQUIPMENT BLANK	BNA-Water	1,4-Dichlorobenzene	1	ug/L	U	1	4
05/08/06 10:30	EQUIPMENT BLANK	BNA-Water	2,4,6-Trichlorophenol	1	ug/L	U	1	4
05/08/06 10:30	EQUIPMENT BLANK	BNA-Water	2,4-Dichlorophenol	1	ug/L	U	1	4
05/08/06 10:30	EQUIPMENT BLANK	BNA-Water	2,4-Dimethylphenol	51	ug/L	U	51	200
05/08/06 10:30	EQUIPMENT BLANK	BNA-Water	2,4-Dinitrophenol	15	ug/L	U	15	61
05/08/06 10:30	EQUIPMENT BLANK	BNA-Water	2,4-Dinitrotoluene	1	ug/L	U	1	4
05/08/06 10:30	EQUIPMENT BLANK	BNA-Water	2,6-Dinitrotoluene	1	ug/L	U	1	4
05/08/06 10:30	EQUIPMENT BLANK	BNA-Water	2-Chloronaphthalene	1	ug/L	U	1	4
05/08/06 10:30	EQUIPMENT BLANK	BNA-Water	2-Chlorophenol	1	ug/L	U	1	4
05/08/06 10:30	EQUIPMENT BLANK	BNA-Water	2-Methyl-4,6-dinitrophenol	3	ug/L	U	3	12
05/08/06 10:30	EQUIPMENT BLANK	BNA-Water	2-Nitrophenol	1	ug/L	U	1	4
05/08/06 10:30	EQUIPMENT BLANK	BNA-Water	3,3'-Dichlorobenzidine	40	ug/L	U	40	160
05/08/06 10:30	EQUIPMENT BLANK	BNA-Water	4,4'-DDD	1.5	ug/L	U	1.5	6.1
05/08/06 10:30	EQUIPMENT BLANK	BNA-Water	4,4'-DDE	1.5	ug/L	U	1.5	6.1
05/08/06 10:30	EQUIPMENT BLANK	BNA-Water	4,4'-DDT	1.5	ug/L	UJ	1.5	6.1
05/08/06 10:30	EQUIPMENT BLANK	BNA-Water	4-Bromophenyl phenyl ether	1	ug/L	U	1	4
05/08/06 10:30	EQUIPMENT BLANK	BNA-Water	4-Chloro-3-methylphenol	1	ug/L	U	1	4
05/08/06 10:30	EQUIPMENT BLANK	BNA-Water	4-Chlorophenyl phenyl ether	2	ug/L	U	2	8.1
05/08/06 10:30	EQUIPMENT BLANK	BNA-Water	4-Nitrophenol	15	ug/L	U	15	61
05/08/06 10:30	EQUIPMENT BLANK	BNA-Water	Acenaphthene	1	ug/L	U	1	4
05/08/06 10:30	EQUIPMENT BLANK	BNA-Water	Acenaphthylene	1	ug/L	U	1	4
05/08/06 10:30	EQUIPMENT BLANK	BNA-Water	Aldrin	1.5	ug/L	U	1.5	6.1
05/08/06 10:30	EQUIPMENT BLANK	BNA-Water	alpha-BHC	1.5	ug/L	U	1.5	6.1
05/08/06 10:30	EQUIPMENT BLANK	BNA-Water	Anthracene	1	ug/L	U	1	4
05/08/06 10:30	EQUIPMENT BLANK	BNA-Water	Benzidine	100	ug/L	U	100	400
05/08/06 10:30	EQUIPMENT BLANK	BNA-Water	Benzo(a)anthracene	1	ug/L	U	1	4
05/08/06 10:30	EQUIPMENT BLANK	BNA-Water	Benzo(a)pyrene	1	ug/L	U	1	4
05/08/06 10:30	EQUIPMENT BLANK	BNA-Water	Benzo(b)fluoranthene	1	ug/L	U	1	4
05/08/06 10:30	EQUIPMENT BLANK	BNA-Water	Benzo(g,h,i)perylene	1	ug/L	U	1	4
05/08/06 10:30	EQUIPMENT BLANK	BNA-Water	Benzo(k)fluoranthene	1	ug/L	U	1	4
05/08/06 10:30	EQUIPMENT BLANK	BNA-Water	beta-BHC	1.5	ug/L	U	1.5	6.1
05/08/06 10:30	EQUIPMENT BLANK	BNA-Water	Bis(2-chloroethoxy)methane	1	ug/L	U	1	4

Appendix E. Chemical Analyses (continued)

Date Sampled	Field ID	Analysis Group	Component	Result	Units	Remark	MDL	PQL
05/08/06 10:30	EQUIPMENT BLANK	BNA-Water	Bis(2-chloroethyl)ether	1	ug/L	U	1	4
05/08/06 10:30	EQUIPMENT BLANK	BNA-Water	Bis(2-chloroisopropyl)ether	3	ug/L	U	3	12
05/08/06 10:30	EQUIPMENT BLANK	BNA-Water	Bis(2-ethylhexyl)phthalate	15	ug/L	U	15	61
05/08/06 10:30	EQUIPMENT BLANK	BNA-Water	Butyl benzyl phthalate	5.1	ug/L	U	5.1	20
05/08/06 10:30	EQUIPMENT BLANK	BNA-Water	Chrysene	1	ug/L	U	1	4
05/08/06 10:30	EQUIPMENT BLANK	BNA-Water	delta-BHC	1.5	ug/L	U	1.5	6.1
05/08/06 10:30	EQUIPMENT BLANK	BNA-Water	Dibenzo(a,h)anthracene	1	ug/L	U	1	4
05/08/06 10:30	EQUIPMENT BLANK	BNA-Water	Dieldrin	1.5	ug/L	U	1.5	6.1
05/08/06 10:30	EQUIPMENT BLANK	BNA-Water	Diethyl phthalate	1	ug/L	U	1	4
05/08/06 10:30	EQUIPMENT BLANK	BNA-Water	Dimethyl phthalate	51	ug/L	U	51	200
05/08/06 10:30	EQUIPMENT BLANK	BNA-Water	Di-n-butyl phthalate	5.1	ug/L	U	5.1	20
05/08/06 10:30	EQUIPMENT BLANK	BNA-Water	Di-n-octyl phthalate	1	ug/L	U	1	4
05/08/06 10:30	EQUIPMENT BLANK	BNA-Water	Endosulfan I	4	ug/L	U	4	16
05/08/06 10:30	EQUIPMENT BLANK	BNA-Water	Endosulfan II	4	ug/L	U	4	16
05/08/06 10:30	EQUIPMENT BLANK	BNA-Water	Endosulfan sulfate	1.5	ug/L	U	1.5	6.1
05/08/06 10:30	EQUIPMENT BLANK	BNA-Water	Endrin	1.5	ug/L	UJ	1.5	6.1
05/08/06 10:30	EQUIPMENT BLANK	BNA-Water	Endrin aldehyde	4	ug/L	U	4	16
05/08/06 10:30	EQUIPMENT BLANK	BNA-Water	Fluoranthene	1	ug/L	U	1	4
05/08/06 10:30	EQUIPMENT BLANK	BNA-Water	Fluorene	1	ug/L	U	1	4
05/08/06 10:30	EQUIPMENT BLANK	BNA-Water	gamma-BHC	1.5	ug/L	U	1.5	6.1
05/08/06 10:30	EQUIPMENT BLANK	BNA-Water	Heptachlor	1.5	ug/L	U	1.5	6.1
05/08/06 10:30	EQUIPMENT BLANK	BNA-Water	Heptachlor epoxide	1.5	ug/L	U	1.5	6.1
05/08/06 10:30	EQUIPMENT BLANK	BNA-Water	Hexachlorobenzene	1	ug/L	U	1	4
05/08/06 10:30	EQUIPMENT BLANK	BNA-Water	Hexachlorobutadiene	3	ug/L	U	3	12
05/08/06 10:30	EQUIPMENT BLANK	BNA-Water	Hexachlorocyclopentadiene	3	ug/L	U	3	12
05/08/06 10:30	EQUIPMENT BLANK	BNA-Water	Hexachloroethane	3	ug/L	U	3	12
05/08/06 10:30	EQUIPMENT BLANK	BNA-Water	Indeno(1,2,3-cd)pyrene	1	ug/L	U	1	4
05/08/06 10:30	EQUIPMENT BLANK	BNA-Water	Isophorone	1	ug/L	U	1	4
05/08/06 10:30	EQUIPMENT BLANK	BNA-Water	Naphthalene	1	ug/L	U	1	4
05/08/06 10:30	EQUIPMENT BLANK	BNA-Water	Nitrobenzene	2	ug/L	U	2	8.1
05/08/06 10:30	EQUIPMENT BLANK	BNA-Water	N-Nitrosodimethylamine	2	ug/L	U	2	8.1
05/08/06 10:30	EQUIPMENT BLANK	BNA-Water	N-Nitrosodi-n-propylamine	2	ug/L	U	2	8.1
05/08/06 10:30	EQUIPMENT BLANK	BNA-Water	N-Nitrosodiphenylamine	3	ug/L	UJ	3	12
05/08/06 10:30	EQUIPMENT BLANK	BNA-Water	Pentachlorophenol	3	ug/L	U	3	12
05/08/06 10:30	EQUIPMENT BLANK	BNA-Water	Phenanthrene	1	ug/L	U	1	4
05/08/06 10:30	EQUIPMENT BLANK	BNA-Water	Phenol	1	ug/L	U	1	4
05/08/06 10:30	EQUIPMENT BLANK	BNA-Water	Pyrene	1	ug/L	U	1	4

Appendix E. Chemical Analyses (continued)

Date Sampled	Field ID	Analysis Group	Component	Result	Units	Remark	MDL	PQL
05/08/06 10:30	EQUIPMENT BLANK	BNA-Water	TRPH	0.26	mg/L	U	0.26	1
05/08/06 10:00	FLAGLER EFFLUENT	GC-Water	Alachlor	0.6	ug/L	U	0.6	2.4
05/08/06 10:00	FLAGLER EFFLUENT	GC-Water	Ametryn	0.05	ug/L	U	0.05	0.2
05/08/06 10:00	FLAGLER EFFLUENT	GC-Water	Atrazine	0.11	ug/L	I	0.05	0.2
05/08/06 10:00	FLAGLER EFFLUENT	GC-Water	Azinphos Methyl	0.2	ug/L	U	0.2	0.8
05/08/06 10:00	FLAGLER EFFLUENT	GC-Water	Bromacil	0.2	ug/L	U	0.2	0.8
05/08/06 10:00	FLAGLER EFFLUENT	GC-Water	Butylate	0.2	ug/L	U	0.2	0.8
05/08/06 10:00	FLAGLER EFFLUENT	GC-Water	Chlorpyrifos Ethyl	0.067	ug/L	I	0.05	0.2
05/08/06 10:00	FLAGLER EFFLUENT	GC-Water	Chlorpyrifos Methyl	0.1	ug/L	U	0.1	0.4
05/08/06 10:00	FLAGLER EFFLUENT	GC-Water	Diazinon	0.05	ug/L	UJ	0.05	0.2
05/08/06 10:00	FLAGLER EFFLUENT	GC-Water	Ethion	0.05	ug/L	U	0.05	0.2
05/08/06 10:00	FLAGLER EFFLUENT	GC-Water	Ethoprop	0.1	ug/L	U	0.1	0.4
05/08/06 10:00	FLAGLER EFFLUENT	GC-Water	Fenamiphos	0.2	ug/L	U	0.2	0.8
05/08/06 10:00	FLAGLER EFFLUENT	GC-Water	Fonofos	0.1	ug/L	U	0.1	0.4
05/08/06 10:00	FLAGLER EFFLUENT	GC-Water	Hexazinone	0.1	ug/L	U	0.1	0.4
05/08/06 10:00	FLAGLER EFFLUENT	GC-Water	Malathion	0.15	ug/L	U	0.15	0.6
05/08/06 10:00	FLAGLER EFFLUENT	GC-Water	Metalaxyl	0.25	ug/L	U	0.25	1
05/08/06 10:00	FLAGLER EFFLUENT	GC-Water	Metolachlor	0.5	ug/L	U	0.5	2
05/08/06 10:00	FLAGLER EFFLUENT	GC-Water	Metribuzin	0.1	ug/L	U	0.1	0.4
05/08/06 10:00	FLAGLER EFFLUENT	GC-Water	Mevinphos	0.2	ug/L	U	0.2	0.8
05/08/06 10:00	FLAGLER EFFLUENT	GC-Water	Naled	0.8	ug/L	U	0.8	3.2
05/08/06 10:00	FLAGLER EFFLUENT	GC-Water	Norflurazon	0.15	ug/L	U	0.15	0.6
05/08/06 10:00	FLAGLER EFFLUENT	GC-Water	Parathion Ethyl	0.15	ug/L	U	0.15	0.6
05/08/06 10:00	FLAGLER EFFLUENT	GC-Water	Parathion Methyl	0.1	ug/L	UJ	0.1	0.4
05/08/06 10:00	FLAGLER EFFLUENT	GC-Water	Phorate	0.05	ug/L	U	0.05	0.2
05/08/06 10:00	FLAGLER EFFLUENT	GC-Water	Prometryn	0.15	ug/L	U	0.15	0.6
05/08/06 10:00	FLAGLER EFFLUENT	GC-Water	Simazine	0.05	ug/L	U	0.05	0.2
05/08/06 10:30	EQUIPMENT BLANK	GC-Water	Alachlor	0.62	ug/L	U	0.62	2.5
05/08/06 10:30	EQUIPMENT BLANK	GC-Water	Ametryn	0.052	ug/L	U	0.052	0.21
05/08/06 10:30	EQUIPMENT BLANK	GC-Water	Atrazine	0.052	ug/L	U	0.052	0.21
05/08/06 10:30	EQUIPMENT BLANK	GC-Water	Azinphos Methyl	0.21	ug/L	U	0.21	0.84
05/08/06 10:30	EQUIPMENT BLANK	GC-Water	Bromacil	0.21	ug/L	U	0.21	0.84
05/08/06 10:30	EQUIPMENT BLANK	GC-Water	Butylate	0.21	ug/L	U	0.21	0.84
05/08/06 10:30	EQUIPMENT BLANK	GC-Water	Chlorpyrifos Ethyl	0.052	ug/L	U	0.052	0.21
05/08/06 10:30	EQUIPMENT BLANK	GC-Water	Chlorpyrifos Methyl	0.1	ug/L	U	0.1	0.4
05/08/06 10:30	EQUIPMENT BLANK	GC-Water	Diazinon	0.052	ug/L	UJ	0.052	0.21
05/08/06 10:30	EQUIPMENT BLANK	GC-Water	Ethion	0.052	ug/L	U	0.052	0.21

Appendix E. Chemical Analyses (continued)

Date Sampled	Field ID	Analysis Group	Component	Result	Units	Remark	MDL	PQL
05/08/06 10:30	EQUIPMENT BLANK	GC-Water	Ethoprop	0.1	ug/L	U	0.1	0.4
05/08/06 10:30	EQUIPMENT BLANK	GC-Water	Fenamiphos	0.21	ug/L	U	0.21	0.84
05/08/06 10:30	EQUIPMENT BLANK	GC-Water	Fonofos	0.1	ug/L	U	0.1	0.4
05/08/06 10:30	EQUIPMENT BLANK	GC-Water	Hexazinone	0.1	ug/L	U	0.1	0.4
05/08/06 10:30	EQUIPMENT BLANK	GC-Water	Malathion	0.16	ug/L	U	0.16	0.64
05/08/06 10:30	EQUIPMENT BLANK	GC-Water	Metalaxyl	0.26	ug/L	U	0.26	1
05/08/06 10:30	EQUIPMENT BLANK	GC-Water	Metolachlor	0.52	ug/L	U	0.52	2.1
05/08/06 10:30	EQUIPMENT BLANK	GC-Water	Metribuzin	0.1	ug/L	U	0.1	0.4
05/08/06 10:30	EQUIPMENT BLANK	GC-Water	Mevinphos	0.21	ug/L	U	0.21	0.84
05/08/06 10:30	EQUIPMENT BLANK	GC-Water	Naled	0.83	ug/L	U	0.83	3.3
05/08/06 10:30	EQUIPMENT BLANK	GC-Water	Norflurazon	0.16	ug/L	U	0.16	0.64
05/08/06 10:30	EQUIPMENT BLANK	GC-Water	Parathion Ethyl	0.16	ug/L	U	0.16	0.64
05/08/06 10:30	EQUIPMENT BLANK	GC-Water	Parathion Methyl	0.1	ug/L	UJ	0.1	0.4
05/08/06 10:30	EQUIPMENT BLANK	GC-Water	Phorate	0.052	ug/L	U	0.052	0.21
05/08/06 10:30	EQUIPMENT BLANK	GC-Water	Prometryn	0.16	ug/L	U	0.16	0.64
05/08/06 10:30	EQUIPMENT BLANK	GC-Water	Simazine	0.052	ug/L	U	0.052	0.21
05/08/06 10:00	FLAGLER EFFLUENT	Metals-Water	Aluminum	259	ug/L		5	20
05/08/06 10:00	FLAGLER EFFLUENT	Metals-Water	Arsenic	1	ug/L	U	1	4
05/08/06 10:00	FLAGLER EFFLUENT	Metals-Water	Cadmium	0.1	ug/L	U	0.1	0.4
05/08/06 10:00	FLAGLER EFFLUENT	Metals-Water	Calcium	108	mg/L		0.05	0.2
05/08/06 10:00	FLAGLER EFFLUENT	Metals-Water	Chromium	2	ug/L	U	2	8
05/08/06 10:00	FLAGLER EFFLUENT	Metals-Water	Copper	0.81	ug/L	I	0.5	2
05/08/06 10:00	FLAGLER EFFLUENT	Metals-Water	Iron	90	ug/L		10	40
05/08/06 10:00	FLAGLER EFFLUENT	Metals-Water	Lead	0.27	ug/L	I	0.15	0.6
05/08/06 10:00	FLAGLER EFFLUENT	Metals-Water	Magnesium	129	mg/L		0.05	0.2
05/08/06 10:00	FLAGLER EFFLUENT	Metals-Water	Nickel	1	ug/L	U	1	4
05/08/06 10:00	FLAGLER EFFLUENT	Metals-Water	Potassium	40.8	mg/L		0.5	2
05/08/06 10:00	FLAGLER EFFLUENT	Metals-Water	Selenium	1	ug/L	U	1	4
05/08/06 10:00	FLAGLER EFFLUENT	Metals-Water	Silver	0.05	ug/L	U	0.05	0.2
05/08/06 10:00	FLAGLER EFFLUENT	Metals-Water	Sodium	988	mg/L		2	8
05/08/06 10:00	FLAGLER EFFLUENT	Metals-Water	Zinc	22	ug/L		3	12
05/08/06 10:30	EQUIPMENT BLANK	Metals-Water	Aluminum	5	ug/L	U	5	20
05/08/06 10:30	EQUIPMENT BLANK	Metals-Water	Arsenic	0.5	ug/L	U	0.5	2
05/08/06 10:30	EQUIPMENT BLANK	Metals-Water	Cadmium	0.05	ug/L	U	0.05	0.2
05/08/06 10:30	EQUIPMENT BLANK	Metals-Water	Calcium	0.05	mg/L	U	0.05	0.2
05/08/06 10:30	EQUIPMENT BLANK	Metals-Water	Chromium	2	ug/L	U	2	8
05/08/06 10:30	EQUIPMENT BLANK	Metals-Water	Copper	0.25	ug/L	U	0.25	1

Appendix E. Chemical Analyses (continued)

Date Sampled	Field ID	Analysis Group	Component	Result	Units	Remark	MDL	PQL
05/08/06 10:30	EQUIPMENT BLANK	Metals-Water	Iron	10	ug/L	U	10	40
05/08/06 10:30	EQUIPMENT BLANK	Metals-Water	Lead	0.075	ug/L	U	0.075	0.3
05/08/06 10:30	EQUIPMENT BLANK	Metals-Water	Magnesium	0.01	mg/L	U	0.01	0.04
05/08/06 10:30	EQUIPMENT BLANK	Metals-Water	Nickel	1	ug/L	U	1	4
05/08/06 10:30	EQUIPMENT BLANK	Metals-Water	Potassium	0.1	mg/L	U	0.1	0.4
05/08/06 10:30	EQUIPMENT BLANK	Metals-Water	Selenium	0.5	ug/L	U	0.5	2
05/08/06 10:30	EQUIPMENT BLANK	Metals-Water	Silver	0.025	ug/L	U	0.025	0.1
05/08/06 10:30	EQUIPMENT BLANK	Metals-Water	Sodium	0.4	mg/L	U	0.4	1.6
05/08/06 10:30	EQUIPMENT BLANK	Metals-Water	Zinc	3	ug/L	U	3	12
05/08/06 10:00	FLAGLER EFFLUENT	Nutrients-Liquid	Alkalinity	109	mg CaCO3/L	A	0.65	2.5
05/08/06 10:00	FLAGLER EFFLUENT	Nutrients-Liquid	Ammonia-N	9.2	mg N/L		0.5	1
05/08/06 10:00	FLAGLER EFFLUENT	Nutrients-Liquid	Bromide	6.1	mg Br/L	A	0.4	1
05/08/06 10:00	FLAGLER EFFLUENT	Nutrients-Liquid	Chloride	1.90E+03	mg Cl/L	A	20	50
05/08/06 10:00	FLAGLER EFFLUENT	Nutrients-Liquid	Cyanide	0.005	mg CN/L	UJ	0.005	0.02
05/08/06 10:00	FLAGLER EFFLUENT	Nutrients-Liquid	Fluoride	0.15	mg F/L	A	0.05	0.1
05/08/06 10:00	FLAGLER EFFLUENT	Nutrients-Liquid	Kjeldahl Nitrogen	10	mg N/L	A	0.8	2
05/08/06 10:00	FLAGLER EFFLUENT	Nutrients-Liquid	NO2NO3-N	0.043	mg N/L		0.004	0.01
05/08/06 10:00	FLAGLER EFFLUENT	Nutrients-Liquid	O-Phosphate-P	0.019	mg P/L		0.004	0.01
05/08/06 10:00	FLAGLER EFFLUENT	Nutrients-Liquid	Specific_Conductance	6.56E+03	umhos/cm		2	8
05/08/06 10:00	FLAGLER EFFLUENT	Nutrients-Liquid	Sulfate	320	mg SO4/L	A	20	50
05/08/06 10:00	FLAGLER EFFLUENT	Nutrients-Liquid	Total-P	0.15	mg P/L	A	0.02	0.06
05/08/06 10:30	EQUIPMENT BLANK	Nutrients-Liquid	Ammonia-N	0.01	mg N/L	U	0.01	0.02
05/08/06 10:30	EQUIPMENT BLANK	Nutrients-Liquid	Bromide	0.2	mg Br/L	U	0.2	0.5
05/08/06 10:30	EQUIPMENT BLANK	Nutrients-Liquid	Chloride	0.2	mg Cl/L	U	0.2	0.5
05/08/06 10:30	EQUIPMENT BLANK	Nutrients-Liquid	Cyanide	0.005	mg CN/L	UJ	0.005	0.02
05/08/06 10:30	EQUIPMENT BLANK	Nutrients-Liquid	Fluoride	0.05	mg F/L	U	0.05	0.1
05/08/06 10:30	EQUIPMENT BLANK	Nutrients-Liquid	Kjeldahl Nitrogen	0.08	mg N/L	U	0.08	0.2
05/08/06 10:30	EQUIPMENT BLANK	Nutrients-Liquid	NO2NO3-N	0.006	mg N/L	I	0.004	0.01
05/08/06 10:30	EQUIPMENT BLANK	Nutrients-Liquid	O-Phosphate-P	0.004	mg P/L	U	0.004	0.01
05/08/06 10:30	EQUIPMENT BLANK	Nutrients-Liquid	Sulfate	0.2	mg SO4/L	U	0.2	0.5
05/08/06 10:30	EQUIPMENT BLANK	Nutrients-Liquid	Total-P	0.02	mg P/L	U	0.02	0.06
05/08/06 10:00	FLAGLER EFFLUENT	Overflow	Oil and Grease	1.7	mg/L	UJ		
05/08/06 10:30	EQUIPMENT BLANK	Overflow	Oil and Grease	1.7	mg/L	U		
05/08/06 10:00	FLAGLER EFFLUENT	VOC-Water	1,1,1-Trichloroethane	0.2	ug/L	U	0.2	1
05/08/06 10:00	FLAGLER EFFLUENT	VOC-Water	1,1,2,2-Tetrachloroethane	0.2	ug/L	U	0.2	1
05/08/06 10:00	FLAGLER EFFLUENT	VOC-Water	1,1,2-Trichloroethane	0.2	ug/L	U	0.2	1

Appendix E. Chemical Analyses (continued)

Date Sampled	Field ID	Analysis Group	Component	Result	Units	Remark	MDL	PQL
05/08/06 10:00	FLAGLER EFFLUENT	VOC-Water	1,1-Dichloroethane	0.2	ug/L	U	0.2	1
05/08/06 10:00	FLAGLER EFFLUENT	VOC-Water	1,1-Dichloroethene	1	ug/L	U	1	2
05/08/06 10:00	FLAGLER EFFLUENT	VOC-Water	1,2-Dichlorobenzene	0.2	ug/L	U	0.2	1
05/08/06 10:00	FLAGLER EFFLUENT	VOC-Water	1,2-Dichloroethane	0.2	ug/L	U	0.2	1
05/08/06 10:00	FLAGLER EFFLUENT	VOC-Water	1,2-Dichloropropane	0.2	ug/L	U	0.2	1
05/08/06 10:00	FLAGLER EFFLUENT	VOC-Water	1,3-Dichlorobenzene	0.2	ug/L	U	0.2	0.96
05/08/06 10:00	FLAGLER EFFLUENT	VOC-Water	1,4-Dichlorobenzene	0.25	ug/L	I	0.2	1
05/08/06 10:00	FLAGLER EFFLUENT	VOC-Water	2-Chloroethylvinyl ether	0.5	ug/L	U	0.5	2
05/08/06 10:00	FLAGLER EFFLUENT	VOC-Water	Benzene	0.5	ug/L	U	0.5	1
05/08/06 10:00	FLAGLER EFFLUENT	VOC-Water	Bromodichloromethane	1.1	ug/L		0.2	1
05/08/06 10:00	FLAGLER EFFLUENT	VOC-Water	Bromoform	2.2	ug/L		0.5	2
05/08/06 10:00	FLAGLER EFFLUENT	VOC-Water	Bromomethane	0.5	ug/L	U	0.5	2
05/08/06 10:00	FLAGLER EFFLUENT	VOC-Water	Carbon tetrachloride	0.2	ug/L	U	0.2	1
05/08/06 10:00	FLAGLER EFFLUENT	VOC-Water	Chlorobenzene	0.2	ug/L	U	0.2	1
05/08/06 10:00	FLAGLER EFFLUENT	VOC-Water	Chloroethane	0.5	ug/L	U	0.5	2
05/08/06 10:00	FLAGLER EFFLUENT	VOC-Water	Chloroform	0.53	ug/L	I	0.2	1
05/08/06 10:00	FLAGLER EFFLUENT	VOC-Water	Chloromethane	0.5	ug/L	UJ	0.5	2
05/08/06 10:00	FLAGLER EFFLUENT	VOC-Water	cis-1,3-Dichloropropene	0.5	ug/L	U	0.5	2
05/08/06 10:00	FLAGLER EFFLUENT	VOC-Water	Dibromochloromethane	1.9	ug/L		0.2	1
05/08/06 10:00	FLAGLER EFFLUENT	VOC-Water	Ethylbenzene	0.5	ug/L	U	0.5	2
05/08/06 10:00	FLAGLER EFFLUENT	VOC-Water	Methylene chloride	1	ug/L	U	1	2
05/08/06 10:00	FLAGLER EFFLUENT	VOC-Water	Tetrachloroethene	0.2	ug/L	U	0.2	1
05/08/06 10:00	FLAGLER EFFLUENT	VOC-Water	Toluene	0.5	ug/L	U	0.5	2
05/08/06 10:00	FLAGLER EFFLUENT	VOC-Water	trans-1,2-Dichloroethene	0.5	ug/L	U	0.5	2
05/08/06 10:00	FLAGLER EFFLUENT	VOC-Water	trans-1,3-Dichloropropene	0.2	ug/L	U	0.2	1
05/08/06 10:00	FLAGLER EFFLUENT	VOC-Water	Trichloroethene	0.2	ug/L	U	0.2	1
05/08/06 10:00	FLAGLER EFFLUENT	VOC-Water	Trichlorofluoromethane	0.5	ug/L	U	0.5	2
05/08/06 10:00	FLAGLER EFFLUENT	VOC-Water	Vinyl chloride	0.5	ug/L	UJ	0.5	2
05/08/06 10:30	EQUIPMENT BLANK	VOC-Water	1,1,1-Trichloroethane	0.2	ug/L	U	0.2	1
05/08/06 10:30	EQUIPMENT BLANK	VOC-Water	1,1,2,2-Tetrachloroethane	0.2	ug/L	U	0.2	1
05/08/06 10:30	EQUIPMENT BLANK	VOC-Water	1,1,2-Trichloroethane	0.2	ug/L	U	0.2	1
05/08/06 10:30	EQUIPMENT BLANK	VOC-Water	1,1-Dichloroethane	0.2	ug/L	U	0.2	1
05/08/06 10:30	EQUIPMENT BLANK	VOC-Water	1,1-Dichloroethene	1	ug/L	U	1	2
05/08/06 10:30	EQUIPMENT BLANK	VOC-Water	1,2-Dichlorobenzene	0.2	ug/L	U	0.2	1
05/08/06 10:30	EQUIPMENT BLANK	VOC-Water	1,2-Dichloroethane	0.2	ug/L	U	0.2	1
05/08/06 10:30	EQUIPMENT BLANK	VOC-Water	1,2-Dichloropropane	0.2	ug/L	U	0.2	1
05/08/06 10:30	EQUIPMENT BLANK	VOC-Water	1,3-Dichlorobenzene	0.2	ug/L	U	0.2	1

Appendix E. Chemical Analyses (continued)

Date Sampled	Field ID	Analysis Group	Component	Result	Units	Remark	MDL	PQL
05/08/06 10:30	EQUIPMENT BLANK	VOC-Water	1,4-Dichlorobenzene	0.2	ug/L	U	0.2	1
05/08/06 10:30	EQUIPMENT BLANK	VOC-Water	2-Chloroethylvinyl ether	0.5	ug/L	U	0.5	2
05/08/06 10:30	EQUIPMENT BLANK	VOC-Water	Benzene	0.5	ug/L	U	0.5	1
05/08/06 10:30	EQUIPMENT BLANK	VOC-Water	Bromodichloromethane	0.2	ug/L	U	0.2	1
05/08/06 10:30	EQUIPMENT BLANK	VOC-Water	Bromoform	0.5	ug/L	U	0.5	2
05/08/06 10:30	EQUIPMENT BLANK	VOC-Water	Bromomethane	0.5	ug/L	U	0.5	2
05/08/06 10:30	EQUIPMENT BLANK	VOC-Water	Carbon tetrachloride	0.2	ug/L	U	0.2	1
05/08/06 10:30	EQUIPMENT BLANK	VOC-Water	Chlorobenzene	0.2	ug/L	U	0.2	1
05/08/06 10:30	EQUIPMENT BLANK	VOC-Water	Chloroethane	0.5	ug/L	U	0.5	2
05/08/06 10:30	EQUIPMENT BLANK	VOC-Water	Chloroform	0.2	ug/L	U	0.2	1
05/08/06 10:30	EQUIPMENT BLANK	VOC-Water	Chloromethane	0.5	ug/L	UJ	0.5	2
05/08/06 10:30	EQUIPMENT BLANK	VOC-Water	cis-1,3-Dichloropropene	0.5	ug/L	U	0.5	2
05/08/06 10:30	EQUIPMENT BLANK	VOC-Water	Dibromochloromethane	0.2	ug/L	U	0.2	1
05/08/06 10:30	EQUIPMENT BLANK	VOC-Water	Ethylbenzene	0.5	ug/L	U	0.5	2
05/08/06 10:30	EQUIPMENT BLANK	VOC-Water	Methylene chloride	1	ug/L	U	1	2
05/08/06 10:30	EQUIPMENT BLANK	VOC-Water	Tetrachloroethene	0.2	ug/L	U	0.2	1
05/08/06 10:30	EQUIPMENT BLANK	VOC-Water	Toluene	0.5	ug/L	U	0.5	2
05/08/06 10:30	EQUIPMENT BLANK	VOC-Water	trans-1,2-Dichloroethene	0.5	ug/L	U	0.5	2
05/08/06 10:30	EQUIPMENT BLANK	VOC-Water	trans-1,3-Dichloropropene	0.2	ug/L	U	0.2	1
05/08/06 10:30	EQUIPMENT BLANK	VOC-Water	Trichloroethene	0.2	ug/L	U	0.2	1
05/08/06 10:30	EQUIPMENT BLANK	VOC-Water	Trichlorofluoromethane	0.5	ug/L	U	0.5	2
05/08/06 10:30	EQUIPMENT BLANK	VOC-Water	Vinyl chloride	0.5	ug/L	UJ	0.5	2
05/08/06 10:00	TRIP BLANK	VOC-Water	1,1,1-Trichloroethane	0.2	ug/L	U	0.2	1
05/08/06 10:30	TRIP BLANK	VOC-Water	1,1,1-Trichloroethane	0.2	ug/L	U	0.2	1
05/08/06 10:00	TRIP BLANK	VOC-Water	1,1,2,2-Tetrachloroethane	0.2	ug/L	U	0.2	1
05/08/06 10:30	TRIP BLANK	VOC-Water	1,1,2,2-Tetrachloroethane	0.2	ug/L	U	0.2	1
05/08/06 10:00	TRIP BLANK	VOC-Water	1,1,2-Trichloroethane	0.2	ug/L	U	0.2	1
05/08/06 10:30	TRIP BLANK	VOC-Water	1,1,2-Trichloroethane	0.2	ug/L	U	0.2	1
05/08/06 10:00	TRIP BLANK	VOC-Water	1,1-Dichloroethane	0.2	ug/L	U	0.2	1
05/08/06 10:30	TRIP BLANK	VOC-Water	1,1-Dichloroethane	0.2	ug/L	U	0.2	1
05/08/06 10:00	TRIP BLANK	VOC-Water	1,1-Dichloroethene	1	ug/L	U	1	2
05/08/06 10:30	TRIP BLANK	VOC-Water	1,1-Dichloroethene	1	ug/L	U	1	2
05/08/06 10:00	TRIP BLANK	VOC-Water	1,2-Dichlorobenzene	0.2	ug/L	U	0.2	1
05/08/06 10:30	TRIP BLANK	VOC-Water	1,2-Dichlorobenzene	0.2	ug/L	U	0.2	1
05/08/06 10:00	TRIP BLANK	VOC-Water	1,2-Dichloroethane	0.2	ug/L	U	0.2	1
05/08/06 10:30	TRIP BLANK	VOC-Water	1,2-Dichloroethane	0.2	ug/L	U	0.2	1
05/08/06 10:00	TRIP BLANK	VOC-Water	1,2-Dichloropropane	0.2	ug/L	U	0.2	1

Appendix E. Chemical Analyses (continued)

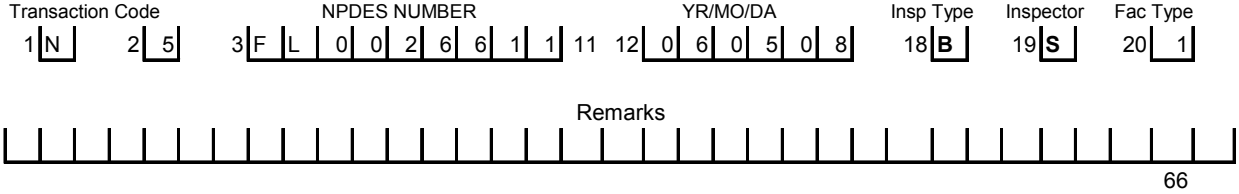
Date Sampled	Field ID	Analysis Group	Component	Result	Units	Remark	MDL	PQL
05/08/06 10:30	TRIP BLANK	VOC-Water	1,2-Dichloropropane	0.2	ug/L	U	0.2	1
05/08/06 10:00	TRIP BLANK	VOC-Water	1,3-Dichlorobenzene	0.2	ug/L	U	0.2	1
05/08/06 10:30	TRIP BLANK	VOC-Water	1,3-Dichlorobenzene	0.2	ug/L	U	0.2	1
05/08/06 10:00	TRIP BLANK	VOC-Water	1,4-Dichlorobenzene	0.2	ug/L	U	0.2	1
05/08/06 10:30	TRIP BLANK	VOC-Water	1,4-Dichlorobenzene	0.2	ug/L	U	0.2	1
05/08/06 10:00	TRIP BLANK	VOC-Water	2-Chloroethylvinyl ether	0.5	ug/L	U	0.5	2
05/08/06 10:30	TRIP BLANK	VOC-Water	2-Chloroethylvinyl ether	0.5	ug/L	U	0.5	2
05/08/06 10:00	TRIP BLANK	VOC-Water	Benzene	0.5	ug/L	U	0.5	1
05/08/06 10:30	TRIP BLANK	VOC-Water	Benzene	0.5	ug/L	U	0.5	1
05/08/06 10:00	TRIP BLANK	VOC-Water	Bromodichloromethane	0.2	ug/L	U	0.2	1
05/08/06 10:30	TRIP BLANK	VOC-Water	Bromodichloromethane	0.2	ug/L	U	0.2	1
05/08/06 10:00	TRIP BLANK	VOC-Water	Bromoform	0.5	ug/L	U	0.5	2
05/08/06 10:30	TRIP BLANK	VOC-Water	Bromoform	0.5	ug/L	U	0.5	2
05/08/06 10:00	TRIP BLANK	VOC-Water	Bromomethane	0.5	ug/L	U	0.5	2
05/08/06 10:30	TRIP BLANK	VOC-Water	Bromomethane	0.5	ug/L	U	0.5	2
05/08/06 10:00	TRIP BLANK	VOC-Water	Carbon tetrachloride	0.2	ug/L	U	0.2	1
05/08/06 10:30	TRIP BLANK	VOC-Water	Carbon tetrachloride	0.2	ug/L	U	0.2	1
05/08/06 10:00	TRIP BLANK	VOC-Water	Chlorobenzene	0.2	ug/L	U	0.2	1
05/08/06 10:30	TRIP BLANK	VOC-Water	Chlorobenzene	0.2	ug/L	U	0.2	1
05/08/06 10:00	TRIP BLANK	VOC-Water	Chloroethane	0.5	ug/L	U	0.5	2
05/08/06 10:30	TRIP BLANK	VOC-Water	Chloroethane	0.5	ug/L	U	0.5	2
05/08/06 10:00	TRIP BLANK	VOC-Water	Chloroform	0.2	ug/L	U	0.2	1
05/08/06 10:30	TRIP BLANK	VOC-Water	Chloroform	0.2	ug/L	U	0.2	1
05/08/06 10:00	TRIP BLANK	VOC-Water	Chloromethane	0.5	ug/L	UJ	0.5	2
05/08/06 10:30	TRIP BLANK	VOC-Water	Chloromethane	0.5	ug/L	UJ	0.5	2
05/08/06 10:00	TRIP BLANK	VOC-Water	cis-1,2-Dichloroethene	0.5	ug/L	U	0.5	2
05/08/06 10:30	TRIP BLANK	VOC-Water	cis-1,2-Dichloroethene	0.5	ug/L	U	0.5	2
05/08/06 10:00	TRIP BLANK	VOC-Water	cis-1,3-Dichloropropene	0.5	ug/L	U	0.5	2
05/08/06 10:30	TRIP BLANK	VOC-Water	cis-1,3-Dichloropropene	0.5	ug/L	U	0.5	2
05/08/06 10:00	TRIP BLANK	VOC-Water	Dibromochloromethane	0.2	ug/L	U	0.2	1
05/08/06 10:30	TRIP BLANK	VOC-Water	Dibromochloromethane	0.2	ug/L	U	0.2	1
05/08/06 10:00	TRIP BLANK	VOC-Water	Ethylbenzene	0.5	ug/L	U	0.5	2
05/08/06 10:30	TRIP BLANK	VOC-Water	Ethylbenzene	0.5	ug/L	U	0.5	2
05/08/06 10:00	TRIP BLANK	VOC-Water	m,p-Xylene	0.5	ug/L	U	0.5	2
05/08/06 10:30	TRIP BLANK	VOC-Water	m,p-Xylene	0.5	ug/L	U	0.5	2
05/08/06 10:00	TRIP BLANK	VOC-Water	Methylene chloride	1	ug/L	U	1	2
05/08/06 10:30	TRIP BLANK	VOC-Water	Methylene chloride	1	ug/L	U	1	2

Appendix E. Chemical Analyses (continued)

Date Sampled	Field ID	Analysis Group	Component	Result	Units	Remark	MDL	PQL
05/08/06 10:00	TRIP BLANK	VOC-Water	o-Xylene	0.2	ug/L	U	0.2	1
05/08/06 10:30	TRIP BLANK	VOC-Water	o-Xylene	0.2	ug/L	U	0.2	1
05/08/06 10:00	TRIP BLANK	VOC-Water	Tetrachloroethene	0.2	ug/L	U	0.2	1
05/08/06 10:30	TRIP BLANK	VOC-Water	Tetrachloroethene	0.2	ug/L	U	0.2	1
05/08/06 10:00	TRIP BLANK	VOC-Water	Toluene	0.5	ug/L	U	0.5	2
05/08/06 10:30	TRIP BLANK	VOC-Water	Toluene	0.5	ug/L	U	0.5	2
05/08/06 10:00	TRIP BLANK	VOC-Water	trans-1,2-Dichloroethene	0.5	ug/L	U	0.5	2
05/08/06 10:30	TRIP BLANK	VOC-Water	trans-1,2-Dichloroethene	0.5	ug/L	U	0.5	2
05/08/06 10:00	TRIP BLANK	VOC-Water	trans-1,3-Dichloropropene	0.2	ug/L	U	0.2	1
05/08/06 10:30	TRIP BLANK	VOC-Water	trans-1,3-Dichloropropene	0.2	ug/L	U	0.2	1
05/08/06 10:00	TRIP BLANK	VOC-Water	Trichloroethene	0.2	ug/L	U	0.2	1
05/08/06 10:30	TRIP BLANK	VOC-Water	Trichloroethene	0.2	ug/L	U	0.2	1
05/08/06 10:00	TRIP BLANK	VOC-Water	Trichlorofluoromethane	0.5	ug/L	U	0.5	2
05/08/06 10:30	TRIP BLANK	VOC-Water	Trichlorofluoromethane	0.5	ug/L	U	0.5	2
05/08/06 10:00	TRIP BLANK	VOC-Water	Vinyl chloride	0.5	ug/L	UJ	0.5	2
05/08/06 10:30	TRIP BLANK	VOC-Water	Vinyl chloride	0.5	ug/L	UJ	0.5	2

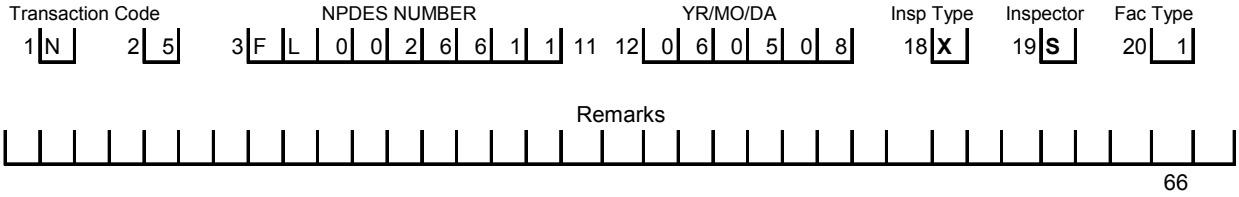
The Bioassay of Flagler Beach Wastewater Treatment Facility effluent sampled on May 8, 2006. NPDES #FL0026611.

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



The Priority Pollutants Analysis of Flagler Beach Wastewater Treatment Facility effluent sampled on May 8, 2006. NPDES #FL0026611.

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



Biological Analyses of Flagler Beach Wastewater Treatment Facility effluent sampled on May 8, 2006. NPDES #FL0026611.

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

