



Bioassays of
Pebble Creek Advanced Wastewater Treatment Plant
Hillsborough County
NPDES #FL0039896
Sampled February 5, 2007

May 2007

Biology Section
Bureau of Laboratories
Division of Resource Assessment and Management

Quality Manual No. 870346G
NELAC Certification No. E31780

Pebble Creek Advanced Wastewater Treatment Plant, 10210 Regents Park Drive, Tampa, Hillsborough County, Florida, NPDES #FL0039896. Effluent samples for chemistry and bioassay analyses for this facility were collected on February 5, 2007. As part of the compliance inspection for this facility, additional samples for chemical analyses were collected on February 6, 2007.

Introduction

Pebble Creek Village Advanced Wastewater Treatment Plant, a Type II domestic advanced wastewater treatment plant, uses the "RABCO" nitrification/de-nitrification process to treat domestic wastewater. The facility has a design flow of 0.4 million gallons per day (MGD) three month average daily flow (3MADF). The discharge through Outfall D-001 and through Reuse Outfall R-001 is measured as an annual average daily flow (AADF) and is limited to 0.4 MGD (AADF). There was no discharge through Outfall D-001 during 2006. Outfall D-001 serves as an alternative wet-weather discharge. The annual average daily flow from January 1, 2006, through December 31, 2006, through Outfall R-001 was 0.328 MGD. The flow during the sampling event was 0.35 MGD. The facility consists of a headworks with a grit removal chamber, a single course bar screen with a bypass channel, and an odor scrubbing system (currently in standby status), a flow equalization basin, two aeration basins, a de-nitrification basin, a re-aeration basin, a first stage clarifier, a second de-nitrification basin, a second re-aeration basin, a second stage clarifier, three de-nitrification filters, a mud-well, a filter pumping chamber, a clear-well (for filter backwash), a post-aeration basin, a chlorine contact chamber (used only for disinfection of reclaimed water), and an effluent pumping station. Effluent is transferred through three 12 lamp ultraviolet banks for surface water high level disinfection, thence to the surface discharge location D001.

Outfall D-001 discharges effluent into the Class III Freshwaters of Pebble Creek, thence to the Trout River, thence to Hillsborough Bay. Outfall D-001 is a 0.3 m (12 inch) diameter PVC pipe (through the creek bank) with a 90° elbow discharging onto riprap. Outfall D-001 discharges at a height of approximately 0.91 m (3 feet) above the surface of the water, and is located approximately at latitude 29° 09' 05" N and longitude 82° 22' 00" W. Reuse system R-001 is a public access reuse system serving the Pebble Creek Village Golf Course (55.9 acres, 1.0 inches per week), the Pebble Creek Village common areas (35.8 acres, 1.0 inches per week), and the Pebble Creek Village Driving Range (8 acres, 1.28 inches per week). Storage of reuse water is available on the golf course in an unlined isolated storage pond as well as several combination stormwater/reclaimed water ponds. The reuse areas are immediately adjacent to the wastewater treatment plant. Residuals are treated by directing waste activated-sludge from both clarifiers to an aerated digester basin then to a sludge holding tank for lime-stabilization. Stabilized residuals are disposed by means of land application.

There are no Administrative Orders (AO) or Consent orders (CO) for this facility. The facility has no mixing zones. Due to lack of flow through Outfall D001, there is no Discharge Monitoring Report (DMR) data for 2006. (Facility information provided by Lori Pillsbury and Joe Squitieri of FDEP Southwest District.)

Methods

Effluent grab samples were collected from the EFD-01 (after disinfection and prior to discharge) and EFB-01 (turbidity monitoring/TSS sampling point after filtration and prior to disinfection) NPDES sampling points for Outfall D-001 and effluent composite samples were collected from the EFA-01 (after disinfection and prior to reuse systems) NPDES sampling point for Outfall D001 by Lori Pillsbury, Peter Wenner, and Joe Squitieri (FDEP Southwest District) following DEP-SOP-001/01 FS 2400 Wastewater Sampling. All DEP SOPs are available on the web at: <http://www.floridadep.org/labs/qa/sops.htm>.

See Appendix A for the completed chain of custody form.

The 48-hour acute screening toxicity tests and algal growth potential test were performed following internal DEP SOPs TA07_01, TA07_02, and TA08_01 through TA08_09. All internal DEP SOPs are available on the web at: <http://www.floridadep.org/labs/cgi-bin/sop/biosop.asp>. While the 48-hour acute

screening toxicity test does not reflect the permit required conditions, the Department uses it to provide reasonable assurance that the facility does not adversely affect waters of the state.

Toxicity Test Results

Tests were performed February 6 - 8, 2006.

Ceriodaphnia dubia 48-hour acute screening bioassay – LC₅₀ > 100%, 0% mortality* in 100% sample at 48 hours

Cyprinella leedsi 48-hour acute screening bioassay – LC₅₀ > 100%, 0% mortality* in 100% sample at 48 hours

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

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

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

Algal Growth Potential

The effluent Algal Growth Potential (AGP) was 75.6 mg dry wt/L of the unicellular green alga, *Pseudokirchneriella subcapitata*, formerly known as *Selenastrum capricornutum*. Raschke and Shultz (1987) found that AGP values above 5.0 mg dry weight/L represent a "problem" threshold for fresh receiving waters, implying nutrient enrichment. The analytical chemistry suggests that the effluent is nitrogen-limited. The predicted AGP based on inorganic nitrogen concentrations was 39.8 (±20%) mg dry wt/L (Table 1; Miller et al. 1978).

See Table 1 for AGP results.

Chemistry Results

Total residual chlorine was not detected in the bioassay sample in the laboratory. Total ammonia was detected in the bioassay sample at a concentration of 0.0261 mg/L in the laboratory. The total ammonia concentrations in the samples collected and preserved for chemical analysis were 0.068 mg/L for the effluent grab sample and 0.024 mg/L for the effluent composite sample. Based on the pH, salinity, and temperature of the effluent as collected, the calculated unionized ammonia concentrations were less than 0.02 mg/L for both the grab and composite Outfall D-001 samples.

Copper, iron, nickel, and zinc were detected in both the effluent grab and composite samples at levels that comply with Class III fresh water quality criteria (62-302.530, F.A.C.); copper was also detected in the equipment blank composite sample. Atrazine, aluminum, and lead were detected between the laboratory method detection limits (MDL) and practical quantitation limits (PQL) in the effluent grab sample. Aluminum was detected between the laboratory method detection limits (MDL) and practical quantitation limits (PQL) in the effluent composite sample.

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

Conclusion

The effluent sample collected from EFD-01 for this facility on February 5, 2007, was not acutely toxic to either test species during the 48-hour acute screening bioassays. The effluent AGP result exceeded the "problem" threshold for fresh receiving waters. Effluent water quality samples did not exceed any applicable water quality standards or violate any permit conditions.

Literature Cited

- Miller, W. E., T. E. Maloney, and J. C. Greene. 1978. The *Selenastrum capricornutum* Printz algal assay bottle test. EPA-600/9-78-018. U. S. EPA, Cincinnati, Ohio. 126 p.
- Raschke, R. L. and D. A. Schultz. 1987. The use of the algal growth potential test for data assessment. J. Wat. Poll. Cont. Fed. 59(4): 222-227.

Table 1. Measured and predicted algal growth potential (AGP; mg dry weight/L) for total soluble nitrogen (TSIN) and total nitrogen (TN) limitation of the freshwater species *Pseudokirchneriella subcapitata* and ratios of nitrogen to phosphorus for samples collected from Pebble Creek Advanced Wastewater Treatment Facility on February 5, 2007.

Location	AGP (measured)	Predicted AGP (TSIN) $\pm$ 20%	Predicted AGP (TN) $\pm$ 20%	Inorganic N:P ratio	Total N:P ratio
Effluent D001	75.6	39.8 $\pm$ 8.0	61.2 $\pm$ 12.2	2.0	2.9

Table 2. Effluent limits, Class III Fresh Criteria, and chemical and microbiological data for samples collected from Pebble Creek Advanced Wastewater Treatment Facility on February 5 and 6, 2007.

Pebble Creek Advanced Wastewater Treatment Facility NPDES #FL0039896	Class III Fresh Stds	Effluent Limits	Effluent Grab Samples (EFD-01)	Effluent Composite Samples (EFA-01)	Filter Effluent (EFB-01)
Organic Constituents (µg/L)					
Atrazine	-	Report	0.18 I	-	-
Metals (µg/L unless otherwise noted)					
Aluminum	-	-	5.0 I	5.6 I	-
Arsenic	≤ 50	-	0.5 U	0.5 U	-
Cadmium	≤ 2.4 b	-	0.05 U	0.05 U	-
Calcium (mg/L)	-	-	93.3	89.8	-
Chromium-III	≤ 191.3 b	-	0.3 U	0.3 U	-
Copper	≤ 21.4 b	≤ 21.4 b ¹	5.28	1.76 f	-
Iron	≤ 1,000	-	43	48	-
Lead	≤ 11.0 b	-	0.2 I	0.2 U	-
Magnesium (mg/L)	-	-	7.7	7.6	-
Nickel	≤ 118.8 b	-	6.4	7.7	-
Selenium	≤ 5.0	-	0.5 U	0.5 U	-
Silver	≤ 0.07	-	0.025 U	0.025 U	-
Zinc	≤ 273.3 b	-	38	33	-
Nutrients (mg/L)					
Ortho-phosphate	-	-	0.53	-	-
Total Phosphorus	-	≤ 2.0 s ²	0.55 A	0.58 A	-
Total Ammonia	-	≤ 1.0 s ²	0.068	0.024	-
Un-ionized Ammonia	≤ 0.02 s	-	≤ 0.02 c	≤ 0.02 c	-
Nitrate and Nitrite	-	-	0.98	0.35	-
Total Kjeldahl Nitrogen	-	-	0.63 A	0.55 JA	-
Organic Nitrogen	-	-	0.562 c	0.526 c	-
Total Nitrogen	-	≤ 6.0 s ²	1.61 c	0.9 c	-
General Physical and Chemical Parameters					
Dissolved Oxygen (mg/L)	≥ 5.0 s	≤ 6.5 s ¹	9.0	-	-
pH (SU)	6.0 - 8.5 s	6.0 - 8.5 s ¹	7.7	-	-
Conductivity (µmhos/cm)	≤ 1,275 s	-	1,022	-	-
Temperature (°C)	-	-	21.5	-	-
Total Residual Chlorine (mg/L)	≤ 0.01	-	< 0.03 £	-	-
Total Suspended Solids (mg/L)	-	≤ 4.0 s ²	4.0 U	4.0 U	-
Total Suspended Solids (mg/L)	-	≤ 5.0 s ³	-	-	4.0 U
Turbidity (NTU)	≤ 29 t	-	0.2	-	-
Turbidity (NTU) R-001	-	Report ³	-	-	0.15
Color (pt-Co)	-	-	10	-	-
CBOD, 5 day (mg/L), N - inhibited	-	≤ 4.0 s ²	0.46 I	-	-
CBOD, 5 day (mg/L), N - inhibited R-001	-	≤ 60.0 s ⁴	-	0.62 I	-
Oils and Greases (mg/L)	≤ 5.0	-	2.1 If	-	-
Flow (MGD) (Outfall D-001)	-	≤ 0.40 a	-	-	-
Flow (MGD) (Outfall R-001)	-	≤ 0.40 a	0.328 a	-	-
Hardness (mg CaCO ₃)	-	Report ¹	264.68 c	255.53 c	-
Microbiology (Number of counts/100ml)					
Fecal Coliforms	≤ 800 s	Report	< 1*	-	-

NOTE: All limits are for Outfall D-001 unless noted by R-001 beside the component name

Value exceeds the Class III Water Quality Criteria or permit limits

a - Annual average

b - Value is calculated based on hardness

c - Value is calculated

f - Analyte was detected in both sample and equipment blank (composite)

s - Single sample

t - Shall not exceed 29 NTUs above background

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

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

J - Estimated value

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

£ - Measured in FDEP bioassay laboratory

* - Data provided by FL DEP Southwest District lab

¹ - Limit is for grab sample at EFD-01

² - Limit is for composite sample at EFD-01

³ - Limit is for grab sample at EFB-01

⁴ - Limit is for grab sample at EFA-01

Florida Department of Environmental Protection										Event ID *	
Central Laboratory Sample Submittal Form										Field Report Prepared By: L Pillsbury	
Requester: Shaman Bogdanov										Send Final Report To: Tom Gucciardo	
Collected By: L Pillsbury, Pwenner											
Sampling Agency: FDEP											
Lab ID *	OUTFALL 0001									Eastern Central	Bottle Group(s) ** A
Field ID	34893									NPDES Number	
Matrix (include type e.g. Salt, Fresh, etc)	FRESH									Collection (begin) Date	Time
Latitude	N 28° 09' 16.9"									Collection (end) Date	Time
Longitude	W 082° 20' 45.4"									Store Station Number	
Location	BLANK									Salinity (ppt) (h)	
Field ID	34894									Sp Conductance (umho/cm)	
Matrix (include type e.g. Salt, Fresh, etc)	FRESH									Collection (begin) Date	Time
Latitude										Collection (end) Date	Time
Longitude										Store Station Number	
Location										Salinity (ppt) (h)	
Field ID										Sp Conductance (umho/cm)	
Lab ID *	EQUIPMENT BLANK - COMPOSITE SAMPLER									Eastern Central	Bottle Group(s) ** B
Field ID	34895									NPDES Number	
Matrix (include type e.g. Salt, Fresh, etc)	FRESH									Collection (begin) Date	Time
Latitude										Collection (end) Date	Time
Longitude										Store Station Number	
Location	Blank collected thru composite sampler									Salinity (ppt) (h)	
Field ID										Sp Conductance (umho/cm)	
Lab ID *	OUTFALL 0001									Eastern Central	Bottle Group(s) ** A
Field ID	34893									NPDES Number	
Matrix (include type e.g. Salt, Fresh, etc)	FRESH									Collection (begin) Date	Time
Latitude	N 28° 09' 16.9"									Collection (end) Date	Time
Longitude	W 082° 20' 45.4"									Store Station Number	
Location	BLANK									Salinity (ppt) (h)	
Field ID	34894									Sp Conductance (umho/cm)	
Matrix (include type e.g. Salt, Fresh, etc)	FRESH									Collection (begin) Date	Time
Latitude										Collection (end) Date	Time
Longitude										Store Station Number	
Location										Salinity (ppt) (h)	
Field ID										Sp Conductance (umho/cm)	

Request Number: RQ-2007-02-05-28

Popple Creek Village WWTF

Customer: SW-DIST

Project ID: FY13

PMAS: 1153

Requester: Shaman Bogdanov

Collected By: L Pillsbury, Pwenner

Sampling Agency: FDEP

Field Report Prepared By: L Pillsbury

Send Final Report To: Tom Gucciardo

Relinquished By: *[Signature]*

Date/Time: 02/05/07 1100

Shipping Method: DHL

Received By: Tom.E

Date/Time: 02/06/07

Relinquished By: *[Signature]*

Date/Time: 02/06/07

Received By: *[Signature]*

Date/Time: 02/06/07

Relinquished By: *[Signature]*

Date/Time: 02/06/07

last revised October 1, 2003

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Florida Department of Environmental Protection
Central Laboratory Sample Submittal Form

Request Number: RQ-2007-02-05-28
Pebble Creek Village WWTF

Customer: SW-DIST
Project ID: FYI3
PMAS: 1153

Requester: Shannan Bogdanov

nnan Bogdanov

Field Report Prepared By: The South

Customer: SW-D
Project ID: FYI3

Collected By: -

Collected By: JOE J. HILL

Send Final Report To **Tom Gucciardo**

PMAS: 1153

Sampling Agency:

Lab ID *	Location										Bottle Group(s) **	
	Outfall 0001 - composite										B	
	Field ID		34896									
	Matrix (include type e.g. Soil, Fresh, etc)											
	WATER - effluent											
	Latitude		0		Longitude		0					
	Temp (C)		pH									
	☒ Comp		☐ Grab		Sample Depth		☐ m		☐ ft			
	Tot Res Chlorine (mg/L)											
	Collection (begin)		Date		2/5/07		Time		0920			
	Collection (end)		Date		2/6/07		Time		0910			
	Collection (begin)		Date		2/5/07		Time		0920			
	Collection (end)		Date		2/6/07		Time		0910			
	Collection (begin)		Date		2/5/07		Time		0920			
	Collection (end)		Date		2/6/07		Time		0910			
	Collection (begin)		Date		2/5/07		Time		0920			
	Collection (end)		Date		2/6/07		Time		0910			
	Collection (begin)		Date		2/5/07		Time		0920			
	Collection (end)		Date		2/6/07		Time		0910			
	Collection (begin)		Date		2/5/07		Time		0920			
	Collection (end)		Date		2/6/07		Time		0910			
	Collection (begin)		Date		2/5/07		Time		0920			
	Collection (end)		Date		2/6/07		Time		0910			
	Collection (begin)		Date		2/5/07		Time		0920			
	Collection (end)		Date		2/6/07		Time		0910			
	Collection (begin)		Date		2/5/07		Time		0920			
	Collection (end)		Date		2/6/07		Time		0910			
	Collection (begin)		Date		2/5/07		Time		0920			
	Collection (end)		Date		2/6/07		Time		0910			
	Collection (begin)		Date		2/5/07		Time		0920			
	Collection (end)		Date		2/6/07		Time		0910			
	Collection (begin)		Date		2/5/07		Time		0920			
	Collection (end)		Date		2/6/07		Time		0910			
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	Collection (end)		Date		2/6/07		Time		0910			
	Collection (begin)		Date		2/5/07		Time		0920			
	Collection (end)		Date		2/6/07		Time		0910			
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	Collection (end)		Date		2/6/07		Time		0910			
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	Collection (end)		Date		2/6/07		Time		0910			
	Collection (begin)		Date		2/5/07		Time		0920			
	Collection (end)		Date		2/6/07		Time		0910			
	Collection (begin)		Date		2/5/07		Time		0920			
	Collection (end)		Date		2/6/07		Time		0910			
	Collection (begin)		Date		2/5/07							

Lab ID *											
Location	Filter Effluent										
Field ID	34897										
Matrix (Include type e.g. Salt, Fresh, etc.)	Water - Effluent										
Latitude	° ' "			Longitude			° ' "			pH	
Temp (C)											
☐ Comp				Collection (begin)		Eastern		Collection (end)		Bottle	
☒ Grab				Date		Central		Date		Group(s)	
Tot Res Chlorine (mg/L)				Time		Time		Time		B	
Sample Depth				m		NPDES Number					
ft						Salinity (ppt)					
Comments				Sp Conductance (umhos/cm)							

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

[illegible]

Relinquished By:	Date/Time	Shipping Method:	Received By:	Date/Time	Relinquished By:	Date/Time
<i>[Signature]</i>	2/6/7 11:20	<i>[Signature]</i>	<i>[Signature]</i>	2-7-07		

Shaded Areas for Lab use only.

last revised October 1, 2003

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Appendix B. Bench Sheets

FDEP Biology Section - Acute Screen Bioassay Bench Sheets

Sample Collection: Date: 2/5/2007 Time: 0905

Hold Time Start: Date: 2/5/2007 Time: 0905

Facility: Peterson Creek Aquatic

Address: 10210 Veterans Park Drive

City: TALPA County: HILLSBOROUGH

Contact/District: L. PULSLEY / SWD

NPDES Permit #: FL00398946

LIMS Job #: TAL-2007-02-00-03-01 LIMS Sample #: 081931

LIMS Data Entry: 2-8-07 MF Data Entry Verification: 2-9-07 JD

Comments: Facility uses WWT for detection not chlorination

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
 Initial sample handling:
 PH adjustment: yes (X) Initial pH: 7.5 NaOH N HCl N Drops mL Final pH: 7.5
 Aeration: yes (X) Initial DO: 7.5 mg/L Final DO: 7.5 mg/L Duration: 15 minutes Rate: 1 bubbles/min
 Salinity adjusted (Test 1): yes (X) Initial Salinity: 0 Final Salinity: 0 Salts Hypersaline brine
 Salinity adjusted (Test 2): yes (X) Initial Salinity: 0 Final Salinity: 0 Salts Hypersaline brine
 Dechlorination: yes (X) mL of 0.025N Sodium Thiosulfate per liter of sample. Final TRC: 0

Sample Validation:
 Temperature: Shipped 50°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)

Water Quality Parameters	20% DMW	Moderately Hard Water	Salt Water Test 1	Salt Water Test 2	Other:	Original Sample	Method	Measured by	Verified by
Field Total Residual Cl ₂ (mg/L)	N/A	N/A	N/A	N/A		4.03	HACH	PAV	BA
Lab Total Residual Cl ₂ (mg/L)	4.03	4.03				45	HACH	PAV	BA
Alkalinity (mg/L as CaCO ₃)	89	142				306	HACH	PAV	BA
Hardness (mg/L as CaCO ₃)	105	153				0.041	DEINER	MF	PAV
Total Ammonia (mg/L as N)	20.07	4.0				4.0	YSI / Mettler	JD	PAV
Salinity (ppt)	4.0								

Investigators' Signatures
Brian Bazzani
Paul V. Chavira
Manuel P. Paredes
David Willett
 REVIEWER

V 1.4 9/12/05

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000001

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FDEP Biology Section - Bioassay Survival Sheet

Test #: 1 Test Started: Date 2/6
SOP #: TA 07_ 01 Test Ended: Date 2-7
Diluent/ Batch: DMW 1 2-2-07
Food: YCT P. subcapitata Artemia
Batch: 3-06 5-06 —
Feeding: Prior to test Prior to renewal - Daily

Test Started: Date 2/6/07 Time: 12:10
Test Ended: Date 2.8.07 Time: 1200

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

THE

Concentration	Replicate	Chamber #	Test Hour					
			0 hr	24 hr	48 hr BR	48 hr AR	72 hr	96 hr
Ctrl	A	B1	5	5	5			
	B	B2	5	5	5			
	C	B3	5	5	5			
	D	B4	5	5	5			
100%	A	B5	5	5	5			
	B	B6	5	5	5			
	C	B7	5	5	5			
	D	B8	5	5	5			

Organisms loaded by: JD

Loading Verified by: AA

Checked by: [Signature]

Comments:

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

Test Results:

V 2.1 11/01/2005

000003

Appendix B. (continued)

FDEP Biology Section - Bioassay Parameter Sheet

LIMS Sample #: 981931 Test #: 1 of 2
 TEST SOP #: TA07-01 Test Species: *Caridophnia dubia* *Cyprinella leedsi* *Pimephales promelas*
Americanmysis baltica *Menidia beryllina* Other: _____

Concentration	0 Hr.	24 Hr.	48 Hr. before renewal	48 Hr. after renewal	72 Hr.	96 Hr.
Replicate	M		M			
pH (S.U.)	7.8		8.1			
Temperature °C	24.8		24.0			
Dissolved Oxygen mg/L	8.1		7.5			
Conductivity μ mhos	1079		1115			
(initials) Measured by:	DP		DP			
(initials) Recorded by:	DP		DP			

Comments:

Concentration	0 Hr.	24 Hr.	48 Hr. before renewal	48 Hr. after renewal	72 Hr.	96 Hr.
Replicate	M		M			
pH (S.U.)	8.1		8.0			
Temperature °C	24.1		24.0			
Dissolved Oxygen mg/L	7.4		7.5			
Conductivity μ mhos	1034		741			
(initials) Measured by:	DP		DP			
(initials) Recorded by:	DP		DP			

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 μ mhos						
(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 μ mhos						
(initials) Measured by:						
(initials) Recorded by:						

Comments:

000004

Appendix B. (continued)

FDEP Biology Section - Bioassay Parameter Sheet

LIMS Sample #: 98193.1 Test #: 2 of 2
TEST SOP #: TA07-02 Test Species: *Ceriodaphnia dubia* (*Cypinella leeds*) *Pimephales promelas*
Americanmysis bahia *Manidia beryllina* Other:

Concentration	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	7.8	7.9			
Temperature °C	25.9	24.0	24.3			
Dissolved Oxygen mg/L	8.1	7.5	7.2			
Conductivity μ mhos	1069	1047	1070			
(initials) Measured by:	JD	JD	JD			
(initials) Recorded by:	JD	JD	JD			

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 μ mhos						
(initials) Measured by:						
(initials) Recorded by:						

Comments:

Appendix C. SRT Bench Sheets and Statistical Analysis

Florida Department of Environmental Protection
Bureau of Laboratories

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

Date	LC50	Mean LC50	Std Dev	Lower Control Limit	Upper Control Limit
07/06/05	2.25	2.37	0.28	1.81	2.94
08/02/05	2.11	2.37	0.29	1.79	2.94
09/12/05	2.06	2.36	0.29	1.77	2.95
10/04/05	2.08	2.34	0.30	1.74	2.94
11/01/05	2.40	2.34	0.30	1.74	2.94
11/29/05	2.09	2.32	0.30	1.72	2.92
01/05/06	2.27	2.30	0.29	1.72	2.89
01/31/06	1.94	2.28	0.30	1.67	2.88
02/28/06	2.18	2.26	0.30	1.67	2.85
03/21/06	2.55	2.28	0.30	1.68	2.88
05/02/06	2.32	2.27	0.30	1.68	2.87
05/30/06	2.47	2.27	0.30	1.68	2.87
07/04/06	2.20	2.26	0.30	1.67	2.85
08/01/06	2.13	2.26	0.30	1.66	2.85
08/08/06	2.12	2.24	0.30	1.65	2.84
09/05/06	1.92	2.19	0.30	1.61	2.83
10/03/06	2.18	2.19	0.30	1.63	2.83
10/31/06	2.26	2.25	0.29	1.66	2.83
11/28/06	1.96	2.18	0.17	1.85	2.51
01/16/07	2.22	2.19	0.17	1.85	2.52

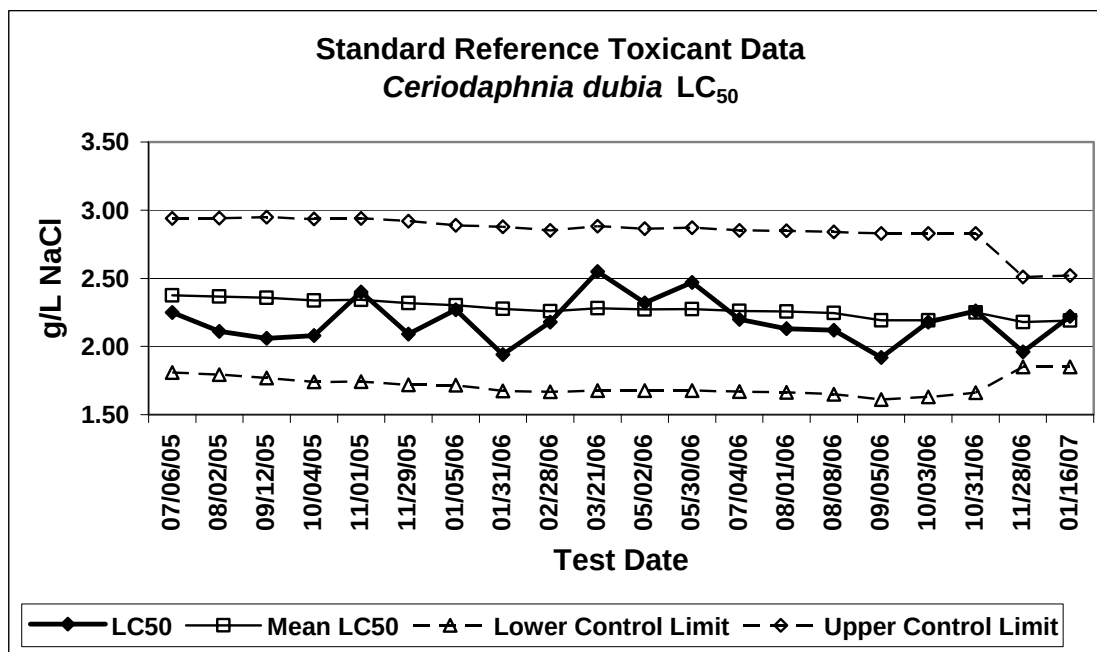
Means are of the last 20 SRT tests.

Lower Confidence Limit = mean - 2 * Std Dev

CV = 7.76

Upper Confidence Limit = mean + 2 * Std Dev

EPA reference 75th quartile CV = 29%



Appendix C. (continued)

Florida Department of Environmental Protection
Bureau of Laboratories

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

Date	LC50	Mean LC50	Std Dev	Lower Control Limit	Upper Control Limit
07/12/05	7.59	8.08	0.86	6.35	9.81
08/02/05	7.53	8.13	0.80	6.53	9.72
09/13/05	7.84	8.16	0.77	6.63	9.70
10/04/05	7.81	8.16	0.77	6.62	9.69
11/01/05	7.74	8.15	0.77	6.61	9.69
11/29/05	7.49	8.15	0.77	6.61	9.69
01/04/06	7.94	8.18	0.75	6.67	9.68
01/24/06	8.39	8.14	0.72	6.71	9.57
02/28/06	8.34	8.09	0.67	6.75	9.44
03/21/06	8.46	8.04	0.57	6.89	9.18
05/02/06	7.2	7.95	0.57	6.82	9.09
05/31/06	8.44	8.00	0.56	6.88	9.13
07/11/06	9.06	8.04	0.61	6.82	9.26
07/18/06	8.77	8.05	0.62	6.81	9.29
08/01/06	7.64	8.04	0.63	6.79	9.29
09/06/06	7.93	8.08	0.60	6.88	9.27
10/03/06	8.09	8.00	0.49	7.03	8.98
10/31/06	8.12	8.01	0.49	7.03	8.98
11/28/06	8.04	8.04	0.46	7.11	8.97
01/16/07	8.47	8.04	0.47	7.11	8.98

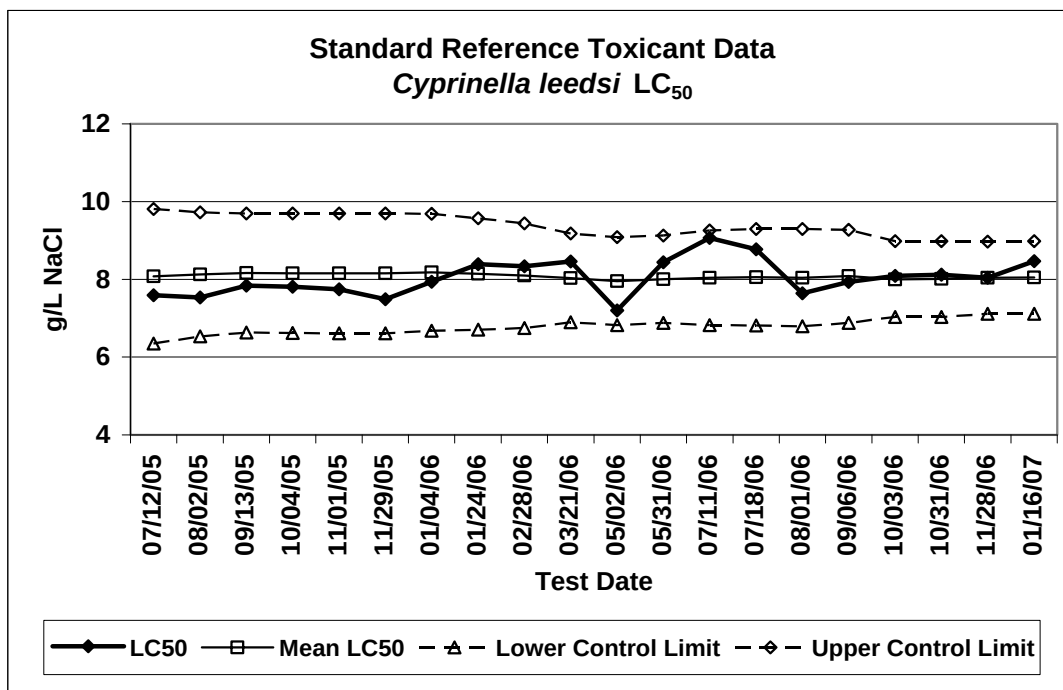
Means are of the last 20 SRT tests.

Lower Confidence Limit = mean - 2 * Std Dev

CV = 5.85

Upper Confidence Limit = mean + 2 * Std Dev

EPA reference 75th quartile CV = 19%



Appendix C. (continued)

FDEP Biology Section - Acute SRT Bench Sheet

Test Organism: *Americamysis bahia* Method 2007.0
Menidia beryllina Method 2006.0
Cyprinella leedsi Method 2000.0
Hyalella azteca Method 100.1 EPA-600-R-99-064
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#: DMW 11-9-07
 Toxicant/ Batch#: NaCl 11-9-07

Test Beginning: Date: 1/16/07 Time: 1430
 Test Ending: Date: 1/24/07 Time: 1200

Water Quality Parameters:	Diluent	Method	Initials
Total Residual Cl ₂ (mg/L):	603	Hach	AV
Alkalinity (mg/L as CaCO ₃):	25	Hach	AV
Hardness (mg/L as CaCO ₃):	90	Hach	AV
Total Ammonia (mg/L as N):	60.0	Denver	AV
Salinity (ppt):	<1	Mettler	BA

Organism Batch # Age: 3-07 1 24hrs
 Feeding: Prior to test Prior to renewal/ Daily
 Food: YCT P.subcapitata Artemia
 Food Batch: 2-06 5-06
 Chamber size: 30 mL
 Test volume: 20 mL per replicate

Conc. (μg/L)	Rep.	Chamber#	Number Live			pH (SU)			Temperature (°C)			D.O. (mg/L)			UNCORRECTED Cond. (mmhos/cm)		
			0 hr	24 hr	48 hr	0 hr	24 hr	48 hr	0 hr	24 hr	48 hr	0 hr	24 hr	48 hr	0 hr	24 hr	48 hr
Control	A	A	5	5	5	7.9		7.8	24.0		24.4	7.2		7.4	2.55		3.17
	B	B	5	5	5												
	C	C	5	5	5												
	D	D	5	5	5												
1.5	A	A	5	5	5	8.0		7.9	24.3		24.0	6.9		7.3	3.92		4.21
	B	B	5	5	5												
	C	C	5	5	5												
	D	D	5	5	5												
2.0	A	A	5	5	5	8.1		7.9	24.0		24.0	7.1		7.3	4.90		5.34
	B	B	5	5	5												
	C	C	5	5	5												
	D	D	5	5	5												
2.5	A	A	5	5	5	8.1		7.9	24.0		24.0	7.2		7.3	5.80		6.28
	B	B	5	5	5												
	C	C	5	5	5												
	D	D	5	5	5												
3.0	A	A	5	5	5	8.1		7.9	24.0		24.0	7.2		7.3	5.80		6.28
	B	B	5	5	5												
	C	C	5	5	5												
	D	D	5	5	5												
4.0	A	A	5	5	5	8.1		7.9	24.0		24.0	7.2		7.3	5.80		6.28
	B	B	5	5	5												
	C	C	5	5	5												
	D	D	5	5	5												
Loaded / measured by:			BA	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA
Recorded by:			BA	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA

Investigators' Signatures

Brian Alder

Patricia Vickaire

Erin Wilcox

John French

Marshall Faindell

Ngili Mullen

REVIEWER

Concentrations prepared by: JD

Loading verified by: JD

Light Intensity: 50-100 Ft. candles

Photoperiod: 16 hours Light / 8 hours dark

Temperature Range °C:

Incubator # 2 min. 23.4 max. 23.9 mean 24.6

Incubator # min. max. mean

Room B246 min. 23.3 max. 24.1 mean 23.5

Remarks:

A 95% confidence limits are not reliable according to TSK program BA 2-8-07
 B 178 JD 2.9.07 transcription error MF 2-9-07

Statistical Results: Method: Spearman-Kärber

48 / 96 hour LC50: 2.22

95% Confidence Interval: lower 0 upper

Revised 02/21/06

Appendix C. (continued)

FDEP Biology Section - Acute SRT Bench Sheet

Test Organism: *Americanysis bahia* Method 2007.0
Menidia beryllina Method 2006.0
Cyprinella leedsii Method 2000.0
Hyalella azteca Method 100.1 EPA-600-R-99-064
Pimephales promelas Method 2000.0
 Other: _____

Method from EPA-821-R-02-012

Test Type: Definitive

Static / Static Renewal

Test Page 2 of 2

Diluent/ Batch#: DMW 11-9-07
 Toxicant/ Batch#: NaCl 11-10-07

Test Beginning: Date: 1-16-07 Time: 14:30
 Test Ending: Date: 1-20-07 Time: 1200

Water Quality Parameters:	Diluent	Method	Initials
Total Residual Cl ₂ (mg/L):	LC-03	Hach	PDV
Alkalinity (mg/L as CaCO ₃):	85	Hach	PDV
Hardness (mg/L as CaCO ₃):	90	Hach	PDV
Total Ammonia (mg/L as N):	46-017	Denver	PDV
Salinity (ppt):	21	Mettler	BA

Organism Batch # Age: 3-0 / 24 hr

Feeding: Prior to test / Prior to renewal / Daily

Food: YCT P. subcapitata Artemia

Food Batch: 2-06 5-06

Chamber size: 30 mL

Test volume: 20 mL per replicate

Conc. µg/L (g/L)	Rep.	Chamber#	Number Live			pH (SU)			Temperature (°C)			D.O. (mg/l)			INCORRECTED Cond. (µmhos/cm)		
			0 hr	24 hr	48 hr	0 hr	24 hr	48 hr	0 hr	24 hr	48 hr	0 hr	24 hr	48 hr	0 hr	24 hr	48 hr
Control	A	A	5	5	5	7.8		8.1	24.1		24.0	7.2		7.3	18.0		18.0
	B	B	5	5	5												
	C	C	5	5	5												
	D	D	5	5	5												
1.5	A	A	5	5	5	8.0		8.1	24.2		24.0	7.5		7.8	3.02		3.1
	B	B	4	2 ^{2D}	110												
	C	C	4	3 ^{1D}	210												
	D	D	5	5	5												
2.0	A	A	5	4 ^{1D}	4	8.0		8.1	24.0		24.1	7.4		7.8	4.00		4.3
	B	B	5	5	140												
	C	C	5	5	410												
	D	D	4	3 ^{1D}	3												
2.5	A	A	0	-	-	8.0		-	24.0		-	7.3		-	4.87		-
	B	B	0	-	-												
	C	C	0	-	-												
	D	D	0	-	-												
3.0	A	A	0	-	-	-		-			-			-			-
	B	B	0	-	-												
	C	C	0	-	-												
	D	D	0	-	-												
4.0	A	A	0	-	-	-		-			-			-			-
	B	B	0	-	-												
	C	C	0	-	-												
	D	D	0	-	-												
Loaded / measured by:			BA	BA	JD	BA		JD	BA		JD	BA		JD	BA		JD
Recorded by:			BA	BA	JD	BA		JD	BA		JD	BA		JD	BA		JD

Investigators' Signatures

David A. Beck

David A. Beck

Erin A. Cox

Erin A. Cox

Erin A. Cox

Erin A. Cox

Erin A. Cox

Erin A. Cox

Erin A. Cox

Concentrations prepared by: JD

Loading verified by: JD

Light Intensity: 50-100 Ft. candles

Photoperiod: 16 hours Light / 8 hours dark

Temperature Range °C:

Incubator # 2 min 23.4 max 25.9 mean 24.6

Incubator # min max mean

Room B246 min 22.2 max 24.7 mean 23.5

Remarks:

Statistical Results:

Method: Spearman-Kärber

48 hour LC50: 2.03

95% Confidence Interval: lower 1.68 upper 2.43

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
Ceriodaphnia dubia Method 2002.0
Cyprinella feedsi Method 2000.0
Hyalloella azteca Method 100.1 EPA-600-R-99-064
Pimephales promelas Other: Method 2000.0

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

Diluent/ Batch#: W1142 11607
 Toxicant/ Batch#: N2C 11607

Test Beginning: Date: 01/16/07 Time: 1345
 Test Ending: Date: 1/20/07 Time: 1200

Water Quality Parameters:	Diluent	Method	Initials
Total Residual Cl ₂ (mg/L):	60.53	Hach	PRV
Alkalinity (mg/L as CaCO ₃):	142	Hach	CS
Hardness (mg/L as CaCO ₃):	136	Hach	CS
Total Ammonia (mg/L as N):	60.17	Denver	PRV
Salinity (ppt):	<1	Mettler	BA

Organism Batch #/ Age: 11607 / 11 days
 Feeding: Prior to test / Prior to renewal / Daily
 Food: YCT P.subcapitata Artemia
 Food Batch: 651-536-40
 Chamber size: 1000 mL
 Test volume: 500 mL per replicate

Conc. μg/L	Rep.	Chamber#	Number Live			pH (SU)			Temperature (°C)			D.O. (mg/L)			UNCORRECTED Cond. (mmhos/cm)		
			0 hr	24 hr	48 hr	0 hr	24 hr	48 hr	0 hr	24 hr	48 hr	0 hr	24 hr	48 hr	0 hr	24 hr	48 hr
Control	A	B13	10	10	10	7.7			24.0			7.1			0.269		
	B	B14	10	10	10	7.7			24.3			6.5			0.295		
	C																
	D																
6.0	A	B15	10	10	10	7.7	7.8	8.2	24.0			7.6			10.51		10.9
	B	B16	10	10	9/10		7.8		24.3			6.7			10.7		
	C																
	D																
7.0	A	B17	10	9/10	8/10	7.8		8.2	24.0			7.6			12.25		12.7
	B	B18	10	10	10	7.9			24.2			6.7			12.3		
	C																
	D																
8.0	A	B19	10	7/10	7	7.8		8.2	24.0			7.6			13.71		14.2
	B	B20	10	8/10	8	7.9			24.2			6.4			13.1		
	C																
	D																
9.0	A	B21	10	5/10	5	7.8		8.2	24.0			7.6			15.30		15.8
	B	B22	10	3/10	2/10	7.9			24.4			6.4			15.6		
	C																
	D																
10.0	A	B23	10	0/10	—	7.8			24.0			7.6			17.05		
	B	B24	10	1/10	0/10	7.9	8.2		24.3			6.4	6.8		17.3	17.5	
	C																
	D																
	A																
	B																
	C																
	D																
Loaded / measured by:			JD	JD	JD	CS	BA	PRV	CS	JD	JD	CS	BA	PRV	CS	BA	PRV
Recorded by:			BA	JD	JD	CS	BA	PRV	CS	JD	JD	CS	BA	PRV	CS	BA	PRV

Investigators' Signatures
Patricia Anderson
Patricia Wickham
Erin Wilcock
John Pash

Concentrations prepared by: JD
 Loading verified by: CS
 Light Intensity: 50-100 Ft. candles
 Photoperiod: 16 hours Light / 8 hours dark
 Temperature Range °C:
 Incubator # 2 min. 23.1 max. 25.9 mean 24.6
 Incubator # min. max. mean
 Room B246 min. 22.2 max. 24.1 mean 23.5

Remarks:

Statistical Results: Method: Spearman-Kärber
 95% Confidence Interval: lower 8.47 upper 8.86

REVIEWER

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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
Cyprinella leedsii Method 2000.0
Hyalella azteca Method 100.1 EPA-600-R-99-064
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#: WEL 11607
 Toxicant/ Batch#: NAC 1 11607

Test Beginning: Date: 01/16/07 Time: 1345
 Test Ending: Date: 1/20/07 Time: 1200

Water Quality Parameters:	Diluent	Method	Initials
Total Residual Cl ₂ (mg/L):	6.03	Hach	BA
Alkalinity (mg/L as CaCO ₃):	142	Hach	BA
Hardness (mg/L as CaCO ₃):	136	Hach	BA
Total Ammonia (mg/L as N):	20.07	Denver	BA
Salinity (ppt):	<1	Mettler	BA

Organism Batch #/ Age: 1-16-07 / 11 days
 Feeding: Prior to test / Prior to renewal / Daily
 Food: YCT P. subcapitata Artemia
 Food Batch: 6.36-40
 Chamber size: 1000 mL
 Test volume: 500 mL per replicate

Conc. µg/L (g/L)	Rep.	Chamber#	Number Live			pH (SU)			Temperature (°C)			D.O. (mg/l)			UNCORRECTED Cond. (nmhos/cm) Cond. (µmhos/cm)		
			0-hr	24-hr	48-hr	0-hr	24-hr	48-hr	0-hr	24-hr	48-hr	0-hr	24-hr	48-hr	0-hr	24-hr	48-hr
Control	A	B13	10	10	9/10	7.9		8.1	24.0		24.6	7.5		7.0	0.259		0.259
	B	B14	10	10	10	7.8			24.3				6.7				
	C																
	D																
6.0	A	B15	10	10	9/10	7.9		8.1	24.0		24.6	7.3		7.3	11.02		11.7
	B	B16	10	10	9/10	7.8			24.3				6.5			11.29	
	C																
	D																
7.0	A	B17	9	8/10	7/10	7.9		8.1	24.1		24.3	7.4		7.3	12.64		13.0
	B	B18	10	10	10	7.9			24.4				6.4			12.79	
	C																
	D																
8.0	A	B19	7	6/10	6	7.9		8.2	24.1		24.7	7.4		7.3	14.37		14.5
	B	B20	8	6/10	6	7.9			24.7				6.4			14.6	
	C																
	D																
9.0	A	B21	5	5	5	7.9		8.1	24.0		24.6	7.4		7.0	15.66		16.2
	B	B22	3	2/10	1/10	7.9			24.6				6.4			15.9	
	C																
	D																
10.0	A	B23	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	B	B24	0	0	—	—	—	—	—	—	—	—	—	—	—	—	—
	C																
	D																
Loaded / measured by: <u>BA</u>			BA	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA
Recorded by: <u>BA</u>			BA	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA

Investigators' Signatures

Brian A. Allen
Patricia A. Allen
Erin Wilcox
Jane Davis

Concentrations prepared by: BA

Loading verified by: BA

Light Intensity: 50-100 Ft. candles

Photoperiod: 16 hours Light / 8 hours dark

Temperature Range °C:

Incubator # 2 min. 23.4 max. 25.9 mean 24.6

Incubator # min. max. mean

Room B246 min. 22.2 max. 24.7 mean 23.5

Remarks: (A) Transcription error from page 72
 1-19-07 BA

Statistical Results:

Method: Spearman-Kärber

48 hour LC50: 8.30

95% Confidence Interval: lower 7.42 upper 8.69

Revised 02/21/06

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Appendix C. (continued)

Ceriodaphnia dubia Acute Standard Reference Toxicant Test

DATE: 01-16-07 DURATION: 48 hr. TOXICANT: NaCl

SPECIES: *Ceriodaphnia dubia*

RAW DATA: Concentration	Number	Mortalities
(g/L)	Exposed	
0.00	20	0
1.50	20	2
2.00	20	1
2.50	20	20
3.00	20	20
4.00	20	20

SPEARMAN-KARBER TRIM: 7.50%

SPEARMAN-KARBER ESTIMATES: **LC50: 2.22**

95% CONFIDENCE LIMITS ARE NOT RELIABLE.

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

Cyprinella leedsii Acute Standard Reference Toxicant Test

DATE: 01-16-07 DURATION: 48 hr. TOXICANT: NaCl

SPECIES: *Cyprinella leedsii*

RAW DATA: Concentration	Number	Mortalities
(g/L)	Exposed	
0.00	20	0
6.00	20	1
7.00	20	2
8.00	20	5
9.00	20	13
10.00	20	20

SPEARMAN-KARBER TRIM: 5.00%

SPEARMAN-KARBER ESTIMATES: **LC50: 8.47**

95% LOWER CONFIDENCE: 8.11

95% UPPER CONFIDENCE: 8.86

Appendix D. Test Organism Receipts



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

NELAC Accredited

Organism Shipment Record

State of Florida Aquaculture Certificate Number AQ0668007

Date: 1/15/07

Shipped to: FEEx

P.O. No: _____

Species	Quantity	Age	Brood Number	Temperature	Salinity
<i>Mysidopsis bahia</i>	1SC+	4 Days	MSC7C11	25°C	~30‰
<i>Menidia beryllina</i>	1SC+	12 Days	SSC7C1C3	25°C	~30‰
<i>Cyprinella leedsii</i>	1SC+	11 Days	CHC7C1C4	25°C	
<i>Pimephales promelas</i>	1SC+	13 Days	MSC7C1CJ-B30	25°C	

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Notes: _____

Thank you for your order.

Appendix D. (continued)



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Species	Quantity	Age	Brood Number	Temperature	Salinity
<i>Mysidopsis bahia</i>					
<i>Menidia beryllina</i>					
<i>Cyprinella leedsii</i>	150+	11 days	C1070125	25°C	
<i>Pimephales promelas</i>					

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Notes: _____

Thank you for your order.

Appendix E. Chemical Analyses performed on the effluent from the Pebble Creek Advanced Wastewater Treatment Plant Outfall D-001, sampled on February 5 and 6, 2007.

Date Sampled	Field ID	Analysis Group	Component	Result	Units	Remark	MDL	PQL
2/5/2007 9:05	Outfall D-001	Bio-AGP/LimNut	Algal Growth Potential	75.6	mg DryWt/L		0.3	0.9
2/5/2007 9:05	Outfall D-001	Bio-BOD	Biochemical Oxygen Demand-5 Day,N-Inhib	0.46	mg/L	I	0.2	2
2/5/2007 8:10	Equipment Blank Composite	Bio-BOD	Biochemical Oxygen Demand-5 Day,N-Inhib	0.2	mg/L	U	0.2	2
2/5/2007 9:05	Outfall D-001	Bio-Chl-a	Chlorophyll-A, Monochromatic, Water	0.85	ug/L	U	0.85	2.6
2/5/2007 9:05	Outfall D-001	Bio-Chl-a	Phaeophytin-A, Monochromatic, Water	1.5	ug/L	U	1.5	4.5
2/5/2007 9:10	Blank	Bio-Chl-a	Chlorophyll-A, Monochromatic, Water	0.85	ug/L	U	0.85	2.6
2/5/2007 9:10	Blank	Bio-Chl-a	Phaeophytin-A, Monochromatic, Water	1.5	ug/L	U	1.5	4.5
2/5/2007 9:05	Outfall D-001	Bio-Toxicology	Bioassay-Acute-Screen-FW-C.dubia, LC50	100	LC50	L		
2/5/2007 9:05	Outfall D-001	Bio-Toxicology	Bioassay-Acute-Screen-FW-Fish, LC50	100	LC50	L		
2/5/2007 9:05	Outfall D-001	BNA-Water	1,2,4-Trichlorobenzene	0.97	ug/L	U	0.97	3.9
2/5/2007 9:05	Outfall D-001	BNA-Water	1,2-Dichlorobenzene	0.97	ug/L	U	0.97	3.9
2/5/2007 9:05	Outfall D-001	BNA-Water	1,3-Dichlorobenzene	0.97	ug/L	U	0.97	3.9
2/5/2007 9:05	Outfall D-001	BNA-Water	1,4-Dichlorobenzene	0.97	ug/L	U	0.97	3.9
2/5/2007 9:05	Outfall D-001	BNA-Water	2,4,6-Trichlorophenol	0.97	ug/L	U	0.97	3.9
2/5/2007 9:05	Outfall D-001	BNA-Water	2,4-Dichlorophenol	0.97	ug/L	U	0.97	3.9
2/5/2007 9:05	Outfall D-001	BNA-Water	2,4-Dimethylphenol	49	ug/L	U	49	190
2/5/2007 9:05	Outfall D-001	BNA-Water	2,4-Dinitrophenol	15	ug/L	UJ	15	58
2/5/2007 9:05	Outfall D-001	BNA-Water	2,4-Dinitrotoluene	0.97	ug/L	U	0.97	3.9
2/5/2007 9:05	Outfall D-001	BNA-Water	2,6-Dinitrotoluene	0.97	ug/L	U	0.97	3.9
2/5/2007 9:05	Outfall D-001	BNA-Water	2-Chloronaphthalene	0.97	ug/L	U	0.97	3.9
2/5/2007 9:05	Outfall D-001	BNA-Water	2-Chlorophenol	0.97	ug/L	U	0.97	3.9
2/5/2007 9:05	Outfall D-001	BNA-Water	2-Methyl-4,6-dinitrophenol	2.9	ug/L	U	2.9	12
2/5/2007 9:05	Outfall D-001	BNA-Water	2-Nitrophenol	0.97	ug/L	UJ	0.97	3.9
2/5/2007 9:05	Outfall D-001	BNA-Water	3,3'-Dichlorobenzidine	39	ug/L	UJ	39	160
2/5/2007 9:05	Outfall D-001	BNA-Water	4,4'-DDD	1.5	ug/L	U	1.5	5.8
2/5/2007 9:05	Outfall D-001	BNA-Water	4,4'-DDE	1.5	ug/L	U	1.5	5.8
2/5/2007 9:05	Outfall D-001	BNA-Water	4,4'-DDT	1.5	ug/L	U	1.5	5.8
2/5/2007 9:05	Outfall D-001	BNA-Water	4-Bromophenyl phenyl ether	0.97	ug/L	U	0.97	3.9
2/5/2007 9:05	Outfall D-001	BNA-Water	4-Chloro-3-methylphenol	0.97	ug/L	U	0.97	3.9
2/5/2007 9:05	Outfall D-001	BNA-Water	4-Chlorophenyl phenyl ether	1.9	ug/L	U	1.9	7.8
2/5/2007 9:05	Outfall D-001	BNA-Water	4-Nitrophenol	15	ug/L	U	15	58
2/5/2007 9:05	Outfall D-001	BNA-Water	Acenaphthene	0.97	ug/L	U	0.97	3.9
2/5/2007 9:05	Outfall D-001	BNA-Water	Acenaphthylene	0.97	ug/L	U	0.97	3.9
2/5/2007 9:05	Outfall D-001	BNA-Water	Aldrin	1.5	ug/L	U	1.5	5.8
2/5/2007 9:05	Outfall D-001	BNA-Water	Anthracene	0.97	ug/L	U	0.97	3.9
2/5/2007 9:05	Outfall D-001	BNA-Water	Benzidine	97	ug/L	UJ	97	390
2/5/2007 9:05	Outfall D-001	BNA-Water	Benzo(a)anthracene	0.97	ug/L	U	0.97	3.9
2/5/2007 9:05	Outfall D-001	BNA-Water	Benzo(a)pyrene	0.97	ug/L	U	0.97	3.9
2/5/2007 9:05	Outfall D-001	BNA-Water	Benzo(b)fluoranthene	0.97	ug/L	U	0.97	3.9
2/5/2007 9:05	Outfall D-001	BNA-Water	Benzo(g,h,i)perylene	0.97	ug/L	U	0.97	3.9
2/5/2007 9:05	Outfall D-001	BNA-Water	Benzo(k)fluoranthene	0.97	ug/L	U	0.97	3.9

Appendix E. (continued)

Date Sampled	Field ID	Analysis Group	Component	Result	Units	Remark	MDL	PQL
2/5/2007 9:05	Outfall D-001	BNA-Water	Bis(2-chloroethoxy)methane	0.97	ug/L	U	0.97	3.9
2/5/2007 9:05	Outfall D-001	BNA-Water	Bis(2-chloroethyl)ether	0.97	ug/L	U	0.97	3.9
2/5/2007 9:05	Outfall D-001	BNA-Water	Bis(2-chloroisopropyl)ether	2.9	ug/L	U	2.9	12
2/5/2007 9:05	Outfall D-001	BNA-Water	Bis(2-ethylhexyl)phthalate	15	ug/L	U	15	58
2/5/2007 9:05	Outfall D-001	BNA-Water	Butyl benzyl phthalate	4.9	ug/L	U	4.9	19
2/5/2007 9:05	Outfall D-001	BNA-Water	Chrysene	0.97	ug/L	U	0.97	3.9
2/5/2007 9:05	Outfall D-001	BNA-Water	Di-n-butyl phthalate	4.9	ug/L	U	4.9	19
2/5/2007 9:05	Outfall D-001	BNA-Water	Di-n-octyl phthalate	0.97	ug/L	U	0.97	3.9
2/5/2007 9:05	Outfall D-001	BNA-Water	Dibenzo(a,h)anthracene	0.97	ug/L	U	0.97	3.9
2/5/2007 9:05	Outfall D-001	BNA-Water	Dieldrin	1.5	ug/L	U	1.5	5.8
2/5/2007 9:05	Outfall D-001	BNA-Water	Diethyl phthalate	0.97	ug/L	U	0.97	3.9
2/5/2007 9:05	Outfall D-001	BNA-Water	Dimethyl phthalate	49	ug/L	U	49	190
2/5/2007 9:05	Outfall D-001	BNA-Water	Endosulfan I	3.9	ug/L	U	3.9	16
2/5/2007 9:05	Outfall D-001	BNA-Water	Endosulfan II	3.9	ug/L	U	3.9	16
2/5/2007 9:05	Outfall D-001	BNA-Water	Endosulfan sulfate	1.5	ug/L	U	1.5	5.8
2/5/2007 9:05	Outfall D-001	BNA-Water	Endrin	1.5	ug/L	UJ	1.5	5.8
2/5/2007 9:05	Outfall D-001	BNA-Water	Endrin aldehyde	3.9	ug/L	UJ	3.9	16
2/5/2007 9:05	Outfall D-001	BNA-Water	Fluoranthene	0.97	ug/L	U	0.97	3.9
2/5/2007 9:05	Outfall D-001	BNA-Water	Fluorene	0.97	ug/L	U	0.97	3.9
2/5/2007 9:05	Outfall D-001	BNA-Water	Heptachlor	1.5	ug/L	U	1.5	5.8
2/5/2007 9:05	Outfall D-001	BNA-Water	Heptachlor epoxide	1.5	ug/L	U	1.5	5.8
2/5/2007 9:05	Outfall D-001	BNA-Water	Hexachlorobenzene	0.97	ug/L	U	0.97	3.9
2/5/2007 9:05	Outfall D-001	BNA-Water	Hexachlorobutadiene	2.9	ug/L	U	2.9	12
2/5/2007 9:05	Outfall D-001	BNA-Water	Hexachlorocyclopentadiene	2.9	ug/L	UJ	2.9	12
2/5/2007 9:05	Outfall D-001	BNA-Water	Hexachloroethane	2.9	ug/L	U	2.9	12
2/5/2007 9:05	Outfall D-001	BNA-Water	Indeno(1,2,3-cd)pyrene	0.97	ug/L	U	0.97	3.9
2/5/2007 9:05	Outfall D-001	BNA-Water	Isophorone	0.97	ug/L	U	0.97	3.9
2/5/2007 9:05	Outfall D-001	BNA-Water	N-Nitrosodi-n-propylamine	1.9	ug/L	U	1.9	7.8
2/5/2007 9:05	Outfall D-001	BNA-Water	N-Nitrosodimethylamine	1.9	ug/L	U	1.9	7.8
2/5/2007 9:05	Outfall D-001	BNA-Water	N-Nitrosodiphenylamine/ Diphenylamine	2.9	ug/L	U	2.9	12
2/5/2007 9:05	Outfall D-001	BNA-Water	Naphthalene	0.97	ug/L	U	0.97	3.9
2/5/2007 9:05	Outfall D-001	BNA-Water	Nitrobenzene	1.9	ug/L	U	1.9	7.8
2/5/2007 9:05	Outfall D-001	BNA-Water	Pentachlorophenol	2.9	ug/L	U	2.9	12
2/5/2007 9:05	Outfall D-001	BNA-Water	Phenanthrene	0.97	ug/L	U	0.97	3.9
2/5/2007 9:05	Outfall D-001	BNA-Water	Phenol	0.97	ug/L	U	0.97	3.9
2/5/2007 9:05	Outfall D-001	BNA-Water	Pyrene	0.97	ug/L	U	0.97	3.9
2/5/2007 9:05	Outfall D-001	BNA-Water	alpha-BHC	1.5	ug/L	U	1.5	5.8
2/5/2007 9:05	Outfall D-001	BNA-Water	beta-BHC	1.5	ug/L	U	1.5	5.8
2/5/2007 9:05	Outfall D-001	BNA-Water	delta-BHC	1.5	ug/L	U	1.5	5.8
2/5/2007 9:05	Outfall D-001	BNA-Water	gamma-BHC	1.5	ug/L	U	1.5	5.8
2/5/2007 9:10	Blank	BNA-Water	1,2,4-Trichlorobenzene	0.95	ug/L	U	0.95	3.8
2/5/2007 9:10	Blank	BNA-Water	1,2-Dichlorobenzene	0.95	ug/L	U	0.95	3.8
2/5/2007 9:10	Blank	BNA-Water	1,3-Dichlorobenzene	0.95	ug/L	U	0.95	3.8
2/5/2007 9:10	Blank	BNA-Water	1,4-Dichlorobenzene	0.95	ug/L	U	0.95	3.8
2/5/2007 9:10	Blank	BNA-Water	2,4,6-Trichlorophenol	0.95	ug/L	U	0.95	3.8

Appendix E. (continued)

Date Sampled	Field ID	Analysis Group	Component	Result	Units	Remark	MDL	PQL
2/5/2007 9:10	Blank	BNA-Water	2,4-Dichlorophenol	0.95	ug/L	U	0.95	3.8
2/5/2007 9:10	Blank	BNA-Water	2,4-Dimethylphenol	48	ug/L	U	48	190
2/5/2007 9:10	Blank	BNA-Water	2,4-Dinitrophenol	14	ug/L	UJ	14	57
2/5/2007 9:10	Blank	BNA-Water	2,4-Dinitrotoluene	0.95	ug/L	U	0.95	3.8
2/5/2007 9:10	Blank	BNA-Water	2,6-Dinitrotoluene	0.95	ug/L	U	0.95	3.8
2/5/2007 9:10	Blank	BNA-Water	2-Chloronaphthalene	0.95	ug/L	U	0.95	3.8
2/5/2007 9:10	Blank	BNA-Water	2-Chlorophenol	0.95	ug/L	U	0.95	3.8
2/5/2007 9:10	Blank	BNA-Water	2-Methyl-4,6-dinitrophenol	2.9	ug/L	U	2.9	11
2/5/2007 9:10	Blank	BNA-Water	2-Nitrophenol	0.95	ug/L	UJ	0.95	3.8
2/5/2007 9:10	Blank	BNA-Water	3,3'-Dichlorobenzidine	38	ug/L	UJ	38	150
2/5/2007 9:10	Blank	BNA-Water	4,4'-DDD	1.4	ug/L	U	1.4	5.7
2/5/2007 9:10	Blank	BNA-Water	4,4'-DDE	1.4	ug/L	U	1.4	5.7
2/5/2007 9:10	Blank	BNA-Water	4,4'-DDT	1.4	ug/L	U	1.4	5.7
2/5/2007 9:10	Blank	BNA-Water	4-Bromophenyl phenyl ether	0.95	ug/L	U	0.95	3.8
2/5/2007 9:10	Blank	BNA-Water	4-Chloro-3-methylphenol	0.95	ug/L	U	0.95	3.8
2/5/2007 9:10	Blank	BNA-Water	4-Chlorophenyl phenyl ether	1.9	ug/L	U	1.9	7.6
2/5/2007 9:10	Blank	BNA-Water	4-Nitrophenol	14	ug/L	U	14	57
2/5/2007 9:10	Blank	BNA-Water	Acenaphthene	0.95	ug/L	U	0.95	3.8
2/5/2007 9:10	Blank	BNA-Water	Acenaphthylene	0.95	ug/L	U	0.95	3.8
2/5/2007 9:10	Blank	BNA-Water	Aldrin	1.4	ug/L	U	1.4	5.7
2/5/2007 9:10	Blank	BNA-Water	Anthracene	0.95	ug/L	U	0.95	3.8
2/5/2007 9:10	Blank	BNA-Water	Benzidine	95	ug/L	UJ	95	380
2/5/2007 9:10	Blank	BNA-Water	Benzo(a)anthracene	0.95	ug/L	U	0.95	3.8
2/5/2007 9:10	Blank	BNA-Water	Benzo(a)pyrene	0.95	ug/L	U	0.95	3.8
2/5/2007 9:10	Blank	BNA-Water	Benzo(b)fluoranthene	0.95	ug/L	U	0.95	3.8
2/5/2007 9:10	Blank	BNA-Water	Benzo(g,h,i)perylene	0.95	ug/L	U	0.95	3.8
2/5/2007 9:10	Blank	BNA-Water	Benzo(k)fluoranthene	0.95	ug/L	U	0.95	3.8
2/5/2007 9:10	Blank	BNA-Water	Bis(2-chloroethoxy)methane	0.95	ug/L	U	0.95	3.8
2/5/2007 9:10	Blank	BNA-Water	Bis(2-chloroethyl)ether	0.95	ug/L	U	0.95	3.8
2/5/2007 9:10	Blank	BNA-Water	Bis(2-chloroisopropyl)ether	2.9	ug/L	U	2.9	11
2/5/2007 9:10	Blank	BNA-Water	Bis(2-ethylhexyl)phthalate	14	ug/L	U	14	57
2/5/2007 9:10	Blank	BNA-Water	Butyl benzyl phthalate	4.8	ug/L	U	4.8	19
2/5/2007 9:10	Blank	BNA-Water	Chrysene	0.95	ug/L	U	0.95	3.8
2/5/2007 9:10	Blank	BNA-Water	Di-n-butyl phthalate	4.8	ug/L	U	4.8	19
2/5/2007 9:10	Blank	BNA-Water	Di-n-octyl phthalate	0.95	ug/L	U	0.95	3.8
2/5/2007 9:10	Blank	BNA-Water	Dibenzo(a,h)anthracene	0.95	ug/L	U	0.95	3.8
2/5/2007 9:10	Blank	BNA-Water	Dieldrin	1.4	ug/L	U	1.4	5.7
2/5/2007 9:10	Blank	BNA-Water	Diethyl phthalate	0.95	ug/L	U	0.95	3.8
2/5/2007 9:10	Blank	BNA-Water	Dimethyl phthalate	48	ug/L	U	48	190
2/5/2007 9:10	Blank	BNA-Water	Endosulfan I	3.8	ug/L	U	3.8	15
2/5/2007 9:10	Blank	BNA-Water	Endosulfan II	3.8	ug/L	U	3.8	15
2/5/2007 9:10	Blank	BNA-Water	Endosulfan sulfate	1.4	ug/L	U	1.4	5.7
2/5/2007 9:10	Blank	BNA-Water	Endrin	1.4	ug/L	UJ	1.4	5.7
2/5/2007 9:10	Blank	BNA-Water	Endrin aldehyde	3.8	ug/L	UJ	3.8	15
2/5/2007 9:10	Blank	BNA-Water	Fluoranthene	0.95	ug/L	U	0.95	3.8

Appendix E. (continued)

Date Sampled	Field ID	Analysis Group	Component	Result	Units	Remark	MDL	PQL
2/5/2007 9:10	Blank	BNA-Water	Fluorene	0.95	ug/L	U	0.95	3.8
2/5/2007 9:10	Blank	BNA-Water	Heptachlor	1.4	ug/L	U	1.4	5.7
2/5/2007 9:10	Blank	BNA-Water	Heptachlor epoxide	1.4	ug/L	U	1.4	5.7
2/5/2007 9:10	Blank	BNA-Water	Hexachlorobenzene	0.95	ug/L	U	0.95	3.8
2/5/2007 9:10	Blank	BNA-Water	Hexachlorobutadiene	2.9	ug/L	U	2.9	11
2/5/2007 9:10	Blank	BNA-Water	Hexachlorocyclopentadiene	2.9	ug/L	UJ	2.9	11
2/5/2007 9:10	Blank	BNA-Water	Hexachloroethane	2.9	ug/L	U	2.9	11
2/5/2007 9:10	Blank	BNA-Water	Indeno(1,2,3-cd)pyrene	0.95	ug/L	U	0.95	3.8
2/5/2007 9:10	Blank	BNA-Water	Isophorone	0.95	ug/L	U	0.95	3.8
2/5/2007 9:10	Blank	BNA-Water	N-Nitrosodi-n-propylamine	1.9	ug/L	U	1.9	7.6
2/5/2007 9:10	Blank	BNA-Water	N-Nitrosodimethylamine	1.9	ug/L	U	1.9	7.6
2/5/2007 9:10	Blank	BNA-Water	N-Nitrosodiphenylamine/ Diphenylamine	2.9	ug/L	U	2.9	11
2/5/2007 9:10	Blank	BNA-Water	Naphthalene	0.95	ug/L	U	0.95	3.8
2/5/2007 9:10	Blank	BNA-Water	Nitrobenzene	1.9	ug/L	U	1.9	7.6
2/5/2007 9:10	Blank	BNA-Water	Pentachlorophenol	2.9	ug/L	U	2.9	11
2/5/2007 9:10	Blank	BNA-Water	Phenanthrene	0.95	ug/L	U	0.95	3.8
2/5/2007 9:10	Blank	BNA-Water	Phenol	0.95	ug/L	U	0.95	3.8
2/5/2007 9:10	Blank	BNA-Water	Pyrene	0.95	ug/L	U	0.95	3.8
2/5/2007 9:10	Blank	BNA-Water	alpha-BHC	1.4	ug/L	U	1.4	5.7
2/5/2007 9:10	Blank	BNA-Water	beta-BHC	1.4	ug/L	U	1.4	5.7
2/5/2007 9:10	Blank	BNA-Water	delta-BHC	1.4	ug/L	U	1.4	5.7
2/5/2007 9:10	Blank	BNA-Water	gamma-BHC	1.4	ug/L	U	1.4	5.7
2/5/2007 9:05	Outfall D-001	GC-Water	Alachlor	0.58	ug/L	U	0.58	2.3
2/5/2007 9:05	Outfall D-001	GC-Water	Ametryn	0.049	ug/L	U	0.049	0.2
2/5/2007 9:05	Outfall D-001	GC-Water	Atrazine	0.18	ug/L	I	0.049	0.2
2/5/2007 9:05	Outfall D-001	GC-Water	Azinphos Methyl	0.19	ug/L	UJ	0.19	0.76
2/5/2007 9:05	Outfall D-001	GC-Water	Bromacil	0.19	ug/L	U	0.19	0.76
2/5/2007 9:05	Outfall D-001	GC-Water	Butylate	0.19	ug/L	U	0.19	0.76
2/5/2007 9:05	Outfall D-001	GC-Water	Chlorpyrifos Ethyl	0.049	ug/L	U	0.049	0.2
2/5/2007 9:05	Outfall D-001	GC-Water	Chlorpyrifos Methyl	0.097	ug/L	U	0.097	0.39
2/5/2007 9:05	Outfall D-001	GC-Water	Diazinon	0.049	ug/L	UJ	0.049	0.2
2/5/2007 9:05	Outfall D-001	GC-Water	Ethion	0.049	ug/L	U	0.049	0.2
2/5/2007 9:05	Outfall D-001	GC-Water	Ethoprop	0.097	ug/L	U	0.097	0.39
2/5/2007 9:05	Outfall D-001	GC-Water	Fenamiphos	0.19	ug/L	U	0.19	0.76
2/5/2007 9:05	Outfall D-001	GC-Water	Fonofos	0.097	ug/L	U	0.097	0.39
2/5/2007 9:05	Outfall D-001	GC-Water	Hexazinone	0.097	ug/L	U	0.097	0.39
2/5/2007 9:05	Outfall D-001	GC-Water	Malathion	0.15	ug/L	U	0.15	0.6
2/5/2007 9:05	Outfall D-001	GC-Water	Metalaxyl	0.24	ug/L	UJ	0.24	0.96
2/5/2007 9:05	Outfall D-001	GC-Water	Metolachlor	0.49	ug/L	U	0.49	2
2/5/2007 9:05	Outfall D-001	GC-Water	Metribuzin	0.097	ug/L	U	0.097	0.39
2/5/2007 9:05	Outfall D-001	GC-Water	Mevinphos	0.19	ug/L	U	0.19	0.76
2/5/2007 9:05	Outfall D-001	GC-Water	Naled	0.78	ug/L	UJ	0.78	3.1
2/5/2007 9:05	Outfall D-001	GC-Water	Norflurazon	0.15	ug/L	U	0.15	0.6
2/5/2007 9:05	Outfall D-001	GC-Water	Parathion Ethyl	0.15	ug/L	U	0.15	0.6
2/5/2007 9:05	Outfall D-001	GC-Water	Parathion Methyl	0.097	ug/L	U	0.097	0.39

Appendix E. (continued)

Date Sampled	Field ID	Analysis Group	Component	Result	Units	Remark	MDL	PQL
2/5/2007 9:05	Outfall D-001	GC-Water	Phorate	0.049	ug/L	U	0.049	0.2
2/5/2007 9:05	Outfall D-001	GC-Water	Prometryn	0.15	ug/L	U	0.15	0.6
2/5/2007 9:05	Outfall D-001	GC-Water	Simazine	0.049	ug/L	U	0.049	0.2
2/5/2007 9:10	Blank	GC-Water	Alachlor	0.58	ug/L	U	0.58	2.3
2/5/2007 9:10	Blank	GC-Water	Ametryn	0.048	ug/L	U	0.048	0.19
2/5/2007 9:10	Blank	GC-Water	Atrazine	0.048	ug/L	UJ	0.048	0.19
2/5/2007 9:10	Blank	GC-Water	Azinphos Methyl	0.19	ug/L	UJ	0.19	0.76
2/5/2007 9:10	Blank	GC-Water	Bromacil	0.19	ug/L	U	0.19	0.76
2/5/2007 9:10	Blank	GC-Water	Butylate	0.19	ug/L	U	0.19	0.76
2/5/2007 9:10	Blank	GC-Water	Chlorpyrifos Ethyl	0.048	ug/L	U	0.048	0.19
2/5/2007 9:10	Blank	GC-Water	Chlorpyrifos Methyl	0.096	ug/L	U	0.096	0.38
2/5/2007 9:10	Blank	GC-Water	Diazinon	0.048	ug/L	UJ	0.048	0.19
2/5/2007 9:10	Blank	GC-Water	Ethion	0.048	ug/L	U	0.048	0.19
2/5/2007 9:10	Blank	GC-Water	Ethoprop	0.096	ug/L	U	0.096	0.38
2/5/2007 9:10	Blank	GC-Water	Fenamiphos	0.19	ug/L	U	0.19	0.76
2/5/2007 9:10	Blank	GC-Water	Fonofos	0.096	ug/L	U	0.096	0.38
2/5/2007 9:10	Blank	GC-Water	Hexazinone	0.096	ug/L	U	0.096	0.38
2/5/2007 9:10	Blank	GC-Water	Malathion	0.14	ug/L	U	0.14	0.56
2/5/2007 9:10	Blank	GC-Water	Metalaxyl	0.24	ug/L	UJ	0.24	0.96
2/5/2007 9:10	Blank	GC-Water	Metolachlor	0.48	ug/L	U	0.48	1.9
2/5/2007 9:10	Blank	GC-Water	Metribuzin	0.096	ug/L	U	0.096	0.38
2/5/2007 9:10	Blank	GC-Water	Mevinphos	0.19	ug/L	U	0.19	0.76
2/5/2007 9:10	Blank	GC-Water	Naled	0.77	ug/L	UJ	0.77	3.1
2/5/2007 9:10	Blank	GC-Water	Norflurazon	0.14	ug/L	U	0.14	0.56
2/5/2007 9:10	Blank	GC-Water	Parathion Ethyl	0.14	ug/L	U	0.14	0.56
2/5/2007 9:10	Blank	GC-Water	Parathion Methyl	0.096	ug/L	U	0.096	0.38
2/5/2007 9:10	Blank	GC-Water	Phorate	0.048	ug/L	U	0.048	0.19
2/5/2007 9:10	Blank	GC-Water	Prometryn	0.14	ug/L	U	0.14	0.56
2/5/2007 9:10	Blank	GC-Water	Simazine	0.048	ug/L	U	0.048	0.19
2/5/2007 9:05	Outfall D-001	Metals-Water	Aluminum	5	ug/L	I	4	16
2/5/2007 9:05	Outfall D-001	Metals-Water	Arsenic	0.5	ug/L	U	0.5	2
2/5/2007 9:05	Outfall D-001	Metals-Water	Cadmium	0.05	ug/L	U	0.05	0.2
2/5/2007 9:05	Outfall D-001	Metals-Water	Calcium	93.3	mg/L		0.02	0.08
2/5/2007 9:05	Outfall D-001	Metals-Water	Chromium	0.3	ug/L	U	0.3	1.2
2/5/2007 9:05	Outfall D-001	Metals-Water	Copper	5.28	ug/L		0.2	0.8
2/5/2007 9:05	Outfall D-001	Metals-Water	Iron	43	ug/L		5	20
2/5/2007 9:05	Outfall D-001	Metals-Water	Lead	0.2	ug/L	I	0.2	0.8
2/5/2007 9:05	Outfall D-001	Metals-Water	Magnesium	7.7	mg/L		0.005	0.02
2/5/2007 9:05	Outfall D-001	Metals-Water	Nickel	6.4	ug/L		1	4
2/5/2007 9:05	Outfall D-001	Metals-Water	Selenium	0.5	ug/L	U	0.5	2
2/5/2007 9:05	Outfall D-001	Metals-Water	Silver	0.025	ug/L	U	0.025	0.1
2/5/2007 9:05	Outfall D-001	Metals-Water	Zinc	38	ug/L		3	12
2/5/2007 9:10	Blank	Metals-Water	Aluminum	4	ug/L	U	4	16
2/5/2007 9:10	Blank	Metals-Water	Arsenic	0.5	ug/L	U	0.5	2
2/5/2007 9:10	Blank	Metals-Water	Cadmium	0.05	ug/L	U	0.05	0.2

Appendix E. (continued)

Date Sampled	Field ID	Analysis Group	Component	Result	Units	Remark	MDL	PQL
2/5/2007 9:10	Blank	Metals-Water	Calcium	0.02	mg/L	U	0.02	0.08
2/5/2007 9:10	Blank	Metals-Water	Chromium	0.3	ug/L	U	0.3	1.2
2/5/2007 9:10	Blank	Metals-Water	Copper	0.2	ug/L	U	0.2	0.8
2/5/2007 9:10	Blank	Metals-Water	Iron	5	ug/L	U	5	20
2/5/2007 9:10	Blank	Metals-Water	Lead	0.2	ug/L	U	0.2	0.8
2/5/2007 9:10	Blank	Metals-Water	Magnesium	0.005	mg/L	U	0.005	0.02
2/5/2007 9:10	Blank	Metals-Water	Nickel	1	ug/L	U	1	4
2/5/2007 9:10	Blank	Metals-Water	Selenium	0.5	ug/L	U	0.5	2
2/5/2007 9:10	Blank	Metals-Water	Silver	0.025	ug/L	U	0.025	0.1
2/5/2007 9:10	Blank	Metals-Water	Zinc	3	ug/L	U	3	12
2/5/2007 8:10	Equipment Blank Composite	Metals-Water	Aluminum	4	ug/L	U	4	16
2/5/2007 8:10	Equipment Blank Composite	Metals-Water	Arsenic	0.5	ug/L	U	0.5	2
2/5/2007 8:10	Equipment Blank Composite	Metals-Water	Cadmium	0.05	ug/L	U	0.05	0.2
2/5/2007 8:10	Equipment Blank Composite	Metals-Water	Calcium	0.026	mg/L	I	0.02	0.08
2/5/2007 8:10	Equipment Blank Composite	Metals-Water	Chromium	0.3	ug/L	U	0.3	1.2
2/5/2007 8:10	Equipment Blank Composite	Metals-Water	Copper	1.09	ug/L		0.2	0.8
2/5/2007 8:10	Equipment Blank Composite	Metals-Water	Iron	5	ug/L	U	5	20
2/5/2007 8:10	Equipment Blank Composite	Metals-Water	Lead	0.2	ug/L	U	0.2	0.8
2/5/2007 8:10	Equipment Blank Composite	Metals-Water	Magnesium	0.005	mg/L	U	0.005	0.02
2/5/2007 8:10	Equipment Blank Composite	Metals-Water	Nickel	1	ug/L	U	1	4
2/5/2007 8:10	Equipment Blank Composite	Metals-Water	Selenium	0.5	ug/L	U	0.5	2
2/5/2007 8:10	Equipment Blank Composite	Metals-Water	Silver	0.025	ug/L	U	0.025	0.1
2/5/2007 8:10	Equipment Blank Composite	Metals-Water	Zinc	3	ug/L	U	3	12
2/5/2007 9:05	Outfall D-001	Nutrients-Liquid	Alkalinity	78	mg CaCO3/L		0.65	2.5
2/5/2007 9:05	Outfall D-001	Nutrients-Liquid	Ammonia-N	0.068	mg N/L		0.01	0.02
2/5/2007 9:05	Outfall D-001	Nutrients-Liquid	Color	10	PCU		5	5
2/5/2007 9:05	Outfall D-001	Nutrients-Liquid	Kjeldahl Nitrogen	0.63	mg N/L	A	0.16	0.4
2/5/2007 9:05	Outfall D-001	Nutrients-Liquid	NO2NO3-N	0.98	mg N/L		0.008	0.02
2/5/2007 9:05	Outfall D-001	Nutrients-Liquid	O-Phosphate-P	0.53	mg P/L		0.024	0.06
2/5/2007 9:05	Outfall D-001	Nutrients-Liquid	Organic Carbon	5.5	mg C/L		1	5
2/5/2007 9:05	Outfall D-001	Nutrients-Liquid	TSS	4	mg/L	U	4	16
2/5/2007 9:05	Outfall D-001	Nutrients-Liquid	Total-P	0.55	mg P/L	A	0.02	0.06
2/5/2007 9:05	Outfall D-001	Nutrients-Liquid	Turbidity	0.2	NTU		0.05	0.05
2/5/2007 9:10	Blank	Nutrients-Liquid	Ammonia-N	0.01	mg N/L	U	0.01	0.02
2/5/2007 9:10	Blank	Nutrients-Liquid	Kjeldahl Nitrogen	0.08	mg N/L	U	0.08	0.2
2/5/2007 9:10	Blank	Nutrients-Liquid	NO2NO3-N	0.004	mg N/L	U	0.004	0.01
2/5/2007 9:10	Blank	Nutrients-Liquid	O-Phosphate-P	0.004	mg P/L	U	0.004	0.01
2/5/2007 9:10	Blank	Nutrients-Liquid	Organic Carbon	1	mg C/L	U	1	5
2/5/2007 9:10	Blank	Nutrients-Liquid	Total-P	0.02	mg P/L	U	0.02	0.06
2/5/2007 8:10	Equipment Blank Composite	Nutrients-Liquid	Ammonia-N	0.01	mg N/L	U	0.01	0.02
2/5/2007 8:10	Equipment Blank Composite	Nutrients-Liquid	Kjeldahl Nitrogen	0.08	mg N/L	U	0.08	0.2
2/5/2007 8:10	Equipment Blank Composite	Nutrients-Liquid	NO2NO3-N	0.004	mg N/L	U	0.004	0.01
2/5/2007 8:10	Equipment Blank Composite	Nutrients-Liquid	Organic Carbon	1	mg C/L	U	1	5
2/5/2007 8:10	Equipment Blank Composite	Nutrients-Liquid	TSS	4	mg/L	U	4	16
2/5/2007 8:10	Equipment Blank Composite	Nutrients-Liquid	Total-P	0.02	mg P/L	U	0.02	0.06

Appendix E. (continued)

Date Sampled	Field ID	Analysis Group	Component	Result	Units	Remark	MDL	PQL
2/5/2007 9:05	Outfall D-001	Overflow	Oil and Grease	2.1	mg/L	I		
2/5/2007 9:10	Blank	Overflow	Oil and Grease	2.3	mg/L	I		
2/5/2007 9:05	Outfall D-001	VOC-Water	Bromodichloromethane	0.2	ug/L	U	0.2	1
2/5/2007 9:05	Outfall D-001	VOC-Water	Bromoform	0.5	ug/L	U	0.5	2
2/5/2007 9:05	Outfall D-001	VOC-Water	Chloroform	0.2	ug/L	U	0.2	1
2/5/2007 9:05	Outfall D-001	VOC-Water	Dibromochloromethane	0.2	ug/L	U	0.2	1
2/5/2007 9:10	Blank	VOC-Water	Bromodichloromethane	0.2	ug/L	U	0.2	1
2/5/2007 9:10	Blank	VOC-Water	Bromoform	0.5	ug/L	U	0.5	2
2/5/2007 9:10	Blank	VOC-Water	Chloroform	0.2	ug/L	U	0.2	1
2/5/2007 9:10	Blank	VOC-Water	Dibromochloromethane	0.2	ug/L	U	0.2	1
2/5/2007 9:05	Trip Blank	VOC-Water	Bromodichloromethane	0.2	ug/L	U	0.2	1
2/5/2007 9:05	Trip Blank	VOC-Water	Bromoform	0.5	ug/L	U	0.5	2
2/5/2007 9:05	Trip Blank	VOC-Water	Chloroform	0.2	ug/L	U	0.2	1
2/5/2007 9:05	Trip Blank	VOC-Water	Dibromochloromethane	0.2	ug/L	U	0.2	1
2/6/2007 9:10	Outfall D-001 Composite	Bio-BOD	Biochemical Oxygen Demand-5 Day,N-Inhib	0.62	mg/L	I	0.2	2
2/6/2007 9:10	Outfall D-001 Composite	Metals-Water	Aluminum	5.6	ug/L	I	4	16
2/6/2007 9:10	Outfall D-001 Composite	Metals-Water	Arsenic	0.5	ug/L	U	0.5	2
2/6/2007 9:10	Outfall D-001 Composite	Metals-Water	Cadmium	0.05	ug/L	U	0.05	0.2
2/6/2007 9:10	Outfall D-001 Composite	Metals-Water	Calcium	89.8	mg/L		0.02	0.08
2/6/2007 9:10	Outfall D-001 Composite	Metals-Water	Chromium	0.3	ug/L	U	0.3	1.2
2/6/2007 9:10	Outfall D-001 Composite	Metals-Water	Copper	1.76	ug/L		0.2	0.8
2/6/2007 9:10	Outfall D-001 Composite	Metals-Water	Iron	48	ug/L		5	20
2/6/2007 9:10	Outfall D-001 Composite	Metals-Water	Lead	0.2	ug/L	U	0.2	0.8
2/6/2007 9:10	Outfall D-001 Composite	Metals-Water	Magnesium	7.6	mg/L		0.005	0.02
2/6/2007 9:10	Outfall D-001 Composite	Metals-Water	Nickel	7.7	ug/L		1	4
2/6/2007 9:10	Outfall D-001 Composite	Metals-Water	Selenium	0.5	ug/L	U	0.5	2
2/6/2007 9:10	Outfall D-001 Composite	Metals-Water	Silver	0.025	ug/L	U	0.025	0.1
2/6/2007 9:10	Outfall D-001 Composite	Metals-Water	Zinc	33	ug/L		3	12
2/6/2007 9:10	Outfall D-001 Composite	Nutrients-Liquid	Ammonia-N	0.024	mg N/L		0.01	0.02
2/6/2007 9:10	Outfall D-001 Composite	Nutrients-Liquid	Kjeldahl Nitrogen	0.55	mg N/L	JA	0.16	0.4
2/6/2007 9:10	Outfall D-001 Composite	Nutrients-Liquid	NO2NO3-N	0.35	mg N/L		0.04	0.1
2/6/2007 9:10	Outfall D-001 Composite	Nutrients-Liquid	Organic Carbon	5.6	mg C/L	A	1	5
2/6/2007 9:10	Outfall D-001 Composite	Nutrients-Liquid	Organic Carbon	5.7	mg C/L		1	5
2/6/2007 9:10	Outfall D-001 Composite	Nutrients-Liquid	TSS	4	mg/L	U	4	16
2/6/2007 9:10	Outfall D-001 Composite	Nutrients-Liquid	Total-P	0.58	mg P/L	A	0.02	0.06
2/6/2007 9:20	Effluent	Nutrients-Liquid	TSS	4	mg/L	U	4	16
2/6/2007 9:20	Effluent	Nutrients-Liquid	Turbidity	0.15	NTU		0.05	0.05

The Bioassay of Pebble Creek Advanced Wastewater Treatment Plant effluent sampled on February 6, 2007. NPDES #FL0039896.

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

Transaction Code		NPDES NUMBER										YR/MO/DA				Insp Type	Inspector	Fac Type									
1	N	2	5	3	F	L	0	0	3	9	8	9	6	11	12	0	7	0	2	0	5	18	B	19	S	20	1
Remarks																											
66																											

The Priority Pollutants Analysis of Pebble Creek Advanced Wastewater Treatment Plant effluent sampled on February 5 and 6, 2007. NPDES #FL0039896.

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

Transaction Code		NPDES NUMBER										YR/MO/DA				Insp Type	Inspector	Fac Type									
1	N	2	5	3	F	L	0	0	3	9	8	9	6	11	12	0	7	0	2	0	5	18	X	19	S	20	1
Remarks																											
66																											

Biological Analyses of Pebble Creek Advanced Wastewater Treatment Plant effluent sampled on February 5, 2007. NPDES #FL0039896.

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

Transaction Code		NPDES NUMBER										YR/MO/DA				Insp Type	Inspector	Fac Type									
1	N	2	5	3	F	L	0	0	3	9	8	9	6	11	12	0	7	0	2	0	5	18	S	19	S	20	1
Remarks																											
66																											