

Bioassays of

Port Buena Vista Mobile Home Park Wastewater Treatment Facility

Putnam County

NPDES #FL0042617

Sampled January 22, 2007

May 2007

Biology Section
Bureau of Laboratories
Division of Resource Assessment and Management

Quality Manual No. 870346G
NELAC Certification No. E31780

Port Buena Vista Mobile Home Park Wastewater Treatment Facility, 121 Margarita Dr., East Palatka, Putnam County, Florida, NPDES #FL0042617. Effluent samples for this facility were collected on January 22, 2007.

Introduction

The Port Buena Vista Mobile Home Park Wastewater Treatment Facility uses the extended-aeration process to treat domestic wastewater. The facility has a design flow of 0.015 million gallons per day (MGD) average annual daily flow (AADF). The AADF from January 2006 through December 2006 was 0.0104 MGD. The facility consists of three aeration tanks, a duel hopper clarifier, two chlorine contact chambers, one dechlorination tank, and one aerobic digester. Chlorine tablets and sodium bisulfite are used for disinfection and dechlorination, respectively. Final treated effluent discharges by gravity-flow through Outfall D-001 to a stormwater pond, is piped to a boat basin, and flows into the Class III freshwaters of the St. Johns River. Outfall D-001discharges at a height of approximately 0.34 m (1.1 feet), and is located approximately at latitude 29º 42' 08" N and longitude 81º 33' 52" W. Residuals are hauled to the Palatka WWTF for further treatment and disposal.

The facility currently has no Administrative Orders (AO) or Consent Orders (CO). The facility has no mixing zones. The corrective actions for which Consent Order 99-1622 was issued in 1999 were completed. The short form consent order (SFCO) 06-0909 which was issued on April 28, 2006, due to effluent exceedances for fecal coliform, unionized ammonia, pH, and carbonaceous biochemical oxygen demand, included a fine and did not set conditions. During the last compliance evaluation inspection (CEI), performed on March 15, 2006, the facility was rated *Significantly out of Compliance*. A review of discharge monitoring report (DMR) data for the past year revealed violations of Class III freshwater water quality criterion for unionized ammonia during January, February, and March 2006. (Facility information provided by Jennifer Paris of FDEP Northeast District.)

Methods

Samples were collected from the EFD-1 NPDES sampling point for Outfall D-001 by Jennifer Paris and Joseph Emory (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 definitive 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. The bioassay tests were performed in accordance with the permit conditions except that the effluent was dechlorinated prior to use in the definitive tests.

Total residual chlorine was detected in the bioassay sample in the laboratory. An aliquot of this sample was dechlorinated by the addition of sodium thiosulfate (0.025 N) at a rate of 0.5 mL per liter of sample to neutralize the chlorine. Bioassays were performed on the dechlorinated aliquot in addition to the bioassays performed on the original sample. The same concentration of sodium thiosulfate was added to the dechlorinated test controls. The purpose of the dechlorinated test controls was to confirm that there was no adverse effect of adding sodium thiosulfate to the sample. There was no mortality in the dechlorinated controls of either test species.

Toxicity Test Results

Tests were performed January 23-27, 2007.

Ceriodaphnia dubia 96-hour acute screening bioassay –	LC_{50} > 100%, 0% mortality in 100% sample at 96 hours

Ceriodaphnia dubia 96-hour acute definitive bioassay – **Dechlorinated Sample**	LC_{50} > 100%, 0% mortality in 100% sample at 96 hours
Cyprinella leedsi 96-hour acute screening bioassay –	LC_{50} > 100%, 0% mortality in 100% sample at 96 hours
Cyprinella leedsi 96-hour acute definitive bioassay – **Dechlorinated Sample**	LC_{50} > 100%, 0% mortality in 100% sample at 96 hours

Neither the original bioassay sample nor the dechlorinated bioassay sample was 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.

Algal Growth Potential

The effluent Algal Growth Potential (AGP) was 82.7 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 44.3 (±20%) mg dry wt/L (Table 1; Miller et al. 1978).

See Table 1 for AGP results.

Chemistry Results

Total residual chlorine was detected in the bioassay sample at a concentration of 0.47 mg/L in the bioassay sample in the laboratory. Total ammonia was not detected in the bioassay sample in the laboratory. The total ammonia concentration in the sample collected and preserved for chemical analysis was 0.065 mg/L, which was between the method detection limit and the practical quantitation limit. Based on the pH, salinity, and temperature of the effluent as collected, the calculated unionized ammonia concentration was less than 0.02 mg/L.

Iron was detected in the effluent at levels that comply with Class III Freshwater quality criterion (62-302.530, F.A.C.). Aluminum, copper, and zinc were detected between the laboratory method detection limits (MDL) and practical quantitation limits (PQL). The conductivity (1,283 µmhos/cm) of the effluent exceeded the Class III freshwater criterion of ≤ 1,275 µmhos/cm (62-302.530(23), F.A.C.). Total residual chlorine (0.67 mg/L) of the effluent, as measured in the field, exceeded the Class III Freshwater criterion of ≤ 0.01 mg/L (62-302.530(23), F.A.C.).

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-1 sampling point for outfall D-001 for this facility on January 22, 2007, was not acutely toxic to either test species during the 96-hour acute screening and definitive bioassays. The effluent AGP result exceeded the "problem” threshold for fresh receiving waters, suggesting nutrient enrichment may be an issue. Effluent conductivity and total residual chlorine exceeded the Class III freshwater criteria.

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 Port Buena Vista Mobile Home Park Wastewater Treatment Facility on January 22,2007.

Location	AGP (measured)	Predicted AGP (TSIN) ± 20%	Predicted AGP (TN) ± 20%	Inorganic N:P ratio	Total N:P ratio
Effluent	82.7 A	44.3 ± 8.9	152.0 ± 30.4	0.5	1.3

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

Table 2. Effluent limits, Class III Fresh Criteria, and chemical and microbiological data for samples collected from Port Buena Vista Mobile Home Park Wastewater Treatment Facility on January 22, 2007.

Port Buena Vista Mobile Home Park Wastewater Treatment Facility NPDES #FL0042617	**Class III Fresh Stds**	**Effluent Limits**	**Effluent**
Organic Constituents (µg/L)			
None Detected	-	-	-
Metals (µg/L unless otherwise noted)			
Aluminum	-	-	15 I
Arsenic	≤ 50	-	0.5 U
Cadmium	≤ 3.1 b	-	0.05 U
Calcium (mg/L)	-	-	110
Chromium-III	≤ 249.0 b	-	0.3 U
Copper	≤ 28.2 b	-	2.53 I
Iron	≤ 1,000	-	114
Lead	≤ 16.6 b	-	0.2 U
Magnesium (mg/L)	-	-	22
Nickel	≤ 156.1 b	-	1.0 U
Selenium	≤ 5.0	-	0.5 U
Silver	≤ 0.07	-	0.025 U
Zinc	≤ 359.1 b	-	26 I
Nutrients (mg/L)			
Ortho-phosphate	-	-	2.4
Total Phosphorus	-	Report	3.0 A
Total Ammonia	-	-	0.065 I
Un-ionized Ammonia	≤ 0.02 s	≤ 0.02 s	≤ 0.02 c
Nitrate and Nitrite	-	-	1.1
Total Kjeldahl Nitrogen	-	-	2.9 A
Organic Nitrogen	-	-	2.835 c
Total Nitrogen	-	Report	4.0 c
General Physical and Chemical Parameters			
Dissolved Oxygen (mg/L)	≥ 5.0 s	≥ 5.0 s	8.9
pH (SU)	6.0 - 8.5 s	6.0 - 8.5 s	7.6
Conductivity (µmhos/cm)	≤ 1,275 s	-	1283
Temperature (°C)	-	-	19.8
Total Residual Chlorine (mg/L)	≤ 0.01 s	≤ 0.01 s	0.67
Total Suspended Solids (mg/L)	-	≤ 60.0 s	4.0 U
CBOD, 5 day (mg/L), N - inhibited	-	≤ 60.0 s	3.3
Flow (MGD)	-	≤ 0.015 a	0.0104 a
Hardness (mg $CaCO_3$)	-	-	365.27 c
Microbiology (Number of counts/100ml)			
Fecal Coliforms	≤ 800 s	≤ 800 s	2.0 U

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

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

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

Appendix A. Chain of Custody form

NEDFS-01-06
12/18/06

Department of Environmental Protection Northeast District Field Sheet

Sample Source: Bruce Vista Meter#: 87 Ortho Kit# 2 Acid Kit# _____ Date 1-22-07 Page ___ of ___
RQ#: 2007-01-22-17 Sampling Team Jim Burns / Joseph Evans

LAB ID #	Site Name: Blank	Storet #:	Total Depth (m)	Sample Depth (m)

Time	Temp °C	Cond µohm cm⁻¹	Sal (%)	pH (s.u.)	DO (mg/L)	DO Sat (%)	Secchi (m)	WTR V (ft/sec)	Tide (Ebb/Flood)	Measured by: (Intl)
9:28										
9:40										

Parameters/Method		Preserve*	Suite**	Intl	Parameters/Method		Preserve*	Suite**	Intl
Preserved Nutrients	TKN NO_2-NO_3 NH_3 TOC TP Tot. N	Ice H_2SO_4 pH <2	D		Physical/ Aggregate Properties	TSS Turbidity W-Cl-IC W-F W-SO_4-IC Color TDS Alk	Ice		
Filtered Nutrients	oP Other:	Ice 0.45µm flt	D		Metals	W-ICP W-FIAS W-ICPMS W-ICP-Tr	HNO_3	D	
BOD	CBOD-Inhb BOD-Unin	Ice			AGP/Other	AA-AGP □Other AA-Lim-Nut	Ice		
Chlorophyll	CHL-PPTN-W	Ice			Micro	T Coli F Coli	Ice		

Equipment: Grab Horizontal Sampler Pole Sampler:
Collection Mode: Wading Shore Gasoline Motor Canoe Bridge
Comments: (Circle 1) Clouds: 0-10% 11-60% 61-90% 91-100%

LAB ID #	Site Name: E Shore	Storet #:	Total Depth (m)	Sample Depth (m)

Time	Temp °C	Cond µohm cm⁻¹	Sal (%)	pH (s.u.)	DO (mg/L)	DO Sat (%)	Secchi (m)	WTR V (ft/sec)	Tide (Ebb/Flood)	Measured by: (Intl)
9:53	19.76	1283	0.64	7.61	8.85	97.3				

Parameters/Method		Preserve*	Suite**	Intl	Parameters/Method		Preserve*	Suite**	Intl
Preserved Nutrients	TKN NO_2-NO_3 NH_3 TOC TP Tot. N	Ice H_2SO_4 pH <2	A		Physical/ Aggregate Properties	TSS Turbidity W-Cl-IC W-F W-SO_4-IC Color TDS Alk	Ice	A	
Filtered Nutrients	oP Other:	Ice 0.45µm flt	A		Metals	W-ICP W-FIAS W-ICPMS W-ICP-Tr	HNO_3	A	
BOD	CBOD-Inhb BOD-Unin	Ice	A		AGP/Other	AA-AGP □Other AA-Lim-Nut	Ice	A	
Chlorophyll	CHL-PPTN-W	Ice			Micro	T Coli F Coli	Ice		

Equipment: Grab Horizontal Sampler Pole Sampler:
Collection Mode: Wading Shore Gasoline Motor Canoe Bridge
Comments: Rechlor 0.67 mg/L <1.0 mg/L (Circle 1) Clouds: 0-10% 11-60% 61-90% 91-100%

LAB ID #	Site Name:	Storet #:	Total Depth (m)	Sample Depth (m)

Time	Temp °C	Cond µohm cm⁻¹	Sal (%)	pH (s.u.)	DO (mg/L)	DO Sat (%)	Secchi (m)	WTR V (ft/sec)	Tide (Ebb/Flood)	Measured by: (Intl)

Parameters/Method		Preserve*	Suite**	Intl	Parameters/Method		Preserve*	Suite**	Intl
Preserved Nutrients	TKN NO_2-NO_3 NH_3 TOC TP Tot. N	Ice H_2SO_4 pH <2			Physical/ Aggregate Properties	TSS Turbidity W-Cl-IC W-F W-SO_4-IC Color TDS Alk	Ice		
Filtered Nutrients	oP Other:	Ice 0.45µm flt			Metals	W-ICP W-FIAS W-ICPMS W-ICP-Tr	HNO_3		
BOD	CBOD-Inhb BOD-Unin	Ice			AGP/Other	AA-AGP □Other AA-Lim-Nut	Ice		
Chlorophyll	CHL-PPTN-W	Ice			Micro	T Coli F Coli	Ice		

Equipment: Grab Horizontal Sampler Pole Sampler:
Collection Mode: Wading Shore Gasoline Motor Canoe Bridge
Comments: (Circle 1) Clouds: 0-10% 11-60% 61-90% 91-100%

LAB ID #	Site Name:	Storet #:	Total Depth (m)	Sample Depth (m)

Time	Temp °C	Cond µohm cm⁻¹	Sal (%)	pH (s.u.)	DO (mg/L)	DO Sat (%)	Secchi (m)	WTR V (ft/sec)	Tide (Ebb/Flood)	Measured by: (Intl)

Parameters/Method		Preserve*	Suite**	Intl	Parameters/Method		Preserve*	Suite**	Intl
Preserved Nutrients	TKN NO_2-NO_3 NH_3 TOC TP Tot. N	Ice H_2SO_4 pH <2			Physical/ Aggregate Properties	TSS Turbidity W-Cl-IC W-F W-SO_4-IC Color TDS Alk	Ice		
Filtered Nutrients	oP Other:	Ice 0.45µm flt			Metals	W-ICP W-FIAS W-ICPMS W-ICP-Tr	HNO_3		
BOD	CBOD-Inhb BOD-Unin	Ice			AGP/Other	AA-AGP □Other AA-Lim-Nut	Ice		
Chlorophyll	CHL-PPTN-W	Ice			Micro	T Coli F Coli	Ice		

Equipment: Grab Horizontal Sampler Pole Sampler:
Collection Mode: Wading Shore Gasoline Motor Canoe Bridge
Comments: (Circle 1) Clouds: 0-10% 11-60% 61-90% 91-100%

*Preservatives: 1mL added per 500 mL sample unless otherwise noted; iced within 15 minutes ** J: samples run in Jacksonville Lab

Relinquished:	Date/time	Received: Tom. E 01/23/07 9:10	□ < 6°C □ on ice □ < 2 pH
Relinquished:	Date/time	Received:	Shipping:

FDEP Biology Laboratory - Acute Definitive Bioassay Bench Sheets

Facility: Port Bowa Vista WWTP

Address: 121 Maracaibo Dr.

City: East Palatka County: Putnam

Contact/District: Joseph Emory - Northeast

NPDES Permit #: FL 0042617

LIMS Job # TLH-2007-01-23-24 LIMS Sample #: 978673

Lims Data Entry: 2-2-07 MF Data Entry Verification: 2-2-07 - JR

Sample Collection: Date: 1-22-07 Time: 9:53

Hold Time Start: Date: 1-22-07 Time: 9:53

Comments: Total residual chlorine of sample in Lab was 0.47 mg/L. an aliquot of sample was dechlorined by the addition of 0.5 mL/L of 0.025 N Sodium thiosulfate. A dechlorinated control was prepared by adding 0.5 mL/L of 0.025 N Sodium thiosulfate to the respective test Control media. The original sample was tested ~~only~~ as a screening Test. the dechlorinated sample was tested as a definitive test. MF 1-23-07

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

Test Type: (Definitive)

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:

Test 1 validation: Test 1: 50 0° 1A 07 01

Control survival ≥90% (Yes) No

Temperature Range ± 3°C (Yes) No

Test 2 validation: Test 2: 50 0° 1A 07 02

Control survival ≥80% (Yes) No

Temperature Range ± 3°C (Yes) No

PH adjustment : yes (no) Initial pH: _____ NaOH N HCl N Required Final pH

Aeration : yes (no) Initial DO: _____mg/L Final DO: _____mg/L Duration minutes Rate bubbles/min

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

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

Dechlorination (yes) no 0.5 mL of 0.025N Sodium Thiosulfate per liter of sample Final TRC: 0.05

Room B246 Temperature Range 22.0 °C To 24.1 °C

Incubator # 2 Temperature Range 24.0 °C To 25.8 °C

Sample Validation:

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

Holding Time: ≤36 Hours (Yes) No (Composite-end of collection; grab-when collected, 4 in 24 - time last sample collected)

Investigators' Signatures

James Daniels

Erin Wilcox

Marshall Faircloth

REVIEWER

Water Quality Parameters	20% DMW	Moderately Hard Water/ (Well Water)	Salt Water ASW NSW Test 1	Salt Water ASW NSW Test 2	Other: Dechlorinated Sample	Original Sample	Method	Measured by	Verified by
Field Total Residual Cl_2 (mg/L):	N/A	N/A	N/A	N/A	—	MF 0.47	HACH	Jr Emory	MF
Lab Total Residual Cl_2 (mg/L):	<0.03	<0.03			0.05	0.47	HACH	DRV/SO	BA
Alkalinity (mg/L as $CaCO_3$):	140	140			—	256	HACH	CW	BA
Hardness (mg/L as $CaCO_3$):	85	135			—	350	HACH	CW	BA
Total Ammonia (mg/L as N):	<0.017	<0.017			—	<0.017	DENVER	DRV	BA
Salinity (ppth):	<1	<1			—	<1	YSI / Mettler	BA	DRV

V 1.4 9/12/05

Appendix B. (continued)

FDEP Biology Laboratory - Bioassay Survival Bench Sheet

LIMS Sample #: 978673 Test #: 1of2 SOP#:TA 07 01 Test Started: Date 12307 Time: 1300
Organism/Batch/Age: Cdubia/4-07 / <24hr> Test Ended: Date 1-27-07 Time: 1000
Chamber/Test Volume: 30 / 20 ml Diluent/ Batch: DMW / 123007
Food/Batch: YCT 3-06 P.sub 5-06 Artemia 0hr — 24hr — 48hr — 72hr — Artemia Lot# —
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
Dechlor Ctrl	A	A	5	5	5	5	5	5
	B	B	5	5	5	5	5	5
	C	C	5	5	5	5	5	5
	D	D	5	5	5	5	5	5
Dechlor 6.25%	A	A	5	5	5	5	5	5
	B	B	5	5	5	5	5	5
	C	C	5	5	5	5	5	5
	D	D	5	5	5	5	5	5
Dechlor 12.5%	A	A	5	5	5	5	5	5
	B	B	5	5	5	5	5	5
	C	C	5	5	5	5	5	5
	D	D	5	5	5	5	5	5
Dechlor 25%	A	A	5	5	5	5	5	5
	B	B	5	5	5	5	5	5
	C	C	5	5	5	5	5	5
	D	D	5	5	5	5	5	5
Dechlor 50%	A	A	5	5	5	5	5	5
	B	B	5	5	5	5	5	5
	C	C	5	5	5	5	5	5
	D	D	5	5	5	5	5	5
Dechlor 100%	A	A	5	5	5	5	5	5
	B	B	5	5	5	5	5	5
	C	C	5	5	5	5	5	5
	D	D	5	5	5	5	5	5
Ctrl	A	A	5	3 2D	3	3	3	3
	B	B	5	5	5	5	5	5
	C	C	5	5	5	5	5	5
	D	D	5	5	5	5	5	5
100%	A	A	5	5	5	5	5	5
	B	B	5	5	5	5	5	5
	C	C	5	5	5	5	3	5
	D	D	5	5	5	5	5	5
			CK	DA	BA	BA	BA	MK

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

Comments: Definitive test LC_{50} >100% MF
Screening test LC_{50} >100% MF 2-2-07
No mortality in 100% dechlorinated sample. MF 2-5-07

V 2.1 11/01/2005

Appendix B. (continued)

FDEP Biology Laboratory - Bioassay Survival Bench Sheet

LIMS Sample #: 978673 Test #: 2057 SOP#:TA 07 02 Test Started: Date 1.23.07 Time: 1330
Organism/Batch/Age: C.tentans/1/23/07/ 12 DS Test Ended: Date 1.27.07 Time: 1015
Chamber/Test Volume: 1000 / 500 ml Diluent/ Batch: Well H20 / 1.22.07
Food/Batch: YCT — P.sub — Artemia 0hr 5.07 24hr — 48hr 6-07 72hr — Artemia Lot# 651-53690
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
dechlor 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
dechlor 6.25%	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
dechlor 12.5%	A	D9	5	5	5	5	5	5
	B	D10	5	5	5	5	5	5
	C	D11	5	5	5	5	5	5
	D	D12	5	5	5	5	5	5
dechlor 25%	A	D13	5	5	5	5	5	5
	B	D14	5	5	5	5	5	5
	C	D15	5	5	5	5	5	5
	D	D16	5	5	5	5	5	5
dechlor 50%	A	D17	5	5	5	5	5	5
	B	D18	5	5	5	5	5	5
	C	D19	5	5	5	5	5	5
	D	D20	5	5	5	5	5	5
dechlor 100%	A	D21	5	5	5	5	5	5
	B	D22	5	5	5	5	5	5
	C	D23	5	5	5	5	5	5
	D	D24	5	5	5	5	5	5
Ctrl	A	E1	5	5	5	5	5	5
	B	E2	5	5	5	5	5	5
	C	E3	5	5	5	5	5	5
	D	E4	5	5	5	5	5	5
100%	A	E5	5	5	5	5	5	5
	B	E6	5	5	5	5	5	5
	C	E7	5	5	5	5	5	5
	D	E8	5	5	5	5	5	5
			JD	JD	JD	JD	MF	MF

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

Comments: Definitive I test LC50 >100% MF
Screening Test LC50 >100% MF 2-2-07
No mortality in definitive test. MF 2-5-07

V 2.1 11/01/2005

FDEP Biology Laboratory - Bioassay Parameter Bench Sheet

LIMS Sample # : 978673 **Test #:** 1 of 2

TEST SOP #: TA07_ a **Test Species:** (Ceriodaphnia dubia) *Cyprinella leedsi* *Pimephales promelas* *Americamysis bahia* *Menidia beryllina* Other:_____

Concentration Dechlor ctrl	0 Hr.	24 Hr.	48 Hr. before renewal	48 Hr. after renewal	72 Hr.	96 Hr.
Replicate	M		M	M		A
pH (S.U.)	7.8		8.0	8.1		8.1
Temperature °C	24.0		24.0	24.1		24.2
Dissolved Oxygen mg/L	7.4		7.5	7.2		7.8
Conductivity (µmhos) mmhos	190.9		209	183		213
(initials) Measured by:	BA		BA	~~PP~~		MF
(initials) Recorded by:	BA		~~BA~~	~~PP~~		MF

Comments:

Concentration Dechlorinated 6.25%	0 Hr.	24 Hr.	48 Hr. before renewal	48 Hr. after renewal	72 Hr.	96 Hr.
Replicate	M		M	M		A
pH (S.U.)	7.8		8.1	8.1		8.1
Temperature °C	24.0		24.0	24.0		24.3
Dissolved Oxygen mg/L	7.4		7.5	7.2		7.7
Conductivity (µmhos) mmhos	259		291	267		299
(initials) Measured by:	BA		BA	~~PP~~		MF
(initials) Recorded by:	BA		BA	~~PP~~		MF

Comments:

Concentration Dechlorinated 12.5%	0 Hr.	24 Hr.	48 Hr. before renewal	48 Hr. after renewal	72 Hr.	96 Hr.
Replicate	M		M	M		A
pH (S.U.)	7.9		8.2	8.2		8.2
Temperature °C	24.0		24.0	24.1		23.4
Dissolved Oxygen mg/L	7.5		7.5	7.2		7.7
Conductivity (µmhos) mmhos	337		364	335		378
(initials) Measured by:	BA		BA	~~PP~~		MF
(initials) Recorded by:	BA		BA	~~PP~~		MF

Comments:

Concentration Dechlorinated 25%	0 Hr.	24 Hr.	48 Hr. before renewal	48 Hr. after renewal	72 Hr.	96 Hr.
Replicate	M		M	M		A
pH (S.U.)	7.9		8.3	8.2		8.2
Temperature °C	24.0		24.0	24.1		24.2
Dissolved Oxygen mg/L	7.6		7.5	7.3		7.8
Conductivity (µmhos) mmhos	484		524	480		518
(initials) Measured by:	BA		BA	~~PP~~		MF
(initials) Recorded by:	BA		BA	~~PP~~		MF

Comments:

V 2.0 2/24/04

FDEP Biology Laboratory - Bioassay Parameter Bench Sheet

LIMS Sample # : 978673 Test #: 1 of 2

TEST SOP #: TA07_ 01 Test Species: (Ceriodaphnia dubia) Cyprinella leedsi Pimephales promelas Americamysis bahia Menidia beryllina Other:_____

Concentration Dechlorinated 50%	0 Hr.	24 Hr.	48 Hr. before renewal	48 Hr. after renewal	72 Hr.	96 Hr.
Replicate	M		M	M		A
pH (S.U.)	7.9		8.5	8.1		8.4
Temperature °C	24.0		24.0	24.0		24.3
Dissolved Oxygen mg/L	7.6		7.5	7.2		7.6
Conductivity (mmhos) mmhos	772		850	785		832
(initials) Measured by:	BA		BA	~~PP~~		MF
(initials) Recorded by:	BA		BA	~~PP~~		mf

Comments:

Concentration dechlor 100%	0 Hr.	24 Hr.	48 Hr. before renewal	48 Hr. after renewal	72 Hr.	96 Hr.
Replicate	M		M	M		A
pH (S.U.)	7.9		8.6	8.1		8.5
Temperature °C	24.0		24.0	24.0		24.4
Dissolved Oxygen mg/L	7.5		7.5	7.3		7.6
Conductivity (mmhos) mmhos	1331		1493	1325		1433
(initials) Measured by:	BA		BA	~~PP~~		MF
(initials) Recorded by:	BA		BA	~~PP~~		MF

Comments:

Original sample Containing-Chlorine - MF 2-5-07

Concentration ctrl	0 Hr.	24 Hr.	48 Hr. before renewal	48 Hr. after renewal	72 Hr.	96 Hr.
Replicate	M		M	M		A
pH (S.U.)	7.8		8.3	7.7		8.3
Temperature °C	24.0		24.0	24.1		24.2
Dissolved Oxygen mg/L	7.6		7.8	7.2		7.7
Conductivity (mmhos) mmhos	176		217	191.2		204
(initials) Measured by:	BA		BA	~~PP~~		MF
(initials) Recorded by:	BA		BA	~~PP~~		MF

Comments:

Concentration 100%	0 Hr.	24 Hr.	48 Hr. before renewal	48 Hr. after renewal	72 Hr.	96 Hr.
Replicate	M		M	M		A
pH (S.U.)	7.9		8.7	8.0		8.7
Temperature °C	24.0		24.0	24.0		24.1
Dissolved Oxygen mg/L	7.7		7.4	7.4		7.6
Conductivity (mmhos) mmhos	134		1554	1348		1413
(initials) Measured by:	BA		BA	~~PP~~		MF
(initials) Recorded by:	BA		BA	~~PP~~		MF

Comments:

FDEP Biology Laboratory - Bioassay Parameter Bench Sheet

LIMS Sample # : 978673 Test #: 2 of 2

TEST SOP #: TA07_02_ Test Species: *Ceriodaphnia dubia* (*Cyprinella leedsi*) *Pimephales promelas* *Americamysis bahia* *Menidia beryllina* Other:_____

Concentration dechlor ctrl	0 Hr.	24 Hr.	48 Hr. before renewal	48 Hr. after renewal	72 Hr.	96 Hr.
Replicate	A	B	C	C	D	A
pH (S.U.)	7.9	8.0	8.0	8.0	8.1	8.2
Temperature °C	25.4	24.8	25.2	24.2	24.9	24.9
Dissolved Oxygen mg/L	7.5	7.1	7.0	7.1	6.6	7.2
Conductivity (µmhos) mmhos	282	290	294	285	293	293
(initials) Measured by:	JD	JD	JD / PPV	PPV	JD	MF
(initials) Recorded by:	JD	JD	JD / PPV	PPV	JD	MF

Comments: dechlor = dechlorinated

Concentration Dechlor 6.25%	0 Hr.	24 Hr.	48 Hr. before renewal	48 Hr. after renewal	72 Hr.	96 Hr.
Replicate	A	B	C	C	D	A
pH (S.U.)	8.0	8.1	8.3	8.2	8.1	8.2
Temperature °C	25.6	24.6	24.7	24.3	24.9	24.9
Dissolved Oxygen mg/L	7.3 JD	7.1	7.1	7.0	6.4	7.1
Conductivity (µmhos) mmhos	363	370	379	294	306	307
(initials) Measured by:	JD	JD	JD / PPV	PPV	JD	MF
(initials) Recorded by:	JD	JD	JD / PPV	PPV	JD	MF

Comments:

Concentration Dechlor 12.5%	0 Hr.	24 Hr.	48 Hr. before renewal	48 Hr. after renewal	72 Hr.	96 Hr.
Replicate	A	B	C	C	D	A
pH (S.U.)	8.0	8.2	8.4	8.2	8.0	8.2
Temperature °C	25.5	24.7	24.8	24.2	24.5	25.0
Dissolved Oxygen mg/L	7.4	7.1	7.1	7.2	6.3	7.0
Conductivity (µmhos) mmhos	420	428	440	308	321	322
(initials) Measured by:	JD	JD	JD / PPV	PPV	JD	MF
(initials) Recorded by:	JD	JD	JD / PPV	PPV	JD	MF

Comments:

Concentration Dechlor 25%	0 Hr.	24 Hr.	48 Hr. before renewal	48 Hr. after renewal	72 Hr.	96 Hr.
Replicate	A	B	C	C	D	A
pH (S.U.)	8.0	8.2	8.4	8.2	8.0	8.2
Temperature °C	25.4	24.5	24.9	24.2	24.6	24.8
Dissolved Oxygen mg/L	7.4	7.2	7.1	7.2	6.0	6.9
Conductivity (µmhos) mmhos	554	554	575	341	555	565
(initials) Measured by:	JD	JD	JD / PPV	PPV	JD	MF
(initials) Recorded by:	JD	JD	JD / PPV	PPV	JD	MF

Comments:

V 2.0 2/24/04

FDEP Biology Laboratory - Bioassay Parameter Bench Sheet

LIMS Sample # : 978673 **Test #:** 2 of 2

TEST SOP #: TA07_02_ **Test Species:** *Ceriodaphnia dubia* *Cyprinella leedsi* *Pimephales promelas* *Americamysis bahia* *Menidia beryllina* Other:_____

Concentration Dechlorinated 50%	0 Hr.	24 Hr.	48 Hr. before renewal	48 Hr. after renewal	72 Hr.	96 Hr.
Replicate	A	B	C	C	D	A
pH (S.U.)	8.0	8.2	8.5	8.2	8.2	8.4
Temperature °C	25.3	24.7	24.9	24.1	24.9	25.0
Dissolved Oxygen mg/L	7.6	7.1	7.1	7.0	5.9	6.8
Conductivity (µmhos) mmhos	823	833	844	814	830	840
(initials) Measured by:	JD	JD	JD / APV	APV	JD	MF
(initials) Recorded by:	JD	JD	JD / APV	APV	JD	MF

Comments:

Concentration dechlor 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.)	7.9	8.2	8.5	8.2	8.2	8.4
Temperature °C	25.3	24.6	24.7	24.2	24.5	24.8
Dissolved Oxygen mg/L	8.1	6.9	7.0	7.0	6.2	6.9
Conductivity (µmhos) mmhos	1355	1314	1354	1338	1334	1352
(initials) Measured by:	JD	JD	JD / APV	APV	JD	MF
(initials) Recorded by:	JD	JD	JD / APV	APV	JD	MF

Comments:

Original Sample Containing Chlorine MF 2-5-07

Concentration Ctrl	0 Hr.	24 Hr.	48 Hr. before renewal	48 Hr. after renewal	72 Hr.	96 Hr.
Replicate	A	B	C	C	D	A
pH (S.U.)	7.9	8.2	8.1	7.9	8.1	8.2
Temperature °C	25.6	25.4	24.5	24.4	24.7	24.5
Dissolved Oxygen mg/L	7.4	7.2	7.2	7.3	6.5	7.0
Conductivity (µmhos) mmhos	280	296	290	280	309	295
(initials) Measured by:	JD	JD	JD / APV	APV	JD	MF
(initials) Recorded by:	JD	JD	JD / APV	APV	JD	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.)	7.9	8.2	8.5	8.2	8.3	8.5
Temperature °C	25.0	24.7	24.8	24.9	24.5	24.5
Dissolved Oxygen mg/L	7.8	7.7	7.0	7.4	6.4	7.1
Conductivity (µmhos) mmhos	1346	1332	1357	1338	1367 @ ~~APH~~	1378
(initials) Measured by:	JD	JD	JD / APV	APV	JD	MF
(initials) Recorded by:	JD	JD	JD / APV	APV	JD	MF

Comments:

@ Transcription error - J.D. 1.26.07

Appendix C. SRT Bench Sheets and Statistical Analysis

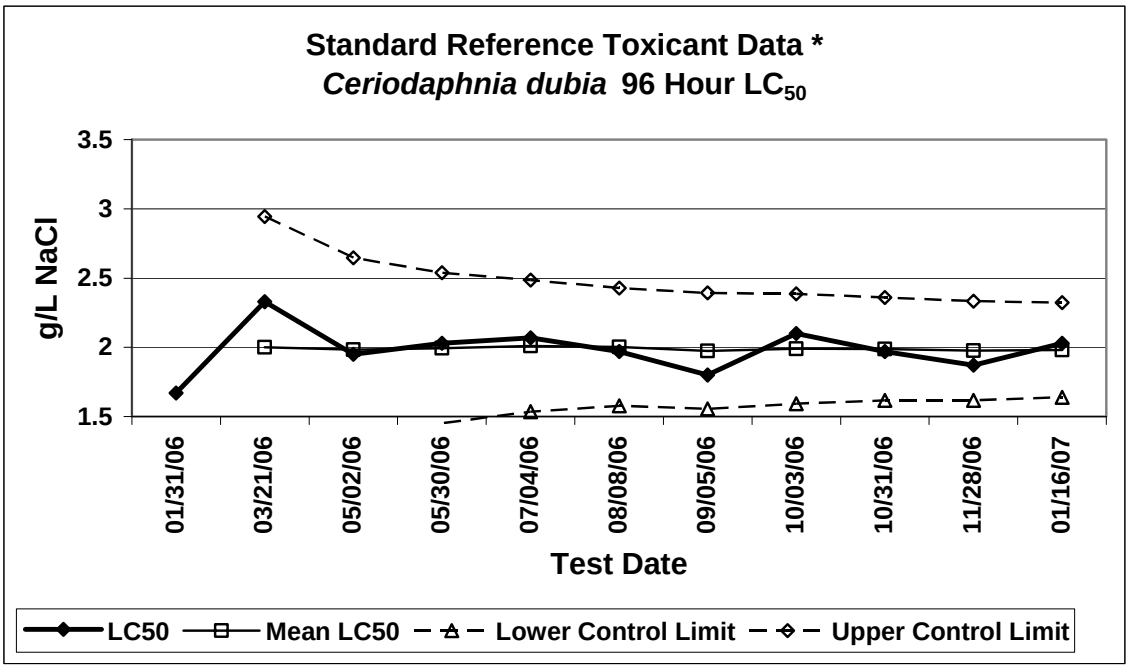
Florida Department of Environmental Protection
Bureau of Laboratories

Standard Reference Toxicant (SRT) Test Data - 96-hour Acute Toxicity
Ceriodaphnia dubia (water flea) - Sodium Chloride (NaCl)

Date	LC50	Mean LC50	Std Dev	Lower Control Limit	Upper Control Limit
01/31/06	1.67				
03/21/06	2.33	2.00	0.47	1.07	2.94
05/02/06	1.95	1.98	0.33	1.32	2.65
05/30/06	2.03	2.00	0.27	1.45	2.54
07/04/06	2.07	2.01	0.24	1.54	2.48
08/08/06	1.97	2.00	0.21	1.58	2.43
09/05/06	1.80	1.97	0.21	1.56	2.39
10/03/06	2.10	1.99	0.20	1.59	2.39
10/31/06	1.97	1.99	0.19	1.62	2.36
11/28/06	1.87	1.98	0.18	1.62	2.33
01/16/07	2.03	1.98	0.17	1.64	2.32

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

CV = 8.62
EPA reference 75th quartile CV = 29%



* Fewer than 20 data points due to recent initiation of 96 hour SRT testing.

Appendix C. (continued)

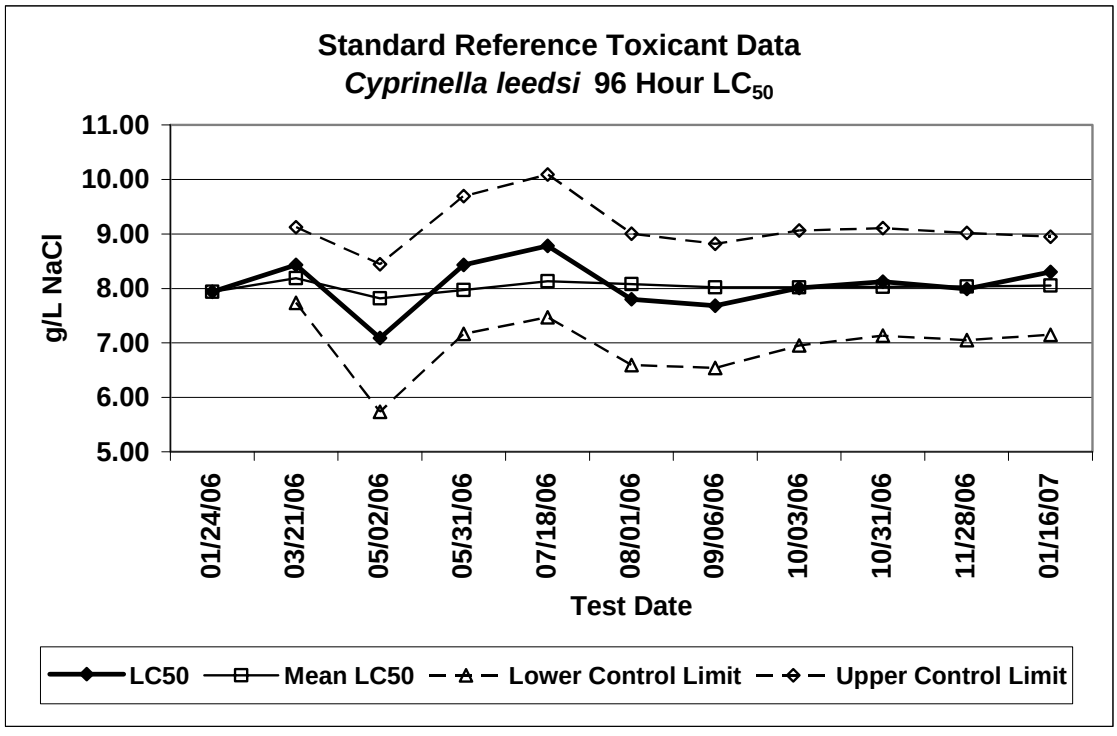
Florida Department of Environmental Protection
Bureau of Laboratories

Standard Reference Toxicant (SRT) Test Data - 96-hour Acute Toxicity
Cyprinella leedsi (bannerfin shiner) - Sodium Chloride (NaCl)

Date	LC50	Mean LC50	Std Dev	Lower Control Limit	Upper Control Limit
01/24/06	7.94	7.94			
03/21/06	8.43	8.19	0.35	7.74	9.12
05/02/06	7.09	7.82	0.68	5.73	8.45
05/31/06	8.43	7.97	0.63	7.17	9.69
07/18/06	8.78	8.13	0.66	7.47	10.09
08/01/06	7.80	8.08	0.60	6.60	9.00
09/06/06	7.68	8.02	0.57	6.54	8.82
10/03/06	8.01	8.02	0.53	6.95	9.07
10/31/06	8.12	8.03	0.49	7.13	9.11
11/28/06	7.99	8.04	0.49	7.05	9.02
01/16/07	8.30	8.05	0.45	7.15	8.95

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

CV = 5.60
EPA reference 75th quartile CV = 19%



* Fewer than 20 data points due to recent initiation of 96 hour SRT testing.

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#: DMW 1-9-07
Toxicant/ Batch# NaCl 1.16.07

Test Beginning: Date: 1.16.07 Time: 1430
Test Ending: Date: 1/20/07 Time: 1200

Organism Batch #/ Age: 3-07 / 1 & 24hrs (started mysis mf 2/8/07)
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

Water Quality Parameters:	Diluent	Method	Initials
Total Residual Cl_2 (mg/L):	40.03	Hach	~~RV~~
Alkalinity (mg/L as $CaCO_3$):	85	Hach	RJ
Hardness (mg/L as CaCO3):	90	Hach	RJ
Total Ammonia (mg/L as N):	40.017	Denver	~~RV~~
Salinity (ppth):	<1	Mettler	BA

Conc µg/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~~)	24 hr (~~72 hr~~)	48 hr (~~96 hr~~)
Control	A	A	5	5	5	7.9		7.8	24.0		24.4	7.2		7.4	~~27.3~~ (B)		0.209
	B	B	5	5	5												
	C	C	5	5	5												
	D	D	5	5	5												
1.5	A	A	5	5	5	7.9		7.8	24.0		24.2	7.2		7.4	28.3		3.17
	B	B	5	5	4 1D												
	C	C	5	5	4 1D												
	D	D	5	5	5												
2.0	A	A	5	5	5	8.0		7.9	24.3		24.0	6.9		7.3	382		4.21
	B	B	5	5	5												
	C	C	5	5	5												
	D	D	5	5	4 1D												
2.3	A	A	5	4 1D	0 4D	8.1		7.9	24.0		24.0	7.1		7.3	490		5.34
	B	B	5	5	0 5D												
	C	C	5	4 1D	0 4D (4 mf 2/8/07 after 48 hr through error corrected)												
	D	D	5	5	0 5D												
3.0	A	A	5	3 2D	0 3D	8.1		7.9	24.0		24.0	7.2		7.3	580		6.28
	B	B	5	1 4D	0 1D												
	C	C	5	3 2D	0 3D												
	D	D	5	2 3D	0 2D												
4.0	A	A	5	0 5D	—	8.1		8.0	24.3		24.0	7.4		7.4	726		8.01
	B	B	5	1 4D	0 1D												
	C	C	5	0 5D	—												
	D	D	5	1 4D	0 1D												
	A																
	B																
	C																
	D																
Loaded / measured by:			~~RV~~	BA	BA	JD		BA	JD		BA	JD		BA	JD		BA
Recorded by:			BA	BA	BA	JD		BA	JD		BA	JD		BA	JD		BA

Investigators' Signatures
Bruce Allbee
Patel Vichaikul
Erin Wilcox
James Brand
Marshall Faircloth
Vicki Mellentine
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. 23.1 max 29.9 mean 24.6
Incubator # ____ min. ____ max. ____ mean ____
Room B246 min. 22.2 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 transcriptional error. MF 2-9-07
NOV monotonically increasing mortality at 48hrs mf 2-9-07

Statistical Results: Method: Spearman-Karber
(48) / 96 hour LC50: 2.22
95% Confidence Interval: lower (2) upper _____

Revised 02/21/06

Appendix C. (continued)

FDEP Biology Section - Acute SRT Bench Sheet

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

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

Diluent/ Batch#: DMW 1-9-07
Toxicant/ Batch# NaCl 1-4-07

Test Beginning: Date: 1-16-07 Time: 11.30
Test Ending: Date: 1.20.07 Time: 1200

Water Quality Parameters:	Diluent	Method	Initials
Total Residual Cl_2 (mg/L):	0.03	Hach	PW
Alkalinity (mg/L as $CaCO_3$):	85	Hach	RD
Hardness (mg/L as CaCO3):	910	Hach	RD
Total Ammonia (mg/L as N):	0.017	Denver	PW
Salinity (ppth):	21	Mettler	BA

Organism Batch #/ Age: 3 OY 1 C 24 hrs
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 0 hr / 24 hr / 48 hr → 48 hr / 72 hr / 96 hr	pH (SU) 0 hr / 24 hr / 48 hr → 48 hr / 72 hr / 96 hr	Temperature (° C) 0 hr / 24 hr / 48 hr → 48 hr / 72 hr / 96 hr	D.O. (mg/l) 0 hr / 24 hr / 48 hr → 48 hr / 72 hr / 96 hr	UNCORRECTED Cond. (mmhos/cm) 0 hr / 24 hr / 48 hr → 48 hr / 72 hr / 96 hr
Control	A	A	5 / 5 / 5	7.8 / — / 8.1	24.1 / — / 24.0	7.2 / — / 7.8	0.180 / — / 0.180 0.228
	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 / — / 3.14
	B	B	4 / 2 2D / 1 1D				
	C	C	4 / 3 1D / 2 1D				
	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 / 4 1D				
	C	C	5 / 5 / 4 1D				
	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 / — / —				
	A						
	B						
	C						
	D						
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
Brian Nelson
Daisy Wichaikul
Erin Wilcox
Jason Steidl
Marshall Frinclath
Nicole Wellendy
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. 25.9 mean 24.6
Incubator # ____ min. _____ max. _____ mean _____
Room B246 min. 22 max. 24.7 mean 23.5

Remarks:

Statistical Results: Method: Spearman-Karber
48 (96) hour LC50: 2.03
95% Confidence Interval: lower 1.68 upper 2.45

Revised 02/21/06

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#: MBWH2O 11607
Toxicant/ Batch# NaCl / 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):	<0.03	Hach	~~PPV~~
Alkalinity (mg/L as $CaCO_3$):	142	Hach	[illegible]
Hardness (mg/L as CaCO3):	136	Hach	[illegible]
Total Ammonia (mg/L as N):	<0.07	Denver	~~PPV~~
Salinity (ppth):	21	Mettler	BA

Organism Batch #/ Age: 1-16-07 / 11 days
Feeding: Prior to test / Prior to renewal / Daily
Food: YCT — P.subcapitata — Artemia GSI-536-40 1-01, 3-07
Food Batch: _____ _____
Chamber size: 1000 mL
Test volume: 500 mL per replicate

Conc. µg/L (g/L)	Rep.	Chamber#	Number Live 0 hr (~~48 hr~~)	Number Live 24 hr (~~72 hr~~)	Number Live 48 hr (~~96 hr~~)	pH (SU) 0 hr (~~48 hr~~)	pH (SU) 24 hr (~~72 hr~~)	pH (SU) 48 hr (~~96 hr~~)	Temperature (° C) 0 hr (~~48 hr~~)	Temperature (° C) 24 hr (~~72 hr~~)	Temperature (° C) 48 hr (~~96 hr~~)	D.O. (mg/l) 0 hr (~~48 hr~~)	D.O. (mg/l) 24 hr (~~72 hr~~)	D.O. (mg/l) 48 hr (~~96 hr~~)	UNCORRECTED Cond. (mmhos/cm) Cond. (µmhom/cm) 0 hr (~~48 hr~~)	24 hr (~~72 hr~~)	48 hr (~~96 hr~~)
Control	A	B13	10	10	10	7.7		8.1	24.0		24.6	7.6		7.1	0.269		0.302
	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		24.7	7.6		6.9	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		24.9	7.6		6.8	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(9)	7	7.8		8.2	24.0		24.8	7.6		6.8	13.71		14.2
	B	B20	10	8(7)	8		7.9			24.2			6.4			13.1	
	C																
	D																
9.0	A	B21	10	5(5)	5	7.8		8.2	24.0		24.5	7.6		6.8	15.30		15.8
	B	B22	10	3(5)	2(5)		7.9			24.4			6.4			15.6	
	C																
	D																
10.0	A	B23	10	8(10)	—	7.8			24.0		24.8	7.6			17.08		
	B	B24	10	9(10)	8(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	CW	BA	~~PPV~~	CW	JD	JD	CW	BA	~~PPV~~	CW	BA	~~PPV~~
Recorded by:			BA	JD	JD	CW	BA	~~PPV~~	CW	JD	JD	CW	BA	~~PPV~~	CW	BA	~~PPV~~

Investigators' Signatures
Bruce Anderson
Patsy Michaud
Erin Wilcox
Jana Bash
_____
_____
Nicole Wellendorf
REVIEWER

Concentrations prepared by: JD
Loading verified by: CW
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. 24.7 mean 23.5

Remarks:

Statistical Results: Method: Spearman-Karber
48 / 96 hour LC50: 8.47
95% Confidence Interval: lower 8.11 upper 8.86

Revised 02/21/06

Appendix C. (continued)

FDEP Biology Section - Acute SRT Bench Sheet

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

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

Diluent/ Batch#: well H2O 1.16.07
Toxicant/ Batch# NaCl / 1.16.07

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):	<0.03	Hach	[illegible]
Alkalinity (mg/L as $CaCO_3$):	142	Hach	[illegible]
Hardness (mg/L as CaCO3):	136	Hach	[illegible]
Total Ammonia (mg/L as N):	<0.07	Denver	[illegible]
Salinity (ppth):	<1	Mettler	BA

Organism Batch #/ Age: 1-16-07 / 1 1 1 4 5
Feeding: Prior to test / Prior to renewal / Daily
Food: YCT P.*subcapitata* Artemia GSL-536-40 1-07,3-07
Food Batch: — — —
Chamber size: 1000 mL
Test volume: 500 mL per replicate

Conc. µg/L (g/L)	Rep.	Chamber#	Number Live 0 hr / 24 hr / 48 hr			pH (SU) 0 hr / 24 hr / 48 hr			Temperature (° C) 0 hr / 24 hr / 48 hr			D.O. (mg/l) 0 hr / 24 hr / 48 hr			UNCORRECTED Cond. (mmhos/cm) 0 hr / 24 hr / 48 hr		
			48 hr	72 hr	96 hr	48 hr	72 hr	96 hr	48 hr	72 hr	96 hr	48 hr	72 hr	96 hr	48 hr	72 hr	96 hr
Control	A	B13	10	10	9/D	7.9		8.1	24.0		24.6	7.5		7.0	0.295		0.299
	B	B14	10	10	10		7.8			24.8			6.7			0.287	
	C																
	D																
6.0	A	B15	10	10	9/D	7.9		8.1	24.0		24.6	7.3		7.3	1.02		1.17
	B	B16	10	10	9/D		7.8			24.8			6.5			11.29	
	C																
	D																
7.0	A	B17	9	8/D	7/D	7.9		8.1	24.1		24.8	7.4		7.3	12.64		13.0
	B	B18	10	10	10		7.9			24.9			6.4			12.79	
	C																
	D																
8.0	A	B19	7	6/D	6	7.9		8.2	24.1		24.7	7.4		7.3	14.39		14.8
	B	B20	8	6/D	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/D	1/D		7.9			24.6			6.4			15.9	
	C																
	D																
10.0	A	B23	—	—	—	—		—	—		—	—		—	—		—
	B	B24	0	0/D	—		—			—			1			—	
	C																
	D																
	A																
	B																
	C																
	D																
Loaded / measured by:			JD	JD	JD	JD	BA	JD	JD	JD	JD	JD	BA	JD	JD	BA	JD
Recorded by:			JD	JD	JD	JD	BA	JD	JD	JD	JD	JD	BA	JD	JD	BA	JD

Investigators' Signatures
Bruce Nuckie
Paul Uchiike
Erin Wilcox
Jean Beall
Nijole Wellendorf
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. 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-Karber
48 (96) hour LC50: 8.130
95% Confidence Interval: lower 7.92 upper 8.69

Revised 02/21/06

Appendix C. (continued)

***Ceriodaphnia dubia* Acute Standard Reference Toxicant Test**

DATE: 1-16-07 DURATION: 96 h TOXICANT : NaCl
SPECIES: *Ceriodaphnia dubia*

RAW DATA: Concentration (g/L)	Number Exposed	Mortalities
0.00	20	0
1.50	20	7
2.00	20	8
2.50	20	20
3.00	20	20
4.00	20	20

SPEARMAN-KARBER TRIM: 35.0%

SPEARMAN-KARBER ESTIMATES: LC50: 2.03
95% LOWER CONFIDENCE: 1.68
95% UPPER CONFIDENCE: 2.45

***Cyprinella leedsi* Acute Standard Reference Toxicant Test**

DATE: 1-16-07 DURATION: 96 h TOXICANT : NaCl
SPECIES: *Cyprinella leedsi*

RAW DATA: Concentration (g/L)	Number Exposed	Mortalities
0.00	20	1
6.00	20	2
7.00	20	3
8.00	20	8
9.00	20	14
10.00	20	20

SPEARMAN-KARBER TRIM: 5.26%

SPEARMAN-KARBER ESTIMATES: LC50: 8.30
95% LOWER CONFIDENCE: 7.92
95% UPPER CONFIDENCE: 8.69

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

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: 1/15/21

Shipped to: TIDEP

P.O. No: _____

Species	Quantity	Age	Brood Number	Temperature	Salinity
Mysidopsis bahia	150+	4 Days	MBC7C111	25°C	~30‰
Menidia beryllina	150+	14 Days	SSC7C103	25°C	~30‰
Cyprinella leedsi	150+	11 Days	CLC7C104	25°C	
Pimephales promelas	150+	13 Days	FHC7C103-150	25°C	

Packed by: Frank Gray

Shipped Via: FedEx

Notes: _____

Thank you for your order.

Appendix D. (continued)

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

NELAC Accredited

Organism Shipment Record

State of Florida Aquaculture Certificate Number AQ0668007

Date: 1/22/07

Shipped to: FDEP

P.O. No: _____

Species	Quantity	Age	Brood Number	Temperature	Salinity
Mysidopsis bahia					
Menidia beryllina					
Cyprinella leedsi	1004	11 days	CL070111	25°C	
Pimephales promelas					

Packed by: Frank Gary

Shipped Via: FedEx

Notes: _____

Thank you for your order.

Appendix E. Chemical Analyses performed on the effluent from the Port Buena Vista Mobile Home Park Wastewater Treatment Facility Outfall D-001, sampled on January 22, 2007.

Date Sampled	Field ID	Analysis Group	Component	Result	Units	Remark	MDL	PQL
1/22/2007 9:53	EFFLUENT	Bio-AGP/LimNut	Algal Growth Potential	82.69	mg DryWt/L	A	0.3	0.9
1/22/2007 9:53	EFFLUENT	Bio-BOD	Biochemical Oxygen Demand-5 Day,N-Inhib	3.3	mg/L		0.2	2
1/22/2007 9:53	EFFLUENT	Bio-Chl-a	Chlorophyll-A, Monochromatic, Water	0.85	ug/L	U	0.85	2.6
1/22/2007 9:53	EFFLUENT	Bio-Chl-a	Phaeophytin-A, Monochromatic, Water	1.5	ug/L	U	1.5	4.5
1/22/2007 9:53	EFFLUENT	Bio-Toxicology	Bioassay-Acute-Def-FW-Fish, LC50-dechlor	100	LC50	L		
1/22/2007 9:53	EFFLUENT	Bio-Toxicology	Bioassay-Acute-Df-FW-C.dubia,LC50-dechlr	100	LC50	L		
1/22/2007 9:53	EFFLUENT	Bio-Toxicology	Bioassay-Acute-Screen-FW-C.dubia, LC50	100	LC50	L		
1/22/2007 9:53	EFFLUENT	Bio-Toxicology	Bioassay-Acute-Screen-FW-Fish, LC50	100	LC50	L		
1/22/2007 9:28	BLANK	BNA-Water	1,2,4-Trichlorobenzene	0.95	ug/L	U	0.95	3.8
1/22/2007 9:28	BLANK	BNA-Water	1,2-Dichlorobenzene	0.95	ug/L	U	0.95	3.8
1/22/2007 9:28	BLANK	BNA-Water	1,3-Dichlorobenzene	0.95	ug/L	U	0.95	3.8
1/22/2007 9:28	BLANK	BNA-Water	1,4-Dichlorobenzene	0.95	ug/L	U	0.95	3.8
1/22/2007 9:28	BLANK	BNA-Water	2,4,6-Trichlorophenol	0.95	ug/L	U	0.95	3.8
1/22/2007 9:28	BLANK	BNA-Water	2,4-Dichlorophenol	0.95	ug/L	U	0.95	3.8
1/22/2007 9:28	BLANK	BNA-Water	2,4-Dimethylphenol	48	ug/L	U	48	190
1/22/2007 9:28	BLANK	BNA-Water	2,4-Dinitrophenol	14	ug/L	U	14	57
1/22/2007 9:28	BLANK	BNA-Water	2,4-Dinitrotoluene	0.95	ug/L	U	0.95	3.8
1/22/2007 9:28	BLANK	BNA-Water	2,6-Dinitrotoluene	0.95	ug/L	U	0.95	3.8
1/22/2007 9:28	BLANK	BNA-Water	2-Chloronaphthalene	0.95	ug/L	U	0.95	3.8
1/22/2007 9:28	BLANK	BNA-Water	2-Chlorophenol	0.95	ug/L	U	0.95	3.8
1/22/2007 9:28	BLANK	BNA-Water	2-Methyl-4,6-dinitrophenol	2.9	ug/L	U	2.9	11
1/22/2007 9:28	BLANK	BNA-Water	2-Nitrophenol	0.95	ug/L	U	0.95	3.8
1/22/2007 9:28	BLANK	BNA-Water	3,3'-Dichlorobenzidine	38	ug/L	UJ	38	150
1/22/2007 9:28	BLANK	BNA-Water	4,4'-DDD	1.4	ug/L	U	1.4	5.7
1/22/2007 9:28	BLANK	BNA-Water	4,4'-DDE	1.4	ug/L	U	1.4	5.7
1/22/2007 9:28	BLANK	BNA-Water	4,4'-DDT	1.4	ug/L	U	1.4	5.7
1/22/2007 9:28	BLANK	BNA-Water	4-Bromophenyl phenyl ether	0.95	ug/L	U	0.95	3.8
1/22/2007 9:28	BLANK	BNA-Water	4-Chloro-3-methylphenol	0.95	ug/L	U	0.95	3.8
1/22/2007 9:28	BLANK	BNA-Water	4-Chlorophenyl phenyl ether	1.9	ug/L	U	1.9	7.6
1/22/2007 9:28	BLANK	BNA-Water	4-Nitrophenol	14	ug/L	U	14	57
1/22/2007 9:28	BLANK	BNA-Water	Acenaphthene	0.95	ug/L	U	0.95	3.8
1/22/2007 9:28	BLANK	BNA-Water	Acenaphthylene	0.95	ug/L	U	0.95	3.8
1/22/2007 9:28	BLANK	BNA-Water	Aldrin	1.4	ug/L	U	1.4	5.7
1/22/2007 9:28	BLANK	BNA-Water	Anthracene	0.95	ug/L	U	0.95	3.8

Appendix E. (continued)

Date Sampled	Field ID	Analysis Group	Component	Result	Units	Remark	MDL	PQL
1/22/2007 9:28	BLANK	BNA-Water	Benzidine	95	ug/L	U	95	380
1/22/2007 9:28	BLANK	BNA-Water	Benzo(a)anthracene	0.95	ug/L	U	0.95	3.8
1/22/2007 9:28	BLANK	BNA-Water	Benzo(a)pyrene	0.95	ug/L	U	0.95	3.8
1/22/2007 9:28	BLANK	BNA-Water	Benzo(b)fluoranthene	0.95	ug/L	U	0.95	3.8
1/22/2007 9:28	BLANK	BNA-Water	Benzo(g,h,i)perylene	0.95	ug/L	U	0.95	3.8
1/22/2007 9:28	BLANK	BNA-Water	Benzo(k)fluoranthene	0.95	ug/L	U	0.95	3.8
1/22/2007 9:28	BLANK	BNA-Water	Bis(2-chloroethoxy)methane	0.95	ug/L	U	0.95	3.8
1/22/2007 9:28	BLANK	BNA-Water	Bis(2-chloroethyl)ether	0.95	ug/L	U	0.95	3.8
1/22/2007 9:28	BLANK	BNA-Water	Bis(2-chloroisopropyl)ether	2.9	ug/L	U	2.9	11
1/22/2007 9:28	BLANK	BNA-Water	Bis(2-ethylhexyl)phthalate	14	ug/L	U	14	57
1/22/2007 9:28	BLANK	BNA-Water	Butyl benzyl phthalate	4.8	ug/L	U	4.8	19
1/22/2007 9:28	BLANK	BNA-Water	Chrysene	0.95	ug/L	U	0.95	3.8
1/22/2007 9:28	BLANK	BNA-Water	Di-n-butyl phthalate	4.8	ug/L	U	4.8	19
1/22/2007 9:28	BLANK	BNA-Water	Di-n-octyl phthalate	0.95	ug/L	U	0.95	3.8
1/22/2007 9:28	BLANK	BNA-Water	Dibenzo(a,h)anthracene	0.95	ug/L	U	0.95	3.8
1/22/2007 9:28	BLANK	BNA-Water	Dieldrin	1.4	ug/L	U	1.4	5.7
1/22/2007 9:28	BLANK	BNA-Water	Diethyl phthalate	0.95	ug/L	U	0.95	3.8
1/22/2007 9:28	BLANK	BNA-Water	Dimethyl phthalate	48	ug/L	U	48	190
1/22/2007 9:28	BLANK	BNA-Water	Endosulfan I	3.8	ug/L	U	3.8	15
1/22/2007 9:28	BLANK	BNA-Water	Endosulfan II	3.8	ug/L	U	3.8	15
1/22/2007 9:28	BLANK	BNA-Water	Endosulfan sulfate	1.4	ug/L	U	1.4	5.7
1/22/2007 9:28	BLANK	BNA-Water	Endrin	1.4	ug/L	UJ	1.4	5.7
1/22/2007 9:28	BLANK	BNA-Water	Endrin aldehyde	3.8	ug/L	U	3.8	15
1/22/2007 9:28	BLANK	BNA-Water	Fluoranthene	0.95	ug/L	U	0.95	3.8
1/22/2007 9:28	BLANK	BNA-Water	Fluorene	0.95	ug/L	U	0.95	3.8
1/22/2007 9:28	BLANK	BNA-Water	Heptachlor	1.4	ug/L	U	1.4	5.7
1/22/2007 9:28	BLANK	BNA-Water	Heptachlor epoxide	1.4	ug/L	U	1.4	5.7
1/22/2007 9:28	BLANK	BNA-Water	Hexachlorobenzene	0.95	ug/L	U	0.95	3.8
1/22/2007 9:28	BLANK	BNA-Water	Hexachlorobutadiene	2.9	ug/L	U	2.9	11
1/22/2007 9:28	BLANK	BNA-Water	Hexachlorocyclopentadiene	2.9	ug/L	U	2.9	11
1/22/2007 9:28	BLANK	BNA-Water	Hexachloroethane	2.9	ug/L	U	2.9	11
1/22/2007 9:28	BLANK	BNA-Water	Indeno(1,2,3-cd)pyrene	0.95	ug/L	U	0.95	3.8
1/22/2007 9:28	BLANK	BNA-Water	Isophorone	0.95	ug/L	U	0.95	3.8
1/22/2007 9:28	BLANK	BNA-Water	N-Nitrosodi-n-propylamine	1.9	ug/L	U	1.9	7.6
1/22/2007 9:28	BLANK	BNA-Water	N-Nitrosodimethylamine	1.9	ug/L	U	1.9	7.6
1/22/2007 9:28	BLANK	BNA-Water	N-Nitrosodiphenylamine/ Diphenylamine	2.9	ug/L	UJ	2.9	11
1/22/2007 9:28	BLANK	BNA-Water	Naphthalene	0.95	ug/L	U	0.95	3.8

Appendix E. (continued)

Date Sampled	Field ID	Analysis Group	Component	Result	Units	Remark	MDL	PQL
1/22/2007 9:28	BLANK	BNA-Water	Nitrobenzene	1.9	ug/L	U	1.9	7.6
1/22/2007 9:28	BLANK	BNA-Water	Pentachlorophenol	2.9	ug/L	U	2.9	11
1/22/2007 9:28	BLANK	BNA-Water	Phenanthrene	0.95	ug/L	U	0.95	3.8
1/22/2007 9:28	BLANK	BNA-Water	Phenol	0.95	ug/L	U	0.95	3.8
1/22/2007 9:28	BLANK	BNA-Water	Pyrene	0.95	ug/L	U	0.95	3.8
1/22/2007 9:28	BLANK	BNA-Water	alpha-BHC	1.4	ug/L	U	1.4	5.7
1/22/2007 9:28	BLANK	BNA-Water	beta-BHC	1.4	ug/L	U	1.4	5.7
1/22/2007 9:28	BLANK	BNA-Water	delta-BHC	1.4	ug/L	U	1.4	5.7
1/22/2007 9:28	BLANK	BNA-Water	gamma-BHC	1.4	ug/L	U	1.4	5.7
1/22/2007 9:53	EFFLUENT	BNA-Water	1,2,4-Trichlorobenzene	0.95	ug/L	U	0.95	3.8
1/22/2007 9:53	EFFLUENT	BNA-Water	1,2-Dichlorobenzene	0.95	ug/L	U	0.95	3.8
1/22/2007 9:53	EFFLUENT	BNA-Water	1,3-Dichlorobenzene	0.95	ug/L	U	0.95	3.8
1/22/2007 9:53	EFFLUENT	BNA-Water	1,4-Dichlorobenzene	0.95	ug/L	U	0.95	3.8
1/22/2007 9:53	EFFLUENT	BNA-Water	2,4,6-Trichlorophenol	0.95	ug/L	U	0.95	3.8
1/22/2007 9:53	EFFLUENT	BNA-Water	2,4-Dichlorophenol	0.95	ug/L	U	0.95	3.8
1/22/2007 9:53	EFFLUENT	BNA-Water	2,4-Dimethylphenol	48	ug/L	U	48	190
1/22/2007 9:53	EFFLUENT	BNA-Water	2,4-Dinitrophenol	14	ug/L	U	14	57
1/22/2007 9:53	EFFLUENT	BNA-Water	2,4-Dinitrotoluene	0.95	ug/L	U	0.95	3.8
1/22/2007 9:53	EFFLUENT	BNA-Water	2,6-Dinitrotoluene	0.95	ug/L	U	0.95	3.8
1/22/2007 9:53	EFFLUENT	BNA-Water	2-Chloronaphthalene	0.95	ug/L	U	0.95	3.8
1/22/2007 9:53	EFFLUENT	BNA-Water	2-Chlorophenol	0.95	ug/L	U	0.95	3.8
1/22/2007 9:53	EFFLUENT	BNA-Water	2-Methyl-4,6-dinitrophenol	2.9	ug/L	U	2.9	11
1/22/2007 9:53	EFFLUENT	BNA-Water	2-Nitrophenol	0.95	ug/L	U	0.95	3.8
1/22/2007 9:53	EFFLUENT	BNA-Water	3,3'-Dichlorobenzidine	38	ug/L	UJ	38	150
1/22/2007 9:53	EFFLUENT	BNA-Water	4,4'-DDD	1.4	ug/L	U	1.4	5.7
1/22/2007 9:53	EFFLUENT	BNA-Water	4,4'-DDE	1.4	ug/L	U	1.4	5.7
1/22/2007 9:53	EFFLUENT	BNA-Water	4,4'-DDT	1.4	ug/L	U	1.4	5.7
1/22/2007 9:53	EFFLUENT	BNA-Water	4-Bromophenyl phenyl ether	0.95	ug/L	U	0.95	3.8
1/22/2007 9:53	EFFLUENT	BNA-Water	4-Chloro-3-methylphenol	0.95	ug/L	U	0.95	3.8
1/22/2007 9:53	EFFLUENT	BNA-Water	4-Chlorophenyl phenyl ether	1.9	ug/L	U	1.9	7.6
1/22/2007 9:53	EFFLUENT	BNA-Water	4-Nitrophenol	14	ug/L	U	14	57
1/22/2007 9:53	EFFLUENT	BNA-Water	Acenaphthene	0.95	ug/L	U	0.95	3.8
1/22/2007 9:53	EFFLUENT	BNA-Water	Acenaphthylene	0.95	ug/L	U	0.95	3.8
1/22/2007 9:53	EFFLUENT	BNA-Water	Aldrin	1.4	ug/L	U	1.4	5.7
1/22/2007 9:53	EFFLUENT	BNA-Water	Anthracene	0.95	ug/L	U	0.95	3.8
1/22/2007 9:53	EFFLUENT	BNA-Water	Benzidine	95	ug/L	U	95	380
1/22/2007 9:53	EFFLUENT	BNA-Water	Benzo(a)anthracene	0.95	ug/L	U	0.95	3.8

Appendix E. (continued)

Date Sampled	Field ID	Analysis Group	Component	Result	Units	Remark	MDL	PQL
1/22/2007 9:53	EFFLUENT	BNA-Water	Benzo(a)pyrene	0.95	ug/L	U	0.95	3.8
1/22/2007 9:53	EFFLUENT	BNA-Water	Benzo(b)fluoranthene	0.95	ug/L	U	0.95	3.8
1/22/2007 9:53	EFFLUENT	BNA-Water	Benzo(g,h,i)perylene	0.95	ug/L	U	0.95	3.8
1/22/2007 9:53	EFFLUENT	BNA-Water	Benzo(k)fluoranthene	0.95	ug/L	U	0.95	3.8
1/22/2007 9:53	EFFLUENT	BNA-Water	Bis(2-chloroethoxy)methane	0.95	ug/L	U	0.95	3.8
1/22/2007 9:53	EFFLUENT	BNA-Water	Bis(2-chloroethyl)ether	0.95	ug/L	U	0.95	3.8
1/22/2007 9:53	EFFLUENT	BNA-Water	Bis(2-chloroisopropyl)ether	2.9	ug/L	U	2.9	11
1/22/2007 9:53	EFFLUENT	BNA-Water	Bis(2-ethylhexyl)phthalate	14	ug/L	U	14	57
1/22/2007 9:53	EFFLUENT	BNA-Water	Butyl benzyl phthalate	4.8	ug/L	U	4.8	19
1/22/2007 9:53	EFFLUENT	BNA-Water	Chrysene	0.95	ug/L	U	0.95	3.8
1/22/2007 9:53	EFFLUENT	BNA-Water	Di-n-butyl phthalate	4.8	ug/L	U	4.8	19
1/22/2007 9:53	EFFLUENT	BNA-Water	Di-n-octyl phthalate	0.95	ug/L	U	0.95	3.8
1/22/2007 9:53	EFFLUENT	BNA-Water	Dibenzo(a,h)anthracene	0.95	ug/L	U	0.95	3.8
1/22/2007 9:53	EFFLUENT	BNA-Water	Dieldrin	1.4	ug/L	U	1.4	5.7
1/22/2007 9:53	EFFLUENT	BNA-Water	Diethyl phthalate	0.95	ug/L	U	0.95	3.8
1/22/2007 9:53	EFFLUENT	BNA-Water	Dimethyl phthalate	48	ug/L	U	48	190
1/22/2007 9:53	EFFLUENT	BNA-Water	Endosulfan I	3.8	ug/L	U	3.8	15
1/22/2007 9:53	EFFLUENT	BNA-Water	Endosulfan II	3.8	ug/L	U	3.8	15
1/22/2007 9:53	EFFLUENT	BNA-Water	Endosulfan sulfate	1.4	ug/L	U	1.4	5.7
1/22/2007 9:53	EFFLUENT	BNA-Water	Endrin	1.4	ug/L	UJ	1.4	5.7
1/22/2007 9:53	EFFLUENT	BNA-Water	Endrin aldehyde	3.8	ug/L	U	3.8	15
1/22/2007 9:53	EFFLUENT	BNA-Water	Fluoranthene	0.95	ug/L	U	0.95	3.8
1/22/2007 9:53	EFFLUENT	BNA-Water	Fluorene	0.95	ug/L	U	0.95	3.8
1/22/2007 9:53	EFFLUENT	BNA-Water	Heptachlor	1.4	ug/L	U	1.4	5.7
1/22/2007 9:53	EFFLUENT	BNA-Water	Heptachlor epoxide	1.4	ug/L	U	1.4	5.7
1/22/2007 9:53	EFFLUENT	BNA-Water	Hexachlorobenzene	0.95	ug/L	U	0.95	3.8
1/22/2007 9:53	EFFLUENT	BNA-Water	Hexachlorobutadiene	2.9	ug/L	U	2.9	11
1/22/2007 9:53	EFFLUENT	BNA-Water	Hexachlorocyclopentadiene	2.9	ug/L	U	2.9	11
1/22/2007 9:53	EFFLUENT	BNA-Water	Hexachloroethane	2.9	ug/L	U	2.9	11
1/22/2007 9:53	EFFLUENT	BNA-Water	Indeno(1,2,3-cd)pyrene	0.95	ug/L	U	0.95	3.8
1/22/2007 9:53	EFFLUENT	BNA-Water	Isophorone	0.95	ug/L	U	0.95	3.8
1/22/2007 9:53	EFFLUENT	BNA-Water	N-Nitrosodi-n-propylamine	1.9	ug/L	U	1.9	7.6
1/22/2007 9:53	EFFLUENT	BNA-Water	N-Nitrosodimethylamine	1.9	ug/L	U	1.9	7.6
1/22/2007 9:53	EFFLUENT	BNA-Water	N-Nitrosodiphenylamine/ Diphenylamine	2.9	ug/L	UJ	2.9	11
1/22/2007 9:53	EFFLUENT	BNA-Water	Naphthalene	0.95	ug/L	U	0.95	3.8
1/22/2007 9:53	EFFLUENT	BNA-Water	Nitrobenzene	1.9	ug/L	U	1.9	7.6
1/22/2007 9:53	EFFLUENT	BNA-Water	Pentachlorophenol	2.9	ug/L	U	2.9	11

Appendix E. (continued)

Date Sampled	Field ID	Analysis Group	Component	Result	Units	Remark	MDL	PQL
1/22/2007 9:53	EFFLUENT	BNA-Water	Phenanthrene	0.95	ug/L	U	0.95	3.8
1/22/2007 9:53	EFFLUENT	BNA-Water	Phenol	0.95	ug/L	U	0.95	3.8
1/22/2007 9:53	EFFLUENT	BNA-Water	Pyrene	0.95	ug/L	U	0.95	3.8
1/22/2007 9:53	EFFLUENT	BNA-Water	alpha-BHC	1.4	ug/L	U	1.4	5.7
1/22/2007 9:53	EFFLUENT	BNA-Water	beta-BHC	1.4	ug/L	U	1.4	5.7
1/22/2007 9:53	EFFLUENT	BNA-Water	delta-BHC	1.4	ug/L	U	1.4	5.7
1/22/2007 9:53	EFFLUENT	BNA-Water	gamma-BHC	1.4	ug/L	U	1.4	5.7
1/22/2007 9:28	BLANK	GC-Water	Alachlor	0.57	ug/L	UJ	0.57	2.3
1/22/2007 9:28	BLANK	GC-Water	Ametryn	0.047	ug/L	U	0.047	0.19
1/22/2007 9:28	BLANK	GC-Water	Atrazine	0.047	ug/L	U	0.047	0.19
1/22/2007 9:28	BLANK	GC-Water	Azinphos Methyl	0.19	ug/L	U	0.19	0.76
1/22/2007 9:28	BLANK	GC-Water	Bromacil	0.19	ug/L	U	0.19	0.76
1/22/2007 9:28	BLANK	GC-Water	Butylate	0.19	ug/L	U	0.19	0.76
1/22/2007 9:28	BLANK	GC-Water	Chlorpyrifos Ethyl	0.047	ug/L	U	0.047	0.19
1/22/2007 9:28	BLANK	GC-Water	Chlorpyrifos Methyl	0.094	ug/L	U	0.094	0.38
1/22/2007 9:28	BLANK	GC-Water	Diazinon	0.047	ug/L	U	0.047	0.19
1/22/2007 9:28	BLANK	GC-Water	Ethion	0.047	ug/L	U	0.047	0.19
1/22/2007 9:28	BLANK	GC-Water	Ethoprop	0.094	ug/L	U	0.094	0.38
1/22/2007 9:28	BLANK	GC-Water	Fenamiphos	0.19	ug/L	U	0.19	0.76
1/22/2007 9:28	BLANK	GC-Water	Fonofos	0.094	ug/L	U	0.094	0.38
1/22/2007 9:28	BLANK	GC-Water	Hexazinone	0.094	ug/L	U	0.094	0.38
1/22/2007 9:28	BLANK	GC-Water	Malathion	0.14	ug/L	U	0.14	0.56
1/22/2007 9:28	BLANK	GC-Water	Metalaxyl	0.24	ug/L	U	0.24	0.96
1/22/2007 9:28	BLANK	GC-Water	Metolachlor	0.47	ug/L	UJ	0.47	1.9
1/22/2007 9:28	BLANK	GC-Water	Metribuzin	0.094	ug/L	U	0.094	0.38
1/22/2007 9:28	BLANK	GC-Water	Mevinphos	0.19	ug/L	U	0.19	0.76
1/22/2007 9:28	BLANK	GC-Water	Naled	0.75	ug/L	U	0.75	3
1/22/2007 9:28	BLANK	GC-Water	Norflurazon	0.14	ug/L	UJ	0.14	0.56
1/22/2007 9:28	BLANK	GC-Water	Parathion Ethyl	0.14	ug/L	U	0.14	0.56
1/22/2007 9:28	BLANK	GC-Water	Parathion Methyl	0.094	ug/L	U	0.094	0.38
1/22/2007 9:28	BLANK	GC-Water	Phorate	0.047	ug/L	U	0.047	0.19
1/22/2007 9:28	BLANK	GC-Water	Prometryn	0.14	ug/L	U	0.14	0.56
1/22/2007 9:28	BLANK	GC-Water	Simazine	0.047	ug/L	U	0.047	0.19
1/22/2007 9:53	EFFLUENT	GC-Water	Alachlor	0.6	ug/L	UJ	0.6	2.4
1/22/2007 9:53	EFFLUENT	GC-Water	Ametryn	0.05	ug/L	U	0.05	0.2
1/22/2007 9:53	EFFLUENT	GC-Water	Atrazine	0.05	ug/L	U	0.05	0.2
1/22/2007 9:53	EFFLUENT	GC-Water	Azinphos Methyl	0.2	ug/L	U	0.2	0.8

Appendix E. (continued)

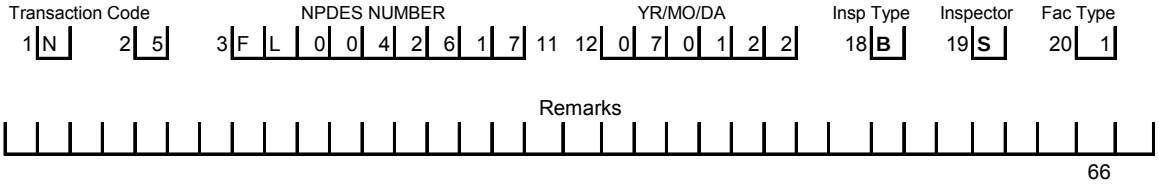
Date Sampled	Field ID	Analysis Group	Component	Result	Units	Remark	MDL	PQL
1/22/2007 9:53	EFFLUENT	GC-Water	Bromacil	0.2	ug/L	U	0.2	0.8
1/22/2007 9:53	EFFLUENT	GC-Water	Butylate	0.2	ug/L	U	0.2	0.8
1/22/2007 9:53	EFFLUENT	GC-Water	Chlorpyrifos Ethyl	0.05	ug/L	U	0.05	0.2
1/22/2007 9:53	EFFLUENT	GC-Water	Chlorpyrifos Methyl	0.1	ug/L	U	0.1	0.4
1/22/2007 9:53	EFFLUENT	GC-Water	Diazinon	0.05	ug/L	U	0.05	0.2
1/22/2007 9:53	EFFLUENT	GC-Water	Ethion	0.05	ug/L	U	0.05	0.2
1/22/2007 9:53	EFFLUENT	GC-Water	Ethoprop	0.1	ug/L	U	0.1	0.4
1/22/2007 9:53	EFFLUENT	GC-Water	Fenamiphos	0.2	ug/L	U	0.2	0.8
1/22/2007 9:53	EFFLUENT	GC-Water	Fonofos	0.1	ug/L	U	0.1	0.4
1/22/2007 9:53	EFFLUENT	GC-Water	Hexazinone	0.1	ug/L	U	0.1	0.4
1/22/2007 9:53	EFFLUENT	GC-Water	Malathion	0.15	ug/L	U	0.15	0.6
1/22/2007 9:53	EFFLUENT	GC-Water	Metalaxyl	0.25	ug/L	U	0.25	1
1/22/2007 9:53	EFFLUENT	GC-Water	Metolachlor	0.5	ug/L	UJ	0.5	2
1/22/2007 9:53	EFFLUENT	GC-Water	Metribuzin	0.1	ug/L	U	0.1	0.4
1/22/2007 9:53	EFFLUENT	GC-Water	Mevinphos	0.2	ug/L	U	0.2	0.8
1/22/2007 9:53	EFFLUENT	GC-Water	Naled	0.8	ug/L	U	0.8	3.2
1/22/2007 9:53	EFFLUENT	GC-Water	Norflurazon	0.15	ug/L	UJ	0.15	0.6
1/22/2007 9:53	EFFLUENT	GC-Water	Parathion Ethyl	0.15	ug/L	U	0.15	0.6
1/22/2007 9:53	EFFLUENT	GC-Water	Parathion Methyl	0.1	ug/L	U	0.1	0.4
1/22/2007 9:53	EFFLUENT	GC-Water	Phorate	0.05	ug/L	U	0.05	0.2
1/22/2007 9:53	EFFLUENT	GC-Water	Prometryn	0.15	ug/L	U	0.15	0.6
1/22/2007 9:53	EFFLUENT	GC-Water	Simazine	0.05	ug/L	U	0.05	0.2
1/22/2007 9:28	BLANK	Metals-Water	Aluminum	4	ug/L	U	4	16
1/22/2007 9:28	BLANK	Metals-Water	Arsenic	0.5	ug/L	U	0.5	2
1/22/2007 9:28	BLANK	Metals-Water	Cadmium	0.05	ug/L	U	0.05	0.2
1/22/2007 9:28	BLANK	Metals-Water	Calcium	0.02	mg/L	U	0.02	0.08
1/22/2007 9:28	BLANK	Metals-Water	Chromium	0.3	ug/L	U	0.3	1.2
1/22/2007 9:28	BLANK	Metals-Water	Copper	0.2	ug/L	U	0.2	0.8
1/22/2007 9:28	BLANK	Metals-Water	Iron	5	ug/L	U	5	20
1/22/2007 9:28	BLANK	Metals-Water	Lead	0.2	ug/L	U	0.2	0.8
1/22/2007 9:28	BLANK	Metals-Water	Magnesium	0.005	mg/L	U	0.005	0.02
1/22/2007 9:28	BLANK	Metals-Water	Nickel	1	ug/L	U	1	4
1/22/2007 9:28	BLANK	Metals-Water	Selenium	0.5	ug/L	U	0.5	2
1/22/2007 9:28	BLANK	Metals-Water	Silver	0.025	ug/L	U	0.025	0.1
1/22/2007 9:28	BLANK	Metals-Water	Zinc	17	ug/L	U	17	68
1/22/2007 9:53	EFFLUENT	Metals-Water	Aluminum	15	ug/L	I	4	16
1/22/2007 9:53	EFFLUENT	Metals-Water	Arsenic	0.5	ug/L	U	0.5	2

Appendix E. (continued)

Date Sampled	Field ID	Analysis Group	Component	Result	Units	Remark	MDL	PQL
1/22/2007 9:53	EFFLUENT	Metals-Water	Cadmium	0.05	ug/L	U	0.05	0.2
1/22/2007 9:53	EFFLUENT	Metals-Water	Calcium	110	mg/L		0.02	0.08
1/22/2007 9:53	EFFLUENT	Metals-Water	Chromium	0.3	ug/L	U	0.3	1.2
1/22/2007 9:53	EFFLUENT	Metals-Water	Copper	2.53	ug/L	I	1.5	6
1/22/2007 9:53	EFFLUENT	Metals-Water	Iron	114	ug/L		5	20
1/22/2007 9:53	EFFLUENT	Metals-Water	Lead	0.2	ug/L	U	0.2	0.8
1/22/2007 9:53	EFFLUENT	Metals-Water	Magnesium	22	mg/L		0.005	0.02
1/22/2007 9:53	EFFLUENT	Metals-Water	Nickel	1	ug/L	U	1	4
1/22/2007 9:53	EFFLUENT	Metals-Water	Selenium	0.5	ug/L	U	0.5	2
1/22/2007 9:53	EFFLUENT	Metals-Water	Silver	0.025	ug/L	U	0.025	0.1
1/22/2007 9:53	EFFLUENT	Metals-Water	Zinc	26	ug/L	I	17	68
1/22/2007 9:28	BLANK	Nutrients-Liquid	Ammonia-N	0.01	mg N/L	U	0.01	0.02
1/22/2007 9:28	BLANK	Nutrients-Liquid	Kjeldahl Nitrogen	0.08	mg N/L	U	0.08	0.2
1/22/2007 9:28	BLANK	Nutrients-Liquid	NO2NO3-N	0.004	mg N/L	U	0.004	0.01
1/22/2007 9:28	BLANK	Nutrients-Liquid	O-Phosphate-P	0.007	mg P/L	I	0.004	0.01
1/22/2007 9:28	BLANK	Nutrients-Liquid	Total-P	0.02	mg P/L	U	0.02	0.06
1/22/2007 9:53	EFFLUENT	Nutrients-Liquid	Ammonia-N	0.065	mg N/L	I	0.05	0.1
1/22/2007 9:53	EFFLUENT	Nutrients-Liquid	Kjeldahl Nitrogen	2.9	mg N/L	A	0.16	0.4
1/22/2007 9:53	EFFLUENT	Nutrients-Liquid	NO2NO3-N	1.1	mg N/L		0.04	0.1
1/22/2007 9:53	EFFLUENT	Nutrients-Liquid	O-Phosphate-P	2.4	mg P/L		0.16	0.4
1/22/2007 9:53	EFFLUENT	Nutrients-Liquid	TSS	4	mg/L	U	4	16
1/22/2007 9:53	EFFLUENT	Nutrients-Liquid	Total-P	3	mg P/L	A	0.1	0.3

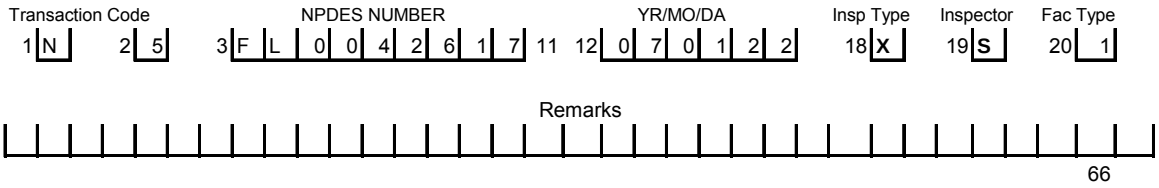
The Bioassay of Port Buena Vista Mobile Home Park Wastewater Treatment Facility effluent sampled on January 22, 2007. NPDES #FL0042617.

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



The Priority Pollutants Analysis of Port Buena Vista Mobile Home Park Wastewater Treatment Facility effluent sampled on January 22, 2007. NPDES #FL0042617.

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



Biological Analyses of Port Buena Vista Mobile Home Park Wastewater Treatment Facility effluent sampled on January 22, 2007. NPDES #FL0042617.

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

