


Bioassays of

# Winter Garden Wastewater Treatment Facility

Orange County

NPDES #FL0020109

Sampled August 28, 2006

December 2006

**Biology Section**
**Bureau of Laboratories**
**Division of Resource Assessment and Management**

Quality Manual No. 870346G
NELAC Certification No. E31780

Winter Garden Wastewater Treatment Facility, 101 East Crest Avenue, Winter Garden, Orange County, Florida, NPDES #FL0020109. Effluent samples for this facility were collected on August 28, 2006.

## Introduction

The Winter Garden Wastewater Treatment Facility is an advanced domestic wastewater treatment plant with a design flow of 2.5 million gallons per day (MGD) annual average daily flow (AADF). The AADF through Outfall D-001from August 1, 2005, through July 31, 2006, was 1.87 MGD. The treatment system and process consists of influent screening, grit removal, a 5-stage biological nutrient removal (Bardenpho) system, secondary clarification, chemical feed, filtration, and chlorination. No chemical dechlorination is applied to the effluent. Residuals are processed by rotary drum thickening and aerobic digestion to Class B standards prior to land application. Treated effluent can be discharged to the Class III freshwaters of Lake Apopka through Outfall D-001, to reuse system R-001 (1.95 MGD AADF August 2005 – July 2006), which consists of 8 percolation ponds, or to reuse system R-002 (0.20 MGD AADF August 2005 – July 2006), an interconnection with the City of Oconee WWTF reclaimed water system. Outfall D-001 is the discharge from the under-drain system of the R-001 land application system (percolation ponds). The under-drain discharge flows through an unnamed ditch then through about one mile of wetland and swamp to Lake Apopka. D-001 is the structure which separates the ditch and the wetlands; it is approximately 2.74 m (9 feet) in length and discharges at ground level. The point of discharge is located approximately at latitude 28º 36’ 26” N and longitude 81º 32’ 56” W.

The facility is currently operating under a Consent Order (OGC File No. 06-0208). The consent order was initiated to address the permit limit exceedances for lead. During the past year, there were exceedances for lead in September 2005 (limit 3.89 µg/L, concentration 8.94 µg/L), November 2005 (limit 4.01 µg/L, concentration 8.7 µg/L) and January 2006 (limit 3.75 µg/L, concentration 8.7 µg/L). There is no mixing zone for this facility. (Facility information provided by David Smicherko of FDEP Central District).

## Methods

Samples were collected from the EFD-1 NPDES sampling point for Outfall D-001 by Phil Kane, Steve Kent, and Shelly Locklear (FDEP Central 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 definitive toxicity tests and algal growth potential test were performed following internal DEP SOPs TA07_03, TA07_04, and TA08_01 through TA08_09. All internal DEP SOPs are available on the web at: http://www.floridadep.org/labs/cgi-bin/sop/biosop.asp.

## Toxicity Test Results

Tests were performed August 29-31, 2006.

| | |
|---|---|
| *Ceriodaphnia dubia* 48-hour acute definitive bioassay – | $LC_{50}$ > 100%, 0% mortality in 100% sample at 48 hours |
| *Cyprinella leedsi* 48-hour acute definitive bioassay – | $LC_{50}$ > 100%, 10% 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.

## Algal Growth Potential

The effluent Algal Growth Potential (AGP) was 86.6 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 44.46 (±20%) mg dry wt/L (Table 1; Miller et al. 1978).

See Table 1 for AGP results.

## Chemistry Results

Total residual chlorine and total ammonia were not detected in the bioassay sample in the laboratory. The total ammonia concentration in the sample collected and preserved for chemical analysis was 0.2 mg/L. Based on the pH, salinity, and temperature of the effluent as collected, the calculated unionized ammonia concentration was < 0.02 mg/L.

Copper, iron, and nickel were detected in the effluent at levels that comply with Class III fresh water quality criteria. Atrazine, arsenic, chromium-III, lead, and zinc were detected between the laboratory method detection limits (MDL) and practical quantitation limits (PQL). Aluminum was also detected in the effluent.

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 the EFD-1 NPDES sampling point for Outfall D-001 for this facility on August 28, 2006, was not acutely toxic to either test species during the 48-hour acute definitive bioassays. The effluent freshwater AGP result exceeded the "problem” threshold for fresh receiving waters, suggesting nutrient enrichment may be an issue. Effluent water quality samples did not violate Class III freshwater quality criteria nor exceed any permit limits.

## 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) of the freshwater species* Pseudokirchneriella subcapitata *for total soluble nitrogen (TSIN) and total nitrogen (TN) limitation and ratios of nitrogen to phosphorus for samples collected from Winter Garden Wastewater Treatment Facility on August 28, 2006.*

| Location | AGP (measured) | Predicted AGP (TSIN) ± 20% | Predicted AGP (TN) ± 20% | Inorganic N:P ratio | Total N:P ratio |
|---|---|---|---|---|---|
| Effluent Samples | 86.6 | 44.46 ± 8.892 | 72.96 ± 14.592 | 6.88 | 8 |

*Table 2. Effluent limits, Class III Freshwater Criteria, and chemical and microbiological data for samples collected from the Winter Garden Wastewater Treatment Facility on August 28, 2006.*

| **Winter Garden WWTF NPDES# FL 0020109** | Class III Freshwater Stds | Effluent Limits [£] | Effluent Samples |
|---|---|---|---|
| **Organic Constituents (µg/L)** | | | |
| Atrazine | - | - | 0.11 IJ |
| Cyanide | ≤ 5.2 | ≤ 5.2 s | - |
| Acenaphthene | ≤ 2.7 a | ≤ 2.7 a | 1 U |
| 2,4,6-trichlorophenol | ≤ 6.5 a | ≤ 6.5 a | 1 U |
| PAHs | ≤ 0.031 a | ≤ 0.031 a | ≤ 0.031 U |
| **Metals (µg/L unless otherwise noted)** | | | |
| Aluminum | - | - | 231 |
| Arsenic | ≤ 50 | - | 0.86 I |
| Beryllium | ≤ 0.13 | ≤ 0.13 a | - |
| Cadmium | ≤ 1.5 b | ≤ 1.5 b | 0.05 U |
| Calcium (mg/L) | - | - | 41.9 |
| Chromium-III | ≤ 111.4 b | - | 0.8 I |
| Copper | ≤ 12.2 b | - | 2.55 |
| Iron | ≤ 1000 | - | 282 |
| Lead | ≤ 4.7 b | ≤ 4.7 b | 0.32 I |
| Magnesium (mg/L) | - | - | 7.8 |
| Nickel | ≤ 68 b | - | 3.19 f |
| Selenium | ≤ 5 | - | 0.5 U |
| Silver | ≤ 0.07 | ≤ 0.07 s | 0.025 U |
| Zinc | ≤ 156.2 b | - | 11 I |
| **Nutrients (mg/L)** | | | |
| Ortho-phosphate | - | - | 0.17 |
| Total Phosphorus | - | ≤ 1.0 s | 0.24 A |
| Ammonia | - | - | 0.2 A |
| Unionized Ammonia | ≤ 0.02 | - | ≤ 0.02 |
| Nitrate+Nitrite | - | - | 0.97 |
| Total Kjeldahl Nitrogen | - | - | 0.95 A |
| Organic Nitrogen | - | - | 0.75 c |
| Total Nitrogen | - | ≤ 18.3 s | 1.92 c |
| **General Physical and Chemical Parameters** | | | |
| TSS (mg/L) | - | - | 4 U |
| pH (S.U.) | 6.0-8.5 s | 6.0-8.5 s | 6.8 |
| Dissolved Oxygen (mg/L) | ≥ 5.0 | ≥ 5.0 s | 12.81 |
| Conductivity (umhos/cm) | ≤ 1275 | - | 590 |
| Temperature (°C) | - | - | 27.2 |
| CBOD (mg/L) | - | - | 0.48 I |
| Flow (MGD) | - | 2.0 a | 1.8292 a |
| Hardness (mg/L) | - | Report | 136.7 c |
| Total Residual Chlorine (mg/L) | ≤ 0.01 | - | ≤ 0.03 U |
| **Microbiology (# counts/100ml)** | | | |
| Fecal Coliforms-Membrane Filter | ≤ 800 s | - | 32 *AB |

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

a - Annual average

b - Limit calculated based on water hardness

c - Calculated value

e - Limit is minimum concentration required for disinfection of effluent discharged into percolation ponds

f - Analyte detected in field blank between the MDL and PQL at a concentration of 0.53 µg/L

s - Single sample

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

B - Results based on colony counts outside the accepatable range

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

J - Estimated value

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

* - Analyses conducted at the DEP Central District Lab

[£] - Limits for all analytes except Dissolved Oxygen are for composite samples. Effluent samples were collected as grab samples.

# Florida Department of Environmental Protection

## Central Laboratory Sample Submittal Form

Event ID *

Request Number: RQ-2006-08-28-23
City of Winter Garden

Requester: Shannan Bogdanov

Field Report Prepared By: P. Kane / Steve Kent

Customer: CEN-DIST

Collected By: KANE, KENT, LOCKLEAR

Send Final Report To Phil Kane

Project ID: FYI3

Sampling Agency: FDEP CENTRAL

PMAS: 1143

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Lab ID * | Location WINTER GARDEN WWTF 101 E CREST AVE, WINTER GARDEN 34787 | | ☐ Comp ☑ Grab | Collection (begin) Date 8/28/06 Time 0845 Eastern Central | Collection (end) PK Date Time Eastern Central | | Bottle Group(s)** |
| | Field ID WING | | Tot Res Chlorine (mg/L) NONE | Diss Oxygen (mg/L) 12.81 | Storet Station Number | | |
| | Matrix (Include type e.g. Salt, Fresh, etc) EFFLUENT | Temp (C) 27.23 pH 6.81 | Sample Depth N/A ☐ m ☑ ft | 590 ☐ Salinity (PPTh) ☑ Sp Conductance (umho/cm) | NPDES Number FL0020109 | | |
| | Latitude o ' " | Longitude o ' " | Comments NO $CL_2$ RESIDUAL | | | | |
| Lab ID * | Location WINTER GARDEN WWTF 101 E. CREST AVE, WINTER GARDEN 34787 | | ☐ Comp ☑ Grab | Collection (begin) Date 8/28/06 Time 0911 Eastern Central | Collection (end) PK Date Time Eastern Central | | Bottle Group(s)** |
| | Field ID WINS | | Tot Res Chlorine (mg/L) N/A | Diss Oxygen (mg/L) | Storet Station Number | | |
| | Matrix (Include type e.g. Salt, Fresh, etc) BLANK | Temp (C) pH | Sample Depth N/A ☐ m ☑ ft | ☐ Salinity (PPTh) ☐ Sp Conductance (umho/cm) | NPDES Number FL0020109 | | |
| | Latitude o ' " | Longitude o ' " | Comments | | | | |
| Lab ID * | Location | | ☐ Comp ☐ Grab | Collection (begin) Date Time Eastern Central | Collection (end) Date Time Eastern Central | | Bottle Group(s)** |
| | Field ID | | Tot Res Chlorine (mg/L) | Diss Oxygen (mg/L) | Storet Station Number | | |
| | Matrix (Include type e.g. Salt, Fresh, etc) | Temp (C) pH | Sample Depth ☐ m ☐ ft | ☐ Salinity (PPTh) ☐ Sp Conductance (umho/cm) | NPDES Number | | |
| | Latitude o ' " | Longitude o ' " | Comments | | | | |
| Lab ID * | Location | | ☐ Comp ☐ Grab | Collection (begin) Date Time Eastern Central | Collection (end) Date Time Eastern Central | | Bottle Group(s)** |
| | Field ID | | Tot Res Chlorine (mg/L) | Diss Oxygen (mg/L) | Storet Station Number | | |
| | Matrix (Include type e.g. Salt, Fresh, etc) | Temp (C) pH | Sample Depth ☐ m ☐ ft | ☐ Salinity (PPTh) ☐ Sp Conductance (umho/cm) | NPDES Number | | |
| | Latitude o ' " | Longitude o ' " | Comments | | | | |

| Relinquished By: | Date/Time | Shipping Method: | Received By: | Date/Time | Relinquished By: | Date/Time | Received By: | Date/Time |
|---|---|---|---|---|---|---|---|---|
| | | | Tom B | 9:05 8/29/06 | | | | |

* Shaded Areas for Lab use only.

** Please see reverse side for Bottle Group information.

last revised October 1, 2003

1BSY 8-29-06 1125 SF

1AAP 1334 CW

# FDEP Biology Laboratory - Acute Definitive Bioassay Bench Sheets

Facility: Winter Garden Wastewater Treatment Facility
Address: 101 East Crest Avenue
City: Winter Garden County: Orange
Contact/District: Phil Kane / Central District
NPDES Permit #: FL 0020109
LIMS Job #: TLH-2006-08-29-53 LIMS Sample #: 947430
Lims Data Entry: 9-5-06 MF Data Entry Verification: 9-15-06 BA

Sample Collection: Date: 8-28-06 Time: 0845
Hold Time Start: Date: 8-28-06 Time: 0845

Comments:

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.

Test 1 validation: Test 1: SOP TA 07_01
Control survival ≥90%: (Yes) No
Temperature Range ≤3°C: (Yes) No

Test 2 validation: Test 2: SOP TA 07_02
Control survival ≥90%: (Yes) No
Temperature Range ≤3°C: (Yes) No

Initial sample handling:

PH adjustment : yes (no) Initial pH: ____ NaOH N HCl N ____ Drops mL Final pH: ____
Aeration : yes (no) Initial DO: ____mg/L Final DO: ____mg/L Duration: ____minutes Rate: ~____bubbles/min
Salinity adjusted (Test 1): yes (no) Initial Salinity: ____ Final Salinity: ____ Salts Hypersaline brine
Salinity adjusted (Test 2): yes (no) Initial Salinity: ____ Final Salinity: ____ Salts Hypersaline brine
Dechlorination: yes (no) ____mL of 0.025N Sodium Thiosulfate per liter of sample Final TRC: ____

Sample Validation:

Temperature: Shipped ≤6°C (Yes) No Hand Delivered: Cooling (received °C < collected °C) Yes No
Holding Time: ≤36 Hours (Yes) No (Composite-end of collection; grab-when collected; 4 in 24 - time last sample collected)

Light Intensity : 50 - 100 ft. candles
Photoperiod : 16 light 8 dark
Temperature Range °C:
Incubator # 2 min 24.3 max 26.6 mean 25.1
Incubator # ____ min ____ max ____ mean ____
Room B246 min 24.5 max 25.5 mean 25.0

Investigators' Signatures

REVIEWER

| Water Quality Parameters | 20% DMW | Moderately Hard Water/ (Well Water) | Salt Water/ ASW NSW Test 1 | Salt Water/ ASW NSW 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 | | (A) <0.03 | Hach | D. Smeberle | MF |
| Lab Total Residual $Cl_2$ (mg/L): | <0.03 | <0.03 | | | | <0.03 | HACH | BA/SP | MF |
| Alkalinity (mg/L as $CaCO_3$): | 85 | 141 | | | | 146 | HACH | EW | BA |
| Hardness (mg/L as $CaCO_3$): | 86 | 138 | | | | 137 | HACH | EW | BA |
| Total Ammonia (mg/L as N): | <0.017 | <0.017 | | | | <0.017 | DENVER | BA/MF | MF |
| Salinity (ppth): | <1 | <1 | | | | <1 | YSI (Mettler) | BA | MF |

(A) Field measurement reported as 0.0 mg/L V 1.4 8/12/05
0.03 mg/L is the detection limit established in the lab for the Hach Pocket Colorimeter used in the field as result reported on bench sheet MF 9-15-06

## Appendix B. Bench Sheets (continued)

### FDEP Biology Laboratory - Bioassay Survival Bench Sheet

LIMS Sample #: 94 7430 Test #: 1 Test Started: Date 8-29-06 Time: 13:45
Organism: C. dubia SOP #: TA 07_01 Test Ended: Date 8-31-06 Time: 12:30
Organism Batch: 36-06 Diluent/ Batch: DMW 122-06
Organism Age: <24 hrs Food: YCT P. subcapitata Artemia
Chamber Size: 30 mL Batch: 2-06 4-06 —
Test Volume: 20 mL Feeding: (Prior to test) - Prior to renewal - Daily

| Concentration | Replicate | Chamber # | Test Hour 0 hr | 24 hr | 48 hr BR | 48 hr AR | 72 hr | 96 hr |
|---|---|---|---|---|---|---|---|---|
| CTRL | A | A | 5 | 5 | 5 | | | |
| | B | B | 5 | 5 | 5 | | | |
| | C | C | 5 | 5 | 5 | | | |
| | D | D | 5 | 5 | 5 | | | |
| 6.25% | A | A | 5 | 5 | 5 | | | |
| | B | B | 5 | 5 | 5 | | | |
| | C | C | 5 | 5 | 5 | | | |
| | D | D | 5 | 5 | 5 | | | |
| 12.5% | A | A | 5 | 5 | 5 | | | |
| | B | B | 5 | 5 | 5 | | | |
| | C | C | 5 | 5 | 5 | | | |
| | D | D | 5 | 5 | 5 | | | |
| 25% | A | A | 5 | 5 | 5 | | | |
| | B | B | 5 | 5 | 5 | | | |
| | C | C | 5 | 5 | 5 | | | |
| | D | D | 5 | 5 | 5 | | | |
| 50% | A | A | 5 | 5 | 5 | | | |
| | B | B | 5 | 5 | 5 | | | |
| | C | C | 5 | 5 | 5 | | | |
| | D | D | 5 | 5 | 5 | | | |
| 100% | A | A | 5 | 5 | 5 | | | |
| | B | B | 5 | 5 | 5 | | | |
| | C | C | 5 | 5 | 5 | | | |
| | D | D | 5 | 5 | 5 | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| Organisms loaded by: BA | | Checked by: JD | | BA | BA | | | |
| Loading Verified by: JD | | | | | | | | |

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

Comments:

**Test Results:**
% mortality in 100% sample: 0%
$LC_{50}$: >100% If Calculated: 95% CI_____ Method:_____

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

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## Appendix B. Bench Sheets (continued)

FDEP Biology Laboratory - Bioassay Survival Bench Sheet

LIMS Sample #: 947430 Test #: 2 Test Started: Date 8-29-06 Time: 1330
Organism: C. leedsi SOP #: TA 07_ 02 Test Ended: Date 8.31.06 Time: 1345
Organism Batch: 19-06 Diluent/ Batch: Well H2O, 8-29-06
Organism Age: 12 days Food: YCT P. subcapitata Artemia
Chamber Size: 1000 mL Batch: — — GSL-536-90
Test Volume: 500 mL Feeding: (Prior to test) - Prior to renewal - Daily

| Concentration | Replicate | Chamber # | Test Hour 0 hr | 24 hr | 48 hr BR | 48 hr AR | 72 hr | 96 hr |
|---|---|---|---|---|---|---|---|---|
| CTRL | A | C1 | 5 | 5 | 4D | | | |
| | B | C2 | 5 | 5 | 5 | | | |
| | C | C3 | 5 | 5 | 5 | | | |
| | D | C4 | 5 | 5 | 5 | | | |
| 6.25% | A | C5 | 5 | 4D | 4 | | | |
| | B | C6 | 5 | 5 | 5 | | | |
| | C | C7 | 5 | 5 | 5 | | | |
| | D | C8 | 5 | 4D | 4 | | | |
| 12.5% | A | C9 | 5 | 4D | 4 | | | |
| | B | C10 | 5 | 5 | 5 | | | |
| | C | C11 | 5 | 5 | 5 | | | |
| | D | C12 | 5 | 4D | 4 | | | |
| 25% | A | C13 | 5 | 5 | 5 | | | |
| | B | C14 | 5 | 4D | 4 | | | |
| | C | C15 | 5 | 5 | 5 | | | |
| | D | C16 | 5 | 4D | 4 | | | |
| 50% | A | C17 | 5 | 4D | 4 | | | |
| | B | C18 | 5 | 5 | 5 | | | |
| | C | C19 | 5 | 5 | 5 | | | |
| | D | C20 | 5 | 5 | 5 | | | |
| 100% | A | C21 | 5 | 5 | 4D | | | |
| | B | C22 | 5 | 5 | 5 | | | |
| | C | C23 | 5 | 4D | 4 | | | |
| | D | C24 | 5 | 5 | 5 | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| Organisms loaded by: JD | | Checked by: | | JD | JD | | | |
| Loading Verified by: | | | | | | | | |

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

Comments:

**Test Results:**
% mortality in 100% sample: 10%
$LC_{50}$: > 100 If Calculated: 95% CI_____ Method:_____
**Screening Tests:**
Report LC50 as >100%, =100%, or <100%.
Substitue highest test concentration used if other than 100% (example: Ocean outfall tested at 30% concentration).

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## Appendix B. Bench Sheets (continued)



FDEP Biology Laboratory - Bioassay Parameter Bench Sheet

LIMS Sample #: 947430 Test #: 1 of 2

TEST SOP #: TA07_01 Test Species: *Ceriodaphnia dubia* *Cyprinella leedsi* *Pimephales promelas* *Americamysis bahia* *Menidia beryllina* Other:

| Concentration CTRL | 0 Hr. | 24 Hr. | 48 Hr. before renewal | 48 Hr. after renewal | 72 Hr. | 96 Hr. |
|---|---|---|---|---|---|---|
| Replicate | A | | A | | | |
| pH (S.U.) | 8.1 | | 8.0 | | | |
| Temperature °C | 25.4 | | 24.5 | | | |
| Dissolved Oxygen mg/L | 7.2 | | 7.5 | | | |
| Conductivity (µmhos) mmhos | 1750 | | 207 | | | |
| (initials) Measured by: | JD | | BA | | | |
| (initials) Recorded by: | JD | | BA | | | |

Comments:

| Concentration 0.25% | 0 Hr. | 24 Hr. | 48 Hr. before renewal | 48 Hr. after renewal | 72 Hr. | 96 Hr. |
|---|---|---|---|---|---|---|
| Replicate | A | | A | | | |
| pH (S.U.) | 8.0 | | 8.1 | | | |
| Temperature °C | 25.4 | | 24.3 | | | |
| Dissolved Oxygen mg/L | 7.2 | | 7.5 | | | |
| Conductivity (µmhos) mmhos | 1701 | | 237 | | | |
| (initials) Measured by: | JD | | BA | | | |
| (initials) Recorded by: | JD | | BA | | | |

Comments:

| Concentration 12.5% | 0 Hr. | 24 Hr. | 48 Hr. before renewal | 48 Hr. after renewal | 72 Hr. | 96 Hr. |
|---|---|---|---|---|---|---|
| Replicate | A | | A | | | |
| pH (S.U.) | 7.9 | | 8.1 | | | |
| Temperature °C | 25.3 | | 24.2 | | | |
| Dissolved Oxygen mg/L | 7.2 | | 7.4 | | | |
| Conductivity (µmhos) mmhos | 831 | | 261 | | | |
| (initials) Measured by: | JD | | BA | | | |
| (initials) Recorded by: | JD | | BA | | | |

Comments:

| Concentration 25% | 0 Hr. | 24 Hr. | 48 Hr. before renewal | 48 Hr. after renewal | 72 Hr. | 96 Hr. |
|---|---|---|---|---|---|---|
| Replicate | A | | A | | | |
| pH (S.U.) | 7.9 | | 8.2 | | | |
| Temperature °C | 25.3 | | 24.3 | 24.1 | | |
| Dissolved Oxygen mg/L | 7.1 | | 7.5 | | | |
| Conductivity (µmhos) mmhos | 2419 | | 2116 | | | |
| (initials) Measured by: | JD | | BA | | | |
| (initials) Recorded by: | JD | | BA | | | |

Comments:

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V 2.0 2/24/04

## FDEP Biology Laboratory - Bioassay Parameter Bench Sheet

LIMS Sample # : 947430 Test #: 1 of 2

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

| Concentration 50% | 0 Hr. | 24 Hr. | 48 Hr. before renewal | 48 Hr. after renewal | 72 Hr. | 96 Hr. |
|---|---|---|---|---|---|---|
| Replicate | A | | A | | | |
| pH (S.U.) | 7.6 | | 8.3 | | | |
| Temperature °C | 25.3 | | 24.3 | | | |
| Dissolved Oxygen mg/L | 6.7 | | 7.2 | | | |
| Conductivity (µmhos) mmhos | 355 | | 428 | | | |
| (initials) Measured by: | JJ | | BA | | | |
| (initials) Recorded by: | JJ | | BA | | | |

Comments:

| Concentration 100% | 0 Hr. | 24 Hr. | 48 Hr. before renewal | 48 Hr. after renewal | 72 Hr. | 96 Hr. |
|---|---|---|---|---|---|---|
| Replicate | A | | A | | | |
| pH (S.U.) | 7.4 | | 8.5 | | | |
| Temperature °C | 25.2 | | 24.3 | | | |
| Dissolved Oxygen mg/L | 6.6 | | 7.4 | | | |
| Conductivity (µmhos) mmhos | 594 | | 724 | | | |
| (initials) Measured by: | JJ | | BA | | | |
| (initials) Recorded by: | JJ | | BA | | | |

Comments:

| Concentration | 0 Hr. | 24 Hr. | 48 Hr. before renewal | 48 Hr. after renewal | 72 Hr. | 96 Hr. |
|---|---|---|---|---|---|---|
| Replicate | | | | | | |
| pH (S.U.) | | | | | | |
| Temperature °C | | | | | | |
| Dissolved Oxygen mg/L | | | | | | |
| Conductivity µmhos mmhos | | | | | | |
| (initials) Measured by: | | | | | | |
| (initials) Recorded by: | | | | | | |

Comments:

| Concentration | 0 Hr. | 24 Hr. | 48 Hr. before renewal | 48 Hr. after renewal | 72 Hr. | 96 Hr. |
|---|---|---|---|---|---|---|
| Replicate | | | | | | |
| pH (S.U.) | | | | | | |
| Temperature °C | | | | | | |
| Dissolved Oxygen mg/L | | | | | | |
| Conductivity µmhos mmhos | | | | | | |
| (initials) Measured by: | | | | | | |
| (initials) Recorded by: | | | | | | |

Comments:

V 2.0 2/24/04

## FDEP Biology Laboratory - Bioassay Parameter Bench Sheet

**LIMS Sample # :** 947430 **Test #:** 2 of 2

**TEST SOP #:** TA07_ 02 **Test Species:** *Ceriodaphnia dubia* (*Cyprinella leedsi*) *Pimephales promelas* *Americamysis bahia* *Menidia beryllina* Other:_____

| Concentration CTRL | 0 Hr. | 24 Hr. | 48 Hr. before renewal | 48 Hr. after renewal | 72 Hr. | 96 Hr. |
|---|---|---|---|---|---|---|
| Replicate | A | B | C | | | |
| pH (S.U.) | 7.8 | 8.1 | 8.2 | | | |
| Temperature °C | 25.5 | 25.5 | 25.1 | | | |
| Dissolved Oxygen mg/L | 7.2 | 6.5 | 7.1 | | | |
| Conductivity (µmhos) mmhos | 272 | 276 | 280 | | | |
| (initials) Measured by: | JD | JD | JD | | | |
| (initials) Recorded by: | JD | JD | JD | | | |

Comments:

| Concentration 6.25% | 0 Hr. | 24 Hr. | 48 Hr. before renewal | 48 Hr. after renewal | 72 Hr. | 96 Hr. |
|---|---|---|---|---|---|---|
| Replicate | A | B | C | | | |
| pH (S.U.) | 7.9 | 8.1 | 8.2 | | | |
| Temperature °C | 25.7 | 25.1 | 25.1 | | | |
| Dissolved Oxygen mg/L | 7.2 | 6.6 | 6.9 | | | |
| Conductivity (µmhos) mmhos | 288 | 294 | 300 | | | |
| (initials) Measured by: | JD | JD | JD | | | |
| (initials) Recorded by: | JD | JD | JD | | | |

Comments:

| Concentration 12.5% | 0 Hr. | 24 Hr. | 48 Hr. before renewal | 48 Hr. after renewal | 72 Hr. | 96 Hr. |
|---|---|---|---|---|---|---|
| Replicate | A | B | C | | | |
| pH (S.U.) | 7.8 | 8.1 | 8.3 | | | |
| Temperature °C | 25.7 | 25.0 | 25.0 | | | |
| Dissolved Oxygen mg/L | 7.3 | 6.6 | 7.2 | | | |
| Conductivity (µmhos) mmhos | 310 | 324 | 319 | | | |
| (initials) Measured by: | JD | JD | JD | | | |
| (initials) Recorded by: | JD | JD | JD | | | |

Comments:

| Concentration 25% | 0 Hr. | 24 Hr. | 48 Hr. before renewal | 48 Hr. after renewal | 72 Hr. | 96 Hr. |
|---|---|---|---|---|---|---|
| Replicate | A | B | C | | | |
| pH (S.U.) | 7.8 | 8.1 | 8.2 | | | |
| Temperature °C | 25.7 | 25.0 | 24.1 | | | |
| Dissolved Oxygen mg/L | 7.3 | 6.7 | 7.3 | | | |
| Conductivity (µmhos) mmhos | 348 | 358 | 365 | | | |
| (initials) Measured by: | JD | JD | JD | | | |
| (initials) Recorded by: | JD | JD | JD | | | |

Comments:

V 2.0 2/24/04

## FDEP Biology Laboratory - Bioassay Parameter Bench Sheet

**LIMS Sample # :** 947430 **Test #:** 2 of 2

**TEST SOP #:** TA07_02 **Test Species:** *Ceriodaphnia dubia* *Cyprinella leedsi* *Pimephales promelas* *Americamysis bahia* *Menidia beryllina* Other:_____

| Concentration 50% | 0 Hr. | 24 Hr. | 48 Hr. before renewal | 48 Hr. after renewal | 72 Hr. | 96 Hr. |
|---|---|---|---|---|---|---|
| Replicate | A | B | C | | | |
| pH (S.U.) | 7.5 | 8.0 | 8.2 | | | |
| Temperature °C | 25.6 | 24.9 | 24.9 | | | |
| Dissolved Oxygen mg/L | 7.2 | 6.7 | 7.2 | | | |
| Conductivity (µmhos) mmhos | 475 | 479 | 454 | | | |
| (initials) Measured by: | JD | JD | JD | | | |
| (initials) Recorded by: | JD | JD | JD | | | |

Comments:

| Concentration 100% | 0 Hr. | 24 Hr. | 48 Hr. before renewal | 48 Hr. after renewal | 72 Hr. | 96 Hr. |
|---|---|---|---|---|---|---|
| Replicate | A | B | C | | | |
| pH (S.U.) | 7.4 | 7.7 | 8.2 | | | |
| Temperature °C | 25.4 | 25.2 | 24.9 | | | |
| Dissolved Oxygen mg/L | 6.4 | 6.5 | 7.0 | | | |
| Conductivity (µmhos) mmhos | 599 | 616 | 624 | | | |
| (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 µmhos mmhos | | | | | | |
| (initials) Measured by: | | | | | | |
| (initials) Recorded by: | | | | | | |

Comments:

| Concentration | 0 Hr. | 24 Hr. | 48 Hr. before renewal | 48 Hr. after renewal | 72 Hr. | 96 Hr. |
|---|---|---|---|---|---|---|
| Replicate | | | | | | |
| pH (S.U.) | | | | | | |
| Temperature °C | | | | | | |
| Dissolved Oxygen mg/L | | | | | | |
| Conductivity µmhos mmhos | | | | | | |
| (initials) Measured by: | | | | | | |
| (initials) Recorded by: | | | | | | |

Comments:

V 2.0 2/24/04

## Appendix C. SRT Bench Sheets and Statistical Analysis

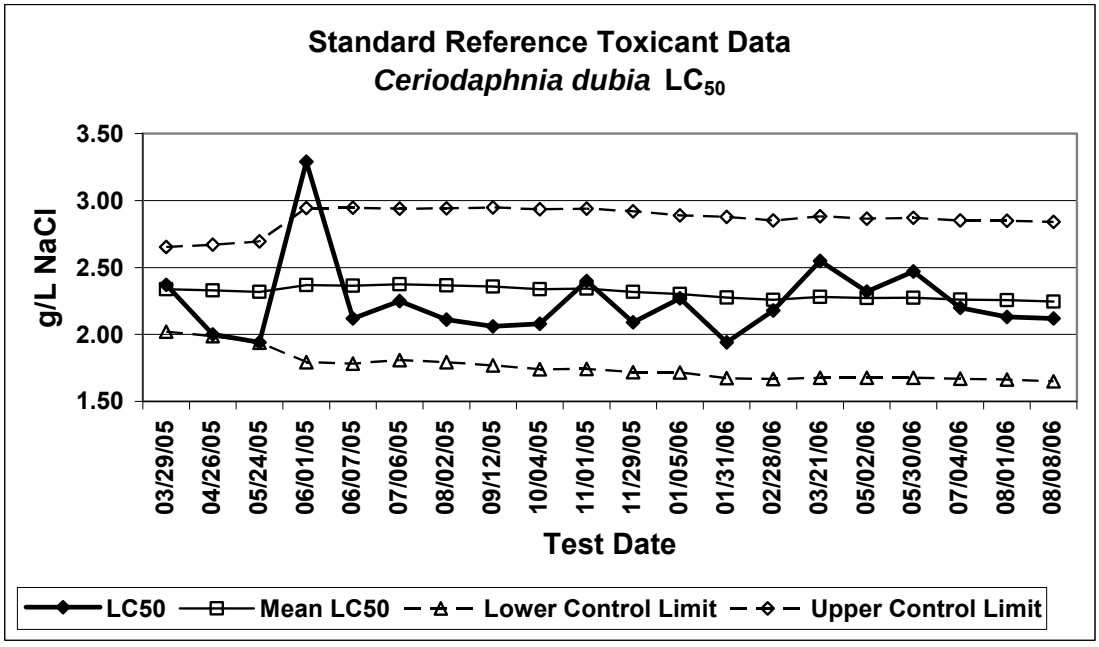
Florida Department of Environmental Protection
Bureau of Laboratories

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 |
|---|---|---|---|---|---|
| 03/29/05 | 2.37 | 2.34 | 0.16 | 2.02 | 2.65 |
| 04/26/05 | 2.00 | 2.33 | 0.17 | 1.99 | 2.67 |
| 05/24/05 | 1.94 | 2.32 | 0.19 | 1.94 | 2.70 |
| 06/01/05 | 3.29 | 2.37 | 0.29 | 1.79 | 2.94 |
| 06/07/05 | 2.12 | 2.36 | 0.29 | 1.78 | 2.95 |
| 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 |

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

**CV = 13.26**
EPA reference 75th quartile CV = 29%



## Appendix C. (continued)

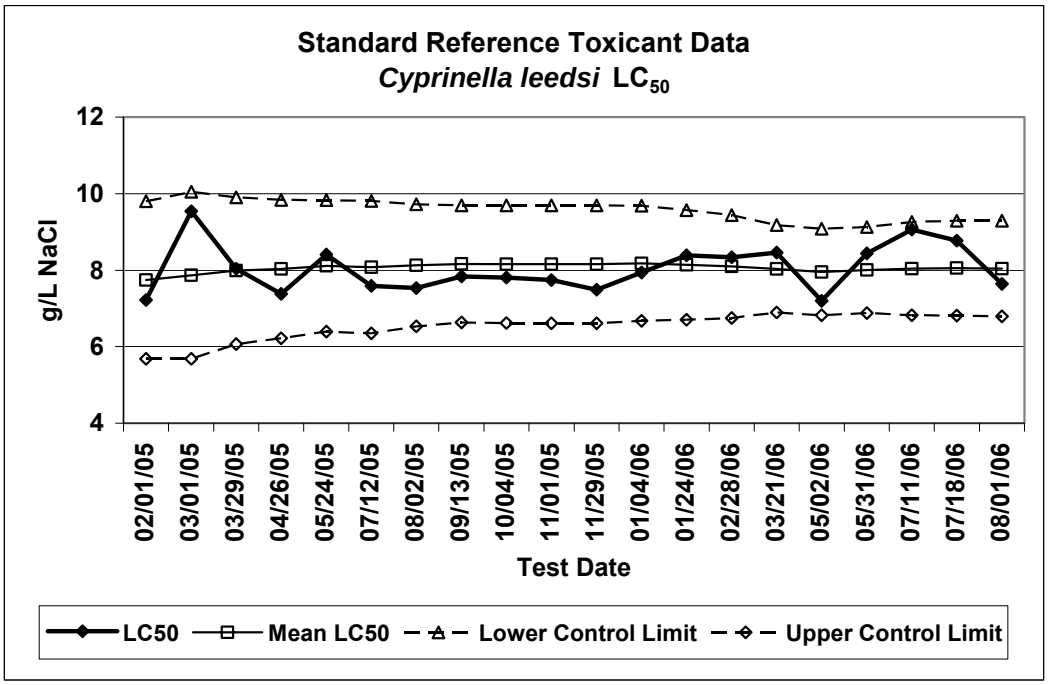
Florida Department of Environmental Protection
Bureau of Laboratories

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

| Date | LC50 | Mean LC50 | Std Dev | Lower Control Limit | Upper Control Limit |
|---|---|---|---|---|---|
| 02/01/05 | 7.22 | 7.74 | 1.03 | 5.68 | 9.80 |
| 03/01/05 | 9.54 | 7.87 | 1.09 | 5.68 | 10.05 |
| 03/29/05 | 8.04 | 7.99 | 0.96 | 6.07 | 9.91 |
| 04/26/05 | 7.38 | 8.03 | 0.90 | 6.22 | 9.84 |
| 05/24/05 | 8.41 | 8.11 | 0.86 | 6.40 | 9.83 |
| 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 |

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

**CV = 7.78**
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) *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 / 20-06
**Toxicant/ Batch#** NaCl / 11-06

**Test Beginning:** Date: 8-8-06 Time: 12:15
**Test Ending:** Date: 8-12-06 Time: 10:30

| Water Quality Parameters: | Diluent | Method | Initials |
|---|---|---|---|
| Total Residual $Cl_2$ (mg/L): | <0.07 | Hach | JD |
| Alkalinity (mg/L as $CaCO_3$): | 120 | Hach | JD |
| Hardness (mg/L as CaCO3): | 138 | Hach | JD |
| Total Ammonia (mg/L as N): | 20.01 | Denver | BP |
| Salinity (ppth): | <1 | Mettler | BA |

**Organism Batch #/ Age:** 33-06 / < 24 hrs
**Feeding:** Prior to test / Prior to renewal / Daily
**Food:** YCT P.subcapitata Artemia
**Food Batch:** 2-06 4-06 —
**Chamber size:** 30 mL
**Test volume:** 20 mL per replicate

| Conc. µg/L (ai) | Rep. | Chamber# | Number Live 0 hr / 48 hr / 96 hr | pH (SU) 0 hr / 48 hr / 96 hr | Temperature (° C) 0 hr / 48 hr / 96 hr | D.O. (mg/l) 0 hr / 48 hr / 96 hr | UNCORRECTED Cond. (mmhos/cm) 0 hr / 48 hr / 96 hr |
|---|---|---|---|---|---|---|---|
| Control | A | A | 5 / 5 / 5 | 8.1 / 7.7 | 24.7 / 24.0 | 7.4 / 6.2 | 0.179 / 0.207 |
| | B | B | 5 / 5 / 5 | | | | |
| | C | C | 5 / 5 / 5 | | | | |
| | D | D | 5 / 4 1D / 4 | | | | |
| 1.5 | A | A | 5 / 5 / 5 | 8.0 / 7.7 | 25.7 / 24.0 | 7.5 / 6.4 | 2.95 / 3.23 |
| | B | B | 5 / 5 / 5 | | | | |
| | C | C | 5 / 5 / 5 | | | | |
| | D | D | 5 / 5 / 5 | | | | |
| 2.0 | A | A | 5 / 5 / 4 1D | 8.0 / 7.7 | 25.8 / 24.0 | 7.4 / 6.4 | 3.85 / 4.26 |
| | B | B | 5 / 5 / 3 2D | | | | |
| | C | C | 5 / 5 / 3 2D | | | | |
| | D | D | 5 / 5 / 3 2D | | | | |
| 2.5 | A | A | 5 / 5 / 1 4D | 8.0 / 7.7 | 25.9 / 24.0 | 7.3 / 6.2 | 4.66 / 5.28 |
| | B | B | 5 / 5 / 0 5D | | | | |
| | C | C | 5 / 5 / 1 4D | | | | |
| | D | D | 5 / 5 / 0 5D | | | | |
| 3.0 | A | A | 5 / 5 / 1 4D | 8.0 / 7.7 | 26.0 / 24.1 | 7.3 / 6.4 | 5.57 / 6.42 |
| | B | B | 5 / 5 / 0 5D | | | | |
| | C | C | 5 / 4 1D / 0 4D | | | | |
| | D | D | 5 / 3 2D / 0 3D | | | | |
| 4.0 | A | A | 5 / 0 5D / — | 8.0 / — | 25.7 / — | 7.3 / — | 7.27 / — |
| | B | B | 5 / 0 5D / — | | | | |
| | C | C | 5 / 0 5D / — | | | | |
| | D | D | 5 / 0 5D / — | | | | |
| | A | | | | | | |
| | B | | | | | | |
| | C | | | | | | |
| | D | | | | | | |
| Loaded / measured by: | | | BA | BA / BA | BA / BA | BA / BA | BA / BA |
| Recorded by: | | | BA | BA / CA | BA / BA | BA / BA | BA / BA |

**Investigators' Signatures**
Dave Alderson
Sarah Pinchuk
Marshall Faircloth
Jason Farish
Nicole Wellenkamp
REVIEWER

Concentrations prepared by: BA
Loading verified by: MC
Light Intensity: 50-100 Ft. candles
Photoperiod: 16 hours Light / 8 hours dark
Temperature Range °C:
Incubator # 2 min. 24.9 max. 26.7 mean 25.6
Incubator # ____ min. ____ max. ____ mean ____
Room B246 min. 24.9 max. 26.1 mean 25.3

**Remarks:**

**Statistical Results:** Method: Spearman-Karber
48 / 96 hour LC50: 2.72
95% Confidence Interval: lower 1.99 upper 2.26

Revised 02/21/06

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## Appendix C. (continued)

### FDEP Biology Section - Acute SRT Bench Sheet

**Test Organism:** *Americamysis bahia* Method 2007.0 | *Menidia beryllina* Method 2006.0 | *Hyalella azteca* Method 100.1 EPA-600-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 / 20-06
**Toxicant/ Batch#** NaCl / 11-06

**Test Beginning:** Date: 8-8-06 Time: 12:15
**Test Ending:** Date: 8-12-06 Time: 10:30

| Water Quality Parameters: | Diluent | Method | Initials |
|---|---|---|---|
| Total Residual $Cl_2$ (mg/L): | <0.03 | Hach | DJ |
| Alkalinity (mg/L as $CaCO_3$): | 120 | Hach | DJ |
| Hardness (mg/L as CaCO3): | 138 | Hach | DJ |
| Total Ammonia (mg/L as N): | <0.017 | Denver | ~~DJ~~ BA |
| Salinity (ppth): | <1 | Mettler | BA |

**Organism Batch #/ Age:** 33-06< 24 hrs
**Feeding:** ~~Prior to test~~ ~~Prior to renewal~~ Daily
**Food:** YCT P.*subcapitata* Artemia
**Food Batch:** 2-06 4-06 —
**Chamber size:** 30 mL
**Test volume:** 20 mL per replicate

| 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 | 8.1 | | 8.1 | 24.7 | | 24.7 | 7.3 | | 7.9 | ~~0.176~~ BA | | 0.206 |
| | B | B | 5 | 5 | 5 | | | | | | | | | | 0.177 | | |
| | C | C | 5 | 5 | 5 | | | | | | | | | | | | |
| | D | D | 4 | 4 | 4 | | | | | | | | | | | | |
| 1.5 | A | A | 5 | 5 | 5 | 8.0 | | 8.1 | 25.2 | | 24.6 | 7.2 | | 7.8 | 2.97 | | 3.30 |
| | B | B | 5 | 5 | 5 | | | | | | | | | | | | |
| | C | C | 5 | 5 | 5 | | | | | | | | | | | | |
| | D | D | 5 | 5 | 5 | | | | | | | | | | | | |
| 2.0 | A | A | 4 | 3 ID | 3 | 8.0 | | 8.1 | 25.3 | | 24.7 | 7.2 | | 7.8 | 3.81 | | 4.25 |
| | B | B | 3 | 3 | 3 | | | | | | | | | | | | |
| | C | C | 3 | 3 | 2 ID | | | | | | | | | | | | |
| | D | D | 3 | 2 ID | 2 | | | | | | | | | | | | |
| 2.5 | A | A | 1 | 0 ID | — | 8.1 | 8.0 | — | 25.3 | 25.4 | — | 7.2 | 7.4 | — | 4.69 | 4.93 | — |
| | B | B | — | — | — | | | | | | | | | | | | |
| | C | C | + 1 BA | 0 ID | — | | | | | | | | | | | | |
| | D | D | — | ~~0 ID~~ | Mf using 3-11-06 | | | | | | | | | | | | |
| 3.0 | A | A | 1 | 0 ID | — | 8.1 | 8.0 | — | 25.1 | 25.2 | — | 7.3 | 7.4 | — | 5.60 | 5.96 | — |
| | B | B | — | — | — | | | | | | | | | | | | |
| | C | C | — | — | — | | | | | | | | | | | | |
| | D | D | — | — | — | | | | | | | | | | | | |
| 4.0 | A | A | — | — | — | — | | — | — | | — | — | | — | — | | — |
| | B | B | — | — | — | | | | | | | | | | | | |
| | C | C | — | — | — | | | | | | | | | | | | |
| | D | D | — | — | — | | | | | | | | | | | | |
| | A | | | | | | | | | | | | | | | | |
| | B | | | | | | | | | | | | | | | | |
| | C | | | | | | | | | | | | | | | | |
| | D | | | | | | | | | | | | | | | | |
| Loaded / measured by: | | | BA | MF | MF | BA | MF | MF | BA | MF | MF | BA | MF | MF | BA | MF | MF |
| Recorded by: | | | BA | MF | MF | BA | MF | MF | BA | MF | MF | BA | MF | MF | BA | MF | MF |

**Investigators' Signatures**
Bill Allender
Brad Pickard
Marshall Starnes
James Daniels
Nigel Willenberg
REVIEWER

Concentrations prepared by: BA
Loading verified by: ~~MF~~
Light Intensity: 50-100 Ft. candles
Photoperiod: 16 hours Light / 8 hours dark
Temperature Range °C:
Incubator # 2 min. 24.9 max. 26.7 mean 25.6
Incubator # ____ min. _____ max. _____ mean _____
Room B246 min. 24.9 max. 26.1 mean 25.5

**Remarks:**

**Statistical Results:** Method: Spearman-Karber
48 / ~~96~~ hour LC50: 1.97
95% Confidence Interval: lower 1.86 upper 2.09

Revised 02/21/06

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## Appendix C. (continued)

### FDEP Biology Section - Acute SRT Bench Sheet

Test Organism: *Americamysis bahia* (Method 2007.0) *Menidia beryllina* (Method 2006.0) *Hyalella azteca* (Method 100.1 EPA-600-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#: Well H2O / 7-31-06
Toxicant/ Batch# NaCl / 9-06

Test Beginning: Date: 8-1-06 Time: 1330
Test Ending: Date: 8-5-06 Time: 1145

| Water Quality Parameters: | Diluent | Method | Initials |
|---|---|---|---|
| Total Residual $Cl_2$ (mg/L): | <0.03 | Hach | JD |
| Alkalinity (mg/L as $CaCO_3$): | 156 | Hach | JD |
| Hardness (mg/L as CaCO3): | 135 | Hach | JD |
| Total Ammonia (mg/L as N): | <0.017 | Denver | SP |
| Salinity (ppth): | <1 | Mettler | SP |

Organism Batch #/ Age: 17-06 / 13days
Feeding: Prior to test / Prior to renewal / Daily
Food: YCT P.subcapitata Artemia
Food Batch: - - GSL-536-90
Chamber size: 1000 mL
Test volume: 500 mL per replicate

| Conc. µg/L (ai) | 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) 0 hr (48 hr) | UNCORRECTED Cond. (mmhos/cm) 24 hr (72 hr) | UNCORRECTED Cond. (mmhos/cm) 48 hr (96 hr) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Control | A | D1 | 10 | 10 | 10 | 7.7 | | 8.2 | 24.9 | | 24.3 | 7.1 | | 6.3 | 0.280 | | 0.309 |
| | B | D2 | 10 | 10 | 10 | | 8.1 | | | 25.0 | | | 6.6 | | | 0.306 | |
| | C | | | | | | | | | | | | | | | | |
| | D | | | | | | | | | | | | | | | | |
| 60 | A | D3 | 10 | 10 | 9 10 | 7.8 | | 8.1 | 25.0 | | 24.7 | 7.0 | | 6.1 | 10.5 | | 10.2 |
| | B | D4 | 10 | 10 | 8 20 | | 8.1 | | | 25.0 | | | 6.2 | | | 9.99 | |
| | C | | | | | | | | | | | | | | | | |
| | D | | | | | | | | | | | | | | | | |
| 70 | A | D5 | 10 | 8 20 | 6 20 | 7.9 | | 8.1 | 25.0 | | 24.1 | 6.9 | | 6.2 | 12.3 | | 12.5 |
| | B | D6 | 10 | 8 20 | 6 20 | | 8.1 | | | 24.5 | | | 6.0 | | | 12.2 | |
| | C | | | | | | | | | | | | | | | | |
| | D | | | | | | | | | | | | | | | | |
| 8.0 | A | D7 | 10 | 7 30 | 5 00 | 7.8 | | 8.1 | 25.0 | | 24.9 | 7.0 | | 6.2 | 13.9 | | 13.8 |
| | B | D8 | 10 | 6 40 | 4 20 | | 8.1 | | | 24.7 | | | 6.1 | | | 13.9 | |
| | C | | | | | | | | | | | | | | | | |
| | D | | | | | | | | | | | | | | | | |
| 9.0 | A | D9 | 10 | 3 20 | 3 | 7.9 | 8.1 20 | 8.2 20 | 25.0 | | 24.4 | 6.9 | | 6.0 | 15.2 | | 15.3 |
| | B | D10 | 10 | 3 20 | 3 | | 8.1 | 8.2 20 | | 24.9 | | | 6.1 | | | 15.2 | |
| | C | | | | | | | | | | | | | | | | |
| | D | | | | | | | | | | | | | | | | |
| 10.0 | A | D11 | 10 | 0 00 | — | 7.9 | | — | 25.0 | | — | 6.9 | | — | 17.0 | | — |
| | B | D12 | 10 | 0 00 | - | | 8.1 | | | 24.9 | | | 6.1 | | | 17.1 | |
| | C | | | | | | | | | | | | | | | | |
| | D | | | | | | | | | | | | | | | | |
| | A | | | | | | | | | | | | | | | | |
| | B | | | | | | | | | | | | | | | | |
| | C | | | | | | | | | | | | | | | | |
| | D | | | | | | | | | | | | | | | | |
| Loaded / measured by: | | | JD | JD | JD | SP | JD | BA | JD | JD | BA | SP | JD | DB | SP | JD | BA |
| Recorded by: | | | JD | JD | JD | SP | JD | BA | JD | JD | BA | SP | JD | BA | SP | JD | BA |

Investigators' Signatures
Sarah Friedrich
Jon Sarid
Brian Adams
Marshall Faircloth
Nicole Wellendorf
REVIEWER

Concentrations prepared by: JD
Loading verified by: SP
Light Intensity: 50-100 Ft. candles
Photoperiod: 16 hours Light / 8 hours dark
Temperature Range °C:
Incubator # 2 min. 24.7 max. 26.3 mean 25.3
Incubator # ____ min. ____ max. ____ mean ____
Room B246 min. 24.9 max. 25.7 mean 25.3

Remarks:

Statistical Results: Method: Spearman-Karber
(48)/ 96 hour LC50: 7.64
95% Confidence Interval: lower 7.13 upper 8.19

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## Appendix C. (continued)

### FDEP Biology Section - Acute SRT Bench Sheet

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

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

Diluent/ Batch#: Well $H_2O$ / 7-31-06
Toxicant/ Batch# NaCl / 9-06

Test Beginning: Date: 8-1-06 Time: 1330
Test Ending: Date: 8-3-06 Time: 1145

| Water Quality Parameters: | Diluent | Method | Initials |
|---|---|---|---|
| Total Residual $Cl_2$ (mg/L): | <0.03 | Hach | JD |
| Alkalinity (mg/L as $CaCO_3$): | 156 | Hach | JD |
| Hardness (mg/L as CaCO3): | 135 | Hach | JD |
| Total Ammonia (mg/L as N): | <0.017 | Denver | BP |
| Salinity (ppth): | <1 | Mettler | BP |

Organism Batch #/ Age: 17-06 / 13 days
Feeding: Prior to test / Prior to renewal / Daily
Food: YCT P.*subcapitata* Artemia
Food Batch: – – GSL-536-90
Chamber size: 1000 mL
Test volume: 500 mL per replicate

| Conc. 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) Cond. (µmhos/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 | D1 | 10 | 10 | 9 ID | 8.1 | | 8.2 | 24.1 | | 24.5 | 6.4 | | 6.9 | 0.333 | | 0.319 |
| | B | D2 | 10 | 10 | 9 ID | | 8.0 | | | 24.4 | | | 6.2 | | | 0.312 | |
| | C | | | | | | | | | | | | | | | | |
| | D | | | | | | | | | | | | | | | | |
| 6.0 | A | D3 | 9 | 9 | 8 ID | 8.0 | | 8.1 | 24.0 | | 24.5 | 6.2 | | 6.5 | 10.7 | | 11.0 |
| | B | D4 | 8 | 8 | 8 | | 7.9 | | | 24.6 | | | 5.9 | | | 10.0 | |
| | C | | | | | | | | | | | | | | | | |
| | D | | | | | | | | | | | | | | | | |
| 7.0 | A | D5 | 6 | 6 | 6 | 8.0 | | 8.1 | 24.0 | | 24.7 | 6.1 | | 6.3 | 12.4 | | 12.6 |
| | B | D6 | 6 | 6 | 6 | | 8.0 | | | 24.9 | | | 5.9 | | | 12.2 | |
| | C | | | | | | | | | | | | | | | | |
| | D | | | | | | | | | | | | | | | | |
| 8.0 | A | D7 | 5 | 5 | 5 | 8.0 | | 8.1 | 24.0 | | 24.1 | 6.1 | | 6.3 | 13.4 | | 14.4 |
| | B | D8 | 4 | 4 | 4 | | 7.9 | | | 25.1 | | | 5.7 | | | 13.9 | |
| | C | | | | | | | | | | | | | | | | |
| | D | | | | | | | | | | | | | | | | |
| 9.0 | A | D9 | 3 | 3 | 3 | 8.0 | | 8.1 | 24.0 | | 24.0 | 6.1 | | 6.3 | 15.2 | | 15.7 |
| | B | D10 | 3 | 2 ID | 2 | | 7.9 | | | 25.2 | | | 5.6 | | | 15.1 | |
| | C | | | | | | | | | | | | | | | | |
| | D | | | | | | | | | | | | | | | | |
| 10.0 | A | D11 | – | – | – | – | | – | – | | – | – | | – | – | | – |
| | B | D12 | – | – | – | | – | | | – | | | – | | | – | |
| | C | | | | | | | | | | | | | | | | |
| | D | | | | | | | | | | | | | | | | |
| | A | | | | | | | | | | | | | | | | |
| | B | | | | | | | | | | | | | | | | |
| | C | | | | | | | | | | | | | | | | |
| | D | | | | | | | | | | | | | | | | |
| Loaded / measured by: | | | JD | JD | MF | BA | JD | MF | BA | JD | MF | BA | JD | MF | BA | JD | MF |
| Recorded by: | | | BP | JD | MF | BA | JD | MF | BA | JD | MF | BA | JD | MF | BA | JD | MF |

Investigators' Signatures
Laura Pritchard
Bruce Henderson
Jorge Canal
Marshall Faircloth
Nicole Wellenstein
REVIEWER

Concentrations prepared by: BP
Loading verified by: JD
Light Intensity: 50-100 Ft. candles
Photoperiod: 16 hours Light / 8 hours dark
Temperature Range °C:
Incubator # 2 min. 24.2 max. 26.3 mean 25.3
Incubator # ____ min. ____ max. ____ mean ____
Room B246 min. 24.9 max. 25.7 mean 25.3

Remarks:

Statistical Results: Method: Spearman-Karber
48 / 96 hour LC50: 7.80
95% Confidence Interval: lower 7.31 upper 8.29

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## Appendix C. (continued)

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

DATE: 8-08-06 DURATION: 96 h TOXICANT : NaCl
SPECIES: *C. dubia*

| RAW DATA: Concentration (g/L) | Number Exposed | Mortalities |
|---|---|---|
| .00 | 20 | 1 |
| 1.50 | 20 | 0 |
| 2.00 | 20 | 10 |
| 2.50 | 20 | 20 |
| 3.00 | 20 | 20 |
| 4.00 | 20 | 20 |

SPEARMAN-KARBER TRIM: .00%

SPEARMAN-KARBER ESTIMATES: $LC_{50}$: 1.97
95% LOWER CONFIDENCE: 1.86
95% UPPER CONFIDENCE: 2.09

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

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

DATE: 8-01-06 DURATION: 96 h TOXICANT : NaCl
SPECIES: *C. leedsi*

| RAW DATA: Concentration (g/l) | Number Exposed | Mortalities |
|---|---|---|
| .00 | 20 | 2 |
| 6.00 | 20 | 4 |
| 7.00 | 20 | 8 |
| 8.00 | 20 | 11 |
| 9.00 | 20 | 15 |
| 10.00 | 20 | 20 |

SPEARMAN-KARBER TRIM: 11.11%

SPEARMAN-KARBER ESTIMATES: LC50: 7.80
95% LOWER CONFIDENCE: 7.34
95% UPPER CONFIDENCE: 8.29

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

## Appendix D. Test Organism Receipt

**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: 7/31/06

Shipped to: FDEP

P.O. No: _____

| Species | Quantity | Age | Brood Number | Temperature | Salinity |
|---|---|---|---|---|---|
| *Mysidopsis bahia* | 250+ | 4 Days | MSC60727 | 25°C | ~30‰ |
| *Menidia beryllina* | 250+ | 12 Days | SSC60719 | 25°C | ~30‰ |
| *Cyprinella leedsi* | 120+ | 12 Days | CLC60719 | 25°C | |
| *Pimephales promelas* | 120+ | 7 Days | FMC60724-1600 | 25°C | |
| | | | | | |

Packed by: Frank Gary

Shipped Via: FedEx

Notes: _____

Thank you for your order.

## Appendix D. Test Organism Receipt (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: 8/28/06

Shipped to: FDEP

P.O. No: _____

| Species | Quantity | Age | Brood Number | Temperature | Salinity |
|---|---|---|---|---|---|
| *Mysidopsis bahia* | | | | | |
| *Menidia beryllina* | | | | | |
| *Cyprinella leedsi* | 150+ | 11 Days | CL060817 | 25°C | |
| *Pimephales promelas* | | | | | |
| | | | | | |

Packed by: Frank Gary

Shipped Via: Fed Ex

Notes: Marshall, will mail info to you request later this week.

Thank you for your order.

## Appendix E. Chemical Analyses performed on the effluent from the Winter Garden Wastewater Treatment Facility Outfall D-001, sampled on August 28, 2006.

| Date Sampled | Field ID | Analysis Group | Component | Result | Units | Remark | MDL | PQL |
|---|---|---|---|---|---|---|---|---|
| 8/28/2006 8:45 | Effluent | Bio-AGP/LimNut | Algal Growth Potential | 86.6 | mg DryWt/L | A | 0.3 | 0.9 |
| 8/28/2006 8:45 | Effluent | Bio-BOD | Biochemical Oxygen Demand-5 Day,N-Inhib | 0.48 | mg/L | I | 0.2 | 2.0 |
| 8/28/2006 8:45 | Effluent | Bio-Chl-a | Chlorophyll-A, Monochromatic, Water | 0.85 | ug/L | U | 0.85 | 2.6 |
| 8/28/2006 8:45 | Effluent | Bio-Chl-a | Phaeophytin-A, Monochromatic, Water | 1.5 | ug/L | U | 1.5 | 4.5 |
| 8/28/2006 8:45 | Effluent | Bio-Toxicology | Bioassay-Acute-Def-FW-C.dubia, LC50 | 100 | LC50 | L | | |
| 8/28/2006 8:45 | Effluent | Bio-Toxicology | Bioassay-Acute-Def-FW-Fish, LC50 | 100 | LC50 | L | | |
| 8/28/2006 8:45 | Effluent | BNA-Water | 1,2,4-Trichlorobenzene | 1 | ug/L | U | 1 | 4.1 |
| 8/28/2006 8:45 | Effluent | BNA-Water | 1,2-Dichlorobenzene | 1 | ug/L | U | 1 | 4.1 |
| 8/28/2006 8:45 | Effluent | BNA-Water | 1,3-Dichlorobenzene | 1 | ug/L | U | 1 | 4.1 |
| 8/28/2006 8:45 | Effluent | BNA-Water | 1,4-Dichlorobenzene | 1 | ug/L | U | 1 | 4.1 |
| 8/28/2006 8:45 | Effluent | BNA-Water | 2,4,6-Trichlorophenol | 1 | ug/L | U | 1 | 4.1 |
| 8/28/2006 8:45 | Effluent | BNA-Water | 2,4-Dichlorophenol | 1 | ug/L | U | 1 | 4.1 |
| 8/28/2006 8:45 | Effluent | BNA-Water | 2,4-Dimethylphenol | 51 | ug/L | U | 51 | 200 |
| 8/28/2006 8:45 | Effluent | BNA-Water | 2,4-Dinitrophenol | 15 | ug/L | U | 15 | 61 |
| 8/28/2006 8:45 | Effluent | BNA-Water | 2,4-Dinitrotoluene | 1 | ug/L | U | 1 | 4.1 |
| 8/28/2006 8:45 | Effluent | BNA-Water | 2,6-Dinitrotoluene | 1 | ug/L | U | 1 | 4.1 |
| 8/28/2006 8:45 | Effluent | BNA-Water | 2-Chloronaphthalene | 1 | ug/L | U | 1 | 4.1 |
| 8/28/2006 8:45 | Effluent | BNA-Water | 2-Chlorophenol | 1 | ug/L | U | 1 | 4.1 |
| 8/28/2006 8:45 | Effluent | BNA-Water | 2-Methyl-4,6-dinitrophenol | 3.1 | ug/L | U | 3.1 | 12 |
| 8/28/2006 8:45 | Effluent | BNA-Water | 2-Nitrophenol | 1 | ug/L | U | 1 | 4.1 |
| 8/28/2006 8:45 | Effluent | BNA-Water | 3,3'-Dichlorobenzidine | 41 | ug/L | U | 41 | 160 |
| 8/28/2006 8:45 | Effluent | BNA-Water | 4,4'-DDD | 1.5 | ug/L | U | 1.5 | 6.1 |
| 8/28/2006 8:45 | Effluent | BNA-Water | 4,4'-DDE | 1.5 | ug/L | U | 1.5 | 6.1 |
| 8/28/2006 8:45 | Effluent | BNA-Water | 4,4'-DDT | 1.5 | ug/L | U | 1.5 | 6.1 |
| 8/28/2006 8:45 | Effluent | BNA-Water | 4-Bromophenyl phenyl ether | 1 | ug/L | U | 1 | 4.1 |
| 8/28/2006 8:45 | Effluent | BNA-Water | 4-Chloro-3-methylphenol | 1 | ug/L | U | 1 | 4.1 |
| 8/28/2006 8:45 | Effluent | BNA-Water | 4-Chlorophenyl phenyl ether | 2 | ug/L | U | 2 | 8.2 |
| 8/28/2006 8:45 | Effluent | BNA-Water | 4-Nitrophenol | 15 | ug/L | U | 15 | 61 |
| 8/28/2006 8:45 | Effluent | BNA-Water | Acenaphthene | 1 | ug/L | U | 1 | 4.1 |
| 8/28/2006 8:45 | Effluent | BNA-Water | Acenaphthylene | 1 | ug/L | U | 1 | 4.1 |
| 8/28/2006 8:45 | Effluent | BNA-Water | Aldrin | 1.5 | ug/L | U | 1.5 | 6.1 |
| 8/28/2006 8:45 | Effluent | BNA-Water | Anthracene | 1 | ug/L | U | 1 | 4.1 |
| 8/28/2006 8:45 | Effluent | BNA-Water | Benzidine | 100 | ug/L | U | 100 | 410 |
| 8/28/2006 8:45 | Effluent | BNA-Water | Benzo(a)anthracene | 1 | ug/L | U | 1 | 4.1 |
| 8/28/2006 8:45 | Effluent | BNA-Water | Benzo(a)pyrene | 1 | ug/L | U | 1 | 4.1 |
| 8/28/2006 8:45 | Effluent | BNA-Water | Benzo(b)fluoranthene | 1 | ug/L | U | 1 | 4.1 |
| 8/28/2006 8:45 | Effluent | BNA-Water | Benzo(g,h,i)perylene | 1 | ug/L | U | 1 | 4.1 |
| 8/28/2006 8:45 | Effluent | BNA-Water | Benzo(k)fluoranthene | 1 | ug/L | U | 1 | 4.1 |

## Appendix E. (continued)

| Date Sampled | Field ID | Analysis Group | Component | Result | Units | Remark | MDL | PQL |
|---|---|---|---|---|---|---|---|---|
| 8/28/2006 8:45 | Effluent | BNA-Water | Bis(2-chloroethyl)ether | 1 | ug/L | U | 1 | 4.1 |
| 8/28/2006 8:45 | Effluent | BNA-Water | Bis(2-chloroisopropyl)ether | 3.1 | ug/L | U | 3.1 | 12 |
| 8/28/2006 8:45 | Effluent | BNA-Water | Bis(2-ethylhexyl)phthalate | 15 | ug/L | U | 15 | 61 |
| 8/28/2006 8:45 | Effluent | BNA-Water | Butyl benzyl phthalate | 5.1 | ug/L | U | 5.1 | 20 |
| 8/28/2006 8:45 | Effluent | BNA-Water | Chrysene | 1 | ug/L | U | 1 | 4.1 |
| 8/28/2006 8:45 | Effluent | BNA-Water | Di-n-butyl phthalate | 5.1 | ug/L | U | 5.1 | 20 |
| 8/28/2006 8:45 | Effluent | BNA-Water | Di-n-octyl phthalate | 1 | ug/L | U | 1 | 4.1 |
| 8/28/2006 8:45 | Effluent | BNA-Water | Dibenzo(a,h)anthracene | 1 | ug/L | U | 1 | 4.1 |
| 8/28/2006 8:45 | Effluent | BNA-Water | Dieldrin | 1.5 | ug/L | U | 1.5 | 6.1 |
| 8/28/2006 8:45 | Effluent | BNA-Water | Diethyl phthalate | 1 | ug/L | U | 1 | 4.1 |
| 8/28/2006 8:45 | Effluent | BNA-Water | Dimethyl phthalate | 51 | ug/L | U | 51 | 200 |
| 8/28/2006 8:45 | Effluent | BNA-Water | Endosulfan I | 4.1 | ug/L | U | 4.1 | 16 |
| 8/28/2006 8:45 | Effluent | BNA-Water | Endosulfan II | 4.1 | ug/L | U | 4.1 | 16 |
| 8/28/2006 8:45 | Effluent | BNA-Water | Endosulfan sulfate | 1.5 | ug/L | U | 1.5 | 6.1 |
| 8/28/2006 8:45 | Effluent | BNA-Water | Endrin | 1.5 | ug/L | U | 1.5 | 6.1 |
| 8/28/2006 8:45 | Effluent | BNA-Water | Endrin aldehyde | 4.1 | ug/L | U | 4.1 | 16 |
| 8/28/2006 8:45 | Effluent | BNA-Water | Fluoranthene | 1 | ug/L | U | 1 | 4.1 |
| 8/28/2006 8:45 | Effluent | BNA-Water | Fluorene | 1 | ug/L | U | 1 | 4.1 |
| 8/28/2006 8:45 | Effluent | BNA-Water | Heptachlor | 1.5 | ug/L | U | 1.5 | 6.1 |
| 8/28/2006 8:45 | Effluent | BNA-Water | Heptachlor epoxide | 1.5 | ug/L | U | 1.5 | 6.1 |
| 8/28/2006 8:45 | Effluent | BNA-Water | Hexachlorobenzene | 1 | ug/L | U | 1 | 4.1 |
| 8/28/2006 8:45 | Effluent | BNA-Water | Hexachlorobutadiene | 3.1 | ug/L | U | 3.1 | 12 |
| 8/28/2006 8:45 | Effluent | BNA-Water | Hexachlorocyclopentadiene | 3.1 | ug/L | U | 3.1 | 12 |
| 8/28/2006 8:45 | Effluent | BNA-Water | Hexachloroethane | 3.1 | ug/L | U | 3.1 | 12 |
| 8/28/2006 8:45 | Effluent | BNA-Water | Indeno(1,2,3-cd)pyrene | 1 | ug/L | U | 1 | 4.1 |
| 8/28/2006 8:45 | Effluent | BNA-Water | Isophorone | 1 | ug/L | U | 1 | 4.1 |
| 8/28/2006 8:45 | Effluent | BNA-Water | N-Nitrosodi-n-propylamine | 2 | ug/L | U | 2 | 8.2 |
| 8/28/2006 8:45 | Effluent | BNA-Water | N-Nitrosodimethylamine | 2 | ug/L | U | 2 | 8.2 |
| 8/28/2006 8:45 | Effluent | BNA-Water | N-Nitrosodiphenylamine | 3.1 | ug/L | U | 3.1 | 12 |
| 8/28/2006 8:45 | Effluent | BNA-Water | Naphthalene | 1 | ug/L | U | 1 | 4.1 |
| 8/28/2006 8:45 | Effluent | BNA-Water | Nitrobenzene | 2 | ug/L | U | 2 | 8.2 |
| 8/28/2006 8:45 | Effluent | BNA-Water | Pentachlorophenol | 3.1 | ug/L | U | 3.1 | 12 |
| 8/28/2006 8:45 | Effluent | BNA-Water | Phenanthrene | 1 | ug/L | U | 1 | 4.1 |
| 8/28/2006 8:45 | Effluent | BNA-Water | Phenol | 1 | ug/L | U | 1 | 4.1 |
| 8/28/2006 8:45 | Effluent | BNA-Water | Pyrene | 1 | ug/L | U | 1 | 4.1 |
| 8/28/2006 8:45 | Effluent | BNA-Water | alpha-BHC | 1.5 | ug/L | U | 1.5 | 6.1 |
| 8/28/2006 8:45 | Effluent | BNA-Water | beta-BHC | 1.5 | ug/L | U | 1.5 | 6.1 |
| 8/28/2006 8:45 | Effluent | BNA-Water | delta-BHC | 1.5 | ug/L | U | 1.5 | 6.1 |
| 8/28/2006 8:45 | Effluent | BNA-Water | gamma-BHC | 1.5 | ug/L | U | 1.5 | 6.1 |

## Appendix E. (continued)

| Date Sampled | Field ID | Analysis Group | Component | Result | Units | Remark | MDL | PQL |
|---|---|---|---|---|---|---|---|---|
| 8/28/2006 9:11 | Blank | BNA-Water | 1,2-Dichlorobenzene | 0.95 | ug/L | U | 0.95 | 3.8 |
| 8/28/2006 9:11 | Blank | BNA-Water | 1,3-Dichlorobenzene | 0.95 | ug/L | U | 0.95 | 3.8 |
| 8/28/2006 9:11 | Blank | BNA-Water | 1,4-Dichlorobenzene | 0.95 | ug/L | U | 0.95 | 3.8 |
| 8/28/2006 9:11 | Blank | BNA-Water | 2,4,6-Trichlorophenol | 0.95 | ug/L | U | 0.95 | 3.8 |
| 8/28/2006 9:11 | Blank | BNA-Water | 2,4-Dichlorophenol | 0.95 | ug/L | U | 0.95 | 3.8 |
| 8/28/2006 9:11 | Blank | BNA-Water | 2,4-Dimethylphenol | 48 | ug/L | U | 48 | 190 |
| 8/28/2006 9:11 | Blank | BNA-Water | 2,4-Dinitrophenol | 14 | ug/L | U | 14 | 57 |
| 8/28/2006 9:11 | Blank | BNA-Water | 2,4-Dinitrotoluene | 0.95 | ug/L | U | 0.95 | 3.8 |
| 8/28/2006 9:11 | Blank | BNA-Water | 2,6-Dinitrotoluene | 0.95 | ug/L | U | 0.95 | 3.8 |
| 8/28/2006 9:11 | Blank | BNA-Water | 2-Chloronaphthalene | 0.95 | ug/L | U | 0.95 | 3.8 |
| 8/28/2006 9:11 | Blank | BNA-Water | 2-Chlorophenol | 0.95 | ug/L | U | 0.95 | 3.8 |
| 8/28/2006 9:11 | Blank | BNA-Water | 2-Methyl-4,6-dinitrophenol | 2.9 | ug/L | U | 2.9 | 11 |
| 8/28/2006 9:11 | Blank | BNA-Water | 2-Nitrophenol | 0.95 | ug/L | U | 0.95 | 3.8 |
| 8/28/2006 9:11 | Blank | BNA-Water | 3,3'-Dichlorobenzidine | 38 | ug/L | U | 38 | 150 |
| 8/28/2006 9:11 | Blank | BNA-Water | 4,4'-DDD | 1.4 | ug/L | U | 1.4 | 5.7 |
| 8/28/2006 9:11 | Blank | BNA-Water | 4,4'-DDE | 1.4 | ug/L | U | 1.4 | 5.7 |
| 8/28/2006 9:11 | Blank | BNA-Water | 4,4'-DDT | 1.4 | ug/L | U | 1.4 | 5.7 |
| 8/28/2006 9:11 | Blank | BNA-Water | 4-Bromophenyl phenyl ether | 0.95 | ug/L | U | 0.95 | 3.8 |
| 8/28/2006 9:11 | Blank | BNA-Water | 4-Chloro-3-methylphenol | 0.95 | ug/L | U | 0.95 | 3.8 |
| 8/28/2006 9:11 | Blank | BNA-Water | 4-Chlorophenyl phenyl ether | 1.9 | ug/L | U | 1.9 | 7.6 |
| 8/28/2006 9:11 | Blank | BNA-Water | 4-Nitrophenol | 14 | ug/L | U | 14 | 57 |
| 8/28/2006 9:11 | Blank | BNA-Water | Acenaphthene | 0.95 | ug/L | U | 0.95 | 3.8 |
| 8/28/2006 9:11 | Blank | BNA-Water | Acenaphthylene | 0.95 | ug/L | U | 0.95 | 3.8 |
| 8/28/2006 9:11 | Blank | BNA-Water | Aldrin | 1.4 | ug/L | U | 1.4 | 5.7 |
| 8/28/2006 9:11 | Blank | BNA-Water | Anthracene | 0.95 | ug/L | U | 0.95 | 3.8 |
| 8/28/2006 9:11 | Blank | BNA-Water | Benzidine | 95 | ug/L | U | 95 | 380 |
| 8/28/2006 9:11 | Blank | BNA-Water | Benzo(a)anthracene | 0.95 | ug/L | U | 0.95 | 3.8 |
| 8/28/2006 9:11 | Blank | BNA-Water | Benzo(a)pyrene | 0.95 | ug/L | U | 0.95 | 3.8 |
| 8/28/2006 9:11 | Blank | BNA-Water | Benzo(b)fluoranthene | 0.95 | ug/L | U | 0.95 | 3.8 |
| 8/28/2006 9:11 | Blank | BNA-Water | Benzo(g,h,i)perylene | 0.95 | ug/L | U | 0.95 | 3.8 |
| 8/28/2006 9:11 | Blank | BNA-Water | Benzo(k)fluoranthene | 0.95 | ug/L | U | 0.95 | 3.8 |
| 8/28/2006 9:11 | Blank | BNA-Water | Bis(2-chloroethoxy)methane | 0.95 | ug/L | U | 0.95 | 3.8 |
| 8/28/2006 9:11 | Blank | BNA-Water | Bis(2-chloroethyl)ether | 0.95 | ug/L | U | 0.95 | 3.8 |
| 8/28/2006 9:11 | Blank | BNA-Water | Bis(2-chloroisopropyl)ether | 2.9 | ug/L | U | 2.9 | 11 |
| 8/28/2006 9:11 | Blank | BNA-Water | Bis(2-ethylhexyl)phthalate | 14 | ug/L | U | 14 | 57 |
| 8/28/2006 9:11 | Blank | BNA-Water | Butyl benzyl phthalate | 4.8 | ug/L | U | 4.8 | 19 |
| 8/28/2006 9:11 | Blank | BNA-Water | Chrysene | 0.95 | ug/L | U | 0.95 | 3.8 |
| 8/28/2006 9:11 | Blank | BNA-Water | Di-n-butyl phthalate | 4.8 | ug/L | U | 4.8 | 19 |
| 8/28/2006 9:11 | Blank | BNA-Water | Di-n-octyl phthalate | 0.95 | ug/L | U | 0.95 | 3.8 |

## Appendix E. (continued)

| Date Sampled | Field ID | Analysis Group | Component | Result | Units | Remark | MDL | PQL |
|---|---|---|---|---|---|---|---|---|
| 8/28/2006 9:11 | Blank | BNA-Water | Dieldrin | 1.4 | ug/L | U | 1.4 | 5.7 |
| 8/28/2006 9:11 | Blank | BNA-Water | Diethyl phthalate | 0.95 | ug/L | U | 0.95 | 3.8 |
| 8/28/2006 9:11 | Blank | BNA-Water | Dimethyl phthalate | 48 | ug/L | U | 48 | 190 |
| 8/28/2006 9:11 | Blank | BNA-Water | Endosulfan I | 3.8 | ug/L | U | 3.8 | 15 |
| 8/28/2006 9:11 | Blank | BNA-Water | Endosulfan II | 3.8 | ug/L | U | 3.8 | 15 |
| 8/28/2006 9:11 | Blank | BNA-Water | Endosulfan sulfate | 1.4 | ug/L | U | 1.4 | 5.7 |
| 8/28/2006 9:11 | Blank | BNA-Water | Endrin | 1.4 | ug/L | U | 1.4 | 5.7 |
| 8/28/2006 9:11 | Blank | BNA-Water | Endrin aldehyde | 3.8 | ug/L | U | 3.8 | 15 |
| 8/28/2006 9:11 | Blank | BNA-Water | Fluoranthene | 0.95 | ug/L | U | 0.95 | 3.8 |
| 8/28/2006 9:11 | Blank | BNA-Water | Fluorene | 0.95 | ug/L | U | 0.95 | 3.8 |
| 8/28/2006 9:11 | Blank | BNA-Water | Heptachlor | 1.4 | ug/L | U | 1.4 | 5.7 |
| 8/28/2006 9:11 | Blank | BNA-Water | Heptachlor epoxide | 1.4 | ug/L | U | 1.4 | 5.7 |
| 8/28/2006 9:11 | Blank | BNA-Water | Hexachlorobenzene | 0.95 | ug/L | U | 0.95 | 3.8 |
| 8/28/2006 9:11 | Blank | BNA-Water | Hexachlorobutadiene | 2.9 | ug/L | U | 2.9 | 11 |
| 8/28/2006 9:11 | Blank | BNA-Water | Hexachlorocyclopentadiene | 2.9 | ug/L | U | 2.9 | 11 |
| 8/28/2006 9:11 | Blank | BNA-Water | Hexachloroethane | 2.9 | ug/L | U | 2.9 | 11 |
| 8/28/2006 9:11 | Blank | BNA-Water | Indeno(1,2,3-cd)pyrene | 0.95 | ug/L | U | 0.95 | 3.8 |
| 8/28/2006 9:11 | Blank | BNA-Water | Isophorone | 0.95 | ug/L | U | 0.95 | 3.8 |
| 8/28/2006 9:11 | Blank | BNA-Water | N-Nitrosodi-n-propylamine | 1.9 | ug/L | U | 1.9 | 7.6 |
| 8/28/2006 9:11 | Blank | BNA-Water | N-Nitrosodimethylamine | 1.9 | ug/L | U | 1.9 | 7.6 |
| 8/28/2006 9:11 | Blank | BNA-Water | N-Nitrosodiphenylamine | 2.9 | ug/L | U | 2.9 | 11 |
| 8/28/2006 9:11 | Blank | BNA-Water | Naphthalene | 0.95 | ug/L | U | 0.95 | 3.8 |
| 8/28/2006 9:11 | Blank | BNA-Water | Nitrobenzene | 1.9 | ug/L | U | 1.9 | 7.6 |
| 8/28/2006 9:11 | Blank | BNA-Water | Pentachlorophenol | 2.9 | ug/L | U | 2.9 | 11 |
| 8/28/2006 9:11 | Blank | BNA-Water | Phenanthrene | 0.95 | ug/L | U | 0.95 | 3.8 |
| 8/28/2006 9:11 | Blank | BNA-Water | Phenol | 0.95 | ug/L | U | 0.95 | 3.8 |
| 8/28/2006 9:11 | Blank | BNA-Water | Pyrene | 0.95 | ug/L | U | 0.95 | 3.8 |
| 8/28/2006 9:11 | Blank | BNA-Water | alpha-BHC | 1.4 | ug/L | U | 1.4 | 5.7 |
| 8/28/2006 9:11 | Blank | BNA-Water | beta-BHC | 1.4 | ug/L | U | 1.4 | 5.7 |
| 8/28/2006 9:11 | Blank | BNA-Water | delta-BHC | 1.4 | ug/L | U | 1.4 | 5.7 |
| 8/28/2006 9:11 | Blank | BNA-Water | gamma-BHC | 1.4 | ug/L | U | 1.4 | 5.7 |
| 8/28/2006 8:45 | Effluent | GC-Water | Alachlor | 0.6 | ug/L | U | 0.6 | 2.4 |
| 8/28/2006 8:45 | Effluent | GC-Water | Ametryn | 0.05 | ug/L | U | 0.05 | 0.2 |
| 8/28/2006 8:45 | Effluent | GC-Water | Atrazine | 0.11 | ug/L | IJ | 0.05 | 0.2 |
| 8/28/2006 8:45 | Effluent | GC-Water | Azinphos Methyl | 0.2 | ug/L | UJ | 0.2 | 0.8 |
| 8/28/2006 8:45 | Effluent | GC-Water | Bromacil | 0.2 | ug/L | U | 0.2 | 0.8 |
| 8/28/2006 8:45 | Effluent | GC-Water | Butylate | 0.2 | ug/L | U | 0.2 | 0.8 |
| 8/28/2006 8:45 | Effluent | GC-Water | Chlorpyrifos Ethyl | 0.05 | ug/L | U | 0.05 | 0.2 |
| 8/28/2006 8:45 | Effluent | GC-Water | Chlorpyrifos Methyl | 0.1 | ug/L | U | 0.1 | 0.4 |

## Appendix E. (continued)

| Date Sampled | Field ID | Analysis Group | Component | Result | Units | Remark | MDL | PQL |
|---|---|---|---|---|---|---|---|---|
| 8/28/2006 8:45 | Effluent | GC-Water | Ethion | 0.05 | ug/L | U | 0.05 | 0.2 |
| 8/28/2006 8:45 | Effluent | GC-Water | Ethoprop | 0.1 | ug/L | U | 0.1 | 0.4 |
| 8/28/2006 8:45 | Effluent | GC-Water | Fenamiphos | 0.2 | ug/L | U | 0.2 | 0.8 |
| 8/28/2006 8:45 | Effluent | GC-Water | Fonofos | 0.1 | ug/L | U | 0.1 | 0.4 |
| 8/28/2006 8:45 | Effluent | GC-Water | Hexazinone | 0.1 | ug/L | U | 0.1 | 0.4 |
| 8/28/2006 8:45 | Effluent | GC-Water | Malathion | 0.15 | ug/L | U | 0.15 | 0.6 |
| 8/28/2006 8:45 | Effluent | GC-Water | Metalaxyl | 0.25 | ug/L | U | 0.25 | 1 |
| 8/28/2006 8:45 | Effluent | GC-Water | Metolachlor | 0.5 | ug/L | U | 0.5 | 2 |
| 8/28/2006 8:45 | Effluent | GC-Water | Metribuzin | 0.1 | ug/L | U | 0.1 | 0.4 |
| 8/28/2006 8:45 | Effluent | GC-Water | Mevinphos | 0.2 | ug/L | U | 0.2 | 0.8 |
| 8/28/2006 8:45 | Effluent | GC-Water | Naled | 0.8 | ug/L | U | 0.8 | 3.2 |
| 8/28/2006 8:45 | Effluent | GC-Water | Norflurazon | 0.15 | ug/L | U | 0.15 | 0.6 |
| 8/28/2006 8:45 | Effluent | GC-Water | Parathion Ethyl | 0.15 | ug/L | U | 0.15 | 0.6 |
| 8/28/2006 8:45 | Effluent | GC-Water | Parathion Methyl | 0.1 | ug/L | U | 0.1 | 0.4 |
| 8/28/2006 8:45 | Effluent | GC-Water | Phorate | 0.05 | ug/L | U | 0.05 | 0.2 |
| 8/28/2006 8:45 | Effluent | GC-Water | Prometryn | 0.15 | ug/L | U | 0.15 | 0.6 |
| 8/28/2006 8:45 | Effluent | GC-Water | Simazine | 0.05 | ug/L | U | 0.05 | 0.2 |
| 8/28/2006 9:11 | Blank | GC-Water | Alachlor | 0.57 | ug/L | U | 0.57 | 2.3 |
| 8/28/2006 9:11 | Blank | GC-Water | Ametryn | 0.048 | ug/L | U | 0.048 | 0.19 |
| 8/28/2006 9:11 | Blank | GC-Water | Atrazine | 0.048 | ug/L | UJ | 0.048 | 0.19 |
| 8/28/2006 9:11 | Blank | GC-Water | Azinphos Methyl | 0.19 | ug/L | UJ | 0.19 | 0.76 |
| 8/28/2006 9:11 | Blank | GC-Water | Bromacil | 0.19 | ug/L | U | 0.19 | 0.76 |
| 8/28/2006 9:11 | Blank | GC-Water | Butylate | 0.19 | ug/L | U | 0.19 | 0.76 |
| 8/28/2006 9:11 | Blank | GC-Water | Chlorpyrifos Ethyl | 0.048 | ug/L | U | 0.048 | 0.19 |
| 8/28/2006 9:11 | Blank | GC-Water | Chlorpyrifos Methyl | 0.095 | ug/L | U | 0.095 | 0.38 |
| 8/28/2006 9:11 | Blank | GC-Water | Diazinon | 0.048 | ug/L | UJ | 0.048 | 0.19 |
| 8/28/2006 9:11 | Blank | GC-Water | Ethion | 0.048 | ug/L | U | 0.048 | 0.19 |
| 8/28/2006 9:11 | Blank | GC-Water | Ethoprop | 0.095 | ug/L | U | 0.095 | 0.38 |
| 8/28/2006 9:11 | Blank | GC-Water | Fenamiphos | 0.19 | ug/L | U | 0.19 | 0.76 |
| 8/28/2006 9:11 | Blank | GC-Water | Fonofos | 0.095 | ug/L | U | 0.095 | 0.38 |
| 8/28/2006 9:11 | Blank | GC-Water | Hexazinone | 0.095 | ug/L | U | 0.095 | 0.38 |
| 8/28/2006 9:11 | Blank | GC-Water | Malathion | 0.14 | ug/L | U | 0.14 | 0.56 |
| 8/28/2006 9:11 | Blank | GC-Water | Metalaxyl | 0.24 | ug/L | U | 0.24 | 0.96 |
| 8/28/2006 9:11 | Blank | GC-Water | Metolachlor | 0.48 | ug/L | U | 0.48 | 1.9 |
| 8/28/2006 9:11 | Blank | GC-Water | Metribuzin | 0.095 | ug/L | U | 0.095 | 0.38 |
| 8/28/2006 9:11 | Blank | GC-Water | Mevinphos | 0.19 | ug/L | U | 0.19 | 0.76 |
| 8/28/2006 9:11 | Blank | GC-Water | Naled | 0.76 | ug/L | U | 0.76 | 3 |
| 8/28/2006 9:11 | Blank | GC-Water | Norflurazon | 0.14 | ug/L | U | 0.14 | 0.56 |
| 8/28/2006 9:11 | Blank | GC-Water | Parathion Ethyl | 0.14 | ug/L | U | 0.14 | 0.56 |

## Appendix E. (continued)

| Date Sampled | Field ID | Analysis Group | Component | Result | Units | Remark | MDL | PQL |
|---|---|---|---|---|---|---|---|---|
| 8/28/2006 9:11 | Blank | GC-Water | Phorate | 0.048 | ug/L | U | 0.048 | 0.19 |
| 8/28/2006 9:11 | Blank | GC-Water | Prometryn | 0.14 | ug/L | U | 0.14 | 0.56 |
| 8/28/2006 9:11 | Blank | GC-Water | Simazine | 0.048 | ug/L | U | 0.048 | 0.19 |
| 8/28/2006 8:45 | Effluent | Metals-Water | Aluminum | 231 | ug/L | | 4 | 16 |
| 8/28/2006 8:45 | Effluent | Metals-Water | Arsenic | 0.86 | ug/L | I | 0.5 | 2 |
| 8/28/2006 8:45 | Effluent | Metals-Water | Cadmium | 0.05 | ug/L | U | 0.05 | 0.2 |
| 8/28/2006 8:45 | Effluent | Metals-Water | Calcium | 41.9 | mg/L | | 0.02 | 0.08 |
| 8/28/2006 8:45 | Effluent | Metals-Water | Chromium | 0.8 | ug/L | I | 0.3 | 1.2 |
| 8/28/2006 8:45 | Effluent | Metals-Water | Copper | 2.55 | ug/L | | 0.2 | 0.8 |
| 8/28/2006 8:45 | Effluent | Metals-Water | Iron | 282 | ug/L | | 5 | 20 |
| 8/28/2006 8:45 | Effluent | Metals-Water | Lead | 0.32 | ug/L | I | 0.2 | 0.8 |
| 8/28/2006 8:45 | Effluent | Metals-Water | Magnesium | 7.8 | mg/L | | 0.005 | 0.02 |
| 8/28/2006 8:45 | Effluent | Metals-Water | Nickel | 3.19 | ug/L | | 0.25 | 1 |
| 8/28/2006 8:45 | Effluent | Metals-Water | Selenium | 0.5 | ug/L | U | 0.5 | 2 |
| 8/28/2006 8:45 | Effluent | Metals-Water | Silver | 0.025 | ug/L | U | 0.025 | 0.1 |
| 8/28/2006 8:45 | Effluent | Metals-Water | Zinc | 11 | ug/L | I | 3 | 12 |
| 8/28/2006 9:11 | Blank | Metals-Water | Aluminum | 4 | ug/L | U | 4 | 16 |
| 8/28/2006 9:11 | Blank | Metals-Water | Arsenic | 0.5 | ug/L | U | 0.5 | 2 |
| 8/28/2006 9:11 | Blank | Metals-Water | Cadmium | 0.05 | ug/L | U | 0.05 | 0.2 |
| 8/28/2006 9:11 | Blank | Metals-Water | Calcium | 0.02 | mg/L | U | 0.02 | 0.08 |
| 8/28/2006 9:11 | Blank | Metals-Water | Chromium | 0.3 | ug/L | U | 0.3 | 1.2 |
| 8/28/2006 9:11 | Blank | Metals-Water | Copper | 2 | ug/L | U | 2 | 8 |
| 8/28/2006 9:11 | Blank | Metals-Water | Iron | 5 | ug/L | U | 5 | 20 |
| 8/28/2006 9:11 | Blank | Metals-Water | Lead | 0.2 | ug/L | U | 0.2 | 0.8 |
| 8/28/2006 9:11 | Blank | Metals-Water | Magnesium | 0.005 | mg/L | U | 0.005 | 0.02 |
| 8/28/2006 9:11 | Blank | Metals-Water | Nickel | 0.53 | ug/L | I | 0.25 | 1 |
| 8/28/2006 9:11 | Blank | Metals-Water | Selenium | 0.5 | ug/L | U | 0.5 | 2 |
| 8/28/2006 9:11 | Blank | Metals-Water | Silver | 0.025 | ug/L | U | 0.025 | 0.1 |
| 8/28/2006 9:11 | Blank | Metals-Water | Zinc | 3 | ug/L | U | 3 | 12 |
| 8/28/2006 8:45 | Effluent | Nutrients-Liquid | Ammonia-N | 0.2 | mg N/L | A | 0.01 | 0.02 |
| 8/28/2006 8:45 | Effluent | Nutrients-Liquid | Kjeldahl Nitrogen | 0.95 | mg N/L | A | 0.16 | 0.4 |
| 8/28/2006 8:45 | Effluent | Nutrients-Liquid | NO2NO3-N | 0.97 | mg N/L | | 0.04 | 0.1 |
| 8/28/2006 8:45 | Effluent | Nutrients-Liquid | O-Phosphate-P | 0.17 | mg P/L | | 0.008 | 0.02 |
| 8/28/2006 8:45 | Effluent | Nutrients-Liquid | TSS | 4 | mg/L | U | 4 | 16 |
| 8/28/2006 8:45 | Effluent | Nutrients-Liquid | Total-P | 0.24 | mg P/L | A | 0.02 | 0.06 |
| 8/28/2006 9:11 | Blank | Nutrients-Liquid | Ammonia-N | 0.01 | mg N/L | U | 0.01 | 0.02 |
| 8/28/2006 9:11 | Blank | Nutrients-Liquid | Kjeldahl Nitrogen | 0.08 | mg N/L | U | 0.08 | 0.2 |
| 8/28/2006 9:11 | Blank | Nutrients-Liquid | NO2NO3-N | 0.004 | mg N/L | U | 0.004 | 0.01 |
| 8/28/2006 9:11 | Blank | Nutrients-Liquid | O-Phosphate-P | 0.004 | mg P/L | U | 0.004 | 0.01 |

## Appendix E. (continued)

| Date Sampled | Field ID | Analysis Group | Component | Result | Units | Remark | MDL | PQL |
|---|---|---|---|---|---|---|---|---|
| 8/28/2006 9:11 | Blank | Nutrients-Liquid | Total-P | 0.02 | mg P/L | U | 0.02 | 0.06 |

**The Bioassay of Winter Garden Wastewater Treatment Facility effluent sampled on August 28, 2006. NPDES #FL0020109.**

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 2 0 1 0 9 11 | 12 0 6 0 8 2 8 | 18 **B** | 19 **S** | 20 1 |

Remarks

66

**The Priority Pollutants Analysis of Winter Garden Wastewater Treatment Facility effluent sampled on August 28, 2006. NPDES #FL0020109.**

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 2 0 1 0 9 11 | 12 0 6 0 8 2 8 | 18 **X** | 19 **S** | 20 1 |

Remarks

66

**Biological Analyses of Winter Garden Wastewater Treatment Facility effluent sampled on August 28, 2006. NPDES #FL0020109.**

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 2 0 1 0 9 11 | 12 0 6 0 8 2 8 | 18 **S** | 19 **S** | 20 1 |

Remarks

66