


**Effluent Quality Assessment**

# Bridgeway Acres Class I Landfill

Pinellas County

NPDES #FL0168505

Sampled August 11, 2008

February 2009

**Biology Section**
**Bureau of Laboratories**
**Division of Environmental Assessment and Restoration**

Quality Manual No. 870346G
NELAC Certification No. E31780

Bridgeway Acres Class I Landfill, 3095 114th Avenue North, St. Petersburg, Pinellas County, Florida, 33716. NPDES #FL0168505. Effluent samples for this facility were collected on August 11, 2008.

## Introduction

Bridgeway Acres Class I Landfill is a landfill which operates a power plant. The facility operates a small wastewater treatment plant which is used to treat strong leachate that is generated when a new cell is cut in the landfill. The treated wastewater is recycled to the power plant as process make-up water. There is a collection system surrounding the entire site which includes three retention ponds (A, B and C) interconnected with canals. The collection system captures non-contact stormwater from the landfill areas and leachate from the landfill. Pond A is the final collection point for stormwater and leachate. The wastewater in Pond A either evaporates or is recycled to the power plant. Effluent discharge from the facility is intermittent and rainfall dependent. During emergency situations, wastewater is discharged off-site through Outfall D-001 to the Class III freshwaters of the Mainlands Canal. The point of discharge for Outfall D-001 is located approximately at latitude 27º 52' 43.1" N, longitude 82º 41' 21.0" W. The facility does not have a design flow. The last discharge from the facility occurred from February 16 – 28, 2006. The AADF for this period was 4.419 million gallons per day. The wastewater treatment system consists of:

- a chlorine contact chamber;
- a lined-aeration pond; and,
- a settling pond.

The facility has no Administrative Orders, Consent Orders or mixing zones. A review of Discharge Monitoring Report (DMR) data for the past year, revealed no permit violations. (Facility information provided by Jason Cohen of FDEP Southwest District.)

## Methods

Samples were collected from the EFF-1 NPDES sampling point for Outfall D-001 by Jason Cohen and Peter Wenner (FDEP Southwest District) following DEP-SOP-001/01 FS 2400 Wastewater Sampling. All DEP SOPs are available on the web at: http://www.floridadep.org/labs/qa/sops.htm.

See Appendix A for the completed chain of custody form.

The 96 - hour 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.

Prior to test initiation, bioassay samples were aerated for 20 minutes at approximately 100 bubbles per minute, to decrease the dissolved oxygen concentration from 9.5 mg/L to 8.0 mg/L.

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

## Toxicity Test Results

Tests were performed August 12 - 16, 2008.

| | |
|---|---|
| *Ceriodaphnia dubia* 96-hour acute definitive bioassay – | $LC_{50}$ > 100%, 0% mortality in 100% sample at 96 hours |
| *Pimephales promelas* 96-hour acute definitive bioassay – | $LC_{50}$ > 100%, 0% mortality in 100% sample at 96 hours |

The bioassay samples were 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 salinity-adjusted effluent AGP was 3.0 U (U - Material was analyzed for but not detected; the report value is the minimum detection limit) mg dry wt/L of the saltwater species *Dunaliella tertiolecta.* Raschke and Shultz found that AGP values above 10.0 mg dry weight/L represent a “problem” threshold for marine receiving waters, implying nutrient enrichment (personal communication, Marshall Faircloth, et. al. FDEP, with Ron Raschke USEPA Region 4 1987). Based on the ratio of total nitrogen to total phosphorus, the analytical chemistry suggests that the effluent is phosphorus-limited. The ratio of inorganic nitrogen to orthophosphate could not be calculated since orthophosphate was not detected in the effluent (Table 1; Maloney et al. 1974).

Due to the apparent salinity of the sample, an AGP test with the freshwater species, *Pseudokirchneriella subcapitata*, was not performed. However, an inference can be made that the freshwater problem threshold of 5 mg dry wt/L (Raschke and Schultz, 1987) also would not have been exceeded.

See Table 1 for AGP results.

## Chemistry Results

Total residual chlorine (TRC) and total ammonia were not detected in the bioassay sample in the laboratory. The effluent TRC concentration as measured in the field was 0.15 mg/L. Total ammonia was not detected in the sample collected and preserved for chemical analysis.

Arsenic, cadmium, copper, lead, and nickel were detected in the effluent at levels that comply with Class III fresh water quality criteria (62-302.530, F.A.C.). Aluminum, chromium-III, iron and zinc were detected between the laboratory method detection limits (MDL) and practical quantitation limits (PQL). The effluent chlorophyll *a* concentration was very high, at 290 μg/L (Table 2).

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

## Conclusion

The effluent sample collected from the EFF-1 NPDES sampling point for Outfall D-001 for this facility on August 11, 2008, was not acutely toxic to either test species during the 96-hour acute definitive bioassays. The saltwater AGP result for the effluent suggests that AGP would likely be less than the "problem” threshold for fresh receiving waters. Effluent water quality samples did not exceed any applicable water quality standards or violate any permit conditions.

## Literature Cited

Maloney, T. E., W. E. Miller, and D. T. Specht. 1974. The Marine Algal Assay Procedure: Bottle Test. National Environmental Research Center Office of Research and Development. U. S. EPA, Corvallis, Oregon. 43 p.

**Table 1. Measured algal growth potential (AGP; mg dry weight/L) of the saltwater species *Dunaliella tertiolecta* and ratios of nitrogen to phosphorus for samples collected from the Bridgeway Acres Class I Landfill on August 11, 2008.**

| Bridgeway Acres Class I Landfill | | | | |
|---|---|---|---|---|
| **Location** | **AGP (measured)** | | **Inorganic N:P ratio** | **Total N:P ratio** |
| Pond Effluent Intake* | 3.0 | U | NC | 36.2 |

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

* - sample salinity adjusted to 7ppt

NC - ratio could not be calculated since orthophosphate was not detected in the effluent

**Table 2. Effluent limits, Class III Freshwater Criteria and chemical data for samples collected from the Bridgeway Acres Class I Landfill on August 11, 2008.**

| Bridgeway Acres Class I Landfill NPDES# FL0168505 | Class III Criteria | Effluent Limits | Pond Effluent Intake | |
|---|---|---|---|---|
| **Organic Constituents (µg/L)** | | | | |
| None Detected | - | - | None Detected | |
| **Metals (µg/L unless otherwise noted)** | | | | |
| Aluminum | - | - | 61 | I |
| Arsenic | ≤ 50 | - | 4.2 | |
| Cadmium | ≤ 0.8 b | Report | 0.1 | |
| Calcium (mg/L) | - | - | 220 | |
| Chromium-III | ≤ 268.2 b | Report | 0.52 | I |
| Copper | ≤ 30.5 b | Report | 3 | |
| Iron | ≤ 1,000 | Report | 120 | I |
| Lead | ≤ 18.6 b | Report | 1.7 | |
| Magnesium (mg/L) | - | - | 22.7 | |
| Nickel | ≤ 168.5 b | Report | 3.45 | |
| Selenium | ≤ 5.0 | - | 0.5 | U |
| Silver | ≤ 0.07 | - | 0.025 | U |
| Zinc | ≤ 387.8 b | Report | 10 | I |
| **Nutrients (mg/L)** | | | | |
| Ortho-phosphate | - | - | 0.004 | U |
| Total Phosphorus | - | Report | 0.13 | |
| Total Ammonia | - | Report | 0.01 | U |
| Un-ionized Ammonia | ≤ 0.02 s | ≤ 0.02 s | ≤ 0.02 | c |
| Nitrate and Nitrite | - | - | 0.004 | I |
| Total Kjeldahl Nitrogen | - | - | 4.7 | |
| Organic Nitrogen | - | - | 4.7 | c |
| Total Nitrogen | - | Report | 4.704 | c |
| **General Physical and Chemical Parameters** | | | | |
| Dissolved Oxygen (mg/L) | ≥ 5.0 | ≥ 5.0 s | 7.1 | |
| pH (SU) | 6.0 - 8.5 | 6.0 - 8.5 s | 8.0 | |
| Conductivity (µmhos/cm) | ≤ 1,275 | | 3,502 | |
| Temperature °C | - | - | 30.4 | |
| Sample Depth (m) | - | - | 0.2 | |
| Total Residual Chlorine (mg/L) | ≤ 0.01 | - | 0.15 | |
| Chlorophyll a (µg/L) - Corrected | - | - | 290 | |
| Phaeophytin (µg/L) | - | - | 3.2 | U |
| Total Suspended Solids (mg/L) | - | - | 36 | |
| Turbidity (NTU) | < 29 t | - | 23 | |
| CBOD, 5 day (mg/L), N - inhibited | - | - | 12 | J |
| BOD, 5 day (mg/L), N - uninhibited | - | - | 20 | J |
| Flow (MGD) No discharge since Feb. 2006 | - | Report | 4.419 | * |
| Hardness (mg $CaCO_3$) | - | - | 642.82 | c |

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

t - Shall not exceed 29 NTUs above background

s - Single sample

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

J - Estimated value

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

* - Flow from February 16 - 28, 2006

# Florida Department of Environmental Protection

## Central Laboratory Sample Submittal Form

**Request Number: RQ-2008-08-04-61**
Bridgeway Acres

Event ID *

Requester: Michael Tanski
Field Report Prepared By:

**Customer: SW-DIST**
Collected By: PETER WENNER, JASON COHEN
Send Final Report To Ilia Balcom

**Project ID: FYI3**
Sampling Agency: FDEP SWD

**PMAS: 1163**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Lab ID * | Location: POND EFFLUENT INTAKE | | | ☐ Comp ☑ Grab | Collection (begin) Date 8/11/08 Time 1050 Eastern Central | | Collection (end) Date Time Eastern Central | | Bottle Group(s)** A |
| | Field ID: 36636 | | | Tot Res Chlorine (mg/L): 0.15 | Diss Oxygen (mg/L): 7.09 | | Storet Station Number | | |
| | Matrix (Include type e.g. Salt, Fresh, etc): FRESH | Temp (C): 30.38 | pH: 7.98 | Sample Depth: 0.2 ☑ m ☐ ft | 482 | ☑ Salinity (PPTh) ☑ Sp Conductance (umho/cm): 3502 | NPDES Number | | |
| | Latitude: 28 ° 12 ' 45 " | Longitude: 82 ° 41 ' 22 " | | Comments: SAMPLES WERE COLLECTED @ THE BASE OF THE INTAKE STRUCTURE OUTFALL D-001 IS SUBMERGED IN MAINLAND CREEK | | | | | |
| Lab ID * | Location: FIELD BLANK | | | ☐ Comp ☑ Grab | Collection (begin) Date 8/11/08 Time 1030 Eastern Central | | Collection (end) Date Time Eastern Central | | Bottle Group(s)** B |
| | Field ID: ~~DI H2O~~ (FB) 36637 | | | Tot Res Chlorine (mg/L): | Diss Oxygen (mg/L): | | Storet Station Number | | |
| | Matrix (Include type e.g. Salt, Fresh, etc): DI $H_2O$ | Temp (C): | pH: | Sample Depth: ☐ m ☐ ft | | ☐ Salinity (PPTh) ☐ Sp Conductance (umho/cm): | NPDES Number | | |
| | Latitude: ° ' " | Longitude: ° ' " | | 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: ° ' " | Longitude: ° ' " | | 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: ° ' " | Longitude: ° ' " | | Comments: 2 Biossy Recd by Tox. JD. 8.12.08 1100 | | | | | |

| Relinquished By: | Date/Time | Shipping Method: | Received By: | Date/Time | Relinquished By: | Date/Time | Received By: | Date/Time |
|---|---|---|---|---|---|---|---|---|
| | 8/11/08 1600 | DHL | | 8/12/08 0905 | | | | |

* Shaded Areas for Lab use only.

** Please see reverse side for Bottle Group information.

last revised October 1, 2003

# FDEP Biology Laboratory - Acute Definitive Bioassay Bench Sheets

Facility: Bridgeway Acres Class I Landfill
Address: 3095 114th Ave North
City: St. Petersburg County: Pinellas
Contact/District: Peter Wenner / Southwest
NPDES Permit #: FL 0168505
LIMS Job #: TLH-2008-08-12-87-01 LIMS Sample #: 1122869
Lims Data Entry: 8-19-08 MF Data Entry Verification: 8.20.08 BA

Sample Collection: Date: 8.11.08 Time: 1050
Hold Time Start: Date: 8.11.08 Time: 1050

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: 9.5 mg/L Final DO: 8.0 mg/L Duration: 20 minutes Rate: ~100 bubbles/min
Salinity adjusted (Test 1): yes (no) Initial Salinity: ____ Final Salinity: ____ Salts Hypersaline brine
Salinity adjusted (Test 2): yes (no) Initial Salinity: ____ Final Salinity: ____ Salts Hypersaline brine
Dechlorination: yes (no) ____mL of 0.025N Sodium Thiosulfate per liter of sample. Final TRC: ____

Light Intensity : 50 - 100 ft. candles
Photoperiod : 16 light 8 dark
Temperature Range °C:
Incubator # 2 min 25.4 max 26.5 mean 26.0
Incubator # ____ min ____ max ____ mean ____
Room B246 min 24.9 max 26.0 mean 25.5

**Sample Validation:**

Temperature: Shipped ≤6°C (Yes) No Hand Delivered: Cooling (received °C < collected °C) NA MF 8-21-08 (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
Bruce Abney
Marshall Faircloth

Loretta C. Wolfe
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 | | 0.15 | DR100 HACH | PW/JC | BA |
| Lab Total Residual $Cl_2$ (mg/L): | <0.03 | <0.03 | | | | <0.03 | HACH | JD | BA |
| Alkalinity (mg/L as $CaCO_3$): | 89 | 98 | | | | 99 | HACH | BA | JD |
| Hardness (mg/L as $CaCO_3$): | 83 | 103 | | | | 600 | HACH | BA | JD |
| Total Ammonia (mg/L as N): | <0.017 | <0.017 | | | | <0.017 | DENVER | MF | JD |
| Salinity (ppth): | — | — | | | | 1.88 | YSI / Mettler | JD | BA |

V 1.4 9/12/05

## Appendix B. (continued)

FDEP Biology Laboratory - Bioassay Survival Bench Sheet

LIMS Sample #: 1122869 Test #: 1/2 Test Started: Date 8.12.08 Time: 1245
Organism: Mysid SOP #: TA 07_01 Test Ended: Date 8-16-08 Time: 1308
Organism Batch: 29-08 Diluent/ Batch: DMW / B.5.08
Organism Age: 24hours Food: YCT P. subcapitata Artemia
Chamber Size: 30 mL Batch: 6-18-08 7-18-08 —
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 | 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 |
| 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 |
| 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 |
| 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 |
| 50% | A | A | 5 | 5 | 4 1D | 4 | 4 | 4 |
| | B | B | 5 | 5 | 5 | 5 | 5 | 5 |
| | C | C | 5 | 5 | 4 1D | 4 | 4 | 4 |
| | 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 | 4 1D | 4 | 2 2D | 2 |
| | D | D | 5 | 5 | 5 | 5 | 2 2D | 2 |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| Organisms loaded by: MF | Checked by: | | BB | DA | BA | BA | DB | MF |
| Loading Verified by: BA | | | | | | | | |

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

Comments:

**Test Results:**
% mortality in 100% sample: 30 %
$LC_{50}$: >100% If Calculated: 95% CI_____ Method:_____

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

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## Appendix B. (continued)

### FDEP Biology Laboratory - Bioassay Survival Bench Sheet

LIMS Sample #: 1122869 Test #: 2/2 Test Started: Date 8.12.08 Time: 1325
Organism: Pimephales SOP #: TA 07_ 02 Test Ended: Date 8-16-08 Time: 1330
Organism Batch: 8.12.08 Diluent/ Batch: MHW / 8.4.08
Organism Age: 9 days Food: YCT P. subcapitata Artemia
Chamber Size: 1000 mL Batch: lot 38438 Batch MF
Test Volume: 500 mL Feeding: Prior to test Prior to renewal - Daily 127 + 127 48hr 128

| Concentration | Replicate | Chamber # | Test Hour 0 hr | 24 hr | 48 hr BR | 48 hr AR | 72 hr | 96 hr |
|---|---|---|---|---|---|---|---|---|
| Ctrl | A | C13 | 10 | 10 | 10 | 10 | 10 | 10 |
| | B | C14 | 10 | 10 | 10 | 10 | 10 | 10 |
| | | | | | | | | |
| | | | | | | | | |
| 6.25% | A | C15 | 10 | 10 | 10 | 10 | 10 | 10 |
| | B | C16 | 10 | 10 | 10 | 10 | 10 | 10 |
| | | | | | | | | |
| | | | | | | | | |
| 12.5% | A | C17 | 10 | 10 | 10 | 10 | 10 | 10 |
| | B | C18 | 10 | 10 | 10 | 10 | 10 | 10 |
| | | | | | | | | |
| | | | | | | | | |
| 25% | A | C19 | 10 | 10 | 10 | 10 | 10 | 10 |
| | B | C20 | 10 | 10 | 10 | 10 | 10 | 10 |
| | | | | | | | | |
| | | | | | | | | |
| 50% | A | C21 | 10 | 10 | 10 | 10 | 10 | 10 |
| | B | C22 | 10 | 10 | 10 | 10 | 10 | 10 |
| | | | | | | | | |
| | | | | | | | | |
| 100% | A | C23 | 10 | 10 | 10 | 10 | 10 | 10 |
| | B | C24 | 10 | 10 | 10 | 10 | 10 | 10 |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| Organisms loaded by: JD | | Checked by: | JD | JD | JD | JD | JD | MF |
| Loading Verified by: BA | | | | | | | | |

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

Comments:

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

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

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## FDEP Biology Laboratory - Bioassay Parameter Bench Sheet

**LIMS Sample # :** 112286 9 **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 | M | | A | M | | A |
| pH (S.U.) | 8.1 | | 8.0 | 7.9 | | 8.1 |
| Temperature °C | 24.0 | | 24.0 | 24.0 | | 24.6 |
| Dissolved Oxygen mg/L | 7.8 | | 7.0 | 7.4 | | 7.6 |
| Conductivity (µmhos) mmhos | 174 | | 198 | 177 | | 178 |
| (initials) Measured by: | BA | | BA | BA | | MF |
| (initials) Recorded by: | BA | | BA | BA | | MF |

Comments: M: Meter via BA 8-21-25

CTRL = control

| Concentration 6.25% | 0 Hr. | 24 Hr. | 48 Hr. before renewal | 48 Hr. after renewal | 72 Hr. | 96 Hr. |
|---|---|---|---|---|---|---|
| Replicate | M | | A | M | | A |
| pH (S.U.) | 8.1 | | 7.9 | 8.0 | | 8.1 |
| Temperature °C | 24.0 | | 24.0 | 24.2 | | 24.3 |
| Dissolved Oxygen mg/L | 7.8 | | 7.1 | 7.5 | | 7.7 |
| Conductivity (µmhos) mmhos | 399 | | 432 | 422 | | 480 |
| (initials) Measured by: | BA | | BA | BA | | MF |
| (initials) Recorded by: | BA | | BA | BA | | MF |

Comments:

| Concentration 12.5% | 0 Hr. | 24 Hr. | 48 Hr. before renewal | 48 Hr. after renewal | 72 Hr. | 96 Hr. |
|---|---|---|---|---|---|---|
| Replicate | M | | A | M | | A |
| pH (S.U.) | 8.1 | | 8.0 | 8.0 | | 8.1 |
| Temperature °C | 24.0 | | 24.0 | 24.3 | | 24.2 |
| Dissolved Oxygen mg/L | 7.1 | | 7.0 | 7.4 | | 7.6 |
| Conductivity (µmhos) mmhos | 609 | | 652 | 669 | | 750 |
| (initials) Measured by: | BA | | BA | BA | | MF |
| (initials) Recorded by: | BA | | BA | BA | | MF |

Comments:

| Concentration 25% | 0 Hr. | 24 Hr. | 48 Hr. before renewal | 48 Hr. after renewal | 72 Hr. | 96 Hr. |
|---|---|---|---|---|---|---|
| Replicate | M | | A | M | | A |
| pH (S.U.) | 8.1 | | 8.0 | 8.0 | | 8.0 |
| Temperature °C | 24.0 | | 24.0 | 24.2 | | 24.2 |
| Dissolved Oxygen mg/L | 7.8 | | 6.9 | 7.2 | | 7.6 |
| Conductivity (µmhos) mmhos | 1075 | | 1116 | 1072 | | 1207 |
| (initials) Measured by: | BA | | BA | BA | | MF |
| (initials) Recorded by: | BA | | BA | BA | | MF |

Comments:

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## FDEP Biology Laboratory - Bioassay Parameter Bench Sheet

LIMS Sample # : 1122869 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 | M | | A | M | | A |
| pH (S.U.) | 8.0 | | 8.0 | 8.0 | | 8.0 |
| Temperature °C | 24.0 | | 24.0 | 24.1 | | 24.2 |
| Dissolved Oxygen mg/L | 7.8 | | 6.9 | 7.2 | | 7.6 |
| Conductivity (µmhos) mmhos | 1910 | | 2030 | 1862 | | 2100 |
| (initials) Measured by: | BA | | BA | BA | | MF |
| (initials) Recorded by: | BA | | BA | BA | | MF |

Comments:

| Concentration 100% | 0 Hr. | 24 Hr. | 48 Hr. before renewal | 48 Hr. after renewal | 72 Hr. | 96 Hr. |
|---|---|---|---|---|---|---|
| Replicate | M | | A | M | | A |
| pH (S.U.) | 8.0 | | 8.0 | 7.9 | | 8.0 |
| Temperature °C | 24.0 | | 24.0 | 24.0 | | 24.4 |
| Dissolved Oxygen mg/L | 7.8 | | 6.7 | 7.2 | | 7.6 |
| Conductivity (µmhos) mmhos | 3590 | | 3920 | 3540 | | 3720 |
| (initials) Measured by: | BA | | BA | BA | | MF |
| (initials) Recorded by: | BA | | BA | BA | | MF |

Comments:

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

Comments:

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

Comments:

V 2.0 2/24/04

Page 00001927

## FDEP Biology Laboratory - Bioassay Parameter Bench Sheet

LIMS Sample # : 1122869 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 | A | A | B | A |
| pH (S.U.) | 8.1 | 7.5 | 7.7 | 8.0 | 7.4 | 7.9 |
| Temperature °C | 24.3 | 24.1 | 24.5 | 24.2 | 24.4 | 24.6 |
| Dissolved Oxygen mg/L | 7.9 | 6.7 | 6.8 | 7.4 | 5.2 | 7.2 |
| Conductivity (µmhos) mmhos | 333 | 359 | 378 | 344 | 342 | 360 |
| (initials) Measured by: | JD | JD | JD | JD | JD | MF |
| (initials) Recorded by: | JD | JD | JD | JD | JD | MF |

Comments:
CTRL = control

| Concentration 6.25% | 0 Hr. | 24 Hr. | 48 Hr. before renewal | 48 Hr. after renewal | 72 Hr. | 96 Hr. |
|---|---|---|---|---|---|---|
| Replicate | A | B | A | A | B | A |
| pH (S.U.) | 8.1 | 7.5 | 7.6 | 8.0 | 7.4 | 7.7 |
| Temperature °C | 24.6 | 24.5 | 24.4 | 24.3 | 24.6 | 24.6 |
| Dissolved Oxygen mg/L | 7.9 | 6.5 | 6.7 | 7.5 | 5.2 | 6.6 |
| Conductivity (µmhos) mmhos | 574 | 558 | 617 | 599 | 599 | 622 |
| (initials) Measured by: | JD | JD | JD | JD | JD | MF |
| (initials) Recorded by: | JD | JD | JD | JD | JD | MF |

Comments:

| Concentration 12.5% | 0 Hr. | 24 Hr. | 48 Hr. before renewal | 48 Hr. after renewal | 72 Hr. | 96 Hr. |
|---|---|---|---|---|---|---|
| Replicate | A | B | A | A | B | A |
| pH (S.U.) | 8.1 | 7.5 | 7.6 | 8.0 | 7.4 | 7.7 |
| Temperature °C | 24.7 | 24.4 | 24.6 | 24.3 | 24.2 | 24.8 |
| Dissolved Oxygen mg/L | 7.9 | 6.4 | 6.8 | 7.6 | 5.2 | 6.4 |
| Conductivity (µmhos) mmhos | 732 | 769 | 791 | 787 | 783 | 804 |
| (initials) Measured by: | JD | JD | JD | JD | JD | MF |
| (initials) Recorded by: | JD | JD | JD | JD | JD | MF |

Comments:

| Concentration 25% | 0 Hr. | 24 Hr. | 48 Hr. before renewal | 48 Hr. after renewal | 72 Hr. | 96 Hr. |
|---|---|---|---|---|---|---|
| Replicate | A | B | A | A | B | A |
| pH (S.U.) | 8.1 | 7.5 | 7.6 | 8.0 | 7.3 | 7.7 |
| Temperature °C | 25.0 | 24.3 | 24.5 | 24.4 | 24.1 | 24.7 |
| Dissolved Oxygen mg/L | 8.0 | 6.6 | 6.6 | 7.6 | 4.4 | 5.3 |
| Conductivity (µmhos) mmhos | 1209 | 1229 | 1266 | 1289 | 1296 | 1324 |
| (initials) Measured by: | JD | JD | JD | JD | JD | MF |
| (initials) Recorded by: | JD | JD | JD | JD | JD | MF |

Comments:

00002828 mL

V2.0 2/21/14

## FDEP Biology Laboratory - Bioassay Parameter Bench Sheet

**LIMS Sample # :** 1122869 **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 | A | A | B | A |
| pH (S.U.) | 8.1 | 7.5 | 7.7 | 8.0 | 7.3 | 7.5 |
| Temperature °C | 25.2 | 24.3 | 24.5 | 24.5 | 24.3 | 24.8 |
| Dissolved Oxygen mg/L | 8.0 | 6.6 | 6.9 | 7.6 | 4.7 | 4.6 |
| Conductivity µmhos (mmhos) | 1884 | 1900 | 1935 | 2020 | 2000 | 2040 |
| (initials) Measured by: | JD | JD | JD | JD | JD | MF |
| (initials) Recorded by: | JD | JD | JD | JD | JD | MF |

Comments:

| Concentration 100% | 0 Hr. | 24 Hr. | 48 Hr. before renewal | 48 Hr. after renewal | 72 Hr. | 96 Hr. |
|---|---|---|---|---|---|---|
| Replicate | A | B | A | A | B | A |
| pH (S.U.) | 8.0 | 7.7 | 7.8 | 8.0 | 7.3 | 7.4 |
| Temperature °C | 25.9 | 24.3 | 24.5 | 24.6 | 24.1 | 24.7 |
| Dissolved Oxygen mg/L | 8.0 | 6.6 | 6.7 | 7.7 | 5.0 | 4.5 |
| Conductivity µmhos (mmhos) | 3.61 | 3.49 | 3.57 | 3.65 | 3.64 | 3.7 |
| (initials) Measured by: | JD | JD | JD | JD | JD | MF |
| (initials) Recorded by: | JD | JD | JD | JD | JD | MF |

Comments:

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

Comments:

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

Comments:

## Appendix C. SRT Bench Sheets and Statistical Analysis

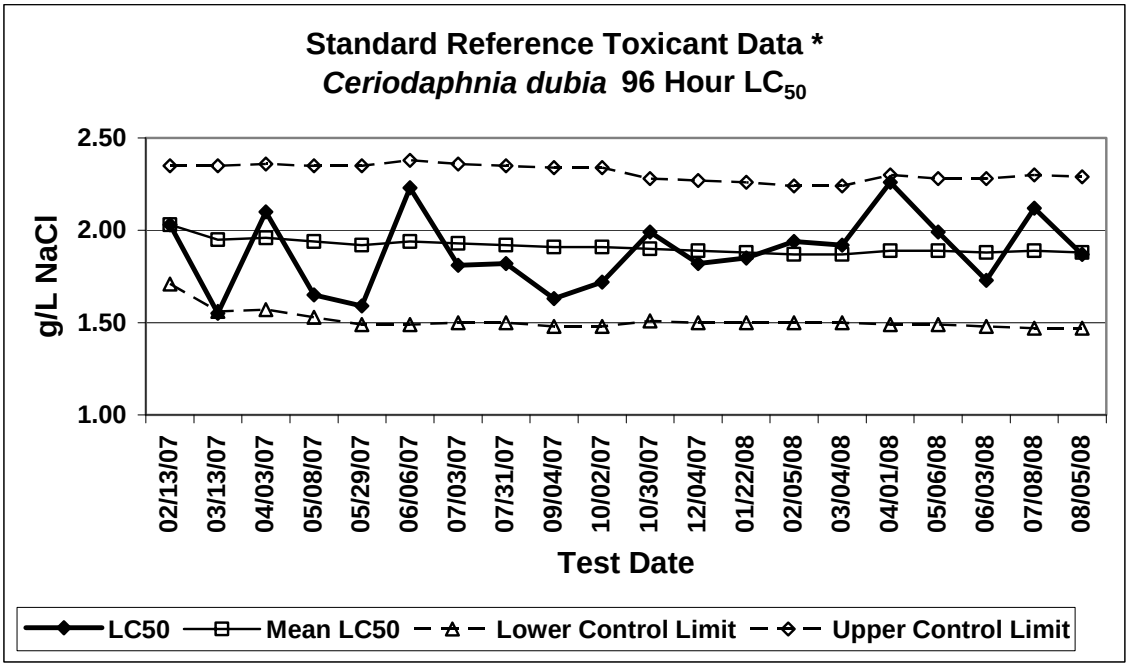
Florida Department of Environmental Protection
Bureau of Laboratories

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 |
|---|---|---|---|---|---|
| 02/13/07 | 2.03 | 2.03 | 0.16 | 1.71 | 2.35 |
| 03/13/07 | 1.55 | 1.95 | 0.20 | 1.56 | 2.35 |
| 04/03/07 | 2.10 | 1.96 | 0.19 | 1.57 | 2.36 |
| 05/08/07 | 1.65 | 1.94 | 0.20 | 1.53 | 2.35 |
| 05/29/07 | 1.59 | 1.92 | 0.22 | 1.49 | 2.35 |
| 06/06/07 | 2.23 | 1.94 | 0.22 | 1.49 | 2.38 |
| 07/03/07 | 1.81 | 1.93 | 0.22 | 1.50 | 2.36 |
| 07/31/07 | 1.82 | 1.92 | 0.21 | 1.50 | 2.35 |
| 09/04/07 | 1.63 | 1.91 | 0.22 | 1.48 | 2.34 |
| 10/02/07 | 1.72 | 1.91 | 0.21 | 1.48 | 2.34 |
| 10/30/07 | 1.99 | 1.90 | 0.19 | 1.51 | 2.28 |
| 12/04/07 | 1.82 | 1.89 | 0.19 | 1.50 | 2.27 |
| 01/22/08 | 1.85 | 1.88 | 0.19 | 1.50 | 2.26 |
| 02/05/08 | 1.94 | 1.87 | 0.18 | 1.50 | 2.24 |
| 03/04/08 | 1.92 | 1.87 | 0.18 | 1.50 | 2.24 |
| 04/01/08 | 2.26 | 1.89 | 0.20 | 1.49 | 2.30 |
| 05/06/08 | 1.99 | 1.89 | 0.20 | 1.49 | 2.28 |
| 06/03/08 | 1.73 | 1.88 | 0.20 | 1.48 | 2.28 |
| 07/08/08 | 2.12 | 1.89 | 0.21 | 1.47 | 2.30 |
| 08/05/08 | 1.87 | 1.88 | 0.20 | 1.47 | 2.29 |

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

**CV = 10.87**
EPA reference 75th quartile CV = 29%



## Appendix C. (continued)

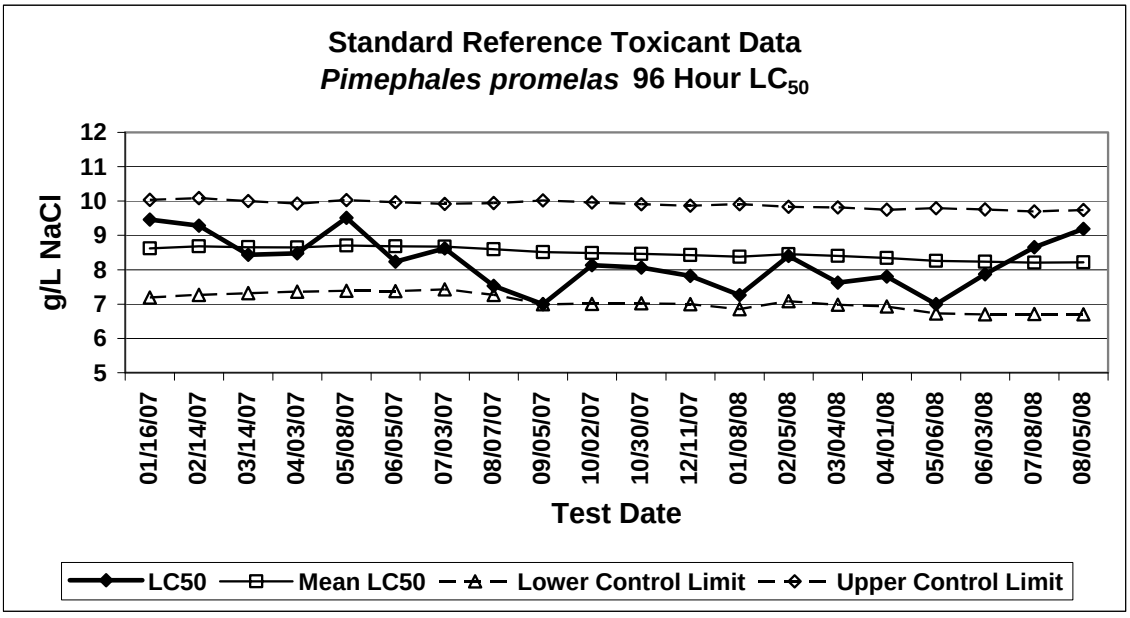
Florida Department of Environmental Protection
Bureau of Laboratories

Standard Reference Toxicant (SRT) Test Data - 96-hour Acute Toxicity
*Pimephales promelas* (fathead minnow) - Sodium Chloride (NaCl)

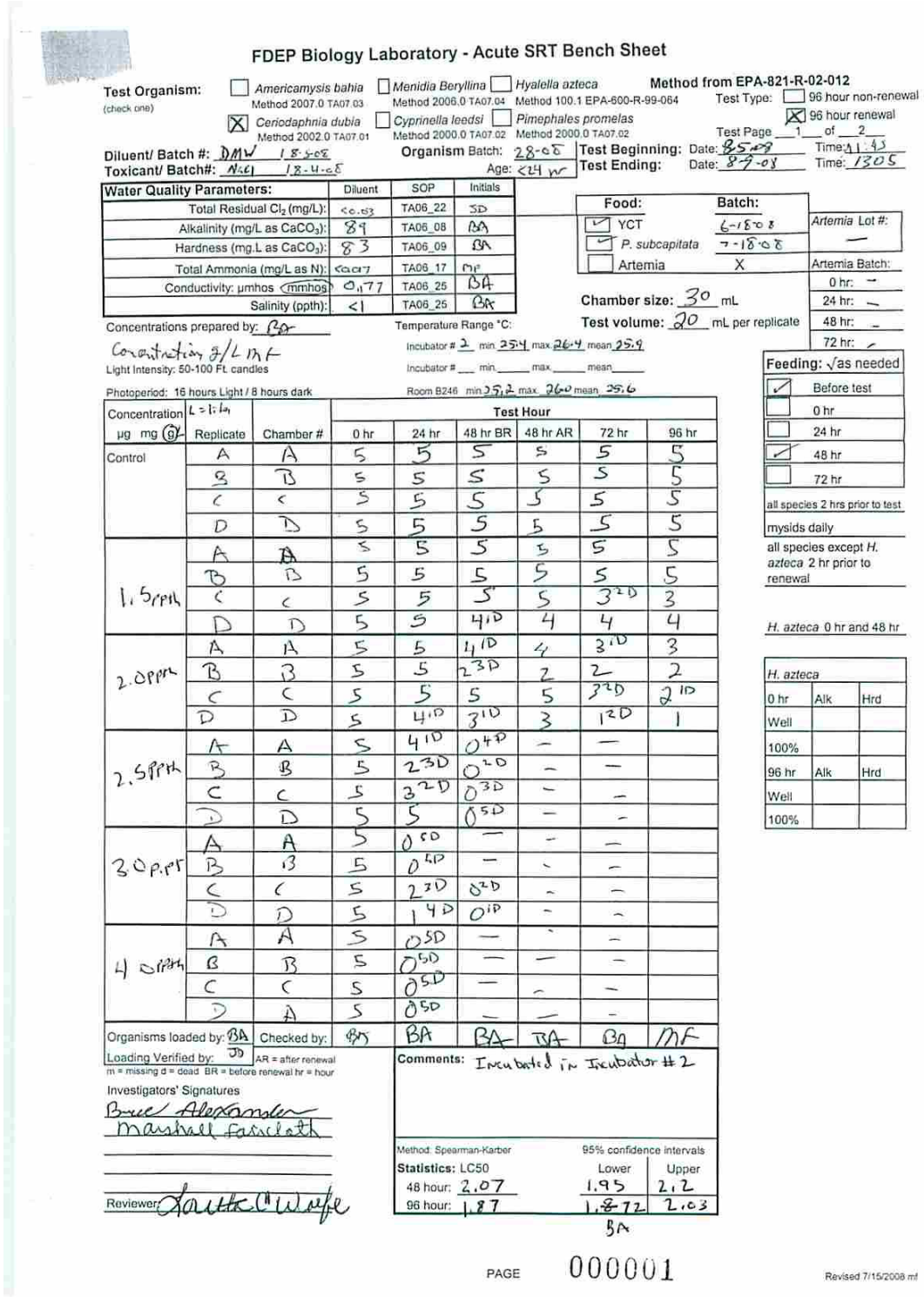
| Date | LC50 | Mean LC50 | Std Dev | Lower Control Limit | Upper Control Limit |
|---|---|---|---|---|---|
| 01/16/07 | 9.46 | 8.62 | 0.71 | 7.19 | 10.04 |
| 02/14/07 | 9.28 | 8.68 | 0.70 | 7.27 | 10.09 |
| 03/14/07 | 8.44 | 8.66 | 0.67 | 7.32 | 10.00 |
| 04/03/07 | 8.48 | 8.65 | 0.64 | 7.36 | 9.93 |
| 05/08/07 | 9.51 | 8.71 | 0.66 | 7.39 | 10.03 |
| 06/05/07 | 8.23 | 8.68 | 0.65 | 7.38 | 9.97 |
| 07/03/07 | 8.62 | 8.67 | 0.62 | 7.43 | 9.92 |
| 08/07/07 | 7.53 | 8.60 | 0.67 | 7.27 | 9.94 |
| 09/05/07 | 7.00 | 8.51 | 0.75 | 7 | 10.02 |
| 10/02/07 | 8.13 | 8.49 | 0.74 | 7.01 | 9.96 |
| 10/30/07 | 8.06 | 8.46 | 0.72 | 7.02 | 9.91 |
| 12/11/07 | 7.82 | 8.43 | 0.72 | 7 | 9.87 |
| 01/08/08 | 7.26 | 8.38 | 0.76 | 6.85 | 9.91 |
| 02/05/08 | 8.40 | 8.45 | 0.69 | 7.08 | 9.83 |
| 03/04/08 | 7.62 | 8.4 | 0.71 | 6.98 | 9.82 |
| 04/01/08 | 7.80 | 8.34 | 0.71 | 6.93 | 9.75 |
| 05/06/08 | 7.00 | 8.26 | 0.76 | 6.73 | 9.79 |
| 06/03/08 | 7.87 | 8.23 | 0.77 | 6.7 | 9.76 |
| 07/08/08 | 8.66 | 8.21 | 0.75 | 6.71 | 9.7 |
| 08/05/08 | 9.19 | 8.22 | 0.76 | 6.7 | 9.74 |

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

**CV = 9.26**
EPA reference 75th quartile CV = 19%



## Appendix C. (continued)



FDEP Biology Laboratory - Acute SRT Bench Sheet

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

Method from EPA-821-R-02-012

Test Type: ☐ 96 hour non-renewal ☒ 96 hour renewal

Test Page 1 of 2

Diluent/ Batch #: DMW 1.8.4-08

Toxicant/ Batch#: NaCl 1.8.4-08

Organism Batch: 28-08 Age: <24 hr

Test Beginning: Date: 8.5.08 Time: 11:45

Test Ending: Date: 8.9.08 Time: 1305

| Water Quality Parameters: | Diluent | SOP | Initials |
|---|---|---|---|
| Total Residual $Cl_2$ (mg/L): | <0.03 | TA06_22 | SD |
| Alkalinity (mg/L as $CaCO_3$): | 89 | TA06_08 | BA |
| Hardness (mg.L as $CaCO_3$): | 83 | TA06_09 | BA |
| Total Ammonia (mg/L as N): | <0.07 | TA06_17 | MF |
| Conductivity: µmhos (mmhos) | 0.177 | TA06_25 | BA |
| Salinity (ppth): | <1 | TA06_25 | BA |

Food: ☑ YCT ☑ P. subcapitata ☐ Artemia X

Batch: 6-180 8 7-18-08

Artemia Lot #: —

Artemia Batch:

0 hr: —

24 hr: —

48 hr: —

72 hr: —

Chamber size: 30 mL

Test volume: 20 mL per replicate

Concentrations prepared by: BA

Concentration g/L MF

Light Intensity: 50-100 Ft. candles

Photoperiod: 16 hours Light / 8 hours dark

Temperature Range °C:

Incubator # 2 min 25.4 max 26.4 mean 25.9

Incubator # ___ min ___ max ___ mean ___

Room B246 min 25.2 max 26.0 mean 25.6

Feeding: √as needed

☑ Before test 0 hr

☐ 24 hr

☑ 48 hr

☐ 72 hr

all species 2 hrs prior to test

mysids daily

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

*H. azteca* 0 hr and 48 hr

| Concentration µg mg (g) | Replicate | Chamber # | Test Hour 0 hr | 24 hr | 48 hr BR | 48 hr AR | 72 hr | 96 hr |
|---|---|---|---|---|---|---|---|---|
| Control | 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 |
| 1.5ppth | A | A | 5 | 5 | 5 | 5 | 5 | 5 |
| | B | B | 5 | 5 | 5 | 5 | 5 | 5 |
| | C | C | 5 | 5 | 5 | 5 | 3 2D | 3 |
| | D | D | 5 | 5 | 4 1D | 4 | 4 | 4 |
| 2.0ppth | A | A | 5 | 5 | 4 1D | 4 | 3 1D | 3 |
| | B | B | 5 | 5 | 2 3D | 2 | 2 | 2 |
| | C | C | 5 | 5 | 5 | 5 | 3 2D | 2 1D |
| | D | D | 5 | 4 1D | 3 1D | 3 | 1 2D | 1 |
| 2.5ppth | A | A | 5 | 4 1D | 0 4D | — | — | |
| | B | B | 5 | 2 3D | 0 2D | — | — | |
| | C | C | 5 | 3 2D | 0 3D | — | — | |
| | D | D | 5 | 5 | 0 5D | — | — | |
| 3.0ppth | A | A | 5 | 0 5D | — | — | — | |
| | B | B | 5 | 0 4D | — | — | — | |
| | C | C | 5 | 2 2D | 0 2D | — | — | |
| | D | D | 5 | 1 4D | 0 1D | — | — | |
| 4 ppth | A | A | 5 | 0 5D | — | — | — | |
| | B | B | 5 | 0 5D | — | — | — | |
| | C | C | 5 | 0 5D | — | — | — | |
| | D | A | 5 | 0 5D | — | — | — | |
| Organisms loaded by: BA | Checked by: | | BA | BA | BA | BA | BA | MF |
| Loading Verified by: JD | | | | | | | | |

AR = after renewal

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

| *H. azteca* | | |
|---|---|---|
| 0 hr | Alk | Hrd |
| Well | | |
| 100% | | |
| 96 hr | Alk | Hrd |
| Well | | |
| 100% | | |

Comments: Incubated in Incubator #2

Investigators' Signatures

Bruce Alexander

Marshall Faircloth

Reviewer: Laurie Wolfe

Method: Spearman-Karber

| Statistics: LC50 | 95% confidence intervals Lower | Upper |
|---|---|---|
| 48 hour: 2.07 | 1.95 | 2.12 |
| 96 hour: 1.87 | 1.872 | 2.03 |

BA

PAGE 000001

Revised 7/15/2008 mf

## Appendix C. (continued)

**FDEP Biology Laboratory - Acute SRT Bench Sheet**
0-96 hour parameters
**Method from EPA-821-R-02-012**

Test Page 2 of 2

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

**Test Beginning:** Date: 8.5.08 Time: 1145
**Test Ending:** Date: 8-9-08 Time: 1305

Test Type: ☐ 96 hour non-renewal ☒ 96 hour renewal

mf = Infection
hr = hour
AR = after renewal BR = before renewal

| Concentration µg mg (g)/L | Replicate | Chamber # | Test Time | pH (SU) | Temperature (° C) | Dissolved Oxygen (mg/L) | Conductivity ☐µmhos ☑mmhos |
|---|---|---|---|---|---|---|---|
| Control | M | – | 0 hr | 8.1 | 24.2 | 7.4 | 0.177 |
| | – | – | 24 hr | – | – | – | – |
| | A | – | 48 hr BR | 8.2 | 24.0 | 6.7 ~~7.5~~ ~~7.5~~ | 0.197 |
| | M | – | 48 hr AR | 8.0 | 24.0 | ~~BR~~ 6.7 7.5 | 0.181 |
| | | – | 72 hr | | | | |
| | A | – | 96 hr | 8.0 | 24.7 | 7.6 | 1.91 |
| 1.5 ppt | M | – | 0 hr | 8.1 | 24.4 | 7.4 | 2.92 |
| | – | – | 24 hr | – | – | – | – |
| | A | – | 48 hr BR | 8.1 | 24.0 | 6.8 | 2.16 |
| | M | – | 48 hr AR | 8.0 | 24.1 | 7.4 | 2.84 |
| | – | – | 72 hr | | | | ~~2.85~~ mf |
| | A | – | 96 hr | 8.0 | 24.7 | 7.4 | 2.85 |
| 2.0 ppt | M | – | 0 hr | 8.1 | 24.5 | 7.3 | 3.82 |
| | – | – | 24 hr | – | – | – | – |
| | A | – | 48 hr BR | 8.1 | 24.0 | 7.1 | 3.90 |
| | M | – | 48 hr AR | 8.0 | 24.2 | 7.4 | 3.73 |
| | – | – | 72 hr | | | | ~~3.80~~ mf |
| | A | – | 96 hr | 8.0 | 24.6 | 7.5 | 3.80 |
| 2.5 ppt | M | – | 0 hr | 8.1 | 24.4 | 7.3 | 4.70 |
| | – | – | 24 hr | – | – | – | – |
| | A | – | 48 hr BR | 8.1 | 24.0 | 7.1 | 4.84 |
| | | – | 48 hr AR | | | | |
| | | – | 72 hr | | | | |
| | | – | 96 hr | | | | |
| 3.0 ppt | M | – | 0 hr | 8.1 | 24.4 | 7.3 | 5.55 |
| | – | – | 24 hr | – | – | – | – |
| | A | – | 48 hr BR | 8.1 | 24.0 | 7.1 | 5.75 |
| | | – | 48 hr AR | | | | |
| | | – | 72 hr | | | | |
| | | – | 96 hr | | | | |
| 4 ppt | M | – | 0 hr | 8.1 | 24.3 | 7.2 | 7.24 |
| | A | – | 24 hr | 8.0 | 24.0 | 7.0 | 7.43 |
| | ~~A~~ | – | 48 hr BR | | | | |
| | | – | 48 hr AR | | | | |
| | | – | 72 hr | | | | |
| | | – | 96 hr | | | | |

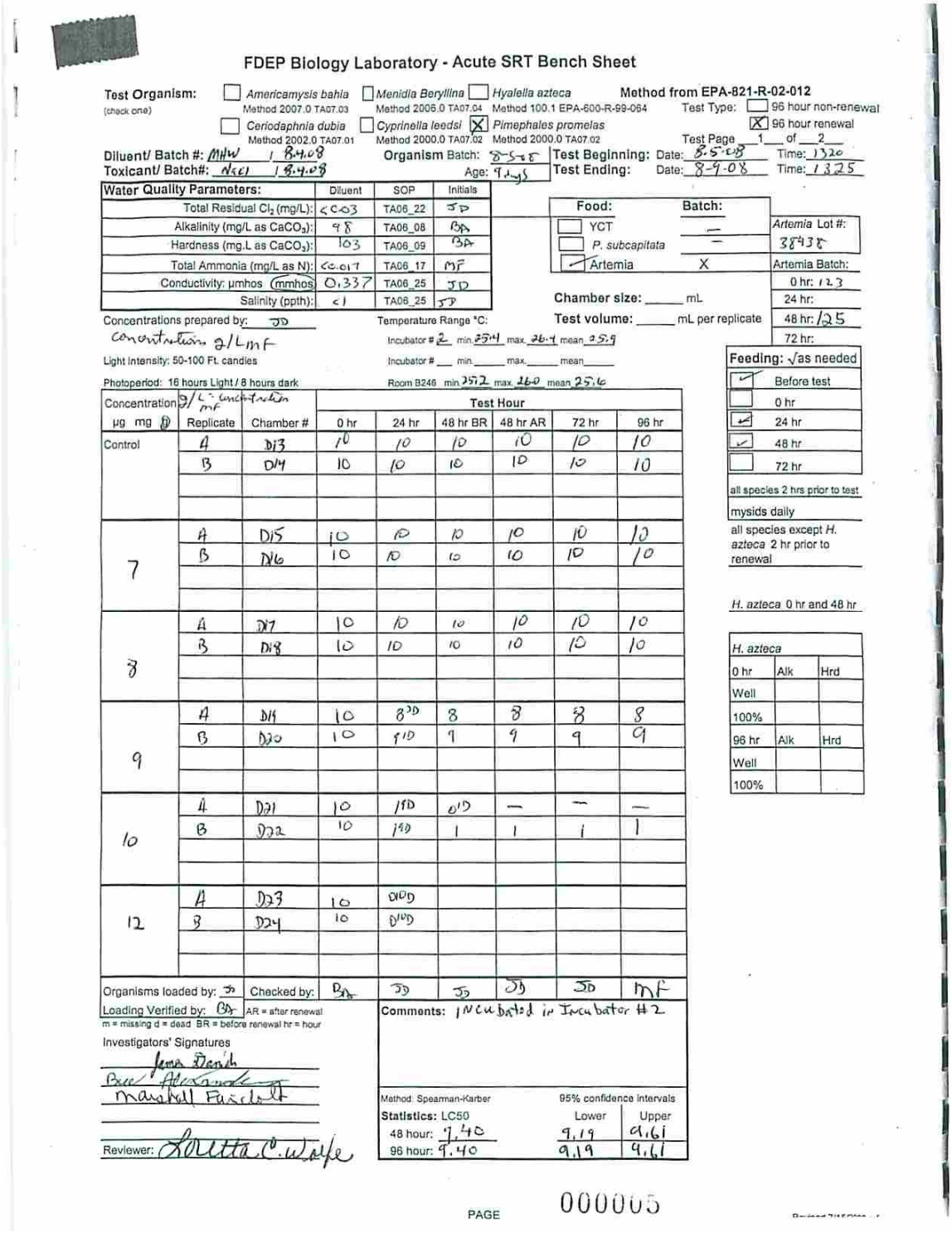
Investigators Signatures
Bu Alexander
Marshall Ausbrooks
Loretta C. Wolfe
Reviewed By:

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

Comments: M = Motor Vial BA

PAGE 000002

## Appendix C. (continued)



FDEP Biology Laboratory - Acute SRT Bench Sheet

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

Method from EPA-821-R-02-012

Test Type: ☐ 96 hour non-renewal ☒ 96 hour renewal

Test Page 1 of 2

Diluent/ Batch #: MHW / 8.4.08

Toxicant/ Batch#: NaCl / 8.4.08

Organism Batch: 8-5-08 Age: 9 days

Test Beginning: Date: 8-5-08 Time: 1320

Test Ending: Date: 8-9-08 Time: 1325

| Water Quality Parameters: | Diluent | SOP | Initials |
|---|---|---|---|
| Total Residual $Cl_2$ (mg/L): | <0.03 | TA06_22 | JD |
| Alkalinity (mg/L as $CaCO_3$): | 98 | TA06_08 | BA |
| Hardness (mg.L as $CaCO_3$): | 103 | TA06_09 | BA |
| Total Ammonia (mg/L as N): | <0.017 | TA06_17 | MF |
| Conductivity: µmhos (mmhos) | 0.337 | TA06_25 | JD |
| Salinity (ppth): | <1 | TA06_25 | JD |

| Food: | Batch: |
|---|---|
| ☐ YCT | — |
| ☐ P. subcapitata | — |
| ☑ Artemia | X |

Artemia Lot #: 3843

Artemia Batch:

0 hr: 123

24 hr:

48 hr: 125

72 hr:

Chamber size: _____ mL

Test volume: _____ mL per replicate

Concentrations prepared by: JD

Concentration g/L mf

Temperature Range °C:

Incubator # 2 min 25.4 max 26.4 mean 25.9

Incubator # ___ min _____ max _____ mean _____

Room B246 min 25.2 max 26.0 mean 25.6

Light Intensity: 50-100 Ft. candles

Photoperiod: 16 hours Light / 8 hours dark

Feeding: √as needed

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

all species 2 hrs prior to test

mysids daily

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

*H. azteca* 0 hr and 48 hr

| Concentration µg mg (d) | Replicate | Chamber # | Test Hour 0 hr | 24 hr | 48 hr BR | 48 hr AR | 72 hr | 96 hr |
|---|---|---|---|---|---|---|---|---|
| Control | A | D13 | 10 | 10 | 10 | 10 | 10 | 10 |
| | B | D14 | 10 | 10 | 10 | 10 | 10 | 10 |
| | | | | | | | | |
| | | | | | | | | |
| 7 | A | D15 | 10 | 10 | 10 | 10 | 10 | 10 |
| | B | D16 | 10 | 10 | 10 | 10 | 10 | 10 |
| | | | | | | | | |
| | | | | | | | | |
| 8 | A | D17 | 10 | 10 | 10 | 10 | 10 | 10 |
| | B | D18 | 10 | 10 | 10 | 10 | 10 | 10 |
| | | | | | | | | |
| | | | | | | | | |
| 9 | A | D19 | 10 | 8 D | 8 | 8 | 8 | 8 |
| | B | D20 | 10 | 9 D | 9 | 9 | 9 | 9 |
| | | | | | | | | |
| | | | | | | | | |
| 10 | A | D21 | 10 | 1 D | 0 D | — | — | — |
| | B | D22 | 10 | 1 D | 1 | 1 | 1 | 1 |
| | | | | | | | | |
| | | | | | | | | |
| 12 | A | D23 | 10 | 0 D | | | | |
| | B | D24 | 10 | 0 D | | | | |
| | | | | | | | | |
| | | | | | | | | |
| Organisms loaded by: JD | | Checked by: | BA | JD | JD | JD | JD | MF |

| *H. azteca* | | |
|---|---|---|
| 0 hr | Alk | Hrd |
| Well | | |
| 100% | | |
| 96 hr | Alk | Hrd |
| Well | | |
| 100% | | |

Loading Verified by: BA AR = after renewal

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

Comments: Incubated in Incubator #2

Investigators' Signatures

Jenna Darish

Brian Alexander

Marshall Fairchild

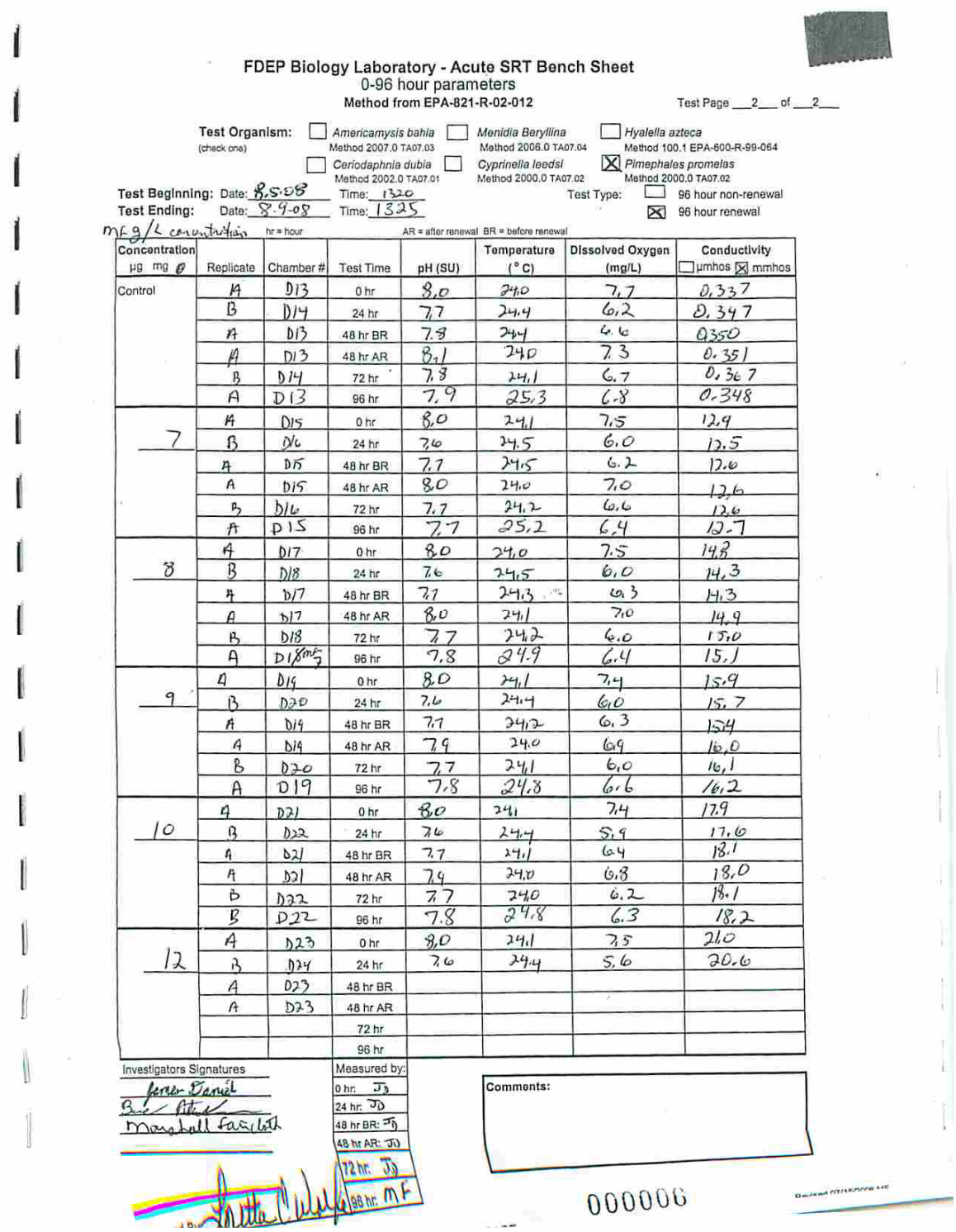
Reviewer: Loretta C. Wolfe

Method: Spearman-Karber

| Statistics: LC50 | 95% confidence intervals Lower | Upper |
|---|---|---|
| 48 hour: 9.40 | 9.19 | 9.61 |
| 96 hour: 9.40 | 9.19 | 9.61 |

PAGE 000005

## Appendix C. (continued)



FDEP Biology Laboratory - Acute SRT Bench Sheet
0-96 hour parameters
Method from EPA-821-R-02-012

Test Page 2 of 2

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

Test Beginning: Date: 8.5.08 Time: 1320
Test Ending: Date: 8.9.08 Time: 1325

Test Type: ☐ 96 hour non-renewal ☒ 96 hour renewal

mg/L concentration  hr = hour  AR = after renewal  BR = before renewal

| Concentration µg mg ∅ | Replicate | Chamber # | Test Time | pH (SU) | Temperature (° C) | Dissolved Oxygen (mg/L) | Conductivity ☐ µmhos ☒ mmhos |
|---|---|---|---|---|---|---|---|
| Control | A | D13 | 0 hr | 8.0 | 24.0 | 7.7 | 0.337 |
| | B | D14 | 24 hr | 7.7 | 24.4 | 6.2 | 0.347 |
| | A | D13 | 48 hr BR | 7.8 | 24.4 | 6.6 | 0350 |
| | A | D13 | 48 hr AR | 8.1 | 24.0 | 7.3 | 0.351 |
| | B | D14 | 72 hr | 7.8 | 24.1 | 6.7 | 0.367 |
| | A | D13 | 96 hr | 7.9 | 25.3 | 6.8 | 0.348 |
| 7 | A | D15 | 0 hr | 8.0 | 24.1 | 7.5 | 12.9 |
| | B | D16 | 24 hr | 7.6 | 24.5 | 6.0 | 12.5 |
| | A | D15 | 48 hr BR | 7.7 | 24.5 | 6.2 | 12.6 |
| | A | D15 | 48 hr AR | 8.0 | 24.0 | 7.0 | 12.6 |
| | B | D16 | 72 hr | 7.7 | 24.2 | 6.6 | 12.6 |
| | A | D15 | 96 hr | 7.7 | 25.2 | 6.4 | 12.7 |
| 8 | A | D17 | 0 hr | 8.0 | 24.0 | 7.5 | 14.8 |
| | B | D18 | 24 hr | 7.6 | 24.5 | 6.0 | 14.3 |
| | A | D17 | 48 hr BR | 7.7 | 24.3 | 6.3 | 14.3 |
| | A | D17 | 48 hr AR | 8.0 | 24.1 | 7.0 | 14.9 |
| | B | D18 | 72 hr | 7.7 | 24.2 | 6.0 | 15.0 |
| | A | D18 mf | 96 hr | 7.8 | 24.9 | 6.4 | 15.1 |
| 9 | A | D19 | 0 hr | 8.0 | 24.1 | 7.4 | 15.9 |
| | B | D20 | 24 hr | 7.6 | 24.4 | 6.0 | 15.7 |
| | A | D19 | 48 hr BR | 7.7 | 24.2 | 6.3 | 15.4 |
| | A | D19 | 48 hr AR | 7.9 | 24.0 | 6.9 | 16.0 |
| | B | D20 | 72 hr | 7.7 | 24.1 | 6.0 | 16.1 |
| | A | D19 | 96 hr | 7.8 | 24.8 | 6.6 | 16.2 |
| 10 | A | D21 | 0 hr | 8.0 | 24.1 | 7.4 | 17.9 |
| | B | D22 | 24 hr | 7.6 | 24.4 | 5.9 | 17.6 |
| | A | D21 | 48 hr BR | 7.7 | 24.1 | 6.4 | 18.1 |
| | A | D21 | 48 hr AR | 7.9 | 24.0 | 6.8 | 18.0 |
| | B | D22 | 72 hr | 7.7 | 24.0 | 6.2 | 18.1 |
| | B | D22 | 96 hr | 7.8 | 24.8 | 6.3 | 18.2 |
| 12 | A | D23 | 0 hr | 8.0 | 24.1 | 7.5 | 21.0 |
| | B | D24 | 24 hr | 7.6 | 24.4 | 5.6 | 20.6 |
| | A | D23 | 48 hr BR | | | | |
| | A | D23 | 48 hr AR | | | | |
| | | | 72 hr | | | | |
| | | | 96 hr | | | | |

Investigators Signatures
Jeremy Daniel
Brian Peterson
Marshall Faircloth

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

Comments:

000006

## Appendix C. (continued)

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

DATE: 8-5-08 DURATION: 96 hr TOXICANT : NaCl
SPECIES: *Ceriodaphnia dubia*

| RAW DATA: Concentration (g/L) | Number Exposed | Mortalities |
|---|---|---|
| .00 | 20 | 0 |
| 1.50 | 20 | 3 |
| 2.00 | 20 | 12 |
| 2.50 | 20 | 20 |
| 3.00 | 20 | 20 |
| 4.00 | 20 | 20 |

SPEARMAN-KARBER TRIM: 15.00%

SPEARMAN-KARBER ESTIMATES: **LC50: 1.87**
95% LOWER CONFIDENCE: 1.72
95% UPPER CONFIDENCE: 2.03

---

***Pimephales promelas* Acute Standard Reference Toxicant Test**

DATE: 8-5-08 DURATION: 96 hr TOXICANT: NaCl
SPECIES: *Pimephales promelas*

| RAW DATA: Concentration (g/L) | Number Exposed | Mortalities |
|---|---|---|
| .00 | 20 | 0 |
| 7.00 | 20 | 0 |
| 8.00 | 20 | 0 |
| 9.00 | 20 | 3 |
| 10.00 | 20 | 19 |
| 12.00 | 20 | 20 |

SPEARMAN-KARBER TRIM: .00%

SPEARMAN-KARBER ESTIMATES: **LC50: 9.40**
95% LOWER CONFIDENCE: 9.19
95% UPPER CONFIDENCE: 9.61

## Appendix D. Test Organism Receipt(s)

MARINCO BIOASSAY LABORATORY
The Aquatic Toxicology Specialists

NELAP Certification # E84191

### Organism Shipment Record

**State of Florida Aquaculture Certificate Number AQ0668007**

Date: 8/4/08

Shipped to: FDEP

P.O. No: _____

| Species | Quantity | Age | Brood Number | Temp. °C | pH s.u. | Salinity ‰ |
|---|---|---|---|---|---|---|
| *Mysidopsis bahia* | 150 | 4 DAYS | MS080731 | 25 | 7.8 | 20 |
| *Menidia beryllina* | 150 | 11 DAYS | SS080724 | 25 | 7.7 | 19.5 |
| | | | | | | Hardness |
| *Cyprinella leedsi* | 150 | 12 DAYS | CL080723 | 25 | 7.8 | 90 |
| *Pimephales promelas* | 200 | 8 DAYS | FM080725 JJ | 25 | 7.9 | 90 |
| | | | | | | |

Packed by: JJ

Shipped Via: Fed Ex

Notes: _____

Thank you for your order.

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

**Appendix D. (continued)**

MARINCO BIOASSAY LABORATORY
The Aquatic Toxicology Specialists

NELAP Certification # E84191

## Organism Shipment Record

**State of Florida Aquaculture Certificate Number AQ0668007**

Date: 8/11/08

Shipped to: FDEP

P.O. No: _____

| Species | Quantity | Age | Brood Number | Temp. | pH | Salinity |
|---|---|---|---|---|---|---|
| *Mysidopsis bahia* | | | | | | |
| *Menidia beryllina* | 150 | 11 DAYS | 55080731 | 25°C | 7.8 | 20‰ |
| | | | | | | Hardness |
| *Cyprinella leedsi* | 150 | 12 DAYS | CL080830 | 25°C | 7.8 | 80mg/L |
| *Pimephales promelas* | 150 | 8 DAYS | FM080803 | 25°C | 7.8 | 80mg/L |
| | | | | | | |

Packed by: [signature]

Shipped Via: Fed Ex

Notes: _____

Thank you for your order.

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

**Appendix E. Chemical Analyses performed on the effluent from the Bridgeway Acres Class I Landfall sampling point for Outfall D-001, sampled on August 11, 2008.**

| Date Sampled | Field ID | Analysis | Component | Result | Remark | Units | MDL | PQL |
|---|---|---|---|---|---|---|---|---|
| 8/11/2008 10:50 | Pond Effluent Intake | AGP/LN | Algal Growth Potential | 3 | U | mg DryWt/L | 3 | 3 |
| 8/11/2008 10:50 | Pond Effluent Intake | Chlorophyll/Grain Size/BOD | Phaeophytin-a | 3.2 | U | ug/L | 3.2 | 9.5 |
| 8/11/2008 10:50 | Pond Effluent Intake | Chlorophyll/Grain Size/BOD | Biochemical Oxygen Demand-5 Day,N-Inhib | 12 | J | mg/L | 0.2 | 2 |
| 8/11/2008 10:50 | Pond Effluent Intake | Chlorophyll/Grain Size/BOD | Chlorophyll-a, Corrected | 290 | | ug/L | 7.3 | 23 |
| 8/11/2008 10:50 | Pond Effluent Intake | Chlorophyll/Grain Size/BOD | Biochemical Oxygen Demand-5 Day | 20 | J | mg/L | 0.2 | 2 |
| 8/11/2008 10:50 | Pond Effluent Intake | Toxicology | Bioassay-Acute-Def-FW-C.dubia, LC50 | 100 | L | LC50 | | |
| 8/11/2008 10:50 | Pond Effluent Intake | Toxicology | Bioassay-Acute-Def-FW-Fish, LC50 | 100 | L | LC50 | | |
| 8/11/2008 10:50 | Pond Effluent Intake | Metals | Cadmium | 0.1 | | ug/L | 0.02 | 0.08 |
| 8/11/2008 10:50 | Pond Effluent Intake | Metals | Aluminum | 61 | I | ug/L | 60 | 240 |
| 8/11/2008 10:50 | Pond Effluent Intake | Metals | Silver | 0.025 | U | ug/L | 0.025 | 0.1 |
| 8/11/2008 10:50 | Pond Effluent Intake | Metals | Calcium | 220 | | mg/L | 0.37 | 1.5 |
| 8/11/2008 10:50 | Pond Effluent Intake | Metals | Iron | 120 | I | ug/L | 30 | 120 |
| 8/11/2008 10:50 | Pond Effluent Intake | Metals | Copper | 3 | | ug/L | 0.5 | 2 |
| 8/11/2008 10:50 | Pond Effluent Intake | Metals | Nickel | 3.45 | | ug/L | 0.25 | 1 |
| 8/11/2008 10:50 | Pond Effluent Intake | Metals | Lead | 1.7 | | ug/L | 0.2 | 0.8 |
| 8/11/2008 10:50 | Pond Effluent Intake | Metals | Chromium | 0.52 | I | ug/L | 0.5 | 2 |
| 8/11/2008 10:50 | Pond Effluent Intake | Metals | Magnesium | 22.7 | | mg/L | 0.04 | 0.16 |
| 8/11/2008 10:50 | Pond Effluent Intake | Metals | Arsenic | 4.2 | | ug/L | 0.5 | 2 |
| 8/11/2008 10:50 | Pond Effluent Intake | Metals | Selenium | 0.5 | U | ug/L | 0.5 | 2 |
| 8/11/2008 10:50 | Pond Effluent Intake | Metals | Zinc | 10 | I | ug/L | 5 | 20 |
| 8/11/2008 10:50 | Pond Effluent Intake | Nutrients | Kjeldahl Nitrogen | 4.7 | | mg N/L | 0.4 | 1 |
| 8/11/2008 10:50 | Pond Effluent Intake | Nutrients | Ammonia-N | 0.01 | U | mg N/L | 0.01 | 0.02 |
| 8/11/2008 10:50 | Pond Effluent Intake | Nutrients | Alkalinity | 78 | | mg CaCO3/L | 0.65 | 2.5 |
| 8/11/2008 10:50 | Pond Effluent Intake | Nutrients | Turbidity | 23 | | NTU | 0.1 | 0.1 |
| 8/11/2008 10:50 | Pond Effluent Intake | Nutrients | O-Phosphate-P | 0.004 | U | mg P/L | 0.004 | 0.01 |
| 8/11/2008 10:50 | Pond Effluent Intake | Nutrients | Total-P | 0.13 | | mg P/L | 0.02 | 0.06 |
| 8/11/2008 10:50 | Pond Effluent Intake | Nutrients | NO2NO3-N | 0.004 | I | mg N/L | 0.004 | 0.01 |
| 8/11/2008 10:50 | Pond Effluent Intake | Nutrients | TSS | 36 | | mg/L | 6.8 | 27 |
| 8/11/2008 10:50 | Pond Effluent Intake | Field Parameter | Sample Depth | 0.2 | | m | | |
| 8/11/2008 10:50 | Pond Effluent Intake | Field Parameter | Specific Conductance | 3502 | | umhos/cm | | |
| 8/11/2008 10:50 | Pond Effluent Intake | Field Parameter | Temperature | 30.38 | | C | | |
| 8/11/2008 10:50 | Pond Effluent Intake | Field Parameter | Dissolved Oxygen | 7.09 | | mg/L | | |
| 8/11/2008 10:50 | Pond Effluent Intake | Field Parameter | Total Residual Chlorine | 0.15 | | mg/L | | |

## Appendix E. (continued)

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 8/11/2008 10:50 | Pond Effluent Intake | Field Parameter | pH | 7.98 | | | | |
| 8/11/2008 10:30 | Field Blank | Metals | Zinc | 5 | U | ug/L | 5 | 20 |
| 8/11/2008 10:30 | Field Blank | Metals | Nickel | 0.25 | U | ug/L | 0.25 | 1 |
| 8/11/2008 10:30 | Field Blank | Metals | Chromium | 0.5 | U | ug/L | 0.5 | 2 |
| 8/11/2008 10:30 | Field Blank | Metals | Cadmium | 0.02 | U | ug/L | 0.02 | 0.08 |
| 8/11/2008 10:30 | Field Blank | Metals | Aluminum | 60 | U | ug/L | 60 | 240 |
| 8/11/2008 10:30 | Field Blank | Metals | Arsenic | 0.5 | U | ug/L | 0.5 | 2 |
| 8/11/2008 10:30 | Field Blank | Metals | Selenium | 0.5 | U | ug/L | 0.5 | 2 |
| 8/11/2008 10:30 | Field Blank | Metals | Lead | 0.2 | U | ug/L | 0.2 | 0.8 |
| 8/11/2008 10:30 | Field Blank | Metals | Copper | 0.5 | U | ug/L | 0.5 | 2 |
| 8/11/2008 10:30 | Field Blank | Metals | Magnesium | 0.04 | U | mg/L | 0.04 | 0.16 |
| 8/11/2008 10:30 | Field Blank | Metals | Iron | 30 | U | ug/L | 30 | 120 |
| 8/11/2008 10:30 | Field Blank | Metals | Calcium | 0.09 | I | mg/L | 0.075 | 0.3 |
| 8/11/2008 10:30 | Field Blank | Metals | Silver | 0.025 | U | ug/L | 0.025 | 0.1 |
| 8/11/2008 10:30 | Field Blank | Nutrients | O-Phosphate-P | 0.004 | U | mg P/L | 0.004 | 0.01 |
| 8/11/2008 10:30 | Field Blank | Nutrients | Kjeldahl Nitrogen | 0.08 | U | mg N/L | 0.08 | 0.2 |
| 8/11/2008 10:30 | Field Blank | Nutrients | Total-P | 0.02 | U | mg P/L | 0.02 | 0.06 |
| 8/11/2008 10:30 | Field Blank | Nutrients | Ammonia-N | 0.01 | U | mg N/L | 0.01 | 0.02 |
| 8/11/2008 10:30 | Field Blank | Nutrients | NO2NO3-N | 0.004 | U | mg N/L | 0.004 | 0.01 |

## Appendix F. Bioassay Instrument Identification

**FDEP Biology Laboratory - Bioassay Instrument Identification**

Test Dates: August 12 - 16, 2008

Test ID: Bridgeway Acres Class I Landfill SRT Dates: August 5 - 9, 2008

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

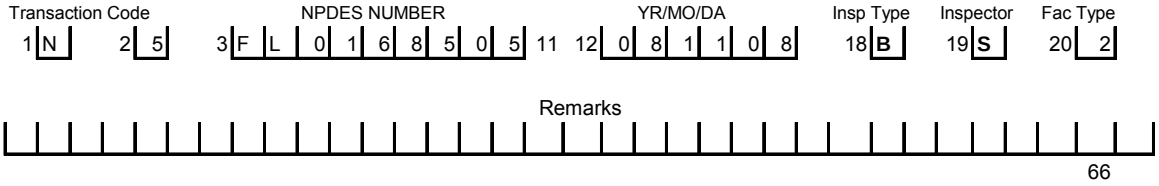
SM-2530B modified to allow use electronic and non-mercury filled thermometers.
Insert other device information in blank spaces(if used). Test ID = Facility or SRTs (acute SRT--Chronic SRT)

Comments:

V 1.4 8/21/08 BA

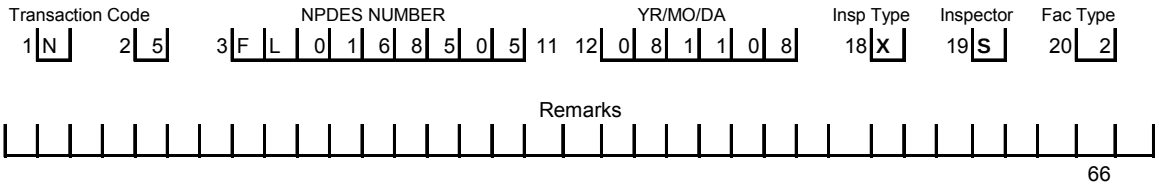
## The Bioassay of the Bridgeway Acres Class I Landfill effluent sampled on August 11, 2008. NPDES #FL0168505.

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




## The Priority Pollutants Analysis of the Bridgeway Acres Class I Landfill effluent sampled on August 11, 2008. NPDES #FL0168505.

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




## Biological Analyses of the Bridgeway Acres Class I Landfill effluent sampled on August 11, 2008. NPDES #FL0168505.

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

