

Effluent Quality Assessment of

Titusville

(Combined Blue Heron WRF and Osprey WRF)

Brevard County

NPDES #FL0103349 (Blue Heron WRF)

NPDES #FL0103268 (Osprey WRF)

Sampled April 16, 2007

June 2007

Biology Section
Bureau of Laboratories
Division of Resource Assessment and Management

Quality Manual No. 870346G
NELAC Certification No. E31780

Titusville Blue Heron WRF, 4800 Deep Marsh Road, Titusville, Brevard County, Florida 32780, NPDES #FL0103349. Titusville Osprey WRF, 1105 Buffalo Road, Titusville, Brevard County, Florida 32780, NPDES #FL0103268. Samples of blended effluent from these facilities were collected on April 16, 2007.

Introduction

Titusville Blue Heron WRF

The Titusville Blue Heron WRF uses a 5-stage activated-sludge treatment process (anaerobic, anoxic, aeration, a 2nd anoxic and finally reaeration) to treat domestic wastewater. The facility has a permitted flow of 4.0 million gallons per day (MGD) annual average daily flow (AADF). The AADF from April 2006 through March 2007 was 0.12 MGD through Outfall D001, 0.97 MGD through Reuse System R001, 0.80 MGD through Reuse System R002, and 0.92 MGD through the man-made wetland treatment system R003. The facility and treatment process consists of influent screening, grit removal, biological nutrient removal, chemical feed facilities, clarification, tertiary filtration, disinfection, residuals stabilization by solids thickening, auto-thermal thermophilic-aerobic digestion (ATAD) and solids storage to achieve further reduction of pathogens. Sodium hypochlorite is used for disinfection. Effluent is neither chemically nor mechanically dechlorinated. Treated effluent can be discharged to the Class III Freshwaters of the Addison Canal (D001), Reuse System R001, Reuse System R002, and the man-made wetland treatment system (R003). Outfall D001 is approximately 0.6 m (2 feet) in length, discharges at a depth of approximately 0.6 m (2 feet), and is located approximately at latitude 28º 32’ 09” N and longitude 80º 51’ 35” W.

Reuse system R001 is a slow-rate public access system for irrigation of golf courses, cemeteries, park and playgrounds, road medians and landscaped areas within the Titusville Osprey and Blue Heron treatment facilities service area. Reuse system R002 is an existing 4.0 MGD AADF permitted capacity restricted public access system which consists of flow sent to a convergence box where the flows of the Blue Heron WRF and Osprey WRF (wet weather) are combined and monitored before discharge to the wetlands. Reuse system R003 is an existing 4.68 MGD AADF permitted capacity man-made wetland treatment/reuse system comprising 106.84 hectares (264 acres) and consisting of seven cells. The wetland treatment/reuse system receives reclaimed water from Blue Heron WRF and the wet weather flow from Osprey WRF for further treatment prior to discharge to adjacent surface waters. The wetland treatment/reuse system is located approximately at latitude 28º 32’ 34” N and longitude 80º 52’ 00” W.

There are no Administrative orders or Consent Orders for this facility. The facility has no mixing zones. The facility has no toxicity testing requirements. A review of Discharge Monitoring Report (DMR) for the past year showed a violation of the permit limit for total phosphorus (value 0.40 mg/L, limit 0.32 mg/L) in February 2006 at Outfall D001. (Facility information provided by David Smicherko of FDEP Central District.)

Osprey WRF

The Titusville Osprey WRF uses 3-stage activated-sludge treatment process (anaerobic, anoxic, oxic) to treat domestic wastewater. The facility has a permitted flow of 2.75 million gallons per day (MGD) annual average daily flow (AADF). The AADF from April 2006 through March 2007 was 1.75 MGD through Reuse System R001, and 0.12 MGD through Reuse System R002. The facility does not have a permitted surface water outfall; the surface water discharge is included in the Titusville Blue Heron WRF domestic wastewater facility permit. The facility and treatment process consists of influent screening, grit removal, odor control, dual anaerobic basins, multiple anoxic/oxic basins, secondary clarification, chemical feed facilities, filtration units, disinfection, and aerobic digestion with belt press de-watering. Sodium hypochlorite is used for disinfection. Effluent is neither chemically nor mechanically dechlorinated. Reuse system R001 is a slow-rate public access system for irrigation of golf courses, cemeteries, park and playgrounds, road medians and landscaped areas within the Titusville Osprey and Blue Heron treatment facilities service area. Reclaimed water (R001) can be discharged into the Royal Oak Golf Course and La

Cita Golf Course stormwater storage lake systems, which intermittently overflow to the Indian River. Reuse system R002 is an existing 4.0 MGD AADF permitted capacity restricted public access system which consists of flow sent to a convergence box where the flows of the Blue Heron WRF and Osprey WRF (wet weather) are combined and monitored before discharge to the wetlands.

There are no Administrative orders or Consent Orders for this facility. The facility has no mixing zones. The facility has no toxicity testing requirements. Permit limits are included in the Titusville Blue Heron WRF permit (Facility information provided by David Smicherko of FDEP Central District.).

Methods

Samples were collected from the EFA-2 NPDES sampling point (at the distribution box where the Osprey WRF and Blue Heron WRF flows blend) for Outfall R-003 (Blue Heron WRF) by Phil Kane, Waylon Locklear, and David Smicherko (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 screening toxicity tests and algal growth potential test were performed following internal DEP SOPs TA07_01, TA07_02, and TA08_01 through TA08_09. All internal DEP SOPs are available on the web at: http://www.floridadep.org/labs/cgi-bin/sop/biosop.asp. While there is no toxicity testing requirement for these facilities, the Department uses the 48-hour acute screening toxicity test to provide reasonable assurance that the facility does not adversely affect waters of the state.

Total residual chlorine (1.17 mg/L,) was detected in the bioassay sample in the laboratory. An aliquot of this sample was dechlorinated by the addition of sodium thiosulfate (0.025 N) at a rate of 1.2 mL per liter of sample to neutralize the chlorine. Bioassays were performed on both the dechlorinated aliquot and the original sample. The same concentration of sodium thiosulfate was added to the dechlorinated test controls. The purpose of the dechlorinated test controls was to confirm that there was no adverse effect of adding sodium thiosulfate to the sample. There was 10% mortality in the dechlorinated controls of both the *Ceriodaphnia dubia* and *Cyprinella leedsi* dechlorinated sample tests.

Toxicity Test Results

Tests were performed April 17 - 19, 2006.

Ceriodaphnia dubia 48-hour acute screening bioassay –	No Result
Ceriodaphnia dubia 48-hour acute screening bioassay – **Dechlorinated**	No Result
Cyprinella leedsi 48-hour acute screening bioassay –	LC_{50} < 100%, 100% mortality* in 100% sample within 1 hour of test initiation
Cyprinella leedsi 48-hour acute screening bioassay – **Dechlorinated**	LC_{50} > 100%, 0% mortality* in 100% sample at 48 hours

The bioassay sample was acutely toxic to the *Cyprinella leedsi* test organisms in the 100% sample test but not in the dechlorinated sample test. The *Ceriodaphnia dubia* 100% sample test

was invalidated due to excess control mortality. The *Ceriodaphnia dubia* dechlorinated test was invalidated due to a laboratory error in which test parameters were not measured at 48 hours.

The observed toxicity was primarily attributed to the total residual chlorine (TRC) in the sample. TRC concentrations as low as 0.028 mg/L have been found to be acutely toxic to some freshwater fish and invertebrates (EPA *Quality Criteria for Water* 1986, EPA 44015-86-001, 1986).

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

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

Algal Growth Potential

The effluent Algal Growth Potential (AGP) was 94.9 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 152.0 (±20%) mg dry wt/L (Table 1; Miller et al. 1978).

See Table 1 for AGP results.

Chemistry Results

Total residual chlorine was detected in the effluent at concentrations of 1.9 mg/L in the field and 1.17 mg/L in the laboratory, both of which exceed the water quality criterion for class III fresh waters (≤0.02 mg/L, 62-302.530(18), F.A.C.). Total ammonia was not detected in the bioassay sample in the laboratory. The total ammonia concentration in the sample collected and preserved for chemical analysis was 0.095 mg/L. Based on the pH, salinity, and temperature of the effluent as collected, the calculated unionized ammonia concentration was less than 0.02 mg/L.

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

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

Conclusion

The effluent sample collected from Titusville Blue Heron Water Reclamation Facility and Titusville Osprey Water Reclamation Facility Outfall R-003 on April 16, 2007, was acutely toxic to the *Cyprinella leedsi* test organisms during the 48-hour acute screening bioassay. The dechlorinated bioassay sample was not acutely toxic to the *Cyprinella leedsi* test organisms during the 48-hour

acute screening bioassay. The toxicity was primarily attributed to residual chlorine. The *Ceriodaphnia dubia* tests were invalidated due to control failure and laboratory error. The effluent AGP result exceeded the "problem" threshold for fresh receiving waters. Effluent total residual chlorine concentrations (1.9 and 1.17 mg/L) exceeded the water quality criterion (≤0.02 mg/L, 62-302.530(18), F.A.C.).

Literature Cited

Miller, W. E., T. E. Maloney, and J. C. Greene. 1978. The *Selenastrum capricornutum* Printz algal assay bottle test. EPA-600/9-78-018. U. S. EPA, Cincinnati, Ohio. 126 p.

Raschke, R. L. and D. A. Schultz. 1987. The use of the algal growth potential test for data assessment. J. Wat. Poll. Cont. Fed. 59(4): 222-227.

Table 1. Measured and predicted algal growth potential (AGP; mg dry weight/L) for total soluble nitrogen (TSIN) and total nitrogen (TN) limitation of the freshwater species *Pseudokirchneriella subcapitata* and ratios of the nitrogen to phosphorus for samples of combined effluent collected from Titusville Blue Heron Water Reclamation Facility and Titusville Osprey Water Reclamation Facility on April 16, 2007.

Location	AGP (measured)	Predicted AGP (TSIN) ± 20%	Predicted AGP (TN) ± 20%	Inorganic N:P ratio	Total N:P ratio
Effluent	94.9	87.2 ± 17.4	152.0 ± 30.4	6.4	7.0
Dechlorinated Effluent	81.2	-	-	-	-

Table 2. Effluent limits, Class III Freshwater Criteria, and chemical and microbiological data for samples collected from Titusville Blue Heron Water Reclamation Facility and Titusville Osprey Water Reclamation Facility on April 16, 2007

Titusville Blue Heron WRF and Titusville Osprey WRF NPDES# FL0103349 and FL0103268	**Class III Fresh Stds**	**Effluent Limits [1]**	**Effluent Grab Samples**	
Organic Constituents (µg/L)				
Atrazine	-	-	0.27	
Metals (µg/L unless otherwise noted)				
Aluminum	-	-	12	I
Arsenic	≤ 50	-	0.64	I
Cadmium	≤ 0.33 b	-	0.05	U
Calcium (mg/L)	-	-	43.8	Af
Chromium-III	≤ 107.1 b	Report	0.71	I
Copper	≤ 11.7 b	-	1.28	Af
Iron	≤ 1,000	-	97	A
Lead	≤ 4.5 b	Report	0.2	U
Magnesium (mg/L)	-	-	5.1	A
Nickel	≤ 65.3 b	Report	2.86	Af
Selenium	≤ 5.0	-	0.5	U
Silver	≤ 0.07	-	0.025	U
Zinc	≤ 150.0 b	Report	41	A
Nutrients (mg/L)				
Ortho-phosphate	-	-	0.36	
Total Phosphorus	-	≤ 3.5 s	0.57	
Total Ammonia	-	-	0.095	
Un-ionized Ammonia	≤ 0.02	-	≤ 0.02	c
Nitrate and Nitrite	-	-	2.2	
Total Kjeldahl Nitrogen	-	-	1.8	Q
Organic Nitrogen	-	-	1.705	c
Total Nitrogen	-	≤ 12 s	4.0	c
General Physical and Chemical Parameters				
Dissolved Oxygen (mg/L)	≥ 5.0	-	11.1	
CBOD, 5 day (mg/L), N - inhibited	-	≤ 10 s	7.6	L
pH (SU)	6.0 - 8.5	-	7.0	
Conductivity (µmhos/cm)	≤ 1,275	-	838	
Temperature °C	-	-	25.2	
Total Residual Chlorine (mg/L)	≤ 0.01	-	1.9	
Total Suspended Solids (mg/L)	-	≤ 10 s	4.0	U
Color (pt-Co)	-	-	10	
Alkalinity (mg/L)	-	-	80	
Sulfate (mg/L)	-	-	66	
Flow (MGD)	-	4.68 a	0.92	
Hardness (mg $CaCO_3$)	-	Report	130.37	c
Microbiology (Number of counts/100ml)				
Fecal Coliforms	≤ 800 s	≤ 86 s	-	

Value exceeds the Class III Water Quality Criteria or permit limits

a - Annual average
b - Value is calculated based on hardness
c - Value is calculated
f - Analyte was detected in both sample and equipment blank
s - Single sample
A - Value reported is the mean of two or more determinations
I - The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit
L - Actual value is known to be greater than value given
Q - Sample held beyond normal holding time
U - Material analyzed for but not detected; value reported is the method detection limit
[1]- Effluent limits are for 24-hour flow proportionaed composite samples

Florida Department of Environmental Protection

Central Laboratory Sample Submittal Form

Request Number: RQ-2007-04-16-35
Titusville (Combined Blue Heron & Osprey)

Event ID *

Requester: Shannan Bogdanov
Field Report Prepared By: KANE
Collected By: KANE, LOCKLEAR, SMICHERKO
Send Final Report To Phil Kane
Sampling Agency: FDEP CENTRAL

Customer: CEN-DIST
Project ID: FYI3
PMAS: 1143

Lab ID *	Location	Comp / Grab	Collection (begin) Date Time Eastern Central	Collection (end) Date Time Eastern Central	Bottle Group(s)**
	TITUSVILLE WWTF COMBINED AT JUNCTION DISTRIBUTION BOX TITUSVILLE, FL. EFA-2 TO WETLAND	☐ Comp ☑ Grab	Date 4/16/07 Time	Date PK Time	
	Field ID: TITUS	Tot Res Chlorine (mg/L):	Diss Oxygen (mg/L): 11.05 DS	Storet Station Number:	
	Matrix (Include type e.g. Salt, Fresh, etc): BLANK	Temp (C): 25.2 DS	pH: 7.03 DS	Sample Depth ☐ m ☐ ft	☐ Salinity (PPTh) ☐ Sp Conductance (umho/cm): 33805	NPDES Number: FL0103349
	Latitude o ' "	Longitude o ' "	Comments: EFA-2 SAMPLE POINT AT WETLAND BOX		pH < 2.0 checked

Lab ID *	Location	Comp / Grab	Collection (begin) Date Time Eastern Central	Collection (end) Date Time Eastern Central	Bottle Group(s)**
	TITUSVILLE WWTF COMBINED AT JUNCTION DISTRIBUTION BOX TITUSVILLE, FL. EFA-2 TO WETLAND	☐ Comp ☑ Grab	Date 4/16/07 Time 0910	Date PK Time	
	Field ID: TITUS	Tot Res Chlorine (mg/L): 1.9	Diss Oxygen (mg/L): 11.05	Storet Station Number:	
	Matrix (Include type e.g. Salt, Fresh, etc): EFFLUENT	Temp (C): 25.2	pH: 7.02	Sample Depth ☐ m ☐ ft	☐ Salinity (PPTh) ☑ Sp Conductance (umho/cm): 938	NPDES Number: FL0103349
	Latitude o ' "	Longitude o ' "	Comments: EFA-2 SAMPLE POINT AT WETLAND BOX FILLED ORTHO TUBING, RINSE DI H2O + FILTER TO REFILL		pH < 2.0 checked

Lab ID *	Location	Comp / Grab	Collection (begin) Date Time Eastern Central	Collection (end) Date Time Eastern Central	Bottle Group(s)**
	TITUSVILLE WWTF COMBINED AT JUNCTION DISTRIBUTION BOX TITUSVILLE, FL. EFA-2 TO WETLAND	☐ Comp ☑ Grab	Date 4/16/07 Time 0930	Date Time	
	Field ID: TITUS	Tot Res Chlorine (mg/L): 1.9	Diss Oxygen (mg/L): 11.05	Storet Station Number:	
	Matrix (Include type e.g. Salt, Fresh, etc): EFFLUENT	Temp (C): 25.2	pH: 7.02	Sample Depth ☐ m ☐ ft	☐ Salinity (PPTh) ☑ Sp Conductance (umho/cm): 938	NPDES Number: FL0103349
	Latitude o ' "	Longitude o ' "	Comments: BIOSAY NOTE: SAMPLE IS CHLORINATED, pH < 2.0 checked not biosay. EFA-2 SAMPLE POINT AT WETLAND BOX		

Lab ID *	Location	Comp / Grab	Collection (begin) Date Time Eastern Central	Collection (end) Date Time Eastern Central	Bottle Group(s)**
		☐ Comp ☐ Grab	Date Time	Date Time	
	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
KANE, LOCKLEAR	4/16/07	DHL	ABS	4-17-07 9:00				

* Shaded Areas for Lab use only.

** Please see reverse side for Bottle Group information.

last revised October 1, 2003

Page 1 of 3

For 4/17/07 9:51AM

FDEP Biology Section - Acute Screen Bioassay Bench Sheets

Facility: Titusville Blue Heron WRF

Address: 4800 Deep Marsh Road

City: Titusville County: Brevard

Contact/District: David Shicherko / Central District

NPDES Permit #: FL 0103349

LIMS Job #: TLH-2007-04-17-66-01 (41 PAV)

LIMS Sample #: 100650

Lims Data Entry: 5/8/07 MF

Data Entry Verification: 5.9.07 JD

Sample Collection: Date: 4/16/07 Time: 0932

Hold Time Start: Date: 4/16/07 Time: 0932

Comments: Sample contained 1.17 mg/L total residual chlorine. A dechlorinated aliquot was prepared by adding 1.2 ml/L Sodium thiosulfate to the sample. A dechlorinated control was prepared by adding the same amount of Sodium thiosulfate to the appropriate control water. MF 4-17-07 The TRC of the dechlorinated sample was 0.1 mg/L MF 4-17-07 The dechlorinated tests were valid for both species, 48 hour parameters were inadvertantly NOT measured for the C. dubia dechlorinated test, see NCR 2438

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

Test Type: Screen

(Static) / Static Renewal / Flow-through

Test Duration: (48) 96 Hours.

Light Intensity: 50 - 100 ft. candles.

Photoperiod: 16 hours light 8 hours dark.

Test 1 validation: Test 1: SOP TA 07_01

Control survival ≥90%: Yes (No) chlorinated sample test

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 1.2 mL of 0.025N Sodium Thiosulfate per liter of sample. Final TRC: 0.1 mg/L

Sample Validation:

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

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

Temperature Range °C

Incubator # 2 Range 25.5-25.8

Room B246: 25.0-26.1

Waterbath: NA

The Chlorinated (100% sample) Ceriodaphnia dubia test was invalidated due to excess control mortality at 24 hours. MF 5-10-07

Investigators' Signatures

James Daniels

Peter Vicinanza

Marshall Faircloth

Bruce Alexander

Nicki Wellendorf

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		~~NJ~~ not measured		A	MF
Lab Total Residual Cl_2 (mg/L):	<0.03	<0.03				1.17	HACH	PAV	BA
Alkalinity (mg/L as $CaCO_3$):	79	141				91	HACH	PAV	BA
Hardness (mg/L as $CaCO_3$):	88	139				133	HACH	PAV	BA
Total Ammonia (mg/L as N):	<0.017	<0.017				<0.017	DENVER	BA	PAV
Salinity (ppth):	<1	<1				<1	YSI / Mettler	JD	BA

A. Field residual chlorine = 1.9 mg/L measured by P. Steve. Facility person. MF 5-2-07

V 1.4 9/12/05

Page 000026

Appendix B. (continued)

FDEP Biology Section - Bioassay Survival Sheet

LIMS Sample #: 1001650 Test #: 1 Test Started: Date 4/17/07 Time: 1300
Organism: C. DUBIA SOP #: TA 07 01 Test Ended: Date 4/19/07 Time: 1150
Organism Batch: 15-07 Diluent/ Batch: DLW 1A-12-07
Organism Age: < 24 HRS. Food: YCT *P. subcapitata* *Artemia* —
Chamber Size: 30 mL Batch: 1-7-07 2-7-07 —
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	2 3D	—			
	B	B	5	2 3D	—			
	C	C	5	4 1D	—			
	D	D	5	3 2D	—			
100%	A	A	5	1 4D	—			
	B	B	5	5	—			
	C	C	5	5	—			
	D	D	5	4 1D	—			
dechlorinated Control	A	A	5	5	5			
	B	B	5	5	5			
	C	C	5	5	5			
	D	D	5	5	5			
dechlorinated 100%	A	A	5	5	5			
	B	B	5	5	5			
	C	C	5	5	5			
	D	D	5	5	5			

Organisms loaded by: MF Checked by: [redacted] BA BA
Loading Verified by: BA

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

Comments: Chlorinated Sample test terminated at 24 hours due to excess control mortality - MF 5/3/07
Dechlorinated test reported as No Result because it was stopped before 48 hour Termination - Parameter was not measured.
Chlorinated test reported as No Result
NCR 2438 created. MF 5/3/07

Dechlorinated

Test Results:
% mortality in 100% sample: Ø
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).

V 2.1 11/01/2005

Page 000027

Appendix B. (continued)

FDEP Biology Section - Bioassay Survival Sheet

LIMS Sample #: 1001650 **Test #:** 2 **Test Started:** Date 4/17/07 Time: 1315
Organism: C. LEEDSI **SOP #:** TA 07_02 **Test Ended:** Date 4/19/07 Time: 1200
Organism Batch: 4-17-07 **Diluent/ Batch:** WELL / 4-16-07
Organism Age: 12 DAYS **Food:** YCT *P. subcapitata* *Artemia* (LOT # GSL 53690)
Chamber Size: 1000 mL **Batch:** — — AB-07
Test Volume: 500 mL **Feeding:** (Prior to test - circled) - 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	B9	5	5	5	5		
	B	B10	5	5	5	5		
	C	B11	5	5	5	5		
	D	B12	5	5	5	5		
100%	A	B13	5	—	—	—		
	B	B14	5	—	—	—		
	C	B15	5	—	—	—		
	D	B16	5	—	—	—		
dechlorinated Control	A	B17	5	5	5	5		
	B	B18	5	5	5	5		
	C	B19	5	5	5	5		
	D	B20	5	5	5	5		
dechlorinated 100%	A	B21	5	5	5	5		
	B	B22	5	5	5	5		
	C	B23	5	5	5	5		
	D	B24	5	5	5	5		
Organisms loaded by: JD		Checked by:		JD	JD	JD		

Loading Verified by: MF

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

Comments: all dead in 100% sample within 1 hour of loading MF 4-17-07

Note: tests were not renewed MF 5/3/07

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

Dechlorinated test Result:
% mortality in 100% dechlorinated Ø MF 5/3/07
LC 50 = >100%

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).

V 2.1 11/01/2005

Page 000028

FDEP Biology Section - Bioassay Parameter Sheet

LIMS Sample # : 1001650 **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	M	(A)			
pH (S.U.)	8.3	8.2				
Temperature °C	24.0	24.0				
Dissolved Oxygen mg/L	7.6	7.4				
Conductivity (~~mhos~~) mmhos	202	215				
(initials) Measured by:	JJ	BA				
(initials) Recorded by:	JJ	BA				

Comments: (A) Due to a communication error, 48-hour Parameters were not measured. MF 5-3-07 See NCR2438.

Concentration 100%	0 Hr.	24 Hr.	48 Hr. before renewal	48 Hr. after renewal	72 Hr.	96 Hr.
Replicate	M	M	(A)			
pH (S.U.)	7.8	8.2				
Temperature °C	24.0	24.6				
Dissolved Oxygen mg/L	7.4	7.5				
Conductivity (~~mhos~~) mmhos	831	1032				
(initials) Measured by:	JJ	BA				
(initials) Recorded by:	JJ	BA				

Comments:

Concentration Dechlor ctrl	0 Hr.	24 Hr.	48 Hr. before renewal	48 Hr. after renewal	72 Hr.	96 Hr.
Replicate	M	M	(A)			
pH (S.U.)	8.3	8.4				
Temperature °C	24.1	24.0				
Dissolved Oxygen mg/L	7.5	7.1				
Conductivity (~~mhos~~) mmhos	274	251				
(initials) Measured by:	JJ	BA				
(initials) Recorded by:	JJ	BA				

Comments:

Concentration Dechlor 100%	0 Hr.	24 Hr.	48 Hr. before renewal	48 Hr. after renewal	72 Hr.	96 Hr.
Replicate	M	M	(A)			
pH (S.U.)	7.9	8.1				
Temperature °C	24.2	24.0				
Dissolved Oxygen mg/L	7.6	7.3				
Conductivity (~~mhos~~) mmhos	850	968				
(initials) Measured by:	JJ	BA				
(initials) Recorded by:	JJ	BA				

Comments:

000029

V 2.0 2/24/04

FDEP Biology Section - Bioassay Parameter Sheet

LIMS Sample # : 1001650 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.)	7.9	8.2	8.3			
Temperature °C	24.6	24.0	24.8			
Dissolved Oxygen mg/L	7.4	6.7	7.3			
Conductivity ~~µmhos~~ mmhos	271	282	283			
(initials) Measured by:	JD	JD	PDV			
(initials) Recorded by:	JD	JD	PDV			

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.)	7.7	–	–			
Temperature °C	25.2	–	–			
Dissolved Oxygen mg/L	7.5	–	–			
Conductivity ~~µmhos~~ mmhos	835	–	–			
(initials) Measured by:	JD	PDV	PDV			
(initials) Recorded by:	JD	PDV	PDV			

Comments:

Concentration Dechlor ctrl	0 Hr.	24 Hr.	48 Hr. before renewal	48 Hr. after renewal	72 Hr.	96 Hr.
Replicate	A	B	C			
pH (S.U.)	7.9	8.2	8.3			
Temperature °C	24.6	24.2	24.6			
Dissolved Oxygen mg/L	7.5	7.1	7.2			
Conductivity ~~µmhos~~ mmhos	284	287	295			
(initials) Measured by:	JD	JD	PDV			
(initials) Recorded by:	JD	JD	PDV			

Comments:

Concentration Dechlor 100%	0 Hr.	24 Hr.	48 Hr. before renewal	48 Hr. after renewal	72 Hr.	96 Hr.
Replicate	A	B	C			
pH (S.U.)	7.9	7.8	8.0			
Temperature °C	25.1	24.3	24.3			
Dissolved Oxygen mg/L	7.6	6.5	7.2			
Conductivity ~~µmhos~~ mmhos	860	837	871			
(initials) Measured by:	JD	JD	PDV			
(initials) Recorded by:	JD	JD	PDV			

Comments:

Appendix C. SRT Bench Sheets and Statistical Analysis

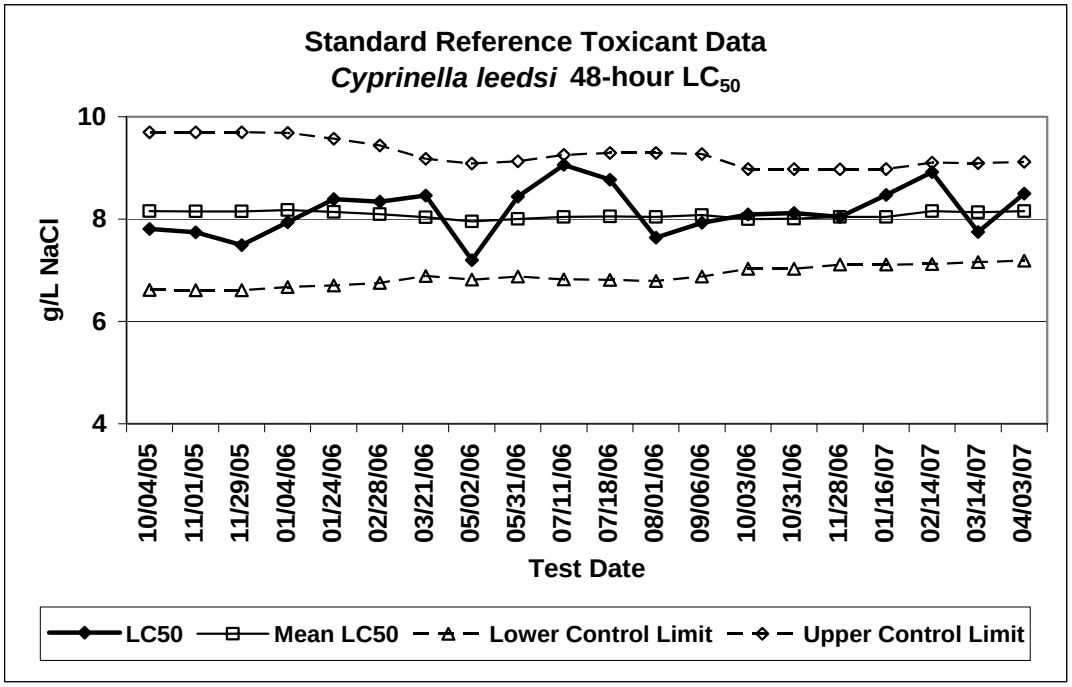
Florida Department of Environmental Protection
Bureau of Laboratories

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

Date	LC50	Mean LC50	Std Dev	Lower Control Limit	Upper Control Limit
10/04/05	7.81	8.16	0.77	6.62	9.69
11/01/05	7.74	8.15	0.77	6.61	9.69
11/29/05	7.49	8.15	0.77	6.61	9.69
01/04/06	7.94	8.18	0.75	6.67	9.68
01/24/06	8.39	8.14	0.72	6.71	9.57
02/28/06	8.34	8.09	0.67	6.75	9.44
03/21/06	8.46	8.04	0.57	6.89	9.18
05/02/06	7.2	7.95	0.57	6.82	9.09
05/31/06	8.44	8.00	0.56	6.88	9.13
07/11/06	9.06	8.04	0.61	6.82	9.26
07/18/06	8.77	8.05	0.62	6.81	9.29
08/01/06	7.64	8.04	0.63	6.79	9.29
09/06/06	7.93	8.08	0.60	6.88	9.27
10/03/06	8.09	8.00	0.49	7.03	8.98
10/31/06	8.12	8.01	0.49	7.03	8.98
11/28/06	8.04	8.04	0.46	7.11	8.97
01/16/07	8.47	8.04	0.47	7.11	8.98
02/14/07	8.92	8.16	0.50	7.12	9.10
03/14/07	7.75	8.14	0.49	7.16	9.09
04/03/07	8.50	8.16	0.48	7.19	9.12

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

CV = 5.88
EPA reference 75th quartile CV = 19%



Appendix C. (continued)

FDEP Biology Laboratory - 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: 48 hour non-renewal / (96 hour renewal)
Test Page 1 of 2

Diluent/ Batch #: well 14-2-07
Toxicant/ Batch#: NaCl 14-2-07

Test Beginning: Date: 4.3.07 Time: 12:45
Test Ending: Date: 4-7-07 Time: 8:50

Water Quality Parameters	Diluent	Method	Initials
Total Residual Cl_2 (mg/L):	<0.03	Hach	BA
Alkalinity (mg/L as $CaCO_3$):	133	Hach	PPV
Hardness (mg.L as $CaCO_3$):	146	Hach	PPV
Total Ammonia (mg/L as N):	<0.017	Denver	MF
Salinity (ppth):	<1	Mettler	DM

Organism Batch #/ Age: 4-3-07 / 13 DAYS
Feeding (Prior to test) (Prior to renewal) Daily
Food: YCT P.subcapitata Artemia: Lot # GSL-S36-90
Food Batch: — — 0hr 4.0-07 24hr — 48hr 4/2 - 4/7 72hr —
Chamber size: 100 mL
Test volume: 500 mL per replicate

Conc µg/L (mg/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 Conductivity µmhom/cm (mmhos/cm) 0 hr	24 hr	48 hr
			~~48 hr~~	~~72 hr~~	~~96 hr~~	~~48 hr~~	~~72 hr~~	~~96 hr~~	~~48 hr~~	~~72 hr~~	~~96 hr~~	~~48 hr~~	~~72 hr~~	~~96 hr~~	~~48 hr~~	~~72 hr~~	~~96 hr~~
Control	A	B1	10	10	10	7.7		7.9	24.8		24.8	7.5		6.5	0.401		0.389
	B	B2	10	10	10		8.0			24.0			5.8			0.474	
	C																
	D																
6	A	B3	10	10	9[10]	7.7		7.8	24.8		25.1	7.3		6.4	11.2		11.2
	B	B4	10	10	9[10]		7.9			24.1			6.0			10.8	
	C																
	D																
7	A	B5	10	10	10	7.7		7.8	24.9		25.2	7.3		6.4	11.6		13.5
	B	B6	10	10	10		7.9			24.1			6.0			12.7	
	C																
	D																
8	A	B7	10	8[3D]	8	7.7		7.8	24.9		25.3	7.1		6.5	13.7		13.9
	B	B8	10	8[3D]	8		7.9			24.0			5.6			13.9	
	C																
	D																
9	A	B9	10	3[7D]	3[10]	7.8		7.8	24.9		25.3	7.2		6.5	15.4		16.8
	B	B10	10	5[5D]	3[2D]		7.9			24.0			5.4			15.2	
	C																
	D																
10	A	B11	10	0[10D]	—	7.7		—	24.9		—	7.2		—	13.1		—
	B	B12	10	0[10D]	—		7.9	—		24.1	—		5.5	—		12.1	—
	C																
	D																
	A																
	B																
	C																
	D																
Loaded / measured by:			JD	JD	JD	JD	JD	PPV	JD	JD	JD	JD	JD	PPV	JD	JD	PPV
Recorded by:			JD	JD	JD	JD	JD	PPV	JD	JD	JD	JD	JD	PPV	JD	JD	PPV

Investigators' Signatures
James Daniels
Eric Ahlers
Patsy Vichaikul
Marshall Faircloth
Nicole Wellendorf
REVIEWER

Concentrations prepared by: JD
Loading verified by: PK
Light Intensity: 50-100 Ft. candles
Photoperiod: 16 hours Light / 8 hours dark
Temperature Range °C:
Incubator # 1 min. 25.7 max. 26.3 mean 26.0
Incubator # ___ min. ___ max. ___ mean ___
Room B246 min. 24.9 max. 26.3 mean 25.6

Comments:

Statistics: Method: Spearman-Karber
(48) / 96 hour LC_{50}: 8.50
95% Confidence Interval: lower 8.21 upper 8.80

PAGE 000023

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Appendix C. (continued)

FDEP Biology Laboratory - 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: 48 hour non-renewal / 96 hour renewal
Test Page 2 of 2

Diluent/ Batch #: WELL 1-4-07
Toxicant/ Batch#: NaCl 1-4-07

Test Beginning: Date: 4.3.07 Time: 12:45
Test Ending: Date: 4-7-07 Time: 8:50

Water Quality Parameters	Diluent	Method	Initials
Total Residual Cl_2 (mg/L):	<0.05	Hach	BA
Alkalinity (mg/L as $CaCO_3$):	133	Hach	DAV
Hardness (mg.L as $CaCO_3$):	146	Hach	DAV
Total Ammonia (mg/L as N):	<0.07	Denver	MF
Salinity (ppth):	<1	Mettler	BA

Organism Batch #/ Age: 4-3-07 / 13 DAYS
Feeding: Prior to test / Prior to renewal / Daily
Food: YCT *P.subcapitata* Artemia: Lot # GSL-536-90
Food Batch: — — 0hr 40.01 24hr — 48hr 42 72hr —
Chamber size: 1000 mL
Test volume: 500 mL per replicate

Conc. g/L µg/L mg/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 Conductivity µmhom/cm mmhos/cm 0 hr / 48 hr	24 hr / 72 hr	48 hr / 96 hr
Control	A	B1	10	10	10	8.0		8.2	24.0		25.3	7.7		7.5	0.268		0.278
	B	B2	10	10	10		8.1			24.3			7.2			0.274	
	C																
	D																
6	A	B3	9	9	9	7.8		8.2	24.1		25.6	7.3		7.2	10.0		10.3
	B	B4	9	9	9		8.0			24.9			7.0			10.3	
	C																
	D																
7	A	B5	10	10	9 1D	7.9		8.2	24.0		25.1	7.4		7.2	12.0		12.4
	B	B6	10	10	9 1D		8.1			24.6			7.0			12.5	
	C																
	D																
8	A	B7	8	8	6 2D	7.9		8.2	24.0		25.1	7.5		7.2	13.8		14.2
	B	B8	8	8	5 3D		8.1			24.7			6.9			14.1	
	C																
	D																
9	A	B9	2	1 1D	0 1D	8.0		8.2	24.0		25.7	7.5		7.2	15.5		16.0
	B	B10	3	2 1D	0 2D		8.1			24.5			6.9			15.7	
	C																
	D																
10	A	B11	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	B	B12	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	C																
	D																
	A																
	B																
	C																
	D																
Loaded / measured by:			JD	JD	BA	DAV	DAV	DAV	DAV	DAV	BA	DAV	DAV	DAV	DAV	DAV	DAV
Recorded by:			JD	JD	BA	DAV	DAV	DAV	DAV	DAV	BA	DAV	DAV	DAV	DAV	DAV	DAV

Investigators' Signatures
James Daniels
Brad Rochow
Patsy Vickaryous
Marshall Faircloth

Nigel Wellendorf
REVIEWER

Concentrations prepared by: JD
Loading verified by: BA
Light Intensity: 50-100 Ft. candles
Photoperiod: 16 hours Light / 8 hours dark
Temperature Range °C:
Incubator # 2 min 25.7 max 26.3 mean 26.0
Incubator # ___ min ___ max ___ mean ___
Room B246 min 24.9 max 26.3 mean 25.6

Comments:

Statistics: Method: Spearman-Karber
48 / 96 hour LC_{50}: 7.98
95% Confidence Interval: lower 7.7 upper 8.28

PAGE 000021

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Appendix C. (continued)

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

DATE: 04-03-07 DURATION: 48 hr TOXICANT: NaCl
SPECIES: Cyprinella leedsi

RAW DATA: Concentration (g/L)	Number Exposed	Mortalities
0.00	20	0
6.00	20	2
7.00	20	0
8.00	20	4
9.00	20	15
10.00	20	20

SPEARMAN-KARBER TRIM: 5.00%

SPEARMAN-KARBER ESTIMATES: LC50: 8.50
95% LOWER CONFIDENCE: 8.21
95% UPPER CONFIDENCE: 8.80

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

Appendix D. Test Organism Receipts

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

NELAC Accredited

Organism Shipment Record

State of Florida Aquaculture Certificate Number AQ0668007

Date: 4/2/07

Shipped to: FDEP

P.O. No: _____

Species	Quantity	Age	Brood Number	Temperature	Salinity
Mysidopsis bahia	400+	4 Days	MS070329	25°C	~15‰
Menidia beryllina	400+	11 Days	SS070311	25°C	~15‰
Cyprinella leedsi	150+	11 Days	CL070321	25°C	
Pimephales promelas	150+	8 Days	FM070315-1530	25°C	

Packed by: Frank Gauj

Shipped Via: FedEx

Notes: _____

Thank you for your order

Appendix D. (continued)

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

NELAC Accredited

Organism Shipment Record

State of Florida Aquaculture Certificate Number AQ0668007

Date: 4/16/07

Shipped to: T-DEP

P.O. No: _____

Species	Quantity	Age	Brood Number	Temperature	Salinity
Mysidopsis bahia					
Menidia beryllina					
Cyprinella leedsi	120+	11 Days	CinL70405	25°C	
Pimephales promelas	350+	<24 hrs	TMO0416-1HO	25°C	

Packed by: Frank Gauji

Shipped Via: FedEx

Notes: _____

Thank you for your order.

Appendix E. Chemical Analyses performed on the effluent from the Titusville Blue Heron Water Reclamation Facility and Titusville Osprey Water Reclamation Facility Outfall R-003, sampled on April 16, 2007.

Date Sampled	Field ID	Analysis Group	Component	Result	Qualifier	Units	MDL	PQL
4/16/2007 9:10	Titus	AGP/LN	Algal Growth Potential	94.9		mg DryWt/L	0.3	0.9
4/16/2007 9:10	Titus	AGP/LN	Algal Growth Potential-Dechlorinated	81.2		mg DryWt/L	0.3	0.9
4/16/2007 9:10	Titus	Metals	Mercury	0.12	U	ug/L	0.12	0.5
4/16/2007 9:10	Titus	Metals	Aluminum	12	I	ug/L	4	16
4/16/2007 9:10	Titus	Metals	Calcium	43.8	A	mg/L	0.02	0.08
4/16/2007 9:10	Titus	Metals	Chromium	0.71	I	ug/L	0.3	1.2
4/16/2007 9:10	Titus	Metals	Iron	97	A	ug/L	5	20
4/16/2007 9:10	Titus	Metals	Magnesium	5.1	A	mg/L	0.005	0.02
4/16/2007 9:10	Titus	Metals	Zinc	41	A	ug/L	5	20
4/16/2007 9:10	Titus	Metals	Arsenic	0.64	I	ug/L	0.5	2
4/16/2007 9:10	Titus	Metals	Cadmium	0.05	U	ug/L	0.05	0.2
4/16/2007 9:10	Titus	Metals	Copper	1.28	A	ug/L	0.2	0.8
4/16/2007 9:10	Titus	Metals	Lead	0.2	U	ug/L	0.2	0.8
4/16/2007 9:10	Titus	Metals	Nickel	2.86	A	ug/L	0.25	1
4/16/2007 9:10	Titus	Metals	Selenium	0.5	U	ug/L	0.5	2
4/16/2007 9:10	Titus	Metals	Silver	0.025	U	ug/L	0.025	0.1
4/16/2007 9:10	Titus	Nutrients	Alkalinity	80		mg CaCO3/L	0.65	2.5
4/16/2007 9:10	Titus	Nutrients	Color	10		PCU	5	5
4/16/2007 9:10	Titus	Nutrients	Specific_Conductance	760		umhos/cm	2	8
4/16/2007 9:10	Titus	Nutrients	Ammonia-N	0.095		mg N/L	0.01	0.02
4/16/2007 9:10	Titus	Nutrients	NO2NO3-N	2.2		mg N/L	0.04	0.1
4/16/2007 9:10	Titus	Nutrients	O-Phosphate-P	0.36		mg P/L	0.04	0.1
4/16/2007 9:10	Titus	Nutrients	Sulfate	66		mg SO4/L	1	2.5
4/16/2007 9:10	Titus	Nutrients	Kjeldahl Nitrogen	1.8	Q	mg N/L	0.08	0.2
4/16/2007 9:10	Titus	Nutrients	Total-P	0.57		mg P/L	0.04	0.12
4/16/2007 9:10	Titus	Nutrients	TSS	4	U	mg/L	4	16
4/16/2007 9:10	Titus	Pesticides	Alachlor	0.6	U	ug/L	0.6	2.4
4/16/2007 9:10	Titus	Pesticides	Ametryn	0.05	U	ug/L	0.05	0.2
4/16/2007 9:10	Titus	Pesticides	Atrazine	0.27		ug/L	0.05	0.2
4/16/2007 9:10	Titus	Pesticides	Azinphos Methyl	0.2	U	ug/L	0.2	0.8
4/16/2007 9:10	Titus	Pesticides	Bromacil	0.2	U	ug/L	0.2	0.8
4/16/2007 9:10	Titus	Pesticides	Butylate	0.2	U	ug/L	0.2	0.8
4/16/2007 9:10	Titus	Pesticides	Chlorpyrifos Ethyl	0.05	U	ug/L	0.05	0.2
4/16/2007 9:10	Titus	Pesticides	Chlorpyrifos Methyl	0.1	UJ	ug/L	0.1	0.4
4/16/2007 9:10	Titus	Pesticides	Diazinon	0.05	UJ	ug/L	0.05	0.2
4/16/2007 9:10	Titus	Pesticides	Ethion	0.05	U	ug/L	0.05	0.2
4/16/2007 9:10	Titus	Pesticides	Ethoprop	0.1	U	ug/L	0.1	0.4
4/16/2007 9:10	Titus	Pesticides	Fenamiphos	0.2	U	ug/L	0.2	0.8

Appendix E. (continued)

Date Sampled	Field ID	Analysis Group	Component	Result	Qualifier	Units	MDL	PQL
4/16/2007 9:10	Titus	Pesticides	Fonofos	0.1	U	ug/L	0.1	0.4
4/16/2007 9:10	Titus	Pesticides	Hexazinone	0.1	U	ug/L	0.1	0.4
4/16/2007 9:10	Titus	Pesticides	Malathion	0.15	UJ	ug/L	0.15	0.6
4/16/2007 9:10	Titus	Pesticides	Metalaxyl	0.25	U	ug/L	0.25	1
4/16/2007 9:10	Titus	Pesticides	Metolachlor	0.5	UJ	ug/L	0.5	2
4/16/2007 9:10	Titus	Pesticides	Metribuzin	0.1	U	ug/L	0.1	0.4
4/16/2007 9:10	Titus	Pesticides	Mevinphos	0.2	U	ug/L	0.2	0.8
4/16/2007 9:10	Titus	Pesticides	Naled	0.8	UJ	ug/L	0.8	3.2
4/16/2007 9:10	Titus	Pesticides	Norflurazon	0.15	U	ug/L	0.15	0.6
4/16/2007 9:10	Titus	Pesticides	Parathion Ethyl	0.15	U	ug/L	0.15	0.6
4/16/2007 9:10	Titus	Pesticides	Parathion Methyl	0.1	U	ug/L	0.1	0.4
4/16/2007 9:10	Titus	Pesticides	Phorate	0.05	U	ug/L	0.05	0.2
4/16/2007 9:10	Titus	Pesticides	Prometryn	0.15	U	ug/L	0.15	0.6
4/16/2007 9:10	Titus	Pesticides	Simazine	0.05	UJ	ug/L	0.05	0.2
4/16/2007 9:10	Titus	Priority Organic Pollutants	1,2,4-Trichlorobenzene	0.96	U	ug/L	0.96	3.8
4/16/2007 9:10	Titus	Priority Organic Pollutants	1,2-Dichlorobenzene	0.96	U	ug/L	0.96	3.8
4/16/2007 9:10	Titus	Priority Organic Pollutants	1,3-Dichlorobenzene	0.96	U	ug/L	0.96	3.8
4/16/2007 9:10	Titus	Priority Organic Pollutants	1,4-Dichlorobenzene	0.96	U	ug/L	0.96	3.8
4/16/2007 9:10	Titus	Priority Organic Pollutants	2,4,6-Trichlorophenol	0.96	U	ug/L	0.96	3.8
4/16/2007 9:10	Titus	Priority Organic Pollutants	2,4-Dichlorophenol	0.96	U	ug/L	0.96	3.8
4/16/2007 9:10	Titus	Priority Organic Pollutants	2,4-Dimethylphenol	9.6	U	ug/L	9.6	38
4/16/2007 9:10	Titus	Priority Organic Pollutants	2,4-Dinitrophenol	14	U	ug/L	14	58
4/16/2007 9:10	Titus	Priority Organic Pollutants	2,4-Dinitrotoluene	0.96	U	ug/L	0.96	3.8
4/16/2007 9:10	Titus	Priority Organic Pollutants	2,6-Dinitrotoluene	0.96	U	ug/L	0.96	3.8
4/16/2007 9:10	Titus	Priority Organic Pollutants	2-Chloronaphthalene	0.96	U	ug/L	0.96	3.8
4/16/2007 9:10	Titus	Priority Organic Pollutants	2-Chlorophenol	0.96	U	ug/L	0.96	3.8
4/16/2007 9:10	Titus	Priority Organic Pollutants	2-Methyl-4,6-dinitrophenol	2.9	U	ug/L	2.9	12
4/16/2007 9:10	Titus	Priority Organic Pollutants	2-Nitrophenol	0.96	U	ug/L	0.96	3.8
4/16/2007 9:10	Titus	Priority Organic Pollutants	3,3'-Dichlorobenzidine	38	U	ug/L	38	150
4/16/2007 9:10	Titus	Priority Organic Pollutants	4,4'-DDD	1.4	U	ug/L	1.4	5.8
4/16/2007 9:10	Titus	Priority Organic Pollutants	4,4'-DDE	1.4	U	ug/L	1.4	5.8
4/16/2007 9:10	Titus	Priority Organic Pollutants	4,4'-DDT	1.4	U	ug/L	1.4	5.8
4/16/2007 9:10	Titus	Priority Organic Pollutants	4-Bromophenyl phenyl ether	0.96	U	ug/L	0.96	3.8
4/16/2007 9:10	Titus	Priority Organic Pollutants	4-Chloro-3-methylphenol	0.96	U	ug/L	0.96	3.8
4/16/2007 9:10	Titus	Priority Organic Pollutants	4-Chlorophenyl phenyl ether	1.9	U	ug/L	1.9	7.7
4/16/2007 9:10	Titus	Priority Organic Pollutants	4-Nitrophenol	14	U	ug/L	14	58
4/16/2007 9:10	Titus	Priority Organic Pollutants	Acenaphthene	0.96	U	ug/L	0.96	3.8
4/16/2007 9:10	Titus	Priority Organic Pollutants	Acenaphthylene	0.96	U	ug/L	0.96	3.8
4/16/2007 9:10	Titus	Priority Organic Pollutants	Aldrin	1.4	U	ug/L	1.4	5.8
4/16/2007 9:10	Titus	Priority Organic Pollutants	Anthracene	0.96	U	ug/L	0.96	3.8
4/16/2007 9:10	Titus	Priority Organic Pollutants	Benzidine	96	U	ug/L	96	380

Appendix E. (continued)

Date Sampled	Field ID	Analysis Group	Component	Result	Qualifier	Units	MDL	PQL
4/16/2007 9:10	Titus	Priority Organic Pollutants	Benzo(a)anthracene	0.96	U	ug/L	0.96	3.8
4/16/2007 9:10	Titus	Priority Organic Pollutants	Benzo(a)pyrene	0.96	U	ug/L	0.96	3.8
4/16/2007 9:10	Titus	Priority Organic Pollutants	Benzo(b)fluoranthene	0.96	U	ug/L	0.96	3.8
4/16/2007 9:10	Titus	Priority Organic Pollutants	Benzo(g,h,i)perylene	0.96	U	ug/L	0.96	3.8
4/16/2007 9:10	Titus	Priority Organic Pollutants	Benzo(k)fluoranthene	0.96	U	ug/L	0.96	3.8
4/16/2007 9:10	Titus	Priority Organic Pollutants	Bis(2-chloroethoxy)methane	0.96	U	ug/L	0.96	3.8
4/16/2007 9:10	Titus	Priority Organic Pollutants	Bis(2-chloroethyl)ether	0.96	U	ug/L	0.96	3.8
4/16/2007 9:10	Titus	Priority Organic Pollutants	Bis(2-chloroisopropyl)ether	2.9	U	ug/L	2.9	12
4/16/2007 9:10	Titus	Priority Organic Pollutants	Bis(2-ethylhexyl)phthalate	14	U	ug/L	14	58
4/16/2007 9:10	Titus	Priority Organic Pollutants	Butyl benzyl phthalate	4.8	U	ug/L	4.8	19
4/16/2007 9:10	Titus	Priority Organic Pollutants	Chrysene	0.96	U	ug/L	0.96	3.8
4/16/2007 9:10	Titus	Priority Organic Pollutants	Di-n-butyl phthalate	4.8	U	ug/L	4.8	19
4/16/2007 9:10	Titus	Priority Organic Pollutants	Di-n-octyl phthalate	0.96	U	ug/L	0.96	3.8
4/16/2007 9:10	Titus	Priority Organic Pollutants	Dibenzo(a,h)anthracene	0.96	U	ug/L	0.96	3.8
4/16/2007 9:10	Titus	Priority Organic Pollutants	Dieldrin	1.4	U	ug/L	1.4	5.8
4/16/2007 9:10	Titus	Priority Organic Pollutants	Diethyl phthalate	0.96	U	ug/L	0.96	3.8
4/16/2007 9:10	Titus	Priority Organic Pollutants	Dimethyl phthalate	48	U	ug/L	48	190
4/16/2007 9:10	Titus	Priority Organic Pollutants	Endosulfan I	3.8	U	ug/L	3.8	15
4/16/2007 9:10	Titus	Priority Organic Pollutants	Endosulfan II	3.8	U	ug/L	3.8	15
4/16/2007 9:10	Titus	Priority Organic Pollutants	Endosulfan sulfate	1.4	U	ug/L	1.4	5.8
4/16/2007 9:10	Titus	Priority Organic Pollutants	Endrin	1.4	U	ug/L	1.4	5.8
4/16/2007 9:10	Titus	Priority Organic Pollutants	Endrin aldehyde	3.8	U	ug/L	3.8	15
4/16/2007 9:10	Titus	Priority Organic Pollutants	Fluoranthene	0.96	U	ug/L	0.96	3.8
4/16/2007 9:10	Titus	Priority Organic Pollutants	Fluorene	0.96	U	ug/L	0.96	3.8
4/16/2007 9:10	Titus	Priority Organic Pollutants	Heptachlor	1.4	U	ug/L	1.4	5.8
4/16/2007 9:10	Titus	Priority Organic Pollutants	Heptachlor epoxide	1.4	U	ug/L	1.4	5.8
4/16/2007 9:10	Titus	Priority Organic Pollutants	Hexachlorobenzene	0.96	U	ug/L	0.96	3.8
4/16/2007 9:10	Titus	Priority Organic Pollutants	Hexachlorobutadiene	2.9	U	ug/L	2.9	12
4/16/2007 9:10	Titus	Priority Organic Pollutants	Hexachlorocyclopentadiene	2.9	U	ug/L	2.9	12
4/16/2007 9:10	Titus	Priority Organic Pollutants	Hexachloroethane	2.9	U	ug/L	2.9	12
4/16/2007 9:10	Titus	Priority Organic Pollutants	Indeno(1,2,3-cd)pyrene	0.96	U	ug/L	0.96	3.8
4/16/2007 9:10	Titus	Priority Organic Pollutants	Isophorone	0.96	U	ug/L	0.96	3.8
4/16/2007 9:10	Titus	Priority Organic Pollutants	N-Nitrosodi-n-propylamine	1.9	U	ug/L	1.9	7.7
4/16/2007 9:10	Titus	Priority Organic Pollutants	N-Nitrosodimethylamine	1.9	U	ug/L	1.9	7.7
4/16/2007 9:10	Titus	Priority Organic Pollutants	N-Nitrosodiphenylamine/ Diphenylamine	2.9	U	ug/L	2.9	12
4/16/2007 9:10	Titus	Priority Organic Pollutants	Naphthalene	0.96	U	ug/L	0.96	3.8
4/16/2007 9:10	Titus	Priority Organic Pollutants	Nitrobenzene	1.9	U	ug/L	1.9	7.7
4/16/2007 9:10	Titus	Priority Organic Pollutants	Pentachlorophenol	2.9	U	ug/L	2.9	12
4/16/2007 9:10	Titus	Priority Organic Pollutants	Phenanthrene	0.96	U	ug/L	0.96	3.8
4/16/2007 9:10	Titus	Priority Organic Pollutants	Phenol	0.96	U	ug/L	0.96	3.8
4/16/2007 9:10	Titus	Priority Organic Pollutants	Pyrene	0.96	U	ug/L	0.96	3.8

Appendix E. (continued)

Date Sampled	Field ID	Analysis Group	Component	Result	Qualifier	Units	MDL	PQL
4/16/2007 9:10	Titus	Priority Organic Pollutants	alpha-BHC	1.4	U	ug/L	1.4	5.8
4/16/2007 9:10	Titus	Priority Organic Pollutants	beta-BHC	1.4	U	ug/L	1.4	5.8
4/16/2007 9:10	Titus	Priority Organic Pollutants	delta-BHC	1.4	U	ug/L	1.4	5.8
4/16/2007 9:10	Titus	Priority Organic Pollutants	gamma-BHC	1.4	U	ug/L	1.4	5.8
4/16/2007 9:32	Titus	Field Parameters	Dissolved Oxygen	11.05		mg/L		
4/16/2007 9:32	Titus	Field Parameters	Specific Conductance	838		umhos/cm		
4/16/2007 9:32	Titus	Field Parameters	Temperature	25.2		C		
4/16/2007 9:32	Titus	Field Parameters	Total Residual Chlorine	1.9		mg/L		
4/16/2007 9:32	Titus	Field Parameters	pH	7.02				
4/16/2007 0:00	Equipment Blank	Metals	Mercury	0.12	U	ug/L	0.12	0.5
4/16/2007 0:00	Equipment Blank	Metals	Aluminum	4	U	ug/L	4	16
4/16/2007 0:00	Equipment Blank	Metals	Calcium	0.026	I	mg/L	0.02	0.08
4/16/2007 0:00	Equipment Blank	Metals	Chromium	0.3	U	ug/L	0.3	1.2
4/16/2007 0:00	Equipment Blank	Metals	Iron	5	U	ug/L	5	20
4/16/2007 0:00	Equipment Blank	Metals	Magnesium	0.005	U	mg/L	0.005	0.02
4/16/2007 0:00	Equipment Blank	Metals	Zinc	5	U	ug/L	5	20
4/16/2007 0:00	Equipment Blank	Metals	Arsenic	0.5	U	ug/L	0.5	2
4/16/2007 0:00	Equipment Blank	Metals	Cadmium	0.05	U	ug/L	0.05	0.2
4/16/2007 0:00	Equipment Blank	Metals	Copper	0.29	I	ug/L	0.2	0.8
4/16/2007 0:00	Equipment Blank	Metals	Lead	0.2	U	ug/L	0.2	0.8
4/16/2007 0:00	Equipment Blank	Metals	Nickel	0.5	I	ug/L	0.25	1
4/16/2007 0:00	Equipment Blank	Metals	Selenium	0.5	U	ug/L	0.5	2
4/16/2007 0:00	Equipment Blank	Metals	Silver	0.025	U	ug/L	0.025	0.1
4/16/2007 0:00	Equipment Blank	Nutrients	Ammonia-N	0.01	U	mg N/L	0.01	0.02
4/16/2007 0:00	Equipment Blank	Nutrients	NO2NO3-N	0.004	U	mg N/L	0.004	0.01
4/16/2007 0:00	Equipment Blank	Nutrients	O-Phosphate-P	0.011		mg P/L	0.004	0.01
4/16/2007 0:00	Equipment Blank	Nutrients	Sulfate	0.2	U	mg SO4/L	0.2	0.5
4/16/2007 0:00	Equipment Blank	Nutrients	Kjeldahl Nitrogen	0.08	U	mg N/L	0.08	0.2
4/16/2007 0:00	Equipment Blank	Nutrients	Total-P	0.02	U	mg P/L	0.02	0.06
4/16/2007 0:00	Equipment Blank	Pesticides	Alachlor	0.58	U	ug/L	0.58	2.3
4/16/2007 0:00	Equipment Blank	Pesticides	Ametryn	0.048	U	ug/L	0.048	0.19
4/16/2007 0:00	Equipment Blank	Pesticides	Atrazine	0.048	U	ug/L	0.048	0.19
4/16/2007 0:00	Equipment Blank	Pesticides	Azinphos Methyl	0.19	U	ug/L	0.19	0.76
4/16/2007 0:00	Equipment Blank	Pesticides	Bromacil	0.19	U	ug/L	0.19	0.76
4/16/2007 0:00	Equipment Blank	Pesticides	Butylate	0.19	U	ug/L	0.19	0.76
4/16/2007 0:00	Equipment Blank	Pesticides	Chlorpyrifos Ethyl	0.048	U	ug/L	0.048	0.19
4/16/2007 0:00	Equipment Blank	Pesticides	Chlorpyrifos Methyl	0.096	UJ	ug/L	0.096	0.38
4/16/2007 0:00	Equipment Blank	Pesticides	Diazinon	0.048	UJ	ug/L	0.048	0.19
4/16/2007 0:00	Equipment Blank	Pesticides	Ethion	0.048	U	ug/L	0.048	0.19
4/16/2007 0:00	Equipment Blank	Pesticides	Ethoprop	0.096	U	ug/L	0.096	0.38
4/16/2007 0:00	Equipment Blank	Pesticides	Fenamiphos	0.19	U	ug/L	0.19	0.76

Appendix E. (continued)

Date Sampled	Field ID	Analysis Group	Component	Result	Qualifier	Units	MDL	PQL
4/16/2007 0:00	Equipment Blank	Pesticides	Fonofos	0.096	U	ug/L	0.096	0.38
4/16/2007 0:00	Equipment Blank	Pesticides	Hexazinone	0.096	U	ug/L	0.096	0.38
4/16/2007 0:00	Equipment Blank	Pesticides	Malathion	0.14	UJ	ug/L	0.14	0.56
4/16/2007 0:00	Equipment Blank	Pesticides	Metalaxyl	0.24	U	ug/L	0.24	0.96
4/16/2007 0:00	Equipment Blank	Pesticides	Metolachlor	0.48	UJ	ug/L	0.48	1.9
4/16/2007 0:00	Equipment Blank	Pesticides	Metribuzin	0.096	U	ug/L	0.096	0.38
4/16/2007 0:00	Equipment Blank	Pesticides	Mevinphos	0.19	U	ug/L	0.19	0.76
4/16/2007 0:00	Equipment Blank	Pesticides	Naled	0.77	UJ	ug/L	0.77	3.1
4/16/2007 0:00	Equipment Blank	Pesticides	Norflurazon	0.14	U	ug/L	0.14	0.56
4/16/2007 0:00	Equipment Blank	Pesticides	Parathion Ethyl	0.14	U	ug/L	0.14	0.56
4/16/2007 0:00	Equipment Blank	Pesticides	Parathion Methyl	0.096	U	ug/L	0.096	0.38
4/16/2007 0:00	Equipment Blank	Pesticides	Phorate	0.048	U	ug/L	0.048	0.19
4/16/2007 0:00	Equipment Blank	Pesticides	Prometryn	0.14	U	ug/L	0.14	0.56
4/16/2007 0:00	Equipment Blank	Pesticides	Simazine	0.048	UJ	ug/L	0.048	0.19
4/16/2007 0:00	Equipment Blank	Priority Organic Pollutants	1,2,4-Trichlorobenzene	0.95	U	ug/L	0.95	3.8
4/16/2007 0:00	Equipment Blank	Priority Organic Pollutants	1,2-Dichlorobenzene	0.95	U	ug/L	0.95	3.8
4/16/2007 0:00	Equipment Blank	Priority Organic Pollutants	1,3-Dichlorobenzene	0.95	U	ug/L	0.95	3.8
4/16/2007 0:00	Equipment Blank	Priority Organic Pollutants	1,4-Dichlorobenzene	0.95	U	ug/L	0.95	3.8
4/16/2007 0:00	Equipment Blank	Priority Organic Pollutants	2,4,6-Trichlorophenol	0.95	U	ug/L	0.95	3.8
4/16/2007 0:00	Equipment Blank	Priority Organic Pollutants	2,4-Dichlorophenol	0.95	U	ug/L	0.95	3.8
4/16/2007 0:00	Equipment Blank	Priority Organic Pollutants	2,4-Dimethylphenol	9.5	U	ug/L	9.5	38
4/16/2007 0:00	Equipment Blank	Priority Organic Pollutants	2,4-Dinitrophenol	14	U	ug/L	14	57
4/16/2007 0:00	Equipment Blank	Priority Organic Pollutants	2,4-Dinitrotoluene	0.95	U	ug/L	0.95	3.8
4/16/2007 0:00	Equipment Blank	Priority Organic Pollutants	2,6-Dinitrotoluene	0.95	U	ug/L	0.95	3.8
4/16/2007 0:00	Equipment Blank	Priority Organic Pollutants	2-Chloronaphthalene	0.95	U	ug/L	0.95	3.8
4/16/2007 0:00	Equipment Blank	Priority Organic Pollutants	2-Chlorophenol	0.95	U	ug/L	0.95	3.8
4/16/2007 0:00	Equipment Blank	Priority Organic Pollutants	2-Methyl-4,6-dinitrophenol	2.9	U	ug/L	2.9	11
4/16/2007 0:00	Equipment Blank	Priority Organic Pollutants	2-Nitrophenol	0.95	U	ug/L	0.95	3.8
4/16/2007 0:00	Equipment Blank	Priority Organic Pollutants	3,3'-Dichlorobenzidine	38	U	ug/L	38	150
4/16/2007 0:00	Equipment Blank	Priority Organic Pollutants	4,4'-DDD	1.4	U	ug/L	1.4	5.7
4/16/2007 0:00	Equipment Blank	Priority Organic Pollutants	4,4'-DDE	1.4	U	ug/L	1.4	5.7
4/16/2007 0:00	Equipment Blank	Priority Organic Pollutants	4,4'-DDT	1.4	U	ug/L	1.4	5.7
4/16/2007 0:00	Equipment Blank	Priority Organic Pollutants	4-Bromophenyl phenyl ether	0.95	U	ug/L	0.95	3.8
4/16/2007 0:00	Equipment Blank	Priority Organic Pollutants	4-Chloro-3-methylphenol	0.95	U	ug/L	0.95	3.8
4/16/2007 0:00	Equipment Blank	Priority Organic Pollutants	4-Chlorophenyl phenyl ether	1.9	U	ug/L	1.9	7.6
4/16/2007 0:00	Equipment Blank	Priority Organic Pollutants	4-Nitrophenol	14	U	ug/L	14	57
4/16/2007 0:00	Equipment Blank	Priority Organic Pollutants	Acenaphthene	0.95	U	ug/L	0.95	3.8
4/16/2007 0:00	Equipment Blank	Priority Organic Pollutants	Acenaphthylene	0.95	U	ug/L	0.95	3.8
4/16/2007 0:00	Equipment Blank	Priority Organic Pollutants	Aldrin	1.4	U	ug/L	1.4	5.7
4/16/2007 0:00	Equipment Blank	Priority Organic Pollutants	Anthracene	0.95	U	ug/L	0.95	3.8
4/16/2007 0:00	Equipment Blank	Priority Organic Pollutants	Benzidine	95	U	ug/L	95	380

Appendix E. (continued)

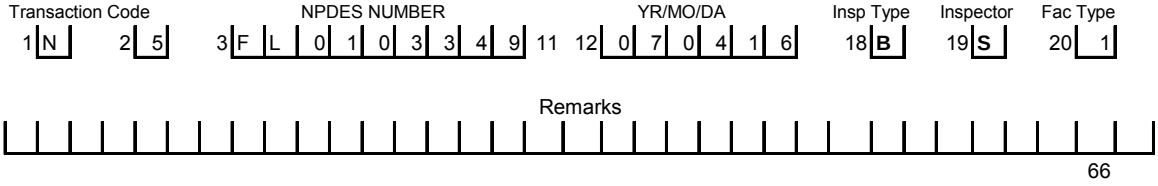
Date Sampled	Field ID	Analysis Group	Component	Result	Qualifier	Units	MDL	PQL
4/16/2007 0:00	Equipment Blank	Priority Organic Pollutants	Benzo(a)anthracene	0.95	U	ug/L	0.95	3.8
4/16/2007 0:00	Equipment Blank	Priority Organic Pollutants	Benzo(a)pyrene	0.95	U	ug/L	0.95	3.8
4/16/2007 0:00	Equipment Blank	Priority Organic Pollutants	Benzo(b)fluoranthene	0.95	U	ug/L	0.95	3.8
4/16/2007 0:00	Equipment Blank	Priority Organic Pollutants	Benzo(g,h,i)perylene	0.95	U	ug/L	0.95	3.8
4/16/2007 0:00	Equipment Blank	Priority Organic Pollutants	Benzo(k)fluoranthene	0.95	U	ug/L	0.95	3.8
4/16/2007 0:00	Equipment Blank	Priority Organic Pollutants	Bis(2-chloroethoxy)methane	0.95	U	ug/L	0.95	3.8
4/16/2007 0:00	Equipment Blank	Priority Organic Pollutants	Bis(2-chloroethyl)ether	0.95	U	ug/L	0.95	3.8
4/16/2007 0:00	Equipment Blank	Priority Organic Pollutants	Bis(2-chloroisopropyl)ether	2.9	U	ug/L	2.9	11
4/16/2007 0:00	Equipment Blank	Priority Organic Pollutants	Bis(2-ethylhexyl)phthalate	14	U	ug/L	14	57
4/16/2007 0:00	Equipment Blank	Priority Organic Pollutants	Butyl benzyl phthalate	4.8	U	ug/L	4.8	19
4/16/2007 0:00	Equipment Blank	Priority Organic Pollutants	Chrysene	0.95	U	ug/L	0.95	3.8
4/16/2007 0:00	Equipment Blank	Priority Organic Pollutants	Di-n-butyl phthalate	4.8	U	ug/L	4.8	19
4/16/2007 0:00	Equipment Blank	Priority Organic Pollutants	Di-n-octyl phthalate	0.95	U	ug/L	0.95	3.8
4/16/2007 0:00	Equipment Blank	Priority Organic Pollutants	Dibenzo(a,h)anthracene	0.95	U	ug/L	0.95	3.8
4/16/2007 0:00	Equipment Blank	Priority Organic Pollutants	Dieldrin	1.4	U	ug/L	1.4	5.7
4/16/2007 0:00	Equipment Blank	Priority Organic Pollutants	Diethyl phthalate	0.95	U	ug/L	0.95	3.8
4/16/2007 0:00	Equipment Blank	Priority Organic Pollutants	Dimethyl phthalate	48	U	ug/L	48	190
4/16/2007 0:00	Equipment Blank	Priority Organic Pollutants	Endosulfan I	3.8	U	ug/L	3.8	15
4/16/2007 0:00	Equipment Blank	Priority Organic Pollutants	Endosulfan II	3.8	U	ug/L	3.8	15
4/16/2007 0:00	Equipment Blank	Priority Organic Pollutants	Endosulfan sulfate	1.4	U	ug/L	1.4	5.7
4/16/2007 0:00	Equipment Blank	Priority Organic Pollutants	Endrin	1.4	U	ug/L	1.4	5.7
4/16/2007 0:00	Equipment Blank	Priority Organic Pollutants	Endrin aldehyde	3.8	U	ug/L	3.8	15
4/16/2007 0:00	Equipment Blank	Priority Organic Pollutants	Fluoranthene	0.95	U	ug/L	0.95	3.8
4/16/2007 0:00	Equipment Blank	Priority Organic Pollutants	Fluorene	0.95	U	ug/L	0.95	3.8
4/16/2007 0:00	Equipment Blank	Priority Organic Pollutants	Heptachlor	1.4	U	ug/L	1.4	5.7
4/16/2007 0:00	Equipment Blank	Priority Organic Pollutants	Heptachlor epoxide	1.4	U	ug/L	1.4	5.7
4/16/2007 0:00	Equipment Blank	Priority Organic Pollutants	Hexachlorobenzene	0.95	U	ug/L	0.95	3.8
4/16/2007 0:00	Equipment Blank	Priority Organic Pollutants	Hexachlorobutadiene	2.9	U	ug/L	2.9	11
4/16/2007 0:00	Equipment Blank	Priority Organic Pollutants	Hexachlorocyclopentadiene	2.9	U	ug/L	2.9	11
4/16/2007 0:00	Equipment Blank	Priority Organic Pollutants	Hexachloroethane	2.9	U	ug/L	2.9	11
4/16/2007 0:00	Equipment Blank	Priority Organic Pollutants	Indeno(1,2,3-cd)pyrene	0.95	U	ug/L	0.95	3.8
4/16/2007 0:00	Equipment Blank	Priority Organic Pollutants	Isophorone	0.95	U	ug/L	0.95	3.8
4/16/2007 0:00	Equipment Blank	Priority Organic Pollutants	N-Nitrosodi-n-propylamine	1.9	U	ug/L	1.9	7.6
4/16/2007 0:00	Equipment Blank	Priority Organic Pollutants	N-Nitrosodimethylamine	1.9	U	ug/L	1.9	7.6
4/16/2007 0:00	Equipment Blank	Priority Organic Pollutants	N-Nitrosodiphenylamine/ Diphenylamine	2.9	U	ug/L	2.9	11
4/16/2007 0:00	Equipment Blank	Priority Organic Pollutants	Naphthalene	0.95	U	ug/L	0.95	3.8
4/16/2007 0:00	Equipment Blank	Priority Organic Pollutants	Nitrobenzene	1.9	U	ug/L	1.9	7.6
4/16/2007 0:00	Equipment Blank	Priority Organic Pollutants	Pentachlorophenol	2.9	U	ug/L	2.9	11
4/16/2007 0:00	Equipment Blank	Priority Organic Pollutants	Phenanthrene	0.95	U	ug/L	0.95	3.8
4/16/2007 0:00	Equipment Blank	Priority Organic Pollutants	Phenol	0.95	U	ug/L	0.95	3.8
4/16/2007 0:00	Equipment Blank	Priority Organic Pollutants	Pyrene	0.95	U	ug/L	0.95	3.8

Appendix E. (continued)

Date Sampled	Field ID	Analysis Group	Component	Result	Qualifier	Units	MDL	PQL
4/16/2007 0:00	Equipment Blank	Priority Organic Pollutants	alpha-BHC	1.4	U	ug/L	1.4	5.7
4/16/2007 0:00	Equipment Blank	Priority Organic Pollutants	beta-BHC	1.4	U	ug/L	1.4	5.7
4/16/2007 0:00	Equipment Blank	Priority Organic Pollutants	delta-BHC	1.4	U	ug/L	1.4	5.7
4/16/2007 0:00	Equipment Blank	Priority Organic Pollutants	gamma-BHC	1.4	U	ug/L	1.4	5.7

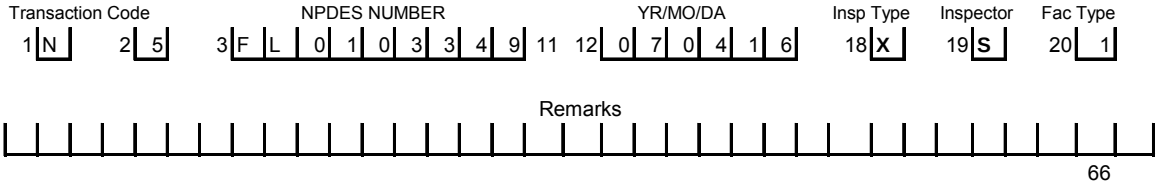
The Bioassay of Titusville Blue Heron Water Reclamation Facility effluent sampled on April 16, 2007. NPDES #FL0103349.

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



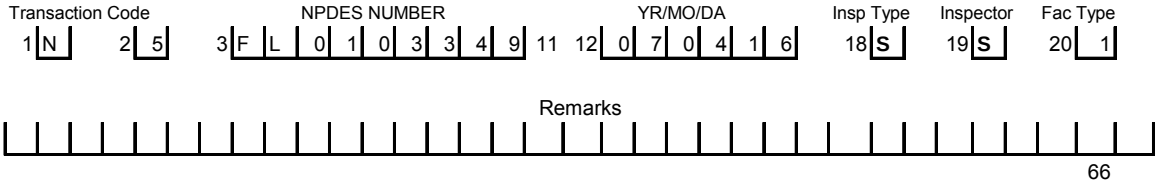
The Priority Pollutants Analysis of Titusville Blue Heron Water Reclamation Facility effluent sampled on April 16, 2007. NPDES #FL0103349.

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



Biological Analyses of Titusville Blue Heron Water Reclamation Facility effluent sampled on April 16, 2007. NPDES #FL0103349.

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



The Bioassay of Titusville Osprey Water Reclamation Facility effluent sampled on April 16, 2007. NPDES #FL0103268

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 1 0 3 2 6 8 11	12 0 7 0 4 1 6	18 **B**	19 **S**	20 1

Remarks

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The Priority Pollutants Analysis of Titusville Osprey Water Reclamation Facility effluent sampled on April 16, 2007. NPDES #FL0103268.

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 1 0 3 2 6 8 11	12 0 7 0 4 1 6	18 **X**	19 **S**	20 1

Remarks

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Biological Analyses of Titusville Osprey Water Reclamation Facility effluent sampled on April 16, 2007. NPDES #FL0103268.

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 1 0 3 2 6 8 11	12 0 7 0 4 1 6	18 **S**	19 **S**	20 1

Remarks

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