

Bioassays of

South Central Regional Wastewater Treatment Facility

Palm Beach County

NPDES #FL0035980

Sampled August 1, 2005

November 2005

Biology Section
Bureau of Laboratories
Division of Resource Assessment and Management

Quality Manual No. 870346G
NELAC Certification No. E31780

South Central Regional Wastewater Treatment Facility, 1801 N. Congress Avenue, Delray Beach, Palm Beach County, Florida, NPDES #FL0035980. Effluent samples for this facility were collected on August 1, 2005.

Introduction

The South Central Regional Wastewater Treatment Facility (WWTF) is a complete-mix activated-sludge process WWTF with a design flow of 24 million gallons per day (MGD) and an average annual flow of 14.11 MGD (August 2004 –July 2005). Effluent is treated with chlorine gas for disinfection. Effluent is dechlorinated with sulfur bisulfite prior to discharge into the Class III Marine Waters of the Atlantic Ocean. Effluent is discharged approximately 1,585 m (5,200 ft) offshore via a 76-cm (30-inch) diameter pipeline at a depth of approximately 27.4 m (90 ft) (latitude 26º 28' 09', longitude 80º 01' 49"). The facility maintains an emergency by-pass system to the C-30 canal. The facility has a reuse project, which provides reclaimed water for five (5) golf courses, urban residential irrigation, and in-plant use. The reuse system discharged a monthly average flow of 4.35 MGD (October 1, 2004 - July 31, 2005). The facility has a reduced standard for dissolved oxygen (no effluent limit - report only) and a mixing zone for pH. The mixing zone for pH is 400 square meters, centered at 11.23 meters from the outfall terminus for D-001 (facility information from June 2005 Bioassay report and Lisa Self of FDEP Southeast District).

In February 2005, samples were collected from this facility for algal growth potential (AGP) tests, bioassay tests, and chemical analyses. During that sampling event: the AGP greatly exceeded the problem thresholds for fresh and marine receiving waters (freshwater test 247 mg dry wt/L; salinity adjusted test, 356 mg dry wt/L), indicating high potential for nuisance algal growth; the bioassay samples were not acutely toxic to test organisms; the effluent's copper concentration (5.2 µg/L) exceeded the Class III Marine water quality criterion of ≤ 3.7 µg/L (62-302.530(24) and the permitted limit of 2.9µg/L.

Methods

Samples were collected from the EFD-1 NPDES sampling point for Outfall D-001 by Terry Davis (FDEP Southeast District) following DEP-SOP-001/01 FS 2400 Wastewater Sampling. All DEP SOP's are available on the web at: http://www.floridadep.org/labs/qa/sops.htm.

The 48-hour acute screening toxicity tests and algal growth potential test were performed following internal DEP SOP's TA07_03, TA07_04, and TA08_01 through TA08_09. All internal DEP SOP's are available on the web at: http://www.floridadep.org/labs/cgi-bin/sop/biosop.asp.

While the 48-hour acute screening toxicity test does not reflect the permit required conditions (acute definitive-96 hour duration), the Department uses it to provide reasonable assurance that the facility does not adversely affect waters of the state.

Bioassay tests were conducted with a 30% effluent concentration, per permit conditions. Sample salinity was adjusted by mixing 30% volume effluent with 70% volume natural seawater (~34.8 parts per thousand [ppth]), to yield an adjusted sample salinity of 24.6 ppth.

Toxicity Test Results

Tests were performed August 2-4, 2005.

Americamysis bahia 48-hr acute screening bioassay –	LC_{50} > 30%, 0% mortality in 30% sample at 48 hours
Menidia beryllina 48-hr acute screening bioassay –	LC_{50} > 30%, 0% mortality in 30% sample at 48 hours

Bioassay samples were not acutely toxic to the test organisms when diluted to 30% effluent with natural salt water.

See Appendix 1 for bioassay bench sheets.

Algal Growth Potential

The effluent Algal Growth Potential (AGP) was 195 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.

In the salinity-adjusted aliquot, the AGP was 308 mg dry wt/L of the unicellular green alga, *Dunaliella tertiolecta.* Raschke and Shultz found that AGP values above 10.0 mg dry wt/L represent a “problem” threshold for marine receiving waters, implying nutrient enrichment (personal communication with Ron Raschke USEPA Region 4 1987). The analytical chemistry suggests that the effluent is co-limited by both nitrogen and phosphorus. The predicted AGP (for *P. subcapitata*) based on the inorganic nitrogen and phosphorus concentrations were 399.0 (±20%) and 509.2 (±20%) mg dry wt/L, respectively (Table 1; Miller et al. 1978).

See Table 1 for AGP results.

Chemistry Results

Total residual chlorine (TRC) was detected in the bioassay sample in the laboratory at a concentration of 0.07 mg/L and was detected in the field at a concentration of 0.02 mg/L (test accuracy is ± 0.02 mg/L). Total ammonia was detected at a concentration of 6.72 mg/L in the bioassay sample in the laboratory. The unionized ammonia concentration in the bioassay sample was 0.06 mg/L based on calculations using sample parameters taken in the lab. The total ammonia concentration in the sample collected and preserved for chemical analysis was 7.0 mg/L. Based on the pH, salinity, and temperature of the effluent as collected, the calculated unionized ammonia concentration was 0.08 mg/L.

Aluminum, iron, and zinc were detected in the effluent at levels that comply with Class III Marine water quality criteria. Atrazine, lead, nickel, selenium, and silver were detected between the laboratory minimum detection limits (MDL) and practical quantitation limits (PQL). The effluent copper level (42.3 µg/L) exceeded both the Class III Marine water quality criterion of ≤ 3.7 µg/L (62-302.530(24), F.A.C.) and the permit limit of 2.9 µg/L. The effluent’s total residual chlorine concentration (0.07 mg/L) as determined in the lab exceeded the permit limit for dechlorination of ≤ 0.01 mg/L.

See Table 2 for results of analytes detected in the effluent, and corresponding limits.

See Appendix 2 for a complete list of chemical analyses performed.

Conclusion

The effluent sample collected from the EFD-1 sampling point for Outfall D-001 of this facility on August 1, 2005, was not acutely toxic to either test species during the acute screen 48-hour bioassays. The effluent AGP result greatly exceeded the "problem” threshold for marine receiving waters, indicating increased potential for nuisance algal growth. The effluent copper concentration exceeded both the Class III Marine water quality criterion and the permit limit. The effluent total residual chlorine concentration exceeded the permit limit for dechlorination.

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 wt/L) of Pseudokirchneriella subcapitata *for total soluble nitrogen (TSIN), ortho phosphate (OP), total nitrogen (TN), and total phosphorus (TP) limitation, the AGP (salt adjusted) of* Duneliella tertiolecta, *and N:P ratios for samples collected from South Central Regional WWTP on August 1, 2005.*

Location	AGP (measured)	Predicted AGP (TSIN) ± 20%	Predicted AGP (OP) ± 20%	Predicted AGP (TN) ± 20%	Predicted AGP (TP) ± 20%	AGP (salt adjusted)	Inorganic N:P ratio	Total N:P ratio
Effluent Samples	195	399 ± 79.8	365.5 ± 73.1	509.2 ± 101.84	417.1 ± 83.42	308	12.35	13.81

Table 2. Effluent limits, Class III Marine Criteria, and chemical and microbiological data for samples collected from South Central Regional Wastewater Treatment Plant on August 1, 2005.

South Cenral Regional WTP NPDES# FL 0035980	Class III Marine Stds	Effluent Limits	Effluent Samples
Organic Constituents (µg/L)			
Atrazine	-	-	0.079 l
Metals (µg/L unless otherwise noted)			
Aluminum	≤ 1,500	-	47
Arsenic	≤ 50	-	4 U
Cadmium	≤ 9.3	-	0.29 U
Calcium (mg/L)	-	-	52.9
Chromium-III	-	-	2 U
Copper	≤ 3.7	≤ 2.9 s	42.3
Iron	≤ 300	≤ 300 s	92
Lead	≤ 8.5	-	0.57 l
Magnesium (mg/L)	-	-	3.4
Mercury (µg/L)	≤ 0.025 s	≤ 0.025 s	-
Nickel	≤ 8.3	≤ 8.3 s	2.7 l
Selenium	≤ 71	-	0.76 l
Silver	≤ 2.3	≤ 2.3 s	0.063 l
Zinc	≤ 86	≤ 86 s	44
Nutrients (mg/L)			
Ortho-phosphate	-	-	0.85
Total Phosphorus	-	Report	0.97
Ammonia	-	Report	7.0
Unionized Ammonia	-	-	0.08 c
Nitrate+Nitrite	-	Report	3.5
Total Kjeldahl Nitrogen	-	-	9.9
Organic Nitrogen	-	Report	2.9 c
Total Nitrogen	-	Report	13.4 c
General Physical and Chemical Parameters			
D.O. (mg/L)	≥ 4.0	Report	4.8
CBOD (mg/L)	-	≤ 60.0 s	-
pH (S.U.)	6.5-8.5	6.0-8.5	7
Conductivity (umhos/cm)	-	-	792
Temperature (C)	-	-	31.8
Hardness (mg/L)	-	-	146.1 c
Total residual chlorine (mg/L)	-	≤ 0.01	0.02 V
Total residual chlorine (mg/L) (lab)	-	≤ 0.01	0.07
Flow (MGD AADF)	-	≤ 24	14.11 a
Cyanide (µg/L)	≤ 1.0 s	≤ 1.0 s	-
TSS (mg/L)	-	≤ 60.0 s	-
Microbiology (# counts/100ml)			
Fecal Coliforms-Membrane Filter	≤ 800 s	≤ 800 s	-

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

a - Annual average

c - Calculated value

s - Single sample

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

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

V - Analyte was detected in both sample and method blank

FDEP Biology Section - Acute Bioassay Bench Sheets

Facility: South Central Regional WWTF
Address: 1801 N. Congress Avenue
City: Delray Beach County: Palm Beach
Contact/District: Terry Davis / SED
NPDES Permit #: FL 0035980
LIMS Job #: TLH-205-08-02-47 LIMS Sample #: 853845
Lims Data Entry: 8-12-05 MF Data Entry Verification: 8-12-05 SP

Sample Collection: Date: 8-1-05 Time: 10:25
Hold time Start: Date: 8-1-05 Time: 10:25

Comments: (A) Salinity of NSW used to dilute sample to test salinity of 24.0 parts per thousand - Control water MF placement 8/3/05 was prepared by diluting NSW with Deionized water to a salinity of 24.7 parts per thousand. MF 8-3-05
(B) Original sample salinity – test solution prepared by diluting 100% effluent with NSW to contain 30% effluent and 70% NSW, MF 8/3/05 test solution salinity was 24.6 parts per thousand.
(C) residual chlorine detected in Field blank
(D) Original NSW control H_2O alkalinity = 127 mg/L, Adjusted NSW control H_2O (24.7‰) alkalinity = 103 mg/L. DN 8/4/05
Nereis beginning – Reported as NO Result due to SAT showing Nereis throughout organisms MF

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

Test Type: (Screening)/Definitive
(Static) / Static Renewal / Flow-through
Test Duration: (48) 96 Hours
Light Intensity : 50 - 100 ft. candles
Photoperiod : 16 hours light 8 hours dark
Initial sample handling:

Test 1 validation: Test 1: SOP TA07_03
Control survival ≥90%: (Yes) No
Temperature Range ≤3°C: (Yes) No
Test 2 validation: Test 2: SOP TA07_04
Control survival ≥90%: (Yes) No
Temperature Range ≤3°C: (Yes) No

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: <1 Final Salinity: ~~24.7~~ 24.6 Salts Hypersaline brine mix with NSW (B)
Salinity adjusted (Test 2) (yes) no Initial Salinity: <1 Final Salinity: ~~26.7~~ 24.6 Salts Hypersaline brine mix with NSW (B)
Dechlorination: yes (no) mL of 0.025N Sodium thiosulfate per liter of sample. Final TRC

Temperature Range °C
Incubator # 2 Range 24.5-25.9 °C
Room B246: 23.7-24.0°C
Waterbath: NA

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

Investigators' Signatures
Sarah Pritchard
Reem Michel
Marshall Faircloth

REVIEWER

Water Quality Parameters	20% DMW	Well Water	Salt Water ASW (NSW) Test 1	Salt Water ASW (NSW) Test 2	Moderately Hard Water	Original Sample	Method	Measured by	Verified by
Field Total Residual Cl2 (mg/L):	N/A	N/A	N/A	N/A	N/A	0.18(C)	T. Davis →		SP
Lab Total Residual Cl2 (mg/L):			<0.03	<0.03		0.07	HACH	SP	DN
Alkalinity (mg/L as $CaCO_3$):			(D)127	127(D)		140	HACH	DN	SP
Hardness (mg/L as $CaCO_3$):			—	—		152	HACH	—DN	MF
Total Ammonia (mg/L as N):			<0.051	<0.051		6.72	DENVER	MF	SP
Salinity (ppth):			34.8(A)	34.8(A)		<1(B)	YSI Mettler	DN	MF

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Appendix 1. Bench Sheets (continued)

FDEP Biology Section - - Bioassay Bench Sheet
Survival

LIMS Sample #: 853845 Test #: 1
Test Started: Date 8-2-05 Time: 1515
Organism: A. bahia
Test Ended: Date 8/4/05 Time: 1250
Organism Batch: 16-05
Diluent/Batch: NSW / NA
Organism Age: 4 days
Food: YCT P. subcapitata (Artemia)
Batch: - - 35138425GR
Chamber Size 1000 mL
Test Volume 500 mL
Feeding: (Prior to test) Prior to renewal (Daily)

Concentration	Replicate	Chamber #	Test Hour 0 hr	24 hr	48 hr BR	48 hr AR	72 hr	96 hr
NSW CTRL	A	E1	5	5	5			
	B	E2	5	5	5			
	C	E3	5	5	5			
	D	E4	5	5	5			
30%	A	E5	5	5	5			
	B	E6	5	5	5			
	C	E7	5	5	5			
	D	E8	5	5	5			
Organisms loaded by: SR		Checked by: (initials)	[redacted]	DN	DN			

Loading verified at 0 hours by: MF

Comments:

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

Test Results:
% mortality in ~~100~~ 30% sample 0
LC_{50}: >30 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 1. Bench Sheets (continued)

FDEP Biology Section - - Bioassay Bench Sheet
Survival

LIMS Sample #: 853845 Test #: 2 Test Started: Date 8-2-05 Time: 1445
Organism: M. beryllina Test Ended: Date 8/04/05 Time: 1255
Organism Batch: 15-05 Diluent/ Batch: NSW / NA
Organism Age: 10 days Food: YCT *P. subcapitata* (Artemia) 35138425 GR
Chamber Size 1000 mL Batch: - - -
Test Volume 500 mL Feeding: Prior to test / Prior to renewal - Daily

Concentration	Replicate	Chamber #	Test Hour 0 hr	24 hr	48 hr BR	48 hr AR	72 hr	96 hr
NSW CTRL	A	E9	5	5	5			
	B	E10	5	5	5			
	C	E11	5	5	5			
	D	E12	5	5	5			
30%	A	E13	5	5	5			
	B	E14	5	5	5			
	C	E15	5	5	5			
	D	E16	5	5	5			

Organisms loaded by: SP Checked by: [redacted] DN DN
Loading verified at 0 hours by: MF (initials)
Comments: Test Reported as No Result due to SRT showing that organisms were hardier than normal MF 8-15-05

m = missing d = dead BR = before renewal AR = after renewal
Test Results:
% mortality in ~~100~~ 30% sample 0
LC_{50}: >30 If Calculated: 95% CI _____ Method: _____ Reported as No Result. MF-8-15-05
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 1. Bench Sheets (continued)

Bioassay Parameters

LIMS Sample # : 853845 Test # : 1 of 2

TEST SOP: TA07_03 Test Species: *Ceriodaphnia dubia* *Cyprinella leedsi* *Pimephales promelas*
Americamysis bahia *Menidia beryllina* Other:

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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.)	8.2	7.8	7.6			
Temperature °C	24.7	24.2	24.4			
Dissolved Oxygen mg/L	7.6	6.7	6.0			
Conductivity µmhos (mmhos)	38.9	38.6	39.9 39.7			
(initials) Measured by:	SP	DN/SP	DN			
(initials) Recorded by:	SP	DN/SP	DN			

Comments: @ First measurement for M. beryllina test DN 8/4/05.

Concentration 30% effluent	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	7.7			
Temperature °C	25.0	25.5	24.1			
Dissolved Oxygen mg/L	7.4	6.6	6.0			
Conductivity µmhos (mmhos)	38.8	38.6	38.6			
(initials) Measured by:	SP	DN/SP	DN			
(initials) Recorded by:	SP	DN/SP	DN			

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:

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Bioassay Parameters

LIMS Sample # : 853845 Test # : 2 of 2

TEST SOP: TA07_04 Test Species: *Ceriodaphnia dubia* *Cyprinella leedsi* *Pimephales promelas*
Americamysis bahia (*Menidia beryllina*) Other:_____

V.1 2/24/04

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.)	8.2	7.9	7.7			
Temperature °C	24.7	24.8	24.4			
Dissolved Oxygen mg/L	7.6	6.7	6.0			
Conductivity µmhos (mmhos)	38.9	39.0	39.9			
(initials) Measured by:	SP	DN/SP	DN			
(initials) Recorded by:	SP	DN/SP	DN			

Comments:

Concentration 30% effluent	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	7.9	7.9			
Temperature °C	25.0	24.6	24.7			
Dissolved Oxygen mg/L	7.5	6.6	6.0			
Conductivity µmhos (mmhos)	38.6	39.2	39.1			
(initials) Measured by:	SP	DN/SP	DN			
(initials) Recorded by:	SP	DN/SP	DN			

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.1 2/24/04

Appendix 2. Chemical Analyses performed on the effluent from the South Central Regional Wastewater Treatment Facility Outfall D-001, sampled on August 1, 2005.

Date Sampled	Field ID	Analysis Group	Component	Result	Units	Remark	MDL	PQL
8/1/2005 10:25	51-SC-1	Bio-AGP/LimNut	Algal Growth Potential	195	mg DryWt/L		0.3	0.9
8/1/2005 10:25	51-SC-1	Bio-AGP/LimNut	Algal Growth Potential-Salinity Adjusted	308	mg DryWt/L	V	0.3	0.9
8/1/2005 10:25	51-SC-1	Bio-Chl-a	Chlorophyll-A, Monochromatic, Water	2.5	ug/L	I	0.85	2.6
8/1/2005 10:25	51-SC-1	Bio-Chl-a	Phaeophytin-A, Monochromatic, Water	0	ug/L	J	0.85	2.6
8/1/2005 10:25	51-SC-1	Bio-Toxicology	Bioassay-Acute-Screen-SW-Fish, LC50	No Result	LC50			
8/1/2005 10:25	51-SC-1	Bio-Toxicology	Bioassay-Acute-Screen-SW-Mysid, LC50	30	LC50	L		
8/1/2005 10:25	51-SC-1	BNA-Water	1,2,4-Trichlorobenzene	0.96	ug/L	U	0.96	3.8
8/1/2005 10:25	51-SC-1	BNA-Water	1,2-Dichlorobenzene	0.96	ug/L	U	0.96	3.8
8/1/2005 10:25	51-SC-1	BNA-Water	1,3-Dichlorobenzene	0.96	ug/L	U	0.96	3.8
8/1/2005 10:25	51-SC-1	BNA-Water	1,4-Dichlorobenzene	0.96	ug/L	U	0.96	3.8
8/1/2005 10:25	51-SC-1	BNA-Water	2,4,6-Trichlorophenol	0.96	ug/L	U	0.96	3.8
8/1/2005 10:25	51-SC-1	BNA-Water	2,4-Dichlorophenol	0.96	ug/L	U	0.96	3.8
8/1/2005 10:25	51-SC-1	BNA-Water	2,4-Dimethylphenol	48	ug/L	U	48	190
8/1/2005 10:25	51-SC-1	BNA-Water	2,4-Dinitrophenol	14	ug/L	UJ	14	58
8/1/2005 10:25	51-SC-1	BNA-Water	2,4-Dinitrotoluene	0.96	ug/L	U	0.96	3.8
8/1/2005 10:25	51-SC-1	BNA-Water	2,6-Dinitrotoluene	0.96	ug/L	U	0.96	3.8
8/1/2005 10:25	51-SC-1	BNA-Water	2-Chloronaphthalene	0.96	ug/L	U	0.96	3.8
8/1/2005 10:25	51-SC-1	BNA-Water	2-Chlorophenol	0.96	ug/L	U	0.96	3.8
8/1/2005 10:25	51-SC-1	BNA-Water	2-Methyl-4,6-dinitrophenol	2.9	ug/L	UJ	2.9	12
8/1/2005 10:25	51-SC-1	BNA-Water	2-Nitrophenol	0.96	ug/L	U	0.96	3.8
8/1/2005 10:25	51-SC-1	BNA-Water	3,3'-Dichlorobenzidine	38	ug/L	UJ	38	150
8/1/2005 10:25	51-SC-1	BNA-Water	4,4'-DDD	1.4	ug/L	U	1.4	5.8
8/1/2005 10:25	51-SC-1	BNA-Water	4,4'-DDE	1.4	ug/L	U	1.4	5.8
8/1/2005 10:25	51-SC-1	BNA-Water	4,4'-DDT	1.4	ug/L	U	1.4	5.8
8/1/2005 10:25	51-SC-1	BNA-Water	4-Bromophenyl phenyl ether	0.96	ug/L	U	0.96	3.8
8/1/2005 10:25	51-SC-1	BNA-Water	4-Chloro-3-methylphenol	0.96	ug/L	U	0.96	3.8
8/1/2005 10:25	51-SC-1	BNA-Water	4-Chlorophenyl phenyl ether	1.9	ug/L	U	1.9	7.7
8/1/2005 10:25	51-SC-1	BNA-Water	4-Nitrophenol	14	ug/L	U	14	58
8/1/2005 10:25	51-SC-1	BNA-Water	Acenaphthene	0.96	ug/L	U	0.96	3.8
8/1/2005 10:25	51-SC-1	BNA-Water	Acenaphthylene	0.96	ug/L	U	0.96	3.8
8/1/2005 10:25	51-SC-1	BNA-Water	Aldrin	1.4	ug/L	U	1.4	5.8
8/1/2005 10:25	51-SC-1	BNA-Water	alpha-BHC	1.4	ug/L	U	1.4	5.8
8/1/2005 10:25	51-SC-1	BNA-Water	Anthracene	0.96	ug/L	U	0.96	3.8
8/1/2005 10:25	51-SC-1	BNA-Water	Benzidine	96	ug/L	U	96	380

Appendix 2. Chemical Analyses (continued)

Date Sampled	Field ID	Analysis Group	Component	Result	Units	Remark	MDL	PQL
8/1/2005 10:25	51-SC-1	BNA-Water	Benzo(a)anthracene	0.96	ug/L	U	0.96	3.8
8/1/2005 10:25	51-SC-1	BNA-Water	Benzo(a)pyrene	0.96	ug/L	U	0.96	3.8
8/1/2005 10:25	51-SC-1	BNA-Water	Benzo(b)fluoranthene	0.96	ug/L	U	0.96	3.8
8/1/2005 10:25	51-SC-1	BNA-Water	Benzo(g,h,i)perylene	0.96	ug/L	U	0.96	3.8
8/1/2005 10:25	51-SC-1	BNA-Water	Benzo(k)fluoranthene	0.96	ug/L	U	0.96	3.8
8/1/2005 10:25	51-SC-1	BNA-Water	beta-BHC	1.4	ug/L	U	1.4	5.8
8/1/2005 10:25	51-SC-1	BNA-Water	Bis(2-chloroethoxy)methane	0.96	ug/L	U	0.96	3.8
8/1/2005 10:25	51-SC-1	BNA-Water	Bis(2-chloroethyl)ether	0.96	ug/L	U	0.96	3.8
8/1/2005 10:25	51-SC-1	BNA-Water	Bis(2-chloroisopropyl)ether	2.9	ug/L	U	2.9	12
8/1/2005 10:25	51-SC-1	BNA-Water	Bis(2-ethylhexyl)phthalate	14	ug/L	UJ	14	58
8/1/2005 10:25	51-SC-1	BNA-Water	Butyl benzyl phthalate	4.8	ug/L	U	4.8	19
8/1/2005 10:25	51-SC-1	BNA-Water	Chrysene	0.96	ug/L	U	0.96	3.8
8/1/2005 10:25	51-SC-1	BNA-Water	delta-BHC	1.4	ug/L	U	1.4	5.8
8/1/2005 10:25	51-SC-1	BNA-Water	Dibenzo(a,h)anthracene	0.96	ug/L	U	0.96	3.8
8/1/2005 10:25	51-SC-1	BNA-Water	Dieldrin	1.4	ug/L	U	1.4	5.8
8/1/2005 10:25	51-SC-1	BNA-Water	Diethyl phthalate	0.96	ug/L	U	0.96	3.8
8/1/2005 10:25	51-SC-1	BNA-Water	Dimethyl phthalate	48	ug/L	U	48	190
8/1/2005 10:25	51-SC-1	BNA-Water	Di-n-butyl phthalate	4.8	ug/L	U	4.8	19
8/1/2005 10:25	51-SC-1	BNA-Water	Di-n-octyl phthalate	0.96	ug/L	U	0.96	3.8
8/1/2005 10:25	51-SC-1	BNA-Water	Endosulfan I	3.8	ug/L	U	3.8	15
8/1/2005 10:25	51-SC-1	BNA-Water	Endosulfan II	3.8	ug/L	U	3.8	15
8/1/2005 10:25	51-SC-1	BNA-Water	Endosulfan sulfate	1.4	ug/L	U	1.4	5.8
8/1/2005 10:25	51-SC-1	BNA-Water	Endrin	1.4	ug/L	U	1.4	5.8
8/1/2005 10:25	51-SC-1	BNA-Water	Endrin aldehyde	3.8	ug/L	U	3.8	15
8/1/2005 10:25	51-SC-1	BNA-Water	Fluoranthene	0.96	ug/L	U	0.96	3.8
8/1/2005 10:25	51-SC-1	BNA-Water	Fluorene	0.96	ug/L	U	0.96	3.8
8/1/2005 10:25	51-SC-1	BNA-Water	gamma-BHC	1.4	ug/L	U	1.4	5.8
8/1/2005 10:25	51-SC-1	BNA-Water	Heptachlor	1.4	ug/L	U	1.4	5.8
8/1/2005 10:25	51-SC-1	BNA-Water	Heptachlor epoxide	1.4	ug/L	U	1.4	5.8
8/1/2005 10:25	51-SC-1	BNA-Water	Hexachlorobenzene	0.96	ug/L	U	0.96	3.8
8/1/2005 10:25	51-SC-1	BNA-Water	Hexachlorobutadiene	2.9	ug/L	U	2.9	12
8/1/2005 10:25	51-SC-1	BNA-Water	Hexachlorocyclopentadiene	2.9	ug/L	U	2.9	12
8/1/2005 10:25	51-SC-1	BNA-Water	Hexachloroethane	2.9	ug/L	U	2.9	12
8/1/2005 10:25	51-SC-1	BNA-Water	Indeno(1,2,3-cd)pyrene	0.96	ug/L	U	0.96	3.8
8/1/2005 10:25	51-SC-1	BNA-Water	Isophorone	0.96	ug/L	U	0.96	3.8

Appendix 2. Chemical Analyses (continued)

Date Sampled	Field ID	Analysis Group	Component	Result	Units	Remark	MDL	PQL
8/1/2005 10:25	51-SC-1	BNA-Water	Naphthalene	0.96	ug/L	U	0.96	3.8
8/1/2005 10:25	51-SC-1	BNA-Water	Nitrobenzene	1.9	ug/L	U	1.9	7.7
8/1/2005 10:25	51-SC-1	BNA-Water	N-Nitrosodimethylamine	1.9	ug/L	U	1.9	7.7
8/1/2005 10:25	51-SC-1	BNA-Water	N-Nitrosodi-n-propylamine	1.9	ug/L	U	1.9	7.7
8/1/2005 10:25	51-SC-1	BNA-Water	N-Nitrosodiphenylamine	2.9	ug/L	U	2.9	12
8/1/2005 10:25	51-SC-1	BNA-Water	Pentachlorophenol	2.9	ug/L	U	2.9	12
8/1/2005 10:25	51-SC-1	BNA-Water	Phenanthrene	0.96	ug/L	U	0.96	3.8
8/1/2005 10:25	51-SC-1	BNA-Water	Phenol	0.96	ug/L	U	0.96	3.8
8/1/2005 10:25	51-SC-1	BNA-Water	Pyrene	0.96	ug/L	U	0.96	3.8
8/1/2005 10:45	Field blank	BNA-Water	1,2,4-Trichlorobenzene	0.96	ug/L	U	0.96	3.8
8/1/2005 10:45	Field blank	BNA-Water	1,2-Dichlorobenzene	0.96	ug/L	U	0.96	3.8
8/1/2005 10:45	Field blank	BNA-Water	1,3-Dichlorobenzene	0.96	ug/L	U	0.96	3.8
8/1/2005 10:45	Field blank	BNA-Water	1,4-Dichlorobenzene	0.96	ug/L	U	0.96	3.8
8/1/2005 10:45	Field blank	BNA-Water	2,4,6-Trichlorophenol	0.96	ug/L	U	0.96	3.8
8/1/2005 10:45	Field blank	BNA-Water	2,4-Dichlorophenol	0.96	ug/L	U	0.96	3.8
8/1/2005 10:45	Field blank	BNA-Water	2,4-Dimethylphenol	48	ug/L	U	48	190
8/1/2005 10:45	Field blank	BNA-Water	2,4-Dinitrophenol	14	ug/L	UJ	14	58
8/1/2005 10:45	Field blank	BNA-Water	2,4-Dinitrotoluene	0.96	ug/L	U	0.96	3.8
8/1/2005 10:45	Field blank	BNA-Water	2,6-Dinitrotoluene	0.96	ug/L	U	0.96	3.8
8/1/2005 10:45	Field blank	BNA-Water	2-Chloronaphthalene	0.96	ug/L	U	0.96	3.8
8/1/2005 10:45	Field blank	BNA-Water	2-Chlorophenol	0.96	ug/L	U	0.96	3.8
8/1/2005 10:45	Field blank	BNA-Water	2-Methyl-4,6-dinitrophenol	2.9	ug/L	UJ	2.9	12
8/1/2005 10:45	Field blank	BNA-Water	2-Nitrophenol	0.96	ug/L	U	0.96	3.8
8/1/2005 10:45	Field blank	BNA-Water	3,3'-Dichlorobenzidine	38	ug/L	UJ	38	150
8/1/2005 10:45	Field blank	BNA-Water	4,4'-DDD	1.4	ug/L	U	1.4	5.8
8/1/2005 10:45	Field blank	BNA-Water	4,4'-DDE	1.4	ug/L	U	1.4	5.8
8/1/2005 10:45	Field blank	BNA-Water	4,4'-DDT	1.4	ug/L	U	1.4	5.8
8/1/2005 10:45	Field blank	BNA-Water	4-Bromophenyl phenyl ether	0.96	ug/L	U	0.96	3.8
8/1/2005 10:45	Field blank	BNA-Water	4-Chloro-3-methylphenol	0.96	ug/L	U	0.96	3.8
8/1/2005 10:45	Field blank	BNA-Water	4-Chlorophenyl phenyl ether	1.9	ug/L	U	1.9	7.7
8/1/2005 10:45	Field blank	BNA-Water	4-Nitrophenol	14	ug/L	U	14	58
8/1/2005 10:45	Field blank	BNA-Water	Acenaphthene	0.96	ug/L	U	0.96	3.8
8/1/2005 10:45	Field blank	BNA-Water	Acenaphthylene	0.96	ug/L	U	0.96	3.8
8/1/2005 10:45	Field blank	BNA-Water	Aldrin	1.4	ug/L	U	1.4	5.8
8/1/2005 10:45	Field blank	BNA-Water	alpha-BHC	1.4	ug/L	U	1.4	5.8

Appendix 2. Chemical Analyses (continued)

Date Sampled	Field ID	Analysis Group	Component	Result	Units	Remark	MDL	PQL
8/1/2005 10:45	Field blank	BNA-Water	Anthracene	0.96	ug/L	U	0.96	3.8
8/1/2005 10:45	Field blank	BNA-Water	Benzidine	96	ug/L	U	96	380
8/1/2005 10:45	Field blank	BNA-Water	Benzo(a)anthracene	0.96	ug/L	U	0.96	3.8
8/1/2005 10:45	Field blank	BNA-Water	Benzo(a)pyrene	0.96	ug/L	U	0.96	3.8
8/1/2005 10:45	Field blank	BNA-Water	Benzo(b)fluoranthene	0.96	ug/L	U	0.96	3.8
8/1/2005 10:45	Field blank	BNA-Water	Benzo(g,h,i)perylene	0.96	ug/L	U	0.96	3.8
8/1/2005 10:45	Field blank	BNA-Water	Benzo(k)fluoranthene	0.96	ug/L	U	0.96	3.8
8/1/2005 10:45	Field blank	BNA-Water	beta-BHC	1.4	ug/L	U	1.4	5.8
8/1/2005 10:45	Field blank	BNA-Water	Bis(2-chloroethoxy)methane	0.96	ug/L	U	0.96	3.8
8/1/2005 10:45	Field blank	BNA-Water	Bis(2-chloroethyl)ether	0.96	ug/L	U	0.96	3.8
8/1/2005 10:45	Field blank	BNA-Water	Bis(2-chloroisopropyl)ether	2.9	ug/L	U	2.9	12
8/1/2005 10:45	Field blank	BNA-Water	Bis(2-ethylhexyl)phthalate	14	ug/L	UJ	14	58
8/1/2005 10:45	Field blank	BNA-Water	Butyl benzyl phthalate	4.8	ug/L	U	4.8	19
8/1/2005 10:45	Field blank	BNA-Water	Chrysene	0.96	ug/L	U	0.96	3.8
8/1/2005 10:45	Field blank	BNA-Water	delta-BHC	1.4	ug/L	U	1.4	5.8
8/1/2005 10:45	Field blank	BNA-Water	Dibenzo(a,h)anthracene	0.96	ug/L	U	0.96	3.8
8/1/2005 10:45	Field blank	BNA-Water	Dieldrin	1.4	ug/L	U	1.4	5.8
8/1/2005 10:45	Field blank	BNA-Water	Diethyl phthalate	1	ug/L	I	0.96	3.8
8/1/2005 10:45	Field blank	BNA-Water	Dimethyl phthalate	48	ug/L	U	48	190
8/1/2005 10:45	Field blank	BNA-Water	Di-n-butyl phthalate	4.8	ug/L	U	4.8	19
8/1/2005 10:45	Field blank	BNA-Water	Di-n-octyl phthalate	0.96	ug/L	U	0.96	3.8
8/1/2005 10:45	Field blank	BNA-Water	Endosulfan I	3.8	ug/L	U	3.8	15
8/1/2005 10:45	Field blank	BNA-Water	Endosulfan II	3.8	ug/L	U	3.8	15
8/1/2005 10:45	Field blank	BNA-Water	Endosulfan sulfate	1.4	ug/L	U	1.4	5.8
8/1/2005 10:45	Field blank	BNA-Water	Endrin	1.4	ug/L	U	1.4	5.8
8/1/2005 10:45	Field blank	BNA-Water	Endrin aldehyde	3.8	ug/L	U	3.8	15
8/1/2005 10:45	Field blank	BNA-Water	Fluoranthene	0.96	ug/L	U	0.96	3.8
8/1/2005 10:45	Field blank	BNA-Water	Fluorene	0.96	ug/L	U	0.96	3.8
8/1/2005 10:45	Field blank	BNA-Water	gamma-BHC	1.4	ug/L	U	1.4	5.8
8/1/2005 10:45	Field blank	BNA-Water	Heptachlor	1.4	ug/L	U	1.4	5.8
8/1/2005 10:45	Field blank	BNA-Water	Heptachlor epoxide	1.4	ug/L	U	1.4	5.8
8/1/2005 10:45	Field blank	BNA-Water	Hexachlorobenzene	0.96	ug/L	U	0.96	3.8
8/1/2005 10:45	Field blank	BNA-Water	Hexachlorobutadiene	2.9	ug/L	U	2.9	12
8/1/2005 10:45	Field blank	BNA-Water	Hexachlorocyclopentadiene	2.9	ug/L	U	2.9	12
8/1/2005 10:45	Field blank	BNA-Water	Hexachloroethane	2.9	ug/L	U	2.9	12

Appendix 2. Chemical Analyses (continued)

Date Sampled	Field ID	Analysis Group	Component	Result	Units	Remark	MDL	PQL
8/1/2005 10:45	Field blank	BNA-Water	Indeno(1,2,3-cd)pyrene	0.96	ug/L	U	0.96	3.8
8/1/2005 10:45	Field blank	BNA-Water	Isophorone	0.96	ug/L	U	0.96	3.8
8/1/2005 10:45	Field blank	BNA-Water	Naphthalene	0.96	ug/L	U	0.96	3.8
8/1/2005 10:45	Field blank	BNA-Water	Nitrobenzene	1.9	ug/L	U	1.9	7.7
8/1/2005 10:45	Field blank	BNA-Water	N-Nitrosodimethylamine	1.9	ug/L	U	1.9	7.7
8/1/2005 10:45	Field blank	BNA-Water	N-Nitrosodi-n-propylamine	1.9	ug/L	U	1.9	7.7
8/1/2005 10:45	Field blank	BNA-Water	N-Nitrosodiphenylamine	2.9	ug/L	U	2.9	12
8/1/2005 10:45	Field blank	BNA-Water	Pentachlorophenol	2.9	ug/L	U	2.9	12
8/1/2005 10:45	Field blank	BNA-Water	Phenanthrene	0.96	ug/L	U	0.96	3.8
8/1/2005 10:45	Field blank	BNA-Water	Phenol	0.96	ug/L	U	0.96	3.8
8/1/2005 10:45	Field blank	BNA-Water	Pyrene	0.96	ug/L	U	0.96	3.8
8/1/2005 10:25	51-SC-1	GC-Water	Alachlor	0.6	ug/L	U	0.6	2.4
8/1/2005 10:25	51-SC-1	GC-Water	Ametryn	0.05	ug/L	U	0.05	0.2
8/1/2005 10:25	51-SC-1	GC-Water	Atrazine	0.079	ug/L	I	0.05	0.2
8/1/2005 10:25	51-SC-1	GC-Water	Azinphos Methyl	0.2	ug/L	U	0.2	0.8
8/1/2005 10:25	51-SC-1	GC-Water	Bromacil	0.2	ug/L	U	0.2	0.8
8/1/2005 10:25	51-SC-1	GC-Water	Butylate	0.2	ug/L	UJ	0.2	0.8
8/1/2005 10:25	51-SC-1	GC-Water	Chlorpyrifos Ethyl	0.05	ug/L	U	0.05	0.2
8/1/2005 10:25	51-SC-1	GC-Water	Chlorpyrifos Methyl	0.1	ug/L	U	0.1	0.4
8/1/2005 10:25	51-SC-1	GC-Water	Diazinon	0.05	ug/L	U	0.05	0.2
8/1/2005 10:25	51-SC-1	GC-Water	Ethion	0.05	ug/L	U	0.05	0.2
8/1/2005 10:25	51-SC-1	GC-Water	Ethoprop	0.1	ug/L	U	0.1	0.4
8/1/2005 10:25	51-SC-1	GC-Water	Fenamiphos	0.2	ug/L	U	0.2	0.8
8/1/2005 10:25	51-SC-1	GC-Water	Fonofos	0.1	ug/L	U	0.1	0.4
8/1/2005 10:25	51-SC-1	GC-Water	Hexazinone	0.1	ug/L	U	0.1	0.4
8/1/2005 10:25	51-SC-1	GC-Water	Malathion	0.15	ug/L	UJ	0.15	0.6
8/1/2005 10:25	51-SC-1	GC-Water	Metalaxyl	0.25	ug/L	U	0.25	1
8/1/2005 10:25	51-SC-1	GC-Water	Metolachlor	0.5	ug/L	U	0.5	2
8/1/2005 10:25	51-SC-1	GC-Water	Metribuzin	0.1	ug/L	U	0.1	0.4
8/1/2005 10:25	51-SC-1	GC-Water	Mevinphos	0.2	ug/L	U	0.2	0.8
8/1/2005 10:25	51-SC-1	GC-Water	Naled	0.8	ug/L	U	0.8	3.2
8/1/2005 10:25	51-SC-1	GC-Water	Norflurazon	0.15	ug/L	U	0.15	0.6
8/1/2005 10:25	51-SC-1	GC-Water	Parathion Ethyl	0.15	ug/L	U	0.15	0.6
8/1/2005 10:25	51-SC-1	GC-Water	Parathion Methyl	0.1	ug/L	U	0.1	0.4
8/1/2005 10:25	51-SC-1	GC-Water	Phorate	0.05	ug/L	U	0.05	0.2

Appendix 2. Chemical Analyses (continued)

Date Sampled	Field ID	Analysis Group	Component	Result	Units	Remark	MDL	PQL
8/1/2005 10:25	51-SC-1	GC-Water	Prometryn	0.15	ug/L	U	0.15	0.6
8/1/2005 10:25	51-SC-1	GC-Water	Simazine	0.05	ug/L	U	0.05	0.2
8/1/2005 10:45	Field blank	GC-Water	Alachlor	0.57	ug/L	U	0.57	2.3
8/1/2005 10:45	Field blank	GC-Water	Ametryn	0.048	ug/L	U	0.048	0.19
8/1/2005 10:45	Field blank	GC-Water	Atrazine	0.048	ug/L	U	0.048	0.19
8/1/2005 10:45	Field blank	GC-Water	Azinphos Methyl	0.19	ug/L	U	0.19	0.76
8/1/2005 10:45	Field blank	GC-Water	Bromacil	0.19	ug/L	U	0.19	0.76
8/1/2005 10:45	Field blank	GC-Water	Butylate	0.19	ug/L	UJ	0.19	0.76
8/1/2005 10:45	Field blank	GC-Water	Chlorpyrifos Ethyl	0.048	ug/L	U	0.048	0.19
8/1/2005 10:45	Field blank	GC-Water	Chlorpyrifos Methyl	0.095	ug/L	U	0.095	0.38
8/1/2005 10:45	Field blank	GC-Water	Diazinon	0.048	ug/L	U	0.048	0.19
8/1/2005 10:45	Field blank	GC-Water	Ethion	0.048	ug/L	U	0.048	0.19
8/1/2005 10:45	Field blank	GC-Water	Ethoprop	0.095	ug/L	U	0.095	0.38
8/1/2005 10:45	Field blank	GC-Water	Fenamiphos	0.19	ug/L	U	0.19	0.76
8/1/2005 10:45	Field blank	GC-Water	Fonofos	0.095	ug/L	U	0.095	0.38
8/1/2005 10:45	Field blank	GC-Water	Hexazinone	0.095	ug/L	U	0.095	0.38
8/1/2005 10:45	Field blank	GC-Water	Malathion	0.14	ug/L	UJ	0.14	0.56
8/1/2005 10:45	Field blank	GC-Water	Metalaxyl	0.24	ug/L	U	0.24	0.96
8/1/2005 10:45	Field blank	GC-Water	Metolachlor	0.48	ug/L	U	0.48	1.9
8/1/2005 10:45	Field blank	GC-Water	Metribuzin	0.095	ug/L	U	0.095	0.38
8/1/2005 10:45	Field blank	GC-Water	Mevinphos	0.19	ug/L	U	0.19	0.76
8/1/2005 10:45	Field blank	GC-Water	Naled	0.76	ug/L	U	0.76	3
8/1/2005 10:45	Field blank	GC-Water	Norflurazon	0.14	ug/L	U	0.14	0.56
8/1/2005 10:45	Field blank	GC-Water	Parathion Ethyl	0.14	ug/L	U	0.14	0.56
8/1/2005 10:45	Field blank	GC-Water	Parathion Methyl	0.095	ug/L	U	0.095	0.38
8/1/2005 10:45	Field blank	GC-Water	Phorate	0.048	ug/L	U	0.048	0.19
8/1/2005 10:45	Field blank	GC-Water	Prometryn	0.14	ug/L	U	0.14	0.56
8/1/2005 10:45	Field blank	GC-Water	Simazine	0.048	ug/L	U	0.048	0.19
8/1/2005 10:25	51-SC-1	Metals-Water	Aluminum	47	ug/L		5	20
8/1/2005 10:25	51-SC-1	Metals-Water	Arsenic	4	ug/L	U	4	16
8/1/2005 10:25	51-SC-1	Metals-Water	Cadmium	0.29	ug/L	U	0.29	1.2
8/1/2005 10:25	51-SC-1	Metals-Water	Calcium	52.9	mg/L		0.05	0.2
8/1/2005 10:25	51-SC-1	Metals-Water	Chromium	2	ug/L	U	2	8
8/1/2005 10:25	51-SC-1	Metals-Water	Copper	42.3	ug/L		1	4
8/1/2005 10:25	51-SC-1	Metals-Water	Iron	92	ug/L		10	40

Appendix 2. Chemical Analyses (continued)

Date Sampled	Field ID	Analysis Group	Component	Result	Units	Remark	MDL	PQL
8/1/2005 10:25	51-SC-1	Metals-Water	Lead	0.57	ug/L	I	0.25	1
8/1/2005 10:25	51-SC-1	Metals-Water	Magnesium	3.4	mg/L		0.01	0.04
8/1/2005 10:25	51-SC-1	Metals-Water	Nickel	2.7	ug/L	I	2	8
8/1/2005 10:25	51-SC-1	Metals-Water	Selenium	0.76	ug/L	I	0.5	2
8/1/2005 10:25	51-SC-1	Metals-Water	Silver	0.063	ug/L	I	0.025	0.1
8/1/2005 10:25	51-SC-1	Metals-Water	Zinc	44	ug/L		3	12
8/1/2005 10:45	Field blank	Metals-Water	Aluminum	5	ug/L	U	5	20
8/1/2005 10:45	Field blank	Metals-Water	Arsenic	4	ug/L	U	4	16
8/1/2005 10:45	Field blank	Metals-Water	Cadmium	0.29	ug/L	U	0.29	1.2
8/1/2005 10:45	Field blank	Metals-Water	Calcium	0.05	mg/L	U	0.05	0.2
8/1/2005 10:45	Field blank	Metals-Water	Chromium	2	ug/L	U	2	8
8/1/2005 10:45	Field blank	Metals-Water	Copper	0.5	ug/L	U	0.5	2
8/1/2005 10:45	Field blank	Metals-Water	Iron	10	ug/L	U	10	40
8/1/2005 10:45	Field blank	Metals-Water	Lead	0.25	ug/L	U	0.25	1
8/1/2005 10:45	Field blank	Metals-Water	Magnesium	0.01	mg/L	U	0.01	0.04
8/1/2005 10:45	Field blank	Metals-Water	Nickel	2	ug/L	U	2	8
8/1/2005 10:45	Field blank	Metals-Water	Selenium	0.5	ug/L	U	0.5	2
8/1/2005 10:45	Field blank	Metals-Water	Silver	0.025	ug/L	U	0.025	0.1
8/1/2005 10:45	Field blank	Metals-Water	Zinc	3	ug/L	U	3	12
8/1/2005 10:25	51-SC-1	Nutrients-Liquid	Ammonia-N	7	mg N/L		0.2	0.4
8/1/2005 10:25	51-SC-1	Nutrients-Liquid	Kjeldahl Nitrogen	9.9	mg N/L		0.3	1
8/1/2005 10:25	51-SC-1	Nutrients-Liquid	NO2NO3-N	3.5	mg N/L		0.08	0.2
8/1/2005 10:25	51-SC-1	Nutrients-Liquid	O-Phosphate-P	0.85	mg P/L		0.04	0.1
8/1/2005 10:25	51-SC-1	Nutrients-Liquid	Total-P	0.97	mg P/L		0.02	0.06
8/1/2005 10:45	Field blank	Nutrients-Liquid	Ammonia-N	0.01	mg N/L	U	0.01	0.02
8/1/2005 10:45	Field blank	Nutrients-Liquid	Kjeldahl Nitrogen	0.06	mg N/L	U	0.06	0.2
8/1/2005 10:45	Field blank	Nutrients-Liquid	NO2NO3-N	0.004	mg N/L	U	0.004	0.01
8/1/2005 10:45	Field blank	Nutrients-Liquid	O-Phosphate-P	0.004	mg P/L	U	0.004	0.01
8/1/2005 10:45	Field blank	Nutrients-Liquid	Total-P	0.02	mg P/L	U	0.02	0.06

The Bioassay of South Central Regional Wastewater Treatment Facility effluent sampled on August 1, 2005. NPDES #FL0035980.

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

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

Remarks

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The Priority Pollutants Analysis of South Central Regional Wastewater Treatment Facility effluent sampled on August 1, 2005. NPDES #FL0035980.

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

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

Remarks

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Biological Analyses of South Central Regional Wastewater Treatment Facility effluent sampled on August 1, 2005. NPDES #FL0035980.

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

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

Remarks

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