

Bioassays of

Tampa Electric Company- Polk Power Station

Polk County

NPDES #FL0043869

Sampled August 15, 2005

November 2005

Biology Section
Bureau of Laboratories
Division of Resource Assessment and Management

Quality Manual No. 870346G
NELAC Certification No. E31780

Tampa Electric Company- Polk Power Station, 9995 SR 37 South, Mulberry, Polk County, Florida, NPDES #FL0043869. Effluent samples for this facility were collected on August 15, 2005.

Introduction

Tampa Electric Company Polk Power Station is an electric power generating plant with a total generating capacity (when complete) of approximately 1,150 Megawatts. The facility has a design flow of 3.10 million gallons per day (MGD). Outfall D-001 had an average annual daily flow (AADF) of 0.659 MGD from May 1, 2004 to May 31, 2005, and Outfall D-002 had an AADF of 52.88 MGD for that time period. The existing generating facility, known as Polk Unit 1, consists of an integrated coal gasification combined cycle (IGCC) unit with a nominal net capacity of 260 megawatts. The IGCC is fueled by coal-derived gas (i.e., coal gas or syngas) with No. 2 fuel oil as backup fuel. Additional generating units planned for this site will be developed in a phased schedule which matches Tampa Electric Company's forecast growth (period of 1999-2010) in electricity demands. The planned facilities will consist of two combined cycle generating units and six simple cycle combustion turbines fueled by natural gas with No. 2 fuel oil as the backup fuel.

The Industrial Wastewater Treatment (IWT) system treats the process and service wastewater, stormwater runoff, and washdown from the materials storage areas. The IWT includes the following basins and units: oil/water separation; neutralization tank; diversion boxes; coal, IWT sludge, and slag runoff retention basins; oxidation tank; clarification; chemical restabilization tank (neutralization); filtration; and sludge handling system. Oil bearing equipment is segregated using curbed areas with drains directing washdown, runoff, minor leaks, and spills to the oil/water separator. Low volume wastes (boiler blowdown, laboratory wastes, and RO concentrate) are combined in a neutralization tank for pH adjustment. Filter backwash water from the makeup water treatment is directed to the equalization basin and subsequently filtered. Metal cleaning wastes associated with the combustion turbine and compressor washing are also routed to the equalization basin for subsequent filtration treatment. Spent chemicals and metal cleaning wastes not associated with the wash operations are disposed off-site by a licensed contractor.

The facility uses a closed-loop system (cooling reservoir) for heat dissipation. The cooling reservoir receives treated effluent from the on-site Industrial Wastewater Treatment Plant, groundwater seepage, treated low-volume wastewater (reject water from the Reverse Osmosis Unit, treated boiler blowdown and lab wastes), treated water from on-site water separators, groundwater from the Floridian Aquifer, and recirculated water.

Cooling reservoir blowdown is discharged through Outfall D-001 (located at approximately latitude 27º43'41.6" North and longitude 81º58'19.2") to an unnamed reclaimed lake, to an unnamed canal, thence into Little Payne Creek (Class III fresh water).

Stormwater associated with industrial activity is discharged through Outfall D-002 (located at approximately latitude 27 44'00" North and longitude 81 59' 13" West) to an unnamed mine cut, to an unnamed canal, thence into Little Payne Creek.

The facility also has an existing 0.65 MGD AADF from the low flow volume wastewater neutralization basin to internal outfall I-003 to the cooling reservoir and a 0.67 MGD AADF from the equalization basin to internal outfall I-004 to the cooling reservoir.

The facility has satisfied the requirements of Administrative Order AO007TL. The facility has a semi-circular mixing zone (for temperature) with a radius of approximately 76.2 m (250 feet) centered at the point of entry into the reclaimed lake (facility information provided by Nahir Cornwell of FDEP Southwest District and Frank Wall of FDEP Tallahassee).

Methods

Samples were collected from the EFF-1 and EFF-2 NPDES sampling points for D-001 and D-002, respectively, by Lori Pillsbury and Nahir Cornwell (FDEP Southwest 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 96-hour acute screening toxicity tests and algal growth potential test were performed using samples collected from EFF-1 following internal DEP SOP's TA07_01,TA07_02, 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.

Toxicity Test Results

Tests were performed August 16 - 20, 2005.

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

The bioassay samples were not acutely toxic to the test organisms.

See Appendix 1 for bioassay bench sheets.

Algal Growth Potential

The effluent Algal Growth Potential (AGP) was 14.7 mg dry wt/L of the unicellular green alga, *Pseudokirchneriella subcapitata*, formerly known as *Selenastrum capricornutum*. Raschke and Shultz (1987) found that AGP values above 5.0 mg dry weight/L represent a "problem" threshold for fresh receiving waters, implying nutrient enrichment. The analytical chemistry suggests that the effluent is phosphorus-limited.

See Table 1 for AGP results.

Chemistry Results

Total residual chlorine and total ammonia were not detected in the bioassay sample in the laboratory. The total ammonia concentration in the sample collected and preserved for chemical analysis was 0.073 mg/L. Based on the pH, salinity, and temperature of the effluent as collected, the calculated unionized ammonia concentration was ≤ 0.02 mg/L. Note: This ammonia analysis was from an unpreserved or improperly preserved sample and may not be accurate (Table 2).

Aluminum, cadmium, and nickel were detected in the D-001 effluent at levels that comply with Class III fresh water quality criteria. Iron, lead, thallium, and zinc were detected at D-001 between the laboratory method detection limits (MDL) and practical quantitation limits (PQL). D-001 effluent concentrations of selenium (5.2 µg/L), thallium (7.3 µg/L), and oil and grease (21 mg/L) exceeded both the Class III freshwater quality criteria (5.0 µg/L, 6.3 µg/L, and 5.0 mg/L, respectively; 62-302.530 (59) (65) (50) F.A.C.) and the permitted limits (same as Class III criteria). The D-002 effluent dissolved oxygen concentration (1.8 mg/L) failed to meet the Class III freshwater quality criterion and the permit limit (5.0 mg/L, 62-302.530 (31) F.A.C.).

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 D-001 for this facility on August 15, 2005, was not acutely toxic to either test species during the acute screen 96-hour bioassays. The effluent AGP result exceeded the "problem" threshold for fresh receiving waters. D-001 effluent selenium, thallium, and oil and grease exceeded both Class III freshwater quality standards and permit limits. The D-002 effluent dissolved oxygen level failed to meet the Class III freshwater quality standard and the permit limit.

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 Psudokirchneriella subcapitata *for total phosphorus (TP) and ortho phosphate (OP) limitation and nitrogen to phosphorus ratios for samples collected from Tampa Electric Company Polk Power Station on August 15, 2005.*

Location	AGP (measured)	Predicted AGP (OP) ± 20%	Predicted AGP (TP) ± 20%	Inorganic N:P ratio	Total N:P ratio
D-001	14.7	Not Applicable*	36.98 ± 7.396	Not Applicable*	22.42

* - Ortho-phosphate was not detected in the analytical chemistry sample, so predictions could not be made and an inorganic N:P ratio could not be calculated.

Table 2. Effluent limits, Class III Freshwater Criteria, and chemical data for samples collected from Tampa Electric Company Polk Power Station on August 15, 2005.

TECO Polk Power Station NPDES# FL0043869	Class III Freshwater Stds	Effluent Limits D-001	Effluent Limits D-002	D-001	D-002
Metals (µg/L unless otherwise noted)					
Aluminum	-	-	-	250	-
Antimony	≤ 4,300	≤ 4,300	-	15 U	-
Arsenic	≤ 50	≤ 50	-	4 U	-
Beryllium	≤ 0.13	≤ 0.13 a	-	0.25 UJ	-
Cadmium	≤ 2.3 b	≤ 2.3 b	-	0.21	-
Calcium (mg/L)	-	-	-	58.3	-
Chromium-III	≤ 181.6 b	-	-	2 U	-
Copper	≤ 20.3 b	≤ 20.3 b	-	0.5 U	-
Iron	≤ 1,000	≤ 1,000	-	15 I	-
Lead	≤ 10.1 b	≤ 10.1 b	-	0.41 I	-
Magnesium (mg/L)	-	-	-	25	-
Nickel	≤ 112.7 b	≤ 112.7 b	-	17.6	-
Selenium	≤ 5	≤ 5	-	5.2	-
Silver	≤ 0.07	≤ 0.07	-	0.025 U	-
Thallium	≤ 6.3	≤ 6.3	-	7.3 I	-
Zinc	≤ 259.1 b	≤ 259.1 b	-	5.8 I	-
Nutrients (mg/L)					
Ortho-phosphate	-	-	-	0.004 U	-
Total Phosphorus	-	Report	-	0.086 JYA	-
Ammonia	-	≤ 0.65	-	0.073 Y	-
Unionized Ammonia	≤ 0.02	≤ 0.02	-	≤ 0.02	-
Nitrate+Nitrite	-	-	-	0.028 Y	-
Total Kjeldahl Nitrogen	-	Report	-	1.9 AY	-
Organic Nitrogen	-	-	-	1.83 c	-
Total Nitrogen	-	-	-	1.93 c	-
General Physical and Chemical Parameters					
Alpha, Gross (pCi/L)	-	≤ 15	-	5.9	-
Alpha-Counting Error (pCi/L)	-	-	-	1.8	-
Dissolved Oxygen (mg/L)	≥ 5	≥ 5	-	7.6	1.8
pH (S.U.)	6.0-8.5	6.0-8.5	6.0-8.5	7.5	7
Conductivity (umhos/cm)	≤ 1,275	≤ 1,275	-	846	200
Temperature (C)	-	Report	-	30	29.3
CBOD (mg/L)	-	≤ 8.5	Report	1.4 I	0.93 AI
Oil and Grease (mg/L)	≤ 5	≤ 5	≤ 5	21	2 I
TSS (mg/L)	-	≤ 100 s	≤ 50 s	7 I	4 U
Flow (MGD)	-	Report	Report	0.745 a	57.47 a
Turbidity (mg/L)	-	-	-	5 A	-
Total residual chlorine (mg/L)	-	≤ 0.01	-	< 0.03	-
Sulfate (mg/L)	-	Report	-	200	-
Alkalinity (mg/L)	≥ 20	-	-	50	-
Hardness (mg/L)	-	Report	-	248.5 c	-

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

a - Annual average. For beryllium, defined in permit as "the maximum concentration at average annual flow conditions"

b - Value is calculated based on hardness

c - Calculated value

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.

J - Estimated value

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

Y - The analysis was from an unpreserved or imporperly preserved sample. The data may not be accurate.

FDEP Biology Section - Acute Bioassay Bench Sheets

Facility: TECO Polk ~~County~~ SP Power Station

Address: State Rd. 37 and County Road 630 (9995 SR 37 South)

City: Mulberry County: Polk

Contact/District: Lori Pillsbury / SW District

NPDES Permit #: FL 0043869

LIMS Job # TLH-2005-08-16-11 LIMS Sample #: 857110

Lims Data Entry: 8-26-05 MF Data Entry Verification: 8-26-05 SP

Sample Collection: Date: 8-15-05 Time: 1045

Hold time Start: Date: 8-15-05 Time: 1045

Comments:

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_01

Control survival ≥90%: (Yes) No

Temperature Range ≤3°C: (Yes) No

Test 2 validation: Test 2: SOP TA07_02

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: Final Salinity: Salts Hypersaline brine

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

Dechlorination: yes (no) mL of 0.025N Sodium thiosulfate per liter of sample. Final TRC

Temperature Range °C

Incubator # 2 Range 24.4 - 26.7

Room B246: 23.6 - 24.2

Waterbath: N/A

Sample Validation:

Temperature: Shipped ≤0°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

Lori Pillsbury

Debra Nicholson

Marshall Faircloth

James Beach

Nicole Wellendorf

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	not measured	–	SP	
Lab Total Residual Cl2 (mg/L):	<0.03	<0.03				<0.03	HACH	SP	DN
Alkalinity (mg/L as $CaCO_3$):	84	156				72	HACH	DN	SP
Hardness (mg/L as $CaCO_3$):	97	142				256	HACH	DN	SP
Total Ammonia (mg/L as N):	<0.017	<0.017				<0.017	DENVER	MF	SP
Salinity (ppth):	<1	<1				<1	YSI Mettler	SP	MF

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Appendix 1. Bench Sheets (continued)

FDEP Biology Section - - Bioassay Bench Sheet

Survival

LIMS Sample #: 857716 Test #: 1 Test Started: Date 8-16-05 Time: 1300

Organism: C. dubia Test Ended: Date 8/20/05 Time: 1320

Organism Batch: 29-05 Diluent Batch: DMW 125-05

Organism Age: <24 hrs Food: YCT *P. subcapitata* *Artemia*

Chamber Size 30 mL Batch: 3-05 3-05 –

Test Volume 20 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	A	5	5	5	5	5	5
	B	B	5	5	5	5	5	5
	C	C	5	5	5	5	5	5
	D	D	5	5	5	5	5	5
100%	A	A	5	5	5	5	5	5
	B	B	5	5	5	5	5	5
	C	C	5	5	5	5	5	5
	D	D	5	5	5	5	5	5
Organisms loaded by: DN; Loading verified at 0 hours by: SP		Checked by: (initials)	[redacted]	DN	SP	DN	DN	DN

Comments:

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

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).

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Appendix 1. Bench Sheets (continued)

FDEP Biology Section - - Bioassay Bench Sheet

Survival

LIMS Sample #: 857716 Test #: 2 Test Started: Date 8-16-05 Time: 1230

Organism: C. leedsi Test Ended: Date 8/20/05 Time: 1330

Organism Batch: 24-05 Diluent/ Batch: Well / NA

Organism Age: 8days Food: YCT *P. subcapitata* *Artemia*

Chamber Size 1000 mL Batch: - - 3538425GR

Test Volume 500 mL Feedings: 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	D1	5	5	5	5	5	5
	B	D2	5	5	5	5	5	5
	C	D3	5	5	5	5	5	5
	D	D4	5	5	5	5	5	5
100%	A	D5	5	5	5	5	5	5
	B	D6	5	5	5	5	5	5
	C	D7	5	5	5	5	5	5
	D	D8	5	5	5	5	5	5
Organisms loaded by: JD		Checked by: [redacted]	JD	JD	DN	DN	DN	
Loading verified at 0 hours by: JD		(initials)	Comments:					

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

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).

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Bioassay Parameters

LIMS Sample # : 857716 **Test # :** 1 **of** 2

TEST SOP: TA07_ 01 **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	B		C
pH (S.U.)	8.2		8.2	8.1		8.4
Temperature °C	24.3		24.0	24.6		24.2
Dissolved Oxygen mg/L	7.9		8.0	8.0		8.8
Conductivity ~~µmhos~~ mmhos	173		190	180		265
(initials) Measured by:	SP		SP	SP		DN
(initials) Recorded by:	SP		SP	SP		DN

Comments:

Concentration 100%	0 Hr.	24 Hr.	48 Hr. before renewal	48 Hr. after renewal	72 Hr.	96 Hr.
Replicate	A		B	B		C
pH (S.U.)	7.6		8.1	7.6		8.4
Temperature °C	24.1		24.0	24.8		24.0
Dissolved Oxygen mg/L	7.5		8.3	7.7		9.3
Conductivity ~~µmhos~~ mmhos	836		955	860		1075
(initials) Measured by:	SP		SP	SP		DN
(initials) Recorded by:	SP		SP	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 # : 857716 **Test # :** 2 of 2

TEST SOP: TA07_ 02 **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	C	D	A
pH (S.U.)	7.9	8.3	8.3	8.2	~~8.0~~ (A)	8.4
Temperature °C	24.9	24.3	24.3	24.2	24.5	24.1
Dissolved Oxygen mg/L	7.6	7.4	7.6	8.1	8.0	8.2
Conductivity ~~µmhos~~ mmhos	271	290	290	270	265	285
(initials) Measured by:	[illegible]	JD	JD	JD	DN	DN
(initials) Recorded by:	[illegible]	JD	JD	JD	DN	DN

Comments: (A) 8.4 = pH, Entry error DN, 8/17/05 First Entry was for D.O.

Concentration 100%	0 Hr.	24 Hr.	48 Hr. before renewal	48 Hr. after renewal	72 Hr.	96 Hr.
Replicate	A	B	C	C	D	A
pH (S.U.)	7.6	8.2	8.3	7.6	8.5	~~8.4~~ (B)
Temperature °C	24.4	24.5	24.0	24.6	24.6	24.2
Dissolved Oxygen mg/L	7.5	8.8	8.9	8.0	9.6	10.3
Conductivity ~~µmhos~~ mmhos	845	895	905	880	885	895
(initials) Measured by:	[illegible]	JD	JD	JD	DN	DN
(initials) Recorded by:	[illegible]	JD	JD	JD	DN	DN

Comments: (B) Entry error pH = 8.6, 1st entry for Control D.N. 8/22/05.

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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Appendix 2. Chemical Analyses performed on the effluent from the Tampa Electric Company Polk Power Station Outfall D-001, sampled on August 15, 2005.

Date Sampled	Field ID	Analysis	Component	Result	Units	Remark	MDL	PQL
8/15/2005 10:45	D-001	Bio-AGP/LimNut	Algal Growth Potential	14.7	mg DryWt/L		0.3	0.9
8/15/2005 10:45	D-001	Bio-BOD	Biochemical Oxygen Demand-5 Day,N-Inhib	1.4	mg/L	I		
8/15/2005 11:20	D-002	Bio-BOD	Biochemical Oxygen Demand-5 Day,N-Inhib	0.93	mg/L	AI		
8/15/2005 10:45	D-001	Bio-Chl-a	Chlorophyll-A, Monochromatic, Water	34	ug/L	A	0.85	2.6
8/15/2005 10:45	D-001	Bio-Chl-a	Phaeophytin-A, Monochromatic, Water	0	ug/L	A	0.85	2.6
8/15/2005 10:45	D-001	Bio-Toxicology	Bioassay-Acute-Screen-FW-C.dubia, LC50	100	LC50	L		
8/15/2005 10:45	D-001	Bio-Toxicology	Bioassay-Acute-Screen-FW-Fish, LC50	100	LC50	L		
8/15/2005 10:45	D-001	BNA-Water	1,2,4-Trichlorobenzene	0.95	ug/L	U	0.95	3.8
8/15/2005 10:45	D-001	BNA-Water	1,2-Dichlorobenzene	0.95	ug/L	U	0.95	3.8
8/15/2005 10:45	D-001	BNA-Water	1,3-Dichlorobenzene	0.95	ug/L	U	0.95	3.8
8/15/2005 10:45	D-001	BNA-Water	1,4-Dichlorobenzene	0.95	ug/L	U	0.95	3.8
8/15/2005 10:45	D-001	BNA-Water	2,4,6-Trichlorophenol	0.95	ug/L	U	0.95	3.8
8/15/2005 10:45	D-001	BNA-Water	2,4-Dichlorophenol	0.95	ug/L	U	0.95	3.8
8/15/2005 10:45	D-001	BNA-Water	2,4-Dimethylphenol	48	ug/L	U	48	190
8/15/2005 10:45	D-001	BNA-Water	2,4-Dinitrophenol	14	ug/L	U	14	57
8/15/2005 10:45	D-001	BNA-Water	2,4-Dinitrotoluene	0.95	ug/L	U	0.95	3.8
8/15/2005 10:45	D-001	BNA-Water	2,6-Dinitrotoluene	0.95	ug/L	U	0.95	3.8
8/15/2005 10:45	D-001	BNA-Water	2-Chloronaphthalene	0.95	ug/L	U	0.95	3.8
8/15/2005 10:45	D-001	BNA-Water	2-Chlorophenol	0.95	ug/L	U	0.95	3.8
8/15/2005 10:45	D-001	BNA-Water	2-Methyl-4,6-dinitrophenol	2.9	ug/L	U	2.9	11
8/15/2005 10:45	D-001	BNA-Water	2-Nitrophenol	0.95	ug/L	U	0.95	3.8
8/15/2005 10:45	D-001	BNA-Water	3,3'-Dichlorobenzidine	38	ug/L	UJ	38	150
8/15/2005 10:45	D-001	BNA-Water	4,4'-DDD	1.4	ug/L	U	1.4	5.7
8/15/2005 10:45	D-001	BNA-Water	4,4'-DDE	1.4	ug/L	U	1.4	5.7
8/15/2005 10:45	D-001	BNA-Water	4,4'-DDT	1.4	ug/L	U	1.4	5.7
8/15/2005 10:45	D-001	BNA-Water	4-Bromophenyl phenyl ether	0.95	ug/L	U	0.95	3.8
8/15/2005 10:45	D-001	BNA-Water	4-Chloro-3-methylphenol	0.95	ug/L	U	0.95	3.8
8/15/2005 10:45	D-001	BNA-Water	4-Chlorophenyl phenyl ether	1.9	ug/L	U	1.9	7.6
8/15/2005 10:45	D-001	BNA-Water	4-Nitrophenol	14	ug/L	U	14	57
8/15/2005 10:45	D-001	BNA-Water	Acenaphthene	0.95	ug/L	U	0.95	3.8
8/15/2005 10:45	D-001	BNA-Water	Acenaphthylene	0.95	ug/L	U	0.95	3.8
8/15/2005 10:45	D-001	BNA-Water	Aldrin	1.4	ug/L	U	1.4	5.7
8/15/2005 10:45	D-001	BNA-Water	alpha-BHC	1.4	ug/L	U	1.4	5.7

Appendix 2. Chemical Analyses (continued)

Date Sampled	Field ID	Analysis	Component	Result	Units	Remark	MDL	PQL
8/15/2005 10:45	D-001	BNA-Water	Anthracene	0.95	ug/L	U	0.95	3.8
8/15/2005 10:45	D-001	BNA-Water	Benzidine	95	ug/L	U	95	380
8/15/2005 10:45	D-001	BNA-Water	Benzo(a)anthracene	0.95	ug/L	U	0.95	3.8
8/15/2005 10:45	D-001	BNA-Water	Benzo(a)pyrene	0.95	ug/L	U	0.95	3.8
8/15/2005 10:45	D-001	BNA-Water	Benzo(b)fluoranthene	0.95	ug/L	U	0.95	3.8
8/15/2005 10:45	D-001	BNA-Water	Benzo(g,h,i)perylene	0.95	ug/L	U	0.95	3.8
8/15/2005 10:45	D-001	BNA-Water	Benzo(k)fluoranthene	0.95	ug/L	U	0.95	3.8
8/15/2005 10:45	D-001	BNA-Water	beta-BHC	1.4	ug/L	U	1.4	5.7
8/15/2005 10:45	D-001	BNA-Water	Bis(2-chloroethoxy)methane	0.95	ug/L	U	0.95	3.8
8/15/2005 10:45	D-001	BNA-Water	Bis(2-chloroethyl)ether	0.95	ug/L	U	0.95	3.8
8/15/2005 10:45	D-001	BNA-Water	Bis(2-chloroisopropyl)ether	2.9	ug/L	U	2.9	11
8/15/2005 10:45	D-001	BNA-Water	Bis(2-ethylhexyl)phthalate	14	ug/L	U	14	57
8/15/2005 10:45	D-001	BNA-Water	Butyl benzyl phthalate	4.8	ug/L	U	4.8	19
8/15/2005 10:45	D-001	BNA-Water	Chrysene	0.95	ug/L	U	0.95	3.8
8/15/2005 10:45	D-001	BNA-Water	delta-BHC	1.4	ug/L	U	1.4	5.7
8/15/2005 10:45	D-001	BNA-Water	Dibenzo(a,h)anthracene	0.95	ug/L	U	0.95	3.8
8/15/2005 10:45	D-001	BNA-Water	Dieldrin	1.4	ug/L	U	1.4	5.7
8/15/2005 10:45	D-001	BNA-Water	Diethyl phthalate	0.95	ug/L	U	0.95	3.8
8/15/2005 10:45	D-001	BNA-Water	Dimethyl phthalate	48	ug/L	U	48	190
8/15/2005 10:45	D-001	BNA-Water	Di-n-butyl phthalate	4.8	ug/L	U	4.8	19
8/15/2005 10:45	D-001	BNA-Water	Di-n-octyl phthalate	0.95	ug/L	U	0.95	3.8
8/15/2005 10:45	D-001	BNA-Water	Endosulfan I	3.8	ug/L	U	3.8	15
8/15/2005 10:45	D-001	BNA-Water	Endosulfan II	3.8	ug/L	U	3.8	15
8/15/2005 10:45	D-001	BNA-Water	Endosulfan sulfate	1.4	ug/L	U	1.4	5.7
8/15/2005 10:45	D-001	BNA-Water	Endrin	1.4	ug/L	U	1.4	5.7
8/15/2005 10:45	D-001	BNA-Water	Endrin aldehyde	3.8	ug/L	U	3.8	15
8/15/2005 10:45	D-001	BNA-Water	Fluoranthene	0.95	ug/L	U	0.95	3.8
8/15/2005 10:45	D-001	BNA-Water	Fluorene	0.95	ug/L	U	0.95	3.8
8/15/2005 10:45	D-001	BNA-Water	gamma-BHC	1.4	ug/L	U	1.4	5.7
8/15/2005 10:45	D-001	BNA-Water	Heptachlor	1.4	ug/L	U	1.4	5.7
8/15/2005 10:45	D-001	BNA-Water	Heptachlor epoxide	1.4	ug/L	U	1.4	5.7
8/15/2005 10:45	D-001	BNA-Water	Hexachlorobenzene	0.95	ug/L	U	0.95	3.8
8/15/2005 10:45	D-001	BNA-Water	Hexachlorobutadiene	2.9	ug/L	U	2.9	11
8/15/2005 10:45	D-001	BNA-Water	Hexachlorocyclopentadiene	2.9	ug/L	U	2.9	11

Appendix 2. Chemical Analyses (continued)

Date Sampled	Field ID	Analysis	Component	Result	Units	Remark	MDL	PQL
8/15/2005 10:45	D-001	BNA-Water	Hexachloroethane	2.9	ug/L	U	2.9	11
8/15/2005 10:45	D-001	BNA-Water	Indeno(1,2,3-cd)pyrene	0.95	ug/L	U	0.95	3.8
8/15/2005 10:45	D-001	BNA-Water	Isophorone	0.95	ug/L	U	0.95	3.8
8/15/2005 10:45	D-001	BNA-Water	Naphthalene	0.95	ug/L	U	0.95	3.8
8/15/2005 10:45	D-001	BNA-Water	Nitrobenzene	1.9	ug/L	U	1.9	7.6
8/15/2005 10:45	D-001	BNA-Water	N-Nitrosodimethylamine	1.9	ug/L	U	1.9	7.6
8/15/2005 10:45	D-001	BNA-Water	N-Nitrosodi-n-propylamine	1.9	ug/L	U	1.9	7.6
8/15/2005 10:45	D-001	BNA-Water	N-Nitrosodiphenylamine	2.9	ug/L	U	2.9	11
8/15/2005 10:45	D-001	BNA-Water	Pentachlorophenol	2.9	ug/L	U	2.9	11
8/15/2005 10:45	D-001	BNA-Water	Phenanthrene	0.95	ug/L	U	0.95	3.8
8/15/2005 10:45	D-001	BNA-Water	Phenol	0.95	ug/L	U	0.95	3.8
8/15/2005 10:45	D-001	BNA-Water	Pyrene	0.95	ug/L	U	0.95	3.8
8/15/2005 10:57	Field Blank	BNA-Water	1,2,4-Trichlorobenzene	0.96	ug/L	U	0.96	3.8
8/15/2005 10:57	Field Blank	BNA-Water	1,2-Dichlorobenzene	0.96	ug/L	U	0.96	3.8
8/15/2005 10:57	Field Blank	BNA-Water	1,3-Dichlorobenzene	0.96	ug/L	U	0.96	3.8
8/15/2005 10:57	Field Blank	BNA-Water	1,4-Dichlorobenzene	0.96	ug/L	U	0.96	3.8
8/15/2005 10:57	Field Blank	BNA-Water	2,4,6-Trichlorophenol	0.96	ug/L	U	0.96	3.8
8/15/2005 10:57	Field Blank	BNA-Water	2,4-Dichlorophenol	0.96	ug/L	U	0.96	3.8
8/15/2005 10:57	Field Blank	BNA-Water	2,4-Dimethylphenol	48	ug/L	U	48	190
8/15/2005 10:57	Field Blank	BNA-Water	2,4-Dinitrophenol	14	ug/L	U	14	58
8/15/2005 10:57	Field Blank	BNA-Water	2,4-Dinitrotoluene	0.96	ug/L	U	0.96	3.8
8/15/2005 10:57	Field Blank	BNA-Water	2,6-Dinitrotoluene	0.96	ug/L	U	0.96	3.8
8/15/2005 10:57	Field Blank	BNA-Water	2-Chloronaphthalene	0.96	ug/L	U	0.96	3.8
8/15/2005 10:57	Field Blank	BNA-Water	2-Chlorophenol	0.96	ug/L	U	0.96	3.8
8/15/2005 10:57	Field Blank	BNA-Water	2-Methyl-4,6-dinitrophenol	2.9	ug/L	U	2.9	12
8/15/2005 10:57	Field Blank	BNA-Water	2-Nitrophenol	0.96	ug/L	U	0.96	3.8
8/15/2005 10:57	Field Blank	BNA-Water	3,3'-Dichlorobenzidine	38	ug/L	UJ	38	150
8/15/2005 10:57	Field Blank	BNA-Water	4,4'-DDD	1.4	ug/L	U	1.4	5.8
8/15/2005 10:57	Field Blank	BNA-Water	4,4'-DDE	1.4	ug/L	U	1.4	5.8
8/15/2005 10:57	Field Blank	BNA-Water	4,4'-DDT	1.4	ug/L	U	1.4	5.8
8/15/2005 10:57	Field Blank	BNA-Water	4-Bromophenyl phenyl ether	0.96	ug/L	U	0.96	3.8
8/15/2005 10:57	Field Blank	BNA-Water	4-Chloro-3-methylphenol	0.96	ug/L	U	0.96	3.8
8/15/2005 10:57	Field Blank	BNA-Water	4-Chlorophenyl phenyl ether	1.9	ug/L	U	1.9	7.7
8/15/2005 10:57	Field Blank	BNA-Water	4-Nitrophenol	14	ug/L	U	14	58

Appendix 2. Chemical Analyses (continued)

Date Sampled	Field ID	Analysis	Component	Result	Units	Remark	MDL	PQL
8/15/2005 10:57	Field Blank	BNA-Water	Acenaphthene	0.96	ug/L	U	0.96	3.8
8/15/2005 10:57	Field Blank	BNA-Water	Acenaphthylene	0.96	ug/L	U	0.96	3.8
8/15/2005 10:57	Field Blank	BNA-Water	Aldrin	1.4	ug/L	U	1.4	5.8
8/15/2005 10:57	Field Blank	BNA-Water	alpha-BHC	1.4	ug/L	U	1.4	5.8
8/15/2005 10:57	Field Blank	BNA-Water	Anthracene	0.96	ug/L	U	0.96	3.8
8/15/2005 10:57	Field Blank	BNA-Water	Benzidine	96	ug/L	U	96	380
8/15/2005 10:57	Field Blank	BNA-Water	Benzo(a)anthracene	0.96	ug/L	U	0.96	3.8
8/15/2005 10:57	Field Blank	BNA-Water	Benzo(a)pyrene	0.96	ug/L	U	0.96	3.8
8/15/2005 10:57	Field Blank	BNA-Water	Benzo(b)fluoranthene	0.96	ug/L	U	0.96	3.8
8/15/2005 10:57	Field Blank	BNA-Water	Benzo(g,h,i)perylene	0.96	ug/L	U	0.96	3.8
8/15/2005 10:57	Field Blank	BNA-Water	Benzo(k)fluoranthene	0.96	ug/L	U	0.96	3.8
8/15/2005 10:57	Field Blank	BNA-Water	beta-BHC	1.4	ug/L	U	1.4	5.8
8/15/2005 10:57	Field Blank	BNA-Water	Bis(2-chloroethoxy)methane	0.96	ug/L	U	0.96	3.8
8/15/2005 10:57	Field Blank	BNA-Water	Bis(2-chloroethyl)ether	0.96	ug/L	U	0.96	3.8
8/15/2005 10:57	Field Blank	BNA-Water	Bis(2-chloroisopropyl)ether	2.9	ug/L	U	2.9	12
8/15/2005 10:57	Field Blank	BNA-Water	Bis(2-ethylhexyl)phthalate	14	ug/L	U	14	58
8/15/2005 10:57	Field Blank	BNA-Water	Butyl benzyl phthalate	4.8	ug/L	U	4.8	19
8/15/2005 10:57	Field Blank	BNA-Water	Chrysene	0.96	ug/L	U	0.96	3.8
8/15/2005 10:57	Field Blank	BNA-Water	delta-BHC	1.4	ug/L	U	1.4	5.8
8/15/2005 10:57	Field Blank	BNA-Water	Dibenzo(a,h)anthracene	0.96	ug/L	U	0.96	3.8
8/15/2005 10:57	Field Blank	BNA-Water	Dieldrin	1.4	ug/L	U	1.4	5.8
8/15/2005 10:57	Field Blank	BNA-Water	Diethyl phthalate	0.96	ug/L	U	0.96	3.8
8/15/2005 10:57	Field Blank	BNA-Water	Dimethyl phthalate	48	ug/L	U	48	190
8/15/2005 10:57	Field Blank	BNA-Water	Di-n-butyl phthalate	4.8	ug/L	U	4.8	19
8/15/2005 10:57	Field Blank	BNA-Water	Di-n-octyl phthalate	0.96	ug/L	U	0.96	3.8
8/15/2005 10:57	Field Blank	BNA-Water	Endosulfan I	3.8	ug/L	U	3.8	15
8/15/2005 10:57	Field Blank	BNA-Water	Endosulfan II	3.8	ug/L	U	3.8	15
8/15/2005 10:57	Field Blank	BNA-Water	Endosulfan sulfate	1.4	ug/L	U	1.4	5.8
8/15/2005 10:57	Field Blank	BNA-Water	Endrin	1.4	ug/L	U	1.4	5.8
8/15/2005 10:57	Field Blank	BNA-Water	Endrin aldehyde	3.8	ug/L	U	3.8	15
8/15/2005 10:57	Field Blank	BNA-Water	Fluoranthene	0.96	ug/L	U	0.96	3.8
8/15/2005 10:57	Field Blank	BNA-Water	Fluorene	0.96	ug/L	U	0.96	3.8
8/15/2005 10:57	Field Blank	BNA-Water	gamma-BHC	1.4	ug/L	U	1.4	5.8
8/15/2005 10:57	Field Blank	BNA-Water	Heptachlor	1.4	ug/L	U	1.4	5.8

Appendix 2. Chemical Analyses (continued)

Date Sampled	Field ID	Analysis	Component	Result	Units	Remark	MDL	PQL
8/15/2005 10:57	Field Blank	BNA-Water	Heptachlor epoxide	1.4	ug/L	U	1.4	5.8
8/15/2005 10:57	Field Blank	BNA-Water	Hexachlorobenzene	0.96	ug/L	U	0.96	3.8
8/15/2005 10:57	Field Blank	BNA-Water	Hexachlorobutadiene	2.9	ug/L	U	2.9	12
8/15/2005 10:57	Field Blank	BNA-Water	Hexachlorocyclopentadiene	2.9	ug/L	U	2.9	12
8/15/2005 10:57	Field Blank	BNA-Water	Hexachloroethane	2.9	ug/L	U	2.9	12
8/15/2005 10:57	Field Blank	BNA-Water	Indeno(1,2,3-cd)pyrene	0.96	ug/L	U	0.96	3.8
8/15/2005 10:57	Field Blank	BNA-Water	Isophorone	0.96	ug/L	U	0.96	3.8
8/15/2005 10:57	Field Blank	BNA-Water	Naphthalene	0.96	ug/L	U	0.96	3.8
8/15/2005 10:57	Field Blank	BNA-Water	Nitrobenzene	1.9	ug/L	U	1.9	7.7
8/15/2005 10:57	Field Blank	BNA-Water	N-Nitrosodimethylamine	1.9	ug/L	U	1.9	7.7
8/15/2005 10:57	Field Blank	BNA-Water	N-Nitrosodi-n-propylamine	1.9	ug/L	U	1.9	7.7
8/15/2005 10:57	Field Blank	BNA-Water	N-Nitrosodiphenylamine	2.9	ug/L	U	2.9	12
8/15/2005 10:57	Field Blank	BNA-Water	Pentachlorophenol	2.9	ug/L	U	2.9	12
8/15/2005 10:57	Field Blank	BNA-Water	Phenanthrene	0.96	ug/L	U	0.96	3.8
8/15/2005 10:57	Field Blank	BNA-Water	Phenol	0.96	ug/L	U	0.96	3.8
8/15/2005 10:57	Field Blank	BNA-Water	Pyrene	0.96	ug/L	U	0.96	3.8
8/15/2005 10:45	D-001	GC-Water	Alachlor	0.6	ug/L	U	0.6	2.4
8/15/2005 10:45	D-001	GC-Water	Ametryn	0.05	ug/L	U	0.05	0.2
8/15/2005 10:45	D-001	GC-Water	Atrazine	0.05	ug/L	U	0.05	0.2
8/15/2005 10:45	D-001	GC-Water	Azinphos Methyl	0.2	ug/L	U	0.2	0.8
8/15/2005 10:45	D-001	GC-Water	Bromacil	0.2	ug/L	U	0.2	0.8
8/15/2005 10:45	D-001	GC-Water	Butylate	0.2	ug/L	UJ	0.2	0.8
8/15/2005 10:45	D-001	GC-Water	Chlorpyrifos Ethyl	0.05	ug/L	U	0.05	0.2
8/15/2005 10:45	D-001	GC-Water	Chlorpyrifos Methyl	0.1	ug/L	U	0.1	0.4
8/15/2005 10:45	D-001	GC-Water	Diazinon	0.05	ug/L	U	0.05	0.2
8/15/2005 10:45	D-001	GC-Water	Ethion	0.05	ug/L	U	0.05	0.2
8/15/2005 10:45	D-001	GC-Water	Ethoprop	0.1	ug/L	U	0.1	0.4
8/15/2005 10:45	D-001	GC-Water	Fenamiphos	0.2	ug/L	U	0.2	0.8
8/15/2005 10:45	D-001	GC-Water	Fonofos	0.1	ug/L	U	0.1	0.4
8/15/2005 10:45	D-001	GC-Water	Hexazinone	0.1	ug/L	U	0.1	0.4
8/15/2005 10:45	D-001	GC-Water	Malathion	0.15	ug/L	UJ	0.15	0.6
8/15/2005 10:45	D-001	GC-Water	Metalaxyl	0.25	ug/L	U	0.25	1
8/15/2005 10:45	D-001	GC-Water	Metolachlor	0.5	ug/L	U	0.5	2
8/15/2005 10:45	D-001	GC-Water	Metribuzin	0.1	ug/L	U	0.1	0.4

Appendix 2. Chemical Analyses (continued)

Date Sampled	Field ID	Analysis	Component	Result	Units	Remark	MDL	PQL
8/15/2005 10:45	D-001	GC-Water	Mevinphos	0.2	ug/L	U	0.2	0.8
8/15/2005 10:45	D-001	GC-Water	Naled	0.8	ug/L	U	0.8	3.2
8/15/2005 10:45	D-001	GC-Water	Norflurazon	0.15	ug/L	U	0.15	0.6
8/15/2005 10:45	D-001	GC-Water	Parathion Ethyl	0.15	ug/L	U	0.15	0.6
8/15/2005 10:45	D-001	GC-Water	Parathion Methyl	0.1	ug/L	U	0.1	0.4
8/15/2005 10:45	D-001	GC-Water	Phorate	0.05	ug/L	U	0.05	0.2
8/15/2005 10:45	D-001	GC-Water	Prometryn	0.15	ug/L	U	0.15	0.6
8/15/2005 10:45	D-001	GC-Water	Simazine	0.05	ug/L	U	0.05	0.2
8/15/2005 10:57	Field Blank	GC-Water	Alachlor	0.57	ug/L	U	0.57	2.3
8/15/2005 10:57	Field Blank	GC-Water	Ametryn	0.048	ug/L	U	0.048	0.19
8/15/2005 10:57	Field Blank	GC-Water	Atrazine	0.048	ug/L	U	0.048	0.19
8/15/2005 10:57	Field Blank	GC-Water	Azinphos Methyl	0.19	ug/L	U	0.19	0.76
8/15/2005 10:57	Field Blank	GC-Water	Bromacil	0.19	ug/L	U	0.19	0.76
8/15/2005 10:57	Field Blank	GC-Water	Butylate	0.19	ug/L	UJ	0.19	0.76
8/15/2005 10:57	Field Blank	GC-Water	Chlorpyrifos Ethyl	0.048	ug/L	U	0.048	0.19
8/15/2005 10:57	Field Blank	GC-Water	Chlorpyrifos Methyl	0.095	ug/L	U	0.095	0.38
8/15/2005 10:57	Field Blank	GC-Water	Diazinon	0.048	ug/L	U	0.048	0.19
8/15/2005 10:57	Field Blank	GC-Water	Ethion	0.048	ug/L	U	0.048	0.19
8/15/2005 10:57	Field Blank	GC-Water	Ethoprop	0.095	ug/L	U	0.095	0.38
8/15/2005 10:57	Field Blank	GC-Water	Fenamiphos	0.19	ug/L	U	0.19	0.76
8/15/2005 10:57	Field Blank	GC-Water	Fonofos	0.095	ug/L	U	0.095	0.38
8/15/2005 10:57	Field Blank	GC-Water	Hexazinone	0.095	ug/L	U	0.095	0.38
8/15/2005 10:57	Field Blank	GC-Water	Malathion	0.14	ug/L	UJ	0.14	0.56
8/15/2005 10:57	Field Blank	GC-Water	Metalaxyl	0.24	ug/L	U	0.24	0.96
8/15/2005 10:57	Field Blank	GC-Water	Metolachlor	0.48	ug/L	U	0.48	1.9
8/15/2005 10:57	Field Blank	GC-Water	Metribuzin	0.095	ug/L	U	0.095	0.38
8/15/2005 10:57	Field Blank	GC-Water	Mevinphos	0.19	ug/L	U	0.19	0.76
8/15/2005 10:57	Field Blank	GC-Water	Naled	0.76	ug/L	U	0.76	3
8/15/2005 10:57	Field Blank	GC-Water	Norflurazon	0.14	ug/L	U	0.14	0.56
8/15/2005 10:57	Field Blank	GC-Water	Parathion Ethyl	0.14	ug/L	U	0.14	0.56
8/15/2005 10:57	Field Blank	GC-Water	Parathion Methyl	0.095	ug/L	U	0.095	0.38
8/15/2005 10:57	Field Blank	GC-Water	Phorate	0.048	ug/L	U	0.048	0.19
8/15/2005 10:57	Field Blank	GC-Water	Prometryn	0.14	ug/L	U	0.14	0.56
8/15/2005 10:57	Field Blank	GC-Water	Simazine	0.048	ug/L	U	0.048	0.19

Appendix 2. Chemical Analyses (continued)

Date Sampled	Field ID	Analysis	Component	Result	Units	Remark	MDL	PQL
8/15/2005 10:45	D-001	Metals-Water	Aluminum	250	ug/L		5	20
8/15/2005 10:45	D-001	Metals-Water	Antimony	15	ug/L	U	15	60
8/15/2005 10:45	D-001	Metals-Water	Arsenic	4	ug/L	U	4	16
8/15/2005 10:45	D-001	Metals-Water	Beryllium	0.25	ug/L	UJ	0.25	1
8/15/2005 10:45	D-001	Metals-Water	Cadmium	0.21	ug/L		0.05	0.2
8/15/2005 10:45	D-001	Metals-Water	Calcium	58.3	mg/L		0.05	0.2
8/15/2005 10:45	D-001	Metals-Water	Chromium	2	ug/L	U	2	8
8/15/2005 10:45	D-001	Metals-Water	Copper	0.5	ug/L	U	0.5	2
8/15/2005 10:45	D-001	Metals-Water	Iron	15	ug/L	I	10	40
8/15/2005 10:45	D-001	Metals-Water	Lead	0.41	ug/L	I	0.19	0.76
8/15/2005 10:45	D-001	Metals-Water	Magnesium	25	mg/L		0.01	0.04
8/15/2005 10:45	D-001	Metals-Water	Nickel	17.6	ug/L		2	8
8/15/2005 10:45	D-001	Metals-Water	Selenium	5.2	ug/L		0.5	2
8/15/2005 10:45	D-001	Metals-Water	Silver	0.025	ug/L	U	0.025	0.1
8/15/2005 10:45	D-001	Metals-Water	Thallium	7.3	ug/L	I	7	28
8/15/2005 10:45	D-001	Metals-Water	Zinc	5.8	ug/L	I	3	12
8/15/2005 10:57	Field Blank	Metals-Water	Aluminum	5	ug/L	U	5	20
8/15/2005 10:57	Field Blank	Metals-Water	Antimony	4	ug/L	U	4	16
8/15/2005 10:57	Field Blank	Metals-Water	Arsenic	4	ug/L	U	4	16
8/15/2005 10:57	Field Blank	Metals-Water	Beryllium	0.25	ug/L	UJ	0.25	1
8/15/2005 10:57	Field Blank	Metals-Water	Cadmium	0.17	ug/L	U	0.17	0.68
8/15/2005 10:57	Field Blank	Metals-Water	Calcium	0.05	mg/L	U	0.05	0.2
8/15/2005 10:57	Field Blank	Metals-Water	Chromium	2	ug/L	U	2	8
8/15/2005 10:57	Field Blank	Metals-Water	Copper	0.5	ug/L	U	0.5	2
8/15/2005 10:57	Field Blank	Metals-Water	Iron	10	ug/L	U	10	40
8/15/2005 10:57	Field Blank	Metals-Water	Lead	0.19	ug/L	U	0.19	0.76
8/15/2005 10:57	Field Blank	Metals-Water	Magnesium	0.01	mg/L	U	0.01	0.04
8/15/2005 10:57	Field Blank	Metals-Water	Nickel	2	ug/L	U	2	8
8/15/2005 10:57	Field Blank	Metals-Water	Selenium	0.5	ug/L	U	0.5	2
8/15/2005 10:57	Field Blank	Metals-Water	Silver	0.025	ug/L	U	0.025	0.1
8/15/2005 10:57	Field Blank	Metals-Water	Thallium	7	ug/L	U	7	28
8/15/2005 10:57	Field Blank	Metals-Water	Zinc	3	ug/L	U	3	12
8/15/2005 10:45	D-001	Nutrients-Liquid	Alkalinity	50	mg CaCO3/L		0.65	2.5
8/15/2005 10:45	D-001	Nutrients-Liquid	Ammonia-N	0.073	mg N/L	Y	0.01	0.02

Appendix 2. Chemical Analyses (continued)

Date Sampled	Field ID	Analysis	Component	Result	Units	Remark	MDL	PQL
8/15/2005 10:45	D-001	Nutrients-Liquid	Kjeldahl Nitrogen	1.9	mg N/L	AY	0.12	0.4
8/15/2005 10:45	D-001	Nutrients-Liquid	NO2NO3-N	0.028	mg N/L	Y	0.004	0.01
8/15/2005 10:45	D-001	Nutrients-Liquid	O-Phosphate-P	0.004	mg P/L	U	0.004	0.01
8/15/2005 10:45	D-001	Nutrients-Liquid	Sulfate	200	mg SO4/L		1	2.5
8/15/2005 10:45	D-001	Nutrients-Liquid	Total-P	0.086	mg P/L	JYA	0.02	0.06
8/15/2005 10:45	D-001	Nutrients-Liquid	TSS	7	mg/L	I	4	16
8/15/2005 10:45	D-001	Nutrients-Liquid	Turbidity	5	NTU	A	0.05	0.05
8/15/2005 11:20	D-002	Nutrients-Liquid	TSS	4	mg/L	U	4	16
8/15/2005 10:57	Field Blank	Nutrients-Liquid	Alkalinity	0.65	mg CaCO3/L	U	0.65	2.5
8/15/2005 10:57	Field Blank	Nutrients-Liquid	Ammonia-N	0.01	mg N/L	U	0.01	0.02
8/15/2005 10:57	Field Blank	Nutrients-Liquid	Kjeldahl Nitrogen	0.06	mg N/L	U	0.06	0.2
8/15/2005 10:57	Field Blank	Nutrients-Liquid	NO2NO3-N	0.004	mg N/L	U	0.004	0.01
8/15/2005 10:57	Field Blank	Nutrients-Liquid	O-Phosphate-P	0.004	mg P/L	U	0.004	0.01
8/15/2005 10:57	Field Blank	Nutrients-Liquid	Sulfate	0.2	mg SO4/L	U	0.2	0.5
8/15/2005 10:57	Field Blank	Nutrients-Liquid	Total-P	0.02	mg P/L	U	0.02	0.06
8/15/2005 10:45	D-001	Overflow	Alpha, Total	5.9	pCi/L			
8/15/2005 10:45	D-001	Overflow	Alpha-Counting Error	1.8	pCi/L			
8/15/2005 10:45	D-001	Overflow	Oil and Grease	21	mg/L			
8/15/2005 11:20	D-002	Overflow	Oil and Grease	2	mg/L	I		
8/15/2005 10:57	Field Blank	Overflow	Alpha, Total	0.6	pCi/L	U		
8/15/2005 10:57	Field Blank	Overflow	Alpha-Counting Error	0.4	pCi/L			
8/15/2005 10:57	Field Blank	Overflow	Oil and Grease	1.7	mg/L	U		

The Bioassay of Tampa Electric Company Polk Power Station effluent sampled on August 15, 2005. NPDES #FL0043869.

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 4 3 8 6 9 11	12 0 5 0 8 1 5	18 **B**	19 **S**	20 2

Remarks

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The Priority Pollutants Analysis of Tampa Electric Company Polk Power Station effluent sampled on August 15, 2005. NPDES #FL0043869.

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 4 3 8 6 9 11	12 0 5 0 8 1 5	18 **X**	19 **S**	20 2

Remarks

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Biological Analyses of Tampa Electric Company Polk Power Station effluent sampled on August 15, 2005. NPDES #FL0043869.

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 4 3 8 6 9 11	12 0 5 0 8 1 5	18 **S**	19 **S**	20 2

Remarks

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