

Bioassays of

Telogia Power-Timber Energy Resources Inc.

Liberty County

NPDES #FL0039951

Sampled February 16, 2004

September 2004

Biology Section
Bureau of Laboratories
Division of Resource Assessment and Management

Quality Manual No. 870346G
NELAC Certification No. E31780

Telogia Power-Timber Energy Resources, Inc., State Road 65, Telogia, Liberty County, Florida, NPDES #FL0039951. Effluent samples for this facility were collected on February 16, 2004.

Introduction

Telogia Power-Timber Energy Resources, Inc. operates a 14 Mega-Watt (MW) carbonaceous-fueled power plant, (currently permitted to burn paper, polyethylene, peanut hulls and wood) with a design monthly average daily flow of 0.01 million gallons per day (MGD) and an average monthly daily flow of 0.075 MGD (flow data from February, March, and April 2004). The facility's wastewater treatment system consists of a wastewater temperature stabilization/transfer station, a settlement basin, a 50,000-gallon concrete-lined cooling basin and a sedimentation basin that is used to treat stormwater runoff from the ash piles. Treated wastewater consists of cooling-tower blowdown, condenser steam, neutralized de-mineralizer backwash water, contact and non-contact cooling water, water for temperature reduction of blowdown water and stormwater runoff from the ash piles. The flash tank and boiler blowdown water is used as make-up water for the cooling towers and thus is indirectly discharged to the wastewater treatment system. Treated effluent is intermittently discharged into the Class III fresh waters of Stokes Branch, and then into Telogia Creek (facility information provided by Eric Kitchen, FDEP Northwest District Branch Office, Tallahassee).

Methods

Samples were collected from the NPDES sampling point by Eric Kitchen (FDEP Northwest District Branch Office Tallahassee) 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 toxicity and algal growth potential tests discussed in this report were performed following internal DEP SOP's TA07_01,TA07_02, and TA08_01 through TA08_06. All internal DEP SOP's are available on the web at: http://www.floridadep.org/labs/cgi-bin/sop/biosop.asp.

The bioassay test species were selected per the NPDES permit for this facility. Although the effluent, based on conductivity and temperature, had an apparent salinity of approximately 1.3 ppth (parts per thousand), the use of freshwater test species was deemed appropriate. The facility is far enough removed from known sources of seawater ions that it is improbable that seawater ions contributed to the apparent salinity. The likely sources of the apparent salinity of the effluent include demineralizer-backwash water and runoff from the ash piles.

Toxicity Test Results

Tests were performed February 17-21, 2004.

Ceriodaphnia dubia 96-hr acute screening bioassay – LC_{50} < 100%, 100% mortality in 100% sample at 48 hours

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

These samples demonstrated unacceptable acute toxicity for *Ceriodaphnia dubia*, but not for *Cyprinella leedsi*, according to permit conditions.

See Table 1 for bioassay bench sheets.

Algal Growth Potential Test Results

The effluent AGP was 15.4 mg dry wt/L of the unicellular green alga, *Pseudokirchneriella subcapitata*, formerly known as *Selenastrum capricornutum*. Raschke and Shultz (1987) found that Algal Growth

Potential (AGP) values above 5.0 mg dry weight/L represent a “problem” threshold for fresh receiving waters, implying nutrient enrichment. The analytical chemistry data suggests the effluent is nitrogen-limited. The predicted AGP based on nitrogen concentrations was 22.42 (±20%) mg dry wt/L (Table 2). The predicted and observed AGP values are not sufficiently different to suggest algal inhibition.

See Table 2 for AGP results.

Chemistry Results

Total residual chlorine and total ammonia were not detected in the bioassay sample in the laboratory.

The conductivity of the effluent sample (2,768 μmhos/cm) exceeded the Class III Fresh Water Quality Criterion of ≤1,275 μmhos/cm (62-302.530(23) F.A.C.).

Aluminum, cadmium, lead and zinc were detected in the effluent at concentrations above the practical quantitation limits (PQL), but complied with Class III Fresh Water Quality Criteria. Nickel was detected in the effluent at a concentration above the method detection limit (MDL) and below the PQL and complied with the Class III Fresh Water Quality Criterion. Although the concentration of zinc (64 µg/L) did not exceed the Criterion, zinc concentrations as low as 65 ug/L have been shown to produce mortality in *Ceriodaphnia dubia* and similar species (USEPA – Ecotox Data Base July 30, 2004).

Copper (38 μg/L) was detected in the effluent sample at a concentration that exceeded the permit limit and the Class III Fresh Water Quality Criterion (hardness based, ≤30.5μg/L, 62-302.530(24) F.A.C.). Copper concentrations as low as 4 ug/L have been shown to be acutely toxic to *Ceriodaphnia dubia* and similar species (USEPA – Ecotox Data Base June 9, 2004).

Iron (2,610 μg/L) was detected in the effluent at a concentration more than double the Class III Fresh Water Quality Criterion (≤1,000 μg/L, 62-302.530(39) F.A.C.). Silver (0.071 μg/L) was detected in the effluent at a level above the MDL but below the PQL.

See Table 3 for results of analytes detected in the effluent.

See Appendix 1 for a complete list of chemical analyses performed.

Conclusion

Effluent samples collected from the Telogia Power-Timber Energy Inc. facility on February 16, 2004, were acutely toxic to the water flea during the 96-hour bioassay tests. The effluent samples did not show acute toxicity to the fish during the 96-hour bioassay tests.

The effluent AGP result exceeded the "problem” threshold for fresh receiving waters.

Effluent conductivity exceeded the Class III Fresh Water Quality Criterion. Copper and iron were detected in the effluent at levels that exceeded Class III Fresh Water Quality Criteria. The concentrations of copper and zinc may have contributed to the toxicity observed; however, unidentified constituents in the sample cannot be ruled out as contributing to the observed mortality.

Literature Cited

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. Data recorded during the 96-hour acute screening bioassays of a sample of effluent from the Telogia Power - Timber Energy Resources, Inc., 1 mile south of Telogia, East of SR 65, Telogia, Liberty County, Florida, NPDES# FL0039951, performed from 17 to 19 February 2004.

Facility:	**Telogia Power - Timber Energy Resources, Inc.**		**NPDES #:**	**FL0039951**	Facility Type:	**Electric Generating**	**Analysts:**	Marshall Faircloth
Location:	1 mile South of Telogia East, SR 65, Telogia		Contact/District:	Eric Kitchen/NW		**Station**		Joshua Ayres
County:	Liberty		Test type:	static acute screen renewal				James Daniels
Sample Collection Date:	2/16/2004	Time: 0840	# tests:	2	Receiving Water:	Stokes Branch to Telogia Creek		Christa A. Pierini
Test Beginning Date:	2/17/2004	Time: 1350	Chlorination Type:	dechlorinated		Class III freshwater		Sarah Prichard
Test Ending Date:	2/19/2004	Time: 1310	FDEP SOP#:	TA07_01		**Page 1 of 2**	**Reviewer:**	David Whiting

Test terminated at 48 hours due to 100% mortality in 100% sample concentration.

Organism: ***Ceriodaphnia dubia*** Life stage: <24 hours [A]Feeding: YCT/Algae
(0-48 hr) (water flea) Chamber size: 30 mL Food Batch #: #4/#23

	Sample/Diluent	SURVIVAL # Alive			pH			[B]Temperature (C)			Diss. Oxygen (mg/L)			[C]Conductivity	
Concentrations	Volume(mL)	0 hr	24 hr	48 hr	0 hour	24 hour	48 hour	0 hour	24 hour	48 hour	0 hour	24 hour	48 hour	0 hour	48 hour
Control A	0/20	5	5	5	7.9	-	7.9	24.1	-	24.0	7.5	-	7.8	0.210	0.210
Control B	0/20	5	5	5	-	-	7.9	-	-	24.0	-	-	7.8	-	0.200
Control C	0/20	5	5	5	-	-	7.9	-	-	24.1	-	-	7.8	-	0.205
Control D	0/20	5	5	5	-	-	7.9	-	-	24.1	-	-	7.8	-	0.210
100% A	20/0	5	5	0	7.3	-	7.9	24.2	-	24.0	7.1	-	7.8	2.64	2.92
100% B	20/0	5	5	0	-	-	7.9	-	-	24.0	-	-	7.9	-	2.92
100% C	20/0	5	5	0	-	-	7.9	-	-	24.0	-	-	7.8	-	3.12
100% D	20/0	5	5	0	-	-	8.0	-	-	24.0	-	-	7.8	-	2.97

Organism: ***Ceriodaphnia dubia*** Life stage: <24 hours [A]Feeding: YCT/Algae
(48 - 96 hr) (water flea) Chamber size: 30 mL Food Batch #: #4/#23

	Sample/Diluent	SURVIVAL # Alive			pH			[B]Temperature (C)			Diss. Oxygen (mg/L)			[C]Conductivity	
Concentrations	Volume(mL)	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	96 hr
Control A	0/20	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Control B	0/20	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Control C	0/20	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Control D	0/20	-	-	-	-	-	-	-	-	-	-	-	-	-	-
100% A	20/0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
100% B	20/0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
100 % C	20/0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
100% D	20/0	-	-	-	-	-	-	-	-	-	-	-	-	-	-

[A]Organisms fed prior to testing.
[B]Temperatures of room and test incubator were continuously recorded on a strip chart recorder.
[C]Conductivity value is uncorrected mmhos/cm.
Room Temperature range for the test period was 22.0 - 24.5°C.
Incubator #3 temperature range for the test period was 24.0 - 25.0°C.
Light Intensity during the test was 50-100 foot candles.
Photoperiod during the test was 16 hours of light : 8 hours of dark.

LIMS	
Job number:	TLH-2004-02-16-10
sample number:	735600

Data Transcription Verification
date: 5/28/04
by: James Daniels/Deinna Nicholson

Total Residual CL2	mg/L	Method
Field 100% sample:	not measured	-
Lab 100% sample:	<0.03	Hach
Control Water:	<0.03	Hach

Ammonia	Total (mg/L)	Unionized (mg/L)
Control water:	<0.017	<0.017
100% Sample:	<0.017	<0.017

Alk & Hardness	Alkalinity (mg/L)	Hardness (mg/L)
Control water:	86	77
100% Sample:	108	906

Mortality	Percent
Control water:	0%
100% sample:	100%

Salinity [D]	PPTH
Control water:	<1
100% sample:	~1.3

[D] Salinity based on conductivity and temperature measurement

Table 1. Data recorded during the 96-hour acute screening bioassays of a sample of effluent from the Telogia Power - Timber Energy Resources, Inc., 1 mile south of Telogia, East of SR 65, Telogia, Liberty County, Florida, NPDES# FL0039951, performed from 17 to 21 February 2004.

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Location:	1 mile South of Telogia East, SR 65, Telogia	Contact/District:	Eric Kitchen/NW		**Station**		Joshua Ayres
County:	Liberty	Test type:	static acute screen renewal				James Daniels
Sample Collection Date:	2/16/2004 Time: 0840	# tests:	2	Receiving Water:	Stokes Branch to Telogia Creek		Christa A. Pierini
Test Beginning Date:	2/17/2004 Time: 1315	Chlorination Type:	dechlorinated		Class III freshwater		Sarah Prichard
Test Ending Date:	2/21/2004 Time: 0900	FDEP SOP#:	TA07_02		**Page 2 of 2**	**Reviewer:**	David Whiting

Organism: ***Cyprinella leedsi*** Life stage: 13 days [A]Feeding: *Artemia*
(0 - 48 hr) (fish) Chamber size: 1000 mL Food Batch #: 0194025G

	Sample/Diluen	SURVIVAL # Alive			pH			[B]Temperature (C)			Diss. Oxygen (mg/L)			[C]Conductivity	
Concentrations	Volume(mL)	0 hr	24 hr	48 hr	0 hour	24 hour	48 hour	0 hour	24 hour	48 hour	0 hour	24 hour	48 hour	0 hour	48 hour
Control A	0/500	5	5	5	8.2	7.9	7.2	24.6	25.4	24.5	7.8	7.3	7.0	0.335	0.315
Control B	0/500	5	5	5	8.2	8.0	7.2	24.7	24.8	24.6	7.7	7.3	6.9	0.323	0.336
Control C	0/500	5	5	5	8.2	8.0	7.2	24.8	25.1	24.5	7.7	7.3	6.9	0.315	0.346
Control D	0/500	5	5	5	8.2	8.0	7.3	24.8	24.7	24.5	7.7	7.4	7.0	0.317	0.323
100% A	500/0	5	5	5	7.3	7.7	7.8	24.8	24.9	24.5	7.7	7.3	7.3	2.53	2.73
100% B	500/0	5	5	5	7.3	7.7	7.9	24.9	24.7	24.8	7.8	7.3	7.3	2.67	2.83
100% C	500/0	5	5	5	7.3	7.7	7.9	24.9	24.7	24.6	7.7	7.2	7.3	2.69	2.83
100% D	500/0	5	5	5	7.3	7.7	7.9	24.9	24.6	24.4	7.8	7.2	7.3	2.69	2.79

Organism: ***Cyprinella leedsi*** Life stage: 13 days [A]Feeding: *Artemia*
(48 - 96 hr) (fish) Chamber size: 1000 mL Food Batch #: 0194025G

	Sample/Diluen	SURVIVAL # Alive			pH			[B]Temperature (C)			Diss. Oxygen (mg/L)			[C]Conductivity	
Concentrations	Volume(mL)	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	96 hr
Control A	0/500	5	5	5	7.8	7.8	7.8	24.5	25.2	26.0	7.8	6.7	6.9	0.311	0.380
Control B	0/500	5	5	5	7.9	7.9	7.8	24.6	25.4	25.8	7.8	6.7	7.1	0.317	0.370
Control C	0/500	5	5	5	7.9	7.9	7.9	24.5	25.2	26.2	7.7	6.7	7.1	0.315	0.370
Control D	0/500	5	5	5	7.9	7.9	7.9	24.5	25.0	25.8	7.8	6.7	7.2	0.305	0.360
100% A	500/0	5	5	5	7.3	7.7	7.7	24.5	25.2	25.5	7.7	6.7	7.3	2.64	2.90
100% B	500/0	5	5	5	7.3	7.7	7.7	24.8	25.0	25.7	7.8	6.8	7.2	2.54	2.98
100 % C	500/0	5	5	5	7.3	7.7	7.7	24.6	25.4	26.2	7.8	6.8	7.2	2.60	3.04
100% D	500/0	5	5	5	7.3	7.7	7.8	24.4	25.5	25.8	7.7	6.8	7.1	2.67	2.98

[A]Organisms fed prior to testing.
[B]Temperatures of room and test incubator were continuously recorded on a strip chart recorder.
[C]Conductivity value is uncorrected mmhos/cm.
Room Temperature range for the test period was 22.0 - 24.5°C.
Incubator #3 temperature range for the test period was 24.0 - 25.0°C.
Light Intensity during the test was 50-100 foot candles.
Photoperiod during the test was 16 hours of light : 8 hours of dark.

LIMS	
Job number:	TLH-2004-02-16-10
sample number:	735600

Data Transcription Verification
date: 5/28/04
by: James Daniels/Deinna Nicholson

Total Residual CL2	mg/L	Method
Field 100% sample:	not measured	-
Lab 100% sample:	<0.03	Hach
Control Water:	<0.03	Hach

Ammonia	Total (mg/L)	Unionized (mg/L)
Control water:	<0.017	<0.017
100% Sample:	<0.017	<0.017

Alk & Hardness	Alkalinity (mg/L)	Hardness (mg/L)
Control water:	82	96
100% Sample:	108	906

Mortality	Percent
Control water:	0%
100% sample:	0%

Salinity [D]	PPTH
Control water:	<1
100% sample:	~1.3

[D] Salinity based on conductivity and temperature measrement

'Table 2. Measured and predicted algal growth potential (AGP) for total soluble inorganic nitrogen (TSIN) for effluent collected from the Telogia Power - Timber Energy Resources, Inc., on February 16, 2004.

Location	AGP (measured)	Predicted AGP (TSIN) ± 20%	Inorganic N:P ratio
Effluent Samples	15.4	22.42 ± 4.484	2.57

Table 3. *Effluent limits, Class III Criteria and chemical data from samples collected from the Telogia Power - Timber Energy Resources, Inc. sampled on February 16, 2004.*

Telogia Power - Timber Energy Resources, Inc.	Class III Freshwater Stds	Effluent Limits	Effluent Samples
Organic Constituents (µg/L)			
None Detected	-	-	-
Metals (µg/L unless otherwise noted)			
Aluminum	-	-	1290
Arsenic	≤ 50	-	9 U
Cadmium	≤ 3.4 b	-	0.19
Calcium (mg/L)	-	-	300
Chromium-III	≤ 268.2 b	-	3 U
Copper	≤ 30.5 b	≤ 30.5 b	38
Iron	≤ 1000	-	2,610
Lead	≤ 18.6 b	-	2.6
Magnesium (mg/L)	-	-	47.5
Nickel	≤ 168.5 b	-	7.1 I
Selenium	≤ 5	-	1 U
Silver	≤ 0.07	-	0.071 I
Zinc	≤ 387.8 b	-	64
Nutrients (mg/L)			
Ortho-phosphate	-	-	0.23
Total Phosphorus	-	-	1.1
Ammonia	-	Report	0.22
Unionized Ammonia	≤ 0.02	≤ 0.02	0 c
Nitrate+Nitrite	-	-	0.37 J
Total Kjeldahl Nitrogen	-	-	1.1
Organic Nitrogen	-	-	0.88 c
Total Nitrogen	-	-	1.47 c
General Physical and Chemical Parameters			
pH (S.U.)	6.0 - 8.5	6.0 - 8.5	7.1
Conductivity (umhos/cm)	≤ 1275	-	2768
Temperature (C)	-	-	20.1
Oil and Grease (mg/l)	≤ 5	-	0.69 U
Flow	-	0.10 a	-
Hardness (mg/L)	-	Report	944.7 c
Chlorine, total residual (lab)	0.01	0.01	≤0.03 U
AGP (mg DryWt/L)	-	-	15.4
Algal Growth Potential-Salinity Adjusted (mg DryWt/L)	-	-	4.66

Value exceeds the Class III Freshwater Quality Criteria

a - Average daily flow

b - Value is calculated based on hardness

c - Value is calculated

I - Value reported is < the minimum quantitation limit, and ≥ the minimum detection limit

J - Estimated value

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

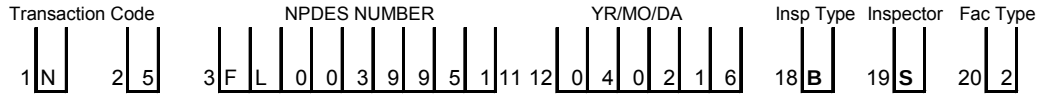
Appendix 1. Analyte list for Telogia Power-Timber Energy Inc. effluent sampled February 16, 2004

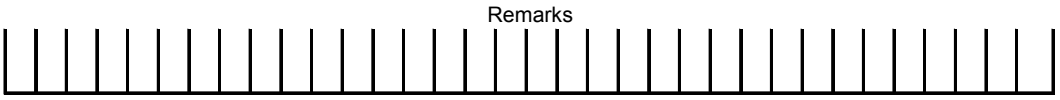
Date Sampled	Field ID	Analysis Group	Component	Result	Units	Remark	MDL	PQL
02/16/04	V-NOTCH WEIR	Bio-AGP/LimNut	Algal Growth Potential	15.4	mg DryWt/L		0.1	0.3
02/16/04	V-NOTCH WEIR	Bio-AGP/LimNut	Algal Growth Potential-Salinity Adjusted	4.66	mg DryWt/L		0.1	0.3
02/16/04	V-NOTCH WEIR	Bio-Chl-a	Chlorophyll-A, Monochromatic, Water	2.8	ug/L	U	2.8	8.5
02/16/04	V-NOTCH WEIR	Bio-Chl-a	Phaeophytin-A, Monochromatic, Water	2.8	ug/L	U	2.8	8.5
02/16/04	V-NOTCH WEIR	Bio-Toxicology	Bioassay-Acute-Screen-FW-C.dubia, LC50	100	LC50	K		
02/16/04	V-NOTCH WEIR	Bio-Toxicology	Bioassay-Acute-Screen-FW-Fish, LC50	100	LC50	L		
02/16/04	V-NOTCH WEIR	BNA-Water	1,2,4-Trichlorobenzene	0.95	ug/L	U	0.95	3.8
02/16/04	V-NOTCH WEIR	BNA-Water	1,2-Dichlorobenzene	0.95	ug/L	U	0.95	3.8
02/16/04	V-NOTCH WEIR	BNA-Water	1,3-Dichlorobenzene	0.95	ug/L	U	0.95	3.8
02/16/04	V-NOTCH WEIR	BNA-Water	1,4-Dichlorobenzene	0.95	ug/L	U	0.95	3.8
02/16/04	V-NOTCH WEIR	BNA-Water	2,4,6-Trichlorophenol	0.95	ug/L	U	0.95	3.8
02/16/04	V-NOTCH WEIR	BNA-Water	2,4-Dichlorophenol	0.95	ug/L	U	0.95	3.8
02/16/04	V-NOTCH WEIR	BNA-Water	2,4-Dimethylphenol	48	ug/L	U	48	190
02/16/04	V-NOTCH WEIR	BNA-Water	2,4-Dinitrophenol	14	ug/L	U	14	57
02/16/04	V-NOTCH WEIR	BNA-Water	2,4-Dinitrotoluene	0.95	ug/L	U	0.95	3.8
02/16/04	V-NOTCH WEIR	BNA-Water	2,6-Dinitrotoluene	0.95	ug/L	U	0.95	3.8
02/16/04	V-NOTCH WEIR	BNA-Water	2-Chloronaphthalene	0.95	ug/L	U	0.95	3.8
02/16/04	V-NOTCH WEIR	BNA-Water	2-Chlorophenol	0.95	ug/L	U	0.95	3.8
02/16/04	V-NOTCH WEIR	BNA-Water	2-Methyl-4,6-dinitrophenol	2.9	ug/L	U	2.9	11
02/16/04	V-NOTCH WEIR	BNA-Water	2-Nitrophenol	0.95	ug/L	U	0.95	3.8
02/16/04	V-NOTCH WEIR	BNA-Water	3,3'-Dichlorobenzidine	38	ug/L	U	38	150
02/16/04	V-NOTCH WEIR	BNA-Water	4,4'-DDD	1.4	ug/L	U	1.4	5.7
02/16/04	V-NOTCH WEIR	BNA-Water	4,4'-DDE	1.4	ug/L	U	1.4	5.7
02/16/04	V-NOTCH WEIR	BNA-Water	4,4'-DDT	1.4	ug/L	UJ	1.4	5.7
02/16/04	V-NOTCH WEIR	BNA-Water	4-Bromophenyl phenyl ether	0.95	ug/L	U	0.95	3.8
02/16/04	V-NOTCH WEIR	BNA-Water	4-Chloro-3-methylphenol	0.95	ug/L	U	0.95	3.8
02/16/04	V-NOTCH WEIR	BNA-Water	4-Chlorophenyl phenyl ether	1.9	ug/L	U	1.9	7.6
02/16/04	V-NOTCH WEIR	BNA-Water	4-Nitrophenol	14	ug/L	U	14	57
02/16/04	V-NOTCH WEIR	BNA-Water	Acenaphthene	0.95	ug/L	U	0.95	3.8
02/16/04	V-NOTCH WEIR	BNA-Water	Acenaphthylene	0.95	ug/L	U	0.95	3.8
02/16/04	V-NOTCH WEIR	BNA-Water	Aldrin	1.4	ug/L	U	1.4	5.7
02/16/04	V-NOTCH WEIR	BNA-Water	Anthracene	0.95	ug/L	U	0.95	3.8
02/16/04	V-NOTCH WEIR	BNA-Water	Benzidine	95	ug/L	U	95	380
02/16/04	V-NOTCH WEIR	BNA-Water	Benzo(a)anthracene	0.95	ug/L	U	0.95	3.8
02/16/04	V-NOTCH WEIR	BNA-Water	Benzo(a)pyrene	0.95	ug/L	U	0.95	3.8
02/16/04	V-NOTCH WEIR	BNA-Water	Benzo(b)fluoranthene	0.95	ug/L	U	0.95	3.8
02/16/04	V-NOTCH WEIR	BNA-Water	Benzo(g,h,i)perylene	0.95	ug/L	U	0.95	3.8
02/16/04	V-NOTCH WEIR	BNA-Water	Benzo(k)fluoranthene	0.95	ug/L	U	0.95	3.8
02/16/04	V-NOTCH WEIR	BNA-Water	Bis(2-chloroethoxy)methane	0.95	ug/L	U	0.95	3.8
02/16/04	V-NOTCH WEIR	BNA-Water	Bis(2-chloroethyl)ether	0.95	ug/L	U	0.95	3.8
02/16/04	V-NOTCH WEIR	BNA-Water	Bis(2-chloroisopropyl)ether	2.9	ug/L	U	2.9	11
02/16/04	V-NOTCH WEIR	BNA-Water	Bis(2-ethylhexyl)phthalate	14	ug/L	U	14	57
02/16/04	V-NOTCH WEIR	BNA-Water	Butyl benzyl phthalate	4.8	ug/L	U	4.8	19
02/16/04	V-NOTCH WEIR	BNA-Water	Chrysene	0.95	ug/L	U	0.95	3.8
02/16/04	V-NOTCH WEIR	BNA-Water	Di-n-butyl phthalate	4.8	ug/L	U	4.8	19
02/16/04	V-NOTCH WEIR	BNA-Water	Di-n-octyl phthalate	0.95	ug/L	U	0.95	3.8
02/16/04	V-NOTCH WEIR	BNA-Water	Dibenzo(a,h)anthracene	0.95	ug/L	U	0.95	3.8
02/16/04	V-NOTCH WEIR	BNA-Water	Dieldrin	1.4	ug/L	U	1.4	5.7
02/16/04	V-NOTCH WEIR	BNA-Water	Diethyl phthalate	0.95	ug/L	U	0.95	3.8
02/16/04	V-NOTCH WEIR	BNA-Water	Dimethyl phthalate	48	ug/L	U	48	190
02/16/04	V-NOTCH WEIR	BNA-Water	Endosulfan I	3.8	ug/L	U	3.8	15
02/16/04	V-NOTCH WEIR	BNA-Water	Endosulfan II	3.8	ug/L	U	3.8	15
02/16/04	V-NOTCH WEIR	BNA-Water	Endosulfan sulfate	1.4	ug/L	U	1.4	5.7
02/16/04	V-NOTCH WEIR	BNA-Water	Endrin	1.4	ug/L	UJ	1.4	5.7
02/16/04	V-NOTCH WEIR	BNA-Water	Endrin aldehyde	3.8	ug/L	U	3.8	15
02/16/04	V-NOTCH WEIR	BNA-Water	Fluoranthene	0.95	ug/L	U	0.95	3.8
02/16/04	V-NOTCH WEIR	BNA-Water	Fluorene	0.95	ug/L	U	0.95	3.8
02/16/04	V-NOTCH WEIR	BNA-Water	Heptachlor	1.4	ug/L	U	1.4	5.7
02/16/04	V-NOTCH WEIR	BNA-Water	Heptachlor epoxide	1.4	ug/L	U	1.4	5.7
02/16/04	V-NOTCH WEIR	BNA-Water	Hexachlorobenzene	0.95	ug/L	U	0.95	3.8

Date Sampled	Field ID	Analysis Group	Component	Result	Units	Remark	MDL	PQL
02/16/04	V-NOTCH WEIR	BNA-Water	Hexachlorobutadiene	2.9	ug/L	U	2.9	11
02/16/04	V-NOTCH WEIR	BNA-Water	Hexachlorocyclopentadiene	2.9	ug/L	U	2.9	11
02/16/04	V-NOTCH WEIR	BNA-Water	Hexachloroethane	2.9	ug/L	U	2.9	11
02/16/04	V-NOTCH WEIR	BNA-Water	Indeno(1,2,3-cd)pyrene	0.95	ug/L	U	0.95	3.8
02/16/04	V-NOTCH WEIR	BNA-Water	Isophorone	0.95	ug/L	U	0.95	3.8
02/16/04	V-NOTCH WEIR	BNA-Water	N-Nitrosodi-n-propylamine	1.9	ug/L	U	1.9	7.6
02/16/04	V-NOTCH WEIR	BNA-Water	N-Nitrosodimethylamine	1.9	ug/L	U	1.9	7.6
02/16/04	V-NOTCH WEIR	BNA-Water	N-Nitrosodiphenylamine	2.9	ug/L	U	2.9	11
02/16/04	V-NOTCH WEIR	BNA-Water	Naphthalene	0.95	ug/L	U	0.95	3.8
02/16/04	V-NOTCH WEIR	BNA-Water	Nitrobenzene	1.9	ug/L	U	1.9	7.6
02/16/04	V-NOTCH WEIR	BNA-Water	Pentachlorophenol	2.9	ug/L	U	2.9	11
02/16/04	V-NOTCH WEIR	BNA-Water	Phenanthrene	0.95	ug/L	U	0.95	3.8
02/16/04	V-NOTCH WEIR	BNA-Water	Phenol	0.95	ug/L	U	0.95	3.8
02/16/04	V-NOTCH WEIR	BNA-Water	Pyrene	0.95	ug/L	U	0.95	3.8
02/16/04	V-NOTCH WEIR	BNA-Water	alpha-BHC	1.4	ug/L	U	1.4	5.7
02/16/04	V-NOTCH WEIR	BNA-Water	beta-BHC	1.4	ug/L	U	1.4	5.7
02/16/04	V-NOTCH WEIR	BNA-Water	delta-BHC	1.4	ug/L	U	1.4	5.7
02/16/04	V-NOTCH WEIR	BNA-Water	gamma-BHC	1.4	ug/L	U	1.4	5.7
02/16/04	V-NOTCH WEIR	GC-Water	Alachlor	0.57	ug/L	U	0.57	2.28
02/16/04	V-NOTCH WEIR	GC-Water	Ametryn	0.048	ug/L	UJ	0.048	0.192
02/16/04	V-NOTCH WEIR	GC-Water	Atrazine	0.048	ug/L	UJ	0.048	0.192
02/16/04	V-NOTCH WEIR	GC-Water	Azinphos Methyl	0.048	ug/L	U	0.048	0.192
02/16/04	V-NOTCH WEIR	GC-Water	Bromacil	0.19	ug/L	UJ	0.19	0.76
02/16/04	V-NOTCH WEIR	GC-Water	Butylate	0.19	ug/L	UJ	0.19	0.76
02/16/04	V-NOTCH WEIR	GC-Water	Chlorpyrifos Ethyl	0.048	ug/L	U	0.048	0.192
02/16/04	V-NOTCH WEIR	GC-Water	Chlorpyrifos Methyl	0.095	ug/L	U	0.095	0.38
02/16/04	V-NOTCH WEIR	GC-Water	Diazinon	0.048	ug/L	UJ	0.048	0.192
02/16/04	V-NOTCH WEIR	GC-Water	Ethion	0.048	ug/L	U	0.048	0.192
02/16/04	V-NOTCH WEIR	GC-Water	Ethoprop	0.095	ug/L	U	0.095	0.38
02/16/04	V-NOTCH WEIR	GC-Water	Fenamiphos	0.19	ug/L	U	0.19	0.76
02/16/04	V-NOTCH WEIR	GC-Water	Fonofos	0.095	ug/L	U	0.095	0.38
02/16/04	V-NOTCH WEIR	GC-Water	Hexazinone	0.095	ug/L	U	0.095	0.38
02/16/04	V-NOTCH WEIR	GC-Water	Malathion	0.14	ug/L	U	0.14	0.56
02/16/04	V-NOTCH WEIR	GC-Water	Metalaxyl	0.24	ug/L	UJ	0.24	0.96
02/16/04	V-NOTCH WEIR	GC-Water	Metolachlor	0.48	ug/L	U	0.48	1.92
02/16/04	V-NOTCH WEIR	GC-Water	Metribuzin	0.095	ug/L	UJ	0.095	0.38
02/16/04	V-NOTCH WEIR	GC-Water	Mevinphos	0.19	ug/L	U	0.19	0.76
02/16/04	V-NOTCH WEIR	GC-Water	Naled	0.76	ug/L	U	0.76	3.04
02/16/04	V-NOTCH WEIR	GC-Water	Norflurazon	0.095	ug/L	UJ	0.095	0.38
02/16/04	V-NOTCH WEIR	GC-Water	Parathion Ethyl	0.14	ug/L	UJ	0.14	0.56
02/16/04	V-NOTCH WEIR	GC-Water	Parathion Methyl	0.095	ug/L	U	0.095	0.38
02/16/04	V-NOTCH WEIR	GC-Water	Phorate	0.048	ug/L	U	0.048	0.192
02/16/04	V-NOTCH WEIR	GC-Water	Prometryn	0.14	ug/L	U	0.14	0.56
02/16/04	V-NOTCH WEIR	GC-Water	Simazine	0.048	ug/L	UJ	0.048	0.192
02/16/04	V-NOTCH WEIR	Metals-Water	Aluminum	1.29E+03	ug/L		7	28
02/16/04	V-NOTCH WEIR	Metals-Water	Arsenic	9	ug/L	U	9	36
02/16/04	V-NOTCH WEIR	Metals-Water	Cadmium	0.19	ug/L		0.025	0.1
02/16/04	V-NOTCH WEIR	Metals-Water	Calcium	300	mg/L		0.1	0.4
02/16/04	V-NOTCH WEIR	Metals-Water	Chromium	3	ug/L	U	3	12
02/16/04	V-NOTCH WEIR	Metals-Water	Copper	38	ug/L		5	20
02/16/04	V-NOTCH WEIR	Metals-Water	Iron	2.61E+03	ug/L		10	40
02/16/04	V-NOTCH WEIR	Metals-Water	Lead	2.6	ug/L		0.05	0.2
02/16/04	V-NOTCH WEIR	Metals-Water	Magnesium	47.5	mg/L		0.02	0.08
02/16/04	V-NOTCH WEIR	Metals-Water	Nickel	7.1	ug/L	I	4	16
02/16/04	V-NOTCH WEIR	Metals-Water	Selenium	1	ug/L	U	1	4
02/16/04	V-NOTCH WEIR	Metals-Water	Silver	0.071	ug/L	I	0.02	0.08
02/16/04	V-NOTCH WEIR	Metals-Water	Zinc	64	ug/L		5	20
02/16/04	V-NOTCH WEIR	Nutrients-Liquid	Ammonia-N	0.22	mg N/L		0.01	0.02
02/16/04	V-NOTCH WEIR	Nutrients-Liquid	NO2NO3-N	0.37	mg N/L	J	0.004	0.01
02/16/04	V-NOTCH WEIR	Nutrients-Liquid	N_KJEL_TOT	1.1	mg N/L		0.06	0.2
02/16/04	V-NOTCH WEIR	Nutrients-Liquid	O-Phosphate-P	0.23	mg P/L		0.004	0.01
02/16/04	V-NOTCH WEIR	Nutrients-Liquid	Total-P	1.1	mg P/L		0.04	0.12
02/16/04	V-NOTCH WEIR	Overflow	Oil and Grease	0.69	mg/l	U		

The Bioassay of Telogia Power effluent sampled on February 16, 2004, NPDES #FL0039951.

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





The Priority Pollutants Analysis for Bioassay of Telogia Power effluent sampled on February 16, 2004, NPDES #FL0039951.

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

