

Bioassays of

Seminole Electric Cooperative, Inc.

Putnam County

NPDES #FL0036495

Sampled January 12, 2004

September 2004

Biology Section
Bureau of Laboratories
Division of Resource Assessment and Management

Quality Manual No. 870346G
NELAC Certification No. E31780

Seminole Electric Cooperative, Inc., Highway 17, Palatka, Putnam County, Florida, NPDES #FL0036498. Effluent samples for this facility were collected on January 12, 2004.

Introduction

Seminole Electric is an electric generation facility with an average daily flow of 5.8 million gallons per day (MGD) (based on flow data from December 2002 – November 2003). The average daily flow during this survey was 5.5 MGD. The facility does not report the monthly average flow. The power plant treats coal pile runoff, bottom ash dewatering system flow, water treatment system wastewater, and other low volume wastewater in an on-site wastewater treatment system consisting of equalization, neutralization, coagulation/flocculation, and sedimentation. Domestic wastewater is treated in an on-site 0.018 MGD extended-aeration package treatment plant. Cooling tower make-up water is chlorinated for biofouling control and the cooling tower blowdown is dechlorinated prior to discharge. All the above treated effluents are discharged to the plant's surge tank and subsequently discharged by a common outfall to surface waters. The combined plant discharge, Outfall D-001, discharges to the St. Johns River, a Class III fresh water. Mixing zones are present for copper, cyanide, iron, mercury, oil and grease, selenium, specific conductance, temperature and zinc (facility information provided by Jeremy Richarde, Northeast District, Jacksonville).

Methods

Samples were collected from the D-001 NPDES sampling point by Jeremy Richarde and James Lucas (FDEP, Northeast District, Jacksonville) 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 tests discussed in this report were performed following internal DEP SOP's TA07_03 and TA07_04 and EPA Method 2021.0. All internal DEP SOP's are available on the web at: http://www.floridadep.org/labs/cgi-bin/sop/biosop.asp.

The NPDES permit for this facility requires that a sample having a salinity between 1 ppth (parts per thousand) and 5 ppth: 1) must be adjusted to a salinity equal to the original salinity plus 6 ppth for the *Americamysis bahia* test and 2) no salinity adjustment is to be made for the *Menidia beryllina* test. An aliquot of sample (original salinity 4 ppth) was salinity adjusted by the addition of Forty Fathoms® artificial sea salts to a salinity of 10 ppth for the *Americamysis bahia* test. The salinity of the aliquot of sample used in the *Menidia beryllina* test was not adjusted.

A salinity-adjusted control was prepared by diluting artificial seawater (ASW) having a salinity of 20 ppth to a salinity of 4 ppth with well water and then adjusting the salinity of the diluted ASW with Forty Fathoms® artificial sea salts to a salinity of 10 ppth. The purpose of the salinity-adjusted control was to ensure that any noted adverse effect was not a result of the sea salt addition. There was no mortality in the salinity-adjusted control.

At the request of district personnel the *D. pulex* and *D. magna* tests were set up to determine the suitability of these species as potential test species for this facility since it had been previously determined that the freshwater test species, the water flea, *Ceriodaphnia dubia*, was not a suitable test species for this facility based on the sensitivity of *C. dubia* to salinity. These tests were not required by the NPDES permit for this facility.

Toxicity Test Results

Tests were performed January 13 - 17, 2004.

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

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

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

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

These samples demonstrated unacceptable acute toxicity for *Americamysis bahia*, but not for *Menidia beryllina*, according to permit criteria. In addition, the facility's effluent was acutely toxic to *D. pulex*. *A. bahia* and *D. pulex* tests were terminated at 48 hours due to 100% mortality in 100% sample at 48 hours.

The chemistry results confirmed that the ionic makeup of the sample was not in seawater proportions and that the apparent 4 ppth (parts per thousand) salinity of the sample was due to elevated levels of groundwater ions. The observed mortality in the *A. bahia* test is likely due to the seawater-ion imbalance of the sample. Previous research conducted by the FDEP Biology Section demonstrated that *A. bahia* is much more sensitive to seawater-ion imbalances than is *M. beryllina* (Wolfe, *et al*. 1995). The calcium concentration was measured at 668 mg/L at 4 ppth salinity (salinity based on conductivity and temperature). This is approximately fourteen times (14X) the normal concentration for calcium in seawater of this salinity. The elevated calcium concentration is one source of toxicity in this sample, but other unidentified sources of toxicity cannot be ruled out without performing the major-seawater-ion imbalance toxicity testing protocols cited above.

See Table 1 for bioassay bench sheets.

Algal Growth Potential

Though an effluent sample was collected for AGP analysis, contamination that interfered with the algal cell counts, was detected in the sample flasks. Therefore, no algal growth potential results were reported.

Chemistry Results

Total residual chlorine was not detected in the bioassay sample in the laboratory. Total ammonia was detected in the effluent sample at a concentration of 0.422 mg/L in the effluent sample collected for toxicity testing. The calculated unionized ammonia concentration was 0.015 mg/L for *A. bahia* and *M. beryllina*, and was 0.005 mg/L for *D. pulex* and *D. magna*. The bioassay samples were preserved in ice and were not acidified as was the sample collected specifically for ammonia analyses. The total ammonia concentration in the sample preserved for chemical analysis was 0.58 mg/L. The unionized ammonia concentration for this sample, based on the temperature and pH of the sample when it was collected, was 0.01 mg/L.

The effluent concentration of iron (1,050 ug/L) exceeded the Class III Fresh Water Quality Criterion (≤ 1,000 ug/L, 62-302.530(39) F.A.C.) but did not exceed the permit limit of ≤ 2330 µg/L. Aluminum, copper, and lead were detected in the effluent samples above the practical quantitation limits (PQL). Zinc and cyanide were detected in the effluent above the method detection limit and below the PQL. Aluminum, copper, lead, zinc and cyanide levels complied with permit limits and Class III Fresh Water Quality Criteria (62-302.530 F.A.C.).

The conductivity of the effluent (5,700 µmhos/cm) exceeded the Class III Fresh Water Quality Criterion (≤ 1,275 µmhos/cm, 62-302.530(23)) but did not exceed the permit limit of ≤ 8,653 µmhos/cm.

See Table 2 for results of analytes detected in the effluent.

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

Conclusion

The effluent samples collected for this facility on January 12, 2004, showed unacceptable acute toxicity to the test species *Americamysis bahia* and *Daphnia pulex* during the 96-hour acute bioassay tests. The elevated calcium concentration is one source of toxicity in the effluent, but other unidentified sources of toxicity cannot be ruled out without performing the major-seawater-ion imbalance toxicity testing protocols. Metals in the effluent complied with Class III Freshwater Quality Criteria and facility permit limits. The effluent AGP result was not reported due to contamination found in the sample flask.

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.

Wolfe, *et al*. 1995. Protocols for determining Major-Seawater-Ion Toxicity in Membrane-Technology Water-Treatment Concentrate. Florida Department of Environmental Protection, Bureau of Laboratories. 96pp.

Table 1. Data recorded during the 96-hour acute bioassays of a sample of effluent from Seminole Electric Cooperative, Inc., U.S. 17, Palatka, Putnam County, Florida, NPDES# FL0036498, performed from 13 to 15 January, 2004.

Facility:	**Seminole Electric Cooperative, Inc.**		**NPDES#:**	**FL0036498**	Facility Type:	**Electric Generation**	**Analysts:** Christa Pierini
Location:	Highway 17, Palatka		Contact/District:	J. Richarde/NE		**Facility**	Sarah Prichard
County:	Putnam		Test type:	acute screen renewal			Joshua Ayres
Sample Collection Date:	1/12/2004	Time: 1415	# tests:	4	Receiving Water:	St. John's River	James Daniels
Test Beginning Date:	1/13/2004	Time: 1400	Chlorination Type:	dechlorinated		Class III freshwater	
Test Ending Date:	1/15/2004	Time: 1230	FDEP SOP#:	TA07_03		**Page 1 of 8**	**Reviewer:** Julie Espy

100% sample filtered with 60 um screen to remove detritus and large debris.
100% sample salt adjusted to 10 ppt with 40 fathoms artificial sea salts.
Control water diluted with well water to 10 ppt.
Test terminated at 48 hours due to 100% mortality in 100% sample.

Organism: ***Americamysis bahia*** Life stage: 5 days [A]Feeding: *Artemia*
0 - 48 hours Chamber size: 1000 ml Food Batch #: 0194025G

	Sample/Diluent	Number alive			pH (Standard units)			[B] Temperature C			[C] DO (mg/L)			Conductivity Uncorrected mmhos/cm	
Concentrations	Volume(mL)	0 hr	24 hr	48 hr	0 hr	24 hr	48 hr	0 hr	24 hr	48 hr	0 hr	6.2	48 hr	0 hr	48 hr
Control A	0/500	5	5	5	8.3	8.1	8.2	24.2	24.6	24.8	7.0	6.2	6.1	15.8	16.1
Control B	0/500	5	5	5	8.3	8.2	8.2	24.2	24.4	24.8	7.0	6.1	6.1	16.2	16.3
Control C	0/500	5	5	5	8.3	8.2	8.2	24.1	24.4	25.1	7.2	6.2	6.4	16.0	16.6
Control D	0/500	5	5	5	8.4	8.2	8.2	24.1	24.3	25.1	7.2	6.1	6.4	16.2	16.7
Salt Control A	0/500	5	5	5	8.3	8.2	8.2	24.2	24.5	24.7	7.2	6.4	6.1	16.4	17.8
Salt Control B	0/500	5	5	5	8.3	8.2	8.2	24.2	24.5	24.8	7.2	6.3	6.1	16.6	17.6
Salt Control C	0/500	5	5	5	8.3	8.2	8.3	24.1	24.8	25.1	7.5	6.4	6.0	16.4	17.8
Salt Control D	0/500	5	5	5	8.3	8.2	8.3	24.1	24.2	25.0	7.4	6.5	6.0	16.5	18.0
100% A	500/0	5	2	0	7.9	7.8	7.9	24.0	24.9	24.7	7.4	5.3	6.2	15.9	17.4
100% B	500/0	5	2	0	7.9	7.8	7.9	24.0	24.8	25.0	7.4	5.2	6.3	16.1	17.3
100% C	500/0	5	1	0	7.9	7.8	7.9	24.1	24.6	25.2	7.2	5.2	6.1	16.2	17.3
100% D	500/0	5	2	0	7.9	7.8	7.9	24.0	24.5	25.2	7.2	5.3	6.1	16.1	17.8

[A] Organisms fed prior to testing, before renewal, and daily.
[B] Temperatures of room and test incubator were continuously recorded on a strip chart recorder.
[C] DO = dissolved oxygen.
Room Temperature range for the test period was 23.5 - 25.0°C.
Incubator #3 temperature range for the test period was 23.0 - 24.5°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-2004-01-13-16-01
sample number:	726718

Data Transcription Verification
date: 4/09/04
by: Cathy Oaks/James Daniels

Total Residual CL2	mg/L	Method
Field: 100% sample:	-	-
Lab: 100% sample:	<0.03	Hach
Control water:	<0.03	Hach

Ammonia	Total (mg/L)
Control water:	<0.017
100% Sample:	0.422

Alk & Hardness	Alkalinity (mg/L)	Hardness (mg/L)
Control water:	255	-
100% Sample:	76	-

[D] Salinity	ppt
Control water:	20
Adjusted control water:	10
100% sample:	4
salt adjusted sample:	10

[D] Salinity based on conductivity and temperature.

Table 1. Data recorded during the 96-hour acute bioassays of a sample of effluent from Seminole Electric Cooperative, Inc., U.S. 17, Palatka, Putnam County, Florida, NPDES# FL0036498, performed from 13 to 15 January, 2004.
continued

Facility:	**Seminole Electric Cooperative, Inc.**	**NPDES#:**	**FL0036498**	Facility Type:	**Electric Generation**	**Analysts:**	Christa Pierini
Location:	Highway 17, Palatka	Contact/District:	J. Richarde/NE		**Facility**		Sarah Prichard
County:	Putnam	Test type:	acute screen renewal				Joshua Ayres
Sample Collection Date:	1/12/2004 Time: 1415	# tests:	4	Receiving Water:	St. John's River		James Daniels
Test Beginning Date:	1/13/2004 Time: 1400	Chlorination Type:	dechlorinated		Class III freshwater		
Test Ending Date:	1/15/2004 Time: 1230	FDEP SOP#:	TA07_03		**Page 2 of 8**	**Reviewer:**	Julie Espy

100% sample filtered with 60 um screen.
100% sample salt adjusted to 10 ppt with 40 fathoms artificial sea salts.
Control water diluted with well water to 10 ppt
Test terminated at 48 hours due to 100% mortality in 100% sample.

Organism: ***Americamysis bahia*** Life stage: 5 days [A]Feeding: *Artemia*
48 - 96 hours Chamber size: 1000 ml Food Batch #: 0194025G

	Sample/Diluent	Number alive			pH (Standard units)			[B] Temperature C			[C] DO (mg/L)			Conductivity Uncorrected mmhos/cm	
Concentrations	Volume(mL)	48 hr	72 hr	96 hr	48 hour	72 hour	96 hour	48 hour	72 hour	96 hour	48 hour	72 hour	96 hour	48 hour	96 hour
Control A	0/500	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Control B	0/500	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Control C	0/500	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Control D	0/500	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Salt Control A	0/500	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Salt Control B	0/500	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Salt Control C	0/500	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Salt Control D	0/500	-	-	-	-	-	-	-	-	-	-	-	-	-	-
100% A	500/0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
100% B	500/0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
100% C	500/0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
100% D	500/0	-	-	-	-	-	-	-	-	-	-	-	-	-	-

[A] Organisms fed prior to testing and before renewal.
[B] Temperatures of room and test incubator were continuously recorded on a strip chart recorder.
[C] DO = dissolved oxygen.
Room Temperature range for the test period was 23.5 - 25.0°C.
Incubator #3 temperature range for the test period was 23.0 - 24.5°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-2004-01-13-16-01
sample number:	726718

Data Transcription Verification
date: 4/09/04
by: Cathy Oaks/James Daniels

Total Residual CL2	mg/L	Method
Field: 100% sample:	-	-
Lab: 100% sample:	<0.03	Hach
Control water:	<0.03	Hach

Ammonia	Total (mg/L)
Control water:	<0.017
100% Sample:	0.422

Alk & Hardness	Alkalinity (mg/L)	Hardness (mg/L)
Control water:	255	-
100% Sample:	76	-

[D] Salinity	ppt
Control water:	20
Adjusted control water:	10
100% sample:	4
salt adjusted sample:	10

[D] Salinity based on conductivity and temperature.

Table 1. continued Data recorded during the 96-hour acute bioassays of a sample of effluent from Seminole Electric Cooperative, Inc., U.S. Highway 17, Palatka, Putnam County, Florida, NPDES# FL0036498, performed from 13 to 17, January 2004.

Facility:	**Seminole Electric Cooperative, Inc.**		**NPDES#:**	**FL0036498**	Facility Type:	**Electric Generation**	**Analysts:** Joshua Ayres
Location:	U.S. Highway 17, Palatka		Contact/District:	RiCharde/NE		**Facility**	Sarah Prichard
County:	Putnam		Test type:	acute screen renewal			Christa Pierini
Sample Collection Date:	1/12/2004	Time: 1415	# tests:	4	Receiving Water:	St. John's River	James Daniels
Test Beginning Date:	1/13/2004	Time: 1530	Chlorination Type:	dechlorinated		Class III freshwater	
Test Ending Date:	1/17/2004	Time: 1300	FDEP SOP#:	TA07_04		**Page 3 of 8**	**Reviewer:** Julie Espy

100% sample filtered with 60 um screen to remove detritus and large debris.
Control water diluted with well water to 4 ppt.

Organism: ***Menidia beryllina*** Life stage: 12 days [A]Feeding: *Artemia*
0 - 48 hours Chamber size: 1000 ml Food Batch #: 0194025G

	Sample/Diluent	SURVIVAL # Alive			pH (Standard units)			[B] Temperature C			Diss. Oxygen mg/L			Conductivity Uncorrected mmhos/cm	
Concentrations	Volume(mL)	0 hr	24 hr	48 hr	0 hr	24 hr	48 hr	0 hr	24 hr	48 hr	0 hr	24 hr	48 hr	0 hr	24 hr
Control A	0/500	5	5	5	8.2	8.1	8.2	24.0	25.2	24.7	6.9	5.9	6.2	6.70	7.68
Control B	0/500	5	5	5	8.2	8.2	8.2	24.1	24.7	24.6	7.1	5.9	6.3	7.00	7.88
Control C	0/500	5	5	5	8.2	8.1	8.1	24.0	24.8	24.6	7.2	6.3	6.2	6.91	7.95
Control D	0/500	5	5	5	8.2	8.1	8.2	24.0	25.1	24.3	7.6	6.2	6.0	6.76	7.82
100% A	500/0	5	5	5	7.5	7.5	7.6	24.0	24.9	24.9	7.5	6.4	5.6	6.32	7.39
100% B	500/0	5	5	5	7.5	7.5	7.6	24.0	24.8	24.6	7.4	6.1	5.5	6.38	7.40
100% C	500/0	5	5	5	7.4	7.5	7.6	24.0	25.1	24.4	7.3	5.7	5.8	6.42	7.35
100% D	500/0	5	5	5	7.4	7.5	7.6	24.0	25.2	24.0	7.3	5.6	5.8	6.33	7.10

[A] Organisms fed prior to testing and before renewal.
[B] Temperatures of room and test incubator were continuously recorded on a strip chart recorder.
[C] DO = dissolved oxygen.
Room Temperature range for the test period was 23.5 - 25.0°C.
Incubator #3 temperature range for the test period was 23.0 - 24.5°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-2004-01-13-16-01
sample number:	726718

Data Transcription Verification
date: 4/09/04
by: Cathy Oaks/James Daniels

Total Residual CL2	mg/L	Method
Field: 100% sample:	-	-
Lab: 100% sample:	<0.03	Hach
Control water:	<0.03	Hach

Ammonia	Total (mg/L)
Control water:	<0.017
100% Sample:	0.422

Alk & Hardness	Alkalinity (mg/L)	Hardness (mg/L)
Control water:	255	-
100% Sample:	76	-

[D] Salinity	ppt
Control water:	20
Adjusted control water:	4
100% sample:	4

[D] Salinity based on conductivity and temperature.

Table 1. continued Data recorded during the 96-hour acute bioassays of a sample of effluent from Seminole Electric Cooperative, Inc., U.S. Highway 17, Palatka, Putnam County, Florida, NPDES# FL0036498, performed from 13 to 17, January 2004.

Facility:	**Seminole Electric Cooperative, Inc.**		**NPDES#:**	**FL0036498**	Facility Type:	**Electric Generation Facility**	**Analysts:** Joshua Ayres, Sarah Prichard, Christa Pierini, James Daniels
Location:	U.S. Highway 17, Palatka		Contact/District:	Richarde/NE			
County:	Putnam		Test type:	acute screen renewal			
Sample Collection Date:	1/12/2004	Time: 1415	# tests:	4	Receiving Water:	St. John's River	
Test Beginning Date:	1/13/2004	Time: 1530	Chlorination Type:	dechlorinated		Class III freshwater	
Test Ending Date:	1/17/2004	Time: 1300	FDEP SOP#:	TA07_04		**Page 4 of 8**	**Reviewer:** Julie Espy

100% sample filtered with 60 um screen to remove detritus and large debris.
Control water diluted with well water to 4 ppt.

Organism: ***Menidia beryllina*** Life stage: 12 days [A]Feeding: *Artemia*
48 - 96 hours Chamber size: 1000 ml Food Batch #: 0194025G

Concentrations	Sample/Diluent Volume(mL)	SURVIVAL # Alive 48 hr	72 hr	96 hr	pH (Standard units) 48 hour	72 hour	96 hour	[B] Temperature C 48 hour	72 hour	96 hour	Diss. Oxygen mg/L 48 hour	72 hour	96 hour	Conductivity Uncorrected mmhos/cm 48 hour	96 hour
Control A	0/500	5	5	5	8.2	8.1	8.2	24.6	24.2	24.5	6.7	7.0	6.6	7.03	7.64
Control B	0/500	5	5	5	8.2	8.1	8.2	24.8	24.3	24.7	6.9	7.0	6.6	7.20	7.50
Control C	0/500	5	5	5	8.2	8.1	8.1	24.7	24.4	25.2	7.1	7.0	6.2	7.17	7.82
Control D	0/500	5	5	5	8.2	8.1	8.2	24.6	24.6	25.1	7.1	6.8	6.1	7.14	7.40
100% A	500/0	5	5	5	7.3	7.5	7.6	24.7	24.5	24.6	6.7	6.7	6.1	6.70	7.03
100% B	500/0	5	5	5	7.3	7.5	7.6	24.5	24.7	25.2	6.6	6.1	5.9	6.59	7.17
100% C	500/0	5	5	5	7.3	7.5	7.5	24.5	24.3	25.2	6.5	6.1	5.9	6.64	7.17
100% D	500/0	5	5	5	7.3	7.5	7.5	24.5	24.5	24.9	6.5	6.0	6.1	6.50	6.97

[A] Organisms fed prior to testing and before renewal.
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[C] DO = dissolved oxygen.
Room Temperature range for the test period was 23.5 - 25.0°C.
Incubator #3 temperature range for the test period was 23.0 - 24.5°C.
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Photoperiod during the test was 16 hours of light : 8 hours of dark.

LIMS	
Job number:	TLH-2004-01-13-16-01
sample number:	726718

Data Transcription Verification
date: 4/09/04
by: Cathy Oaks/James Daniels

Total Residual CL2	mg/L	Method
Field: 100% sample:	-	-
Lab: 100% sample:	<0.03	Hach
Control water:	<0.03	Hach

Ammonia	Total (mg/L)
Control water:	<0.017
100% Sample:	0.422

Alk & Hardness	Alkalinity (mg/L)	Hardness (mg/L)
Control water:	255	-
100% Sample:	76	-

[D] Salinity	ppt
Control water:	20
Adjusted control water:	4
100% sample:	4

[D] Salinity based on conductivity and temperature.

Table 1. continued — Data recorded during the 96-hour acute bioassays of a sample of effluent from Seminole Electric Cooperative, Inc., U.S. 17, Palatka, Putnam County, Florida, NPDES# FL0036498, performed from 13 to 15 January, 2004.

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Location:	Highway 17, Palatka	Contact/District:	J. Richarde/NE		**Facility**		Sarah Prichard
County:	Putnam	Test type:	acute screen renewal				Joshua Ayres
Sample Collection Date:	1/12/2004 Time: 1415	# tests:	4	Receiving Water:	St. John's River		James Daniels
Test Beginning Date:	1/13/2004 Time: 1400	Chlorination Type:	dechlorinated		Class III freshwater		
Test Ending Date:	1/15/2004 Time: 1230	EPA Method:	2021.0		**Page 5 of 8**	**Reviewer:**	Julie Espy

100% sample filtered with 60 um screen to remove detritus and large debris.
Test terminated at 48 hours due to 100% mortality in 100% sample.

Organism: ***Daphnia pulex*** Life stage: days <24 hours [A]Feeding: *Daphnia pulex* chow Conductivity Uncorrected
0 - 48 hours Chamber size: 30 ml Food Batch #: #11 mmhos/cm

	Sample/Diluent	Number alive			pH (Standard units)			[B] Temperature °C			[C] DO (mg/L)				
Concentrations	Volume(mL)	0 hr	24 hr	48 hr	0 hr	24 hr	48 hr	0 hr	24 hr	48 hr	0 hr	24 hr	48 hr	0 hr	48 hr
Control A	0/20	5	5	5	7.8	-	7.5	24.0	-	25.3	7.1	-	6.2	0.307	0.345
Control B	0/20	5	5	5	-	-	7.5	-	-	25.1	-	-	6.1	-	0.356
Control C	0/20	5	4	4	-	-	7.5	-	-	24.9	-	-	5.2	-	0.361
Control D	0/20	5	4	4	-	-	7.5	-	-	24.7	-	-	5.2	-	0.385
100% A	20/0	5	1	0	7.4	-	7.7	24.2	-	25.3	7.0	-	5.8	6.25	6.46
100% B	20/0	5	0	-	-	-	7.8	-	-	25.2	-	-	6.7	-	7.11
100% C	20/0	5	0	-	-	-	7.8	-	-	25.0	-	-	7.1	-	7.02
100% D	20/0	5	0	-	-	-	7.8	-	-	24.8	-	-	7.1	-	7.71

[A] Organisms fed prior to testing and before renewal.
[B] Temperatures of room and test incubator were continuously recorded on a strip chart recorder.
[C] DO = dissolved oxygen.
Room Temperature range for the test period was 23.5 - 25.0°C.
Incubator #3 temperature range for the test period was 23.0 - 24.5°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-2004-01-13-16-01
sample number:	726718

Data Transcription Verification
date: 4/09/04
by: Cathy Oaks/James Daniels

Total Residual CL2	mg/L	Method
Field: 100% sample:	-	-
Lab: 100% sample:	<0.03	Hach
Control water:	<0.03	Hach

Ammonia	Total (mg/L)
Control water:	<0.017
100% Sample:	0.422

Alk & Hardness	Alkalinity (mg/L)	Hardness (mg/L)
Control water:	74	93
100% Sample:	76	-

[D] Salinity	ppt
Control water:	<1
100% sample:	4

[D] Salinity based on conductivity and temperature.

Table 1. continued

Data recorded during the 96-hour acute bioassays of a sample of effluent from Seminole Electric Cooperative, Inc., U.S. 17, Palatka, Putnam County, Florida, NPDES# FL0036498, performed from 13 to 15 January, 2004.

Facility:	**Seminole Electric Cooperative, Inc.**	**NPDES#:**	**FL0036498**	Facility Type:	**Electric Generation Facility**	**Analysts:**	Christa Pierini
Location:	Highway 17, Palatka	Contact/District:	J. Richarde/NE				Sarah Prichard
County:	Putnam	Test type:	acute screen renewal				Joshua Ayres
Sample Collection Date:	1/12/2004 Time: 1415	# tests:	4	Receiving Water:	St. John's River		James Daniels
Test Beginning Date:	1/13/2004 Time: 1400	Chlorination Type:	dechlorinated		Class III freshwater		
Test Ending Date:	1/15/2004 Time: 1230	EPA Method:	2021.0		**Page 6 of 8**	**Reviewer:**	Julie Espy

100% sample filtered with 60 um screen to remove detritus and large debris.
Test terminated at 48 hours due to 100% mortality in 100% sample.

Organism: ***Daphnia pulex*** Life stage: days <24 hours [A]Feeding: *Daphnia pulex* chow
48 - 96 hours Chamber size: 30 ml Food Batch #: #11

	Sample/Diluent	Number alive			pH (Standard units)			[B] Temperature C			[C] DO (mg/L)			Conductivity Uncorrected mmhos/cm	
Concentrations	Volume(mL)	48 hr	72 hr	96 hr	48 hour	72 hour	96 hour	48 hour	72 hour	96 hour	48 hour	72 hour	96 hour	48 hour	96 hour
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 and before renewal.
[B] Temperatures of room and test incubator were continuously recorded on a strip chart recorder.
[C] DO = dissolved oxygen.
Room Temperature range for the test period was 23.5 - 25.0°C.
Incubator #3 temperature range for the test period was 23.0 - 24.5°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-2004-01-13-16-01
sample number:	726718

Data Transcription Verification
date: 4/09/04
by: Cathy Oaks/James Daniels

Total Residual CL2	mg/L	Method
Field: 100% sample:	-	-
Lab: 100% sample:	<0.03	Hach
Control water:	<0.03	Hach

Ammonia	Total (mg/L)
Control water:	<0.017
100% Sample:	0.422

Alk & Hardness	Alkalinity (mg/L)	Hardness (mg/L)
Control water:	74	93
100% Sample:	76	-

[D] Salinity	ppt
Control water:	<1
100% sample:	4

[D] Salinity based on conductivity and temperature.

Table 1. Data recorded during the 96-hour acute bioassays of a sample of effluent from Seminole Electric Cooperative, Inc., U.S. 17, Palatka, Putnam County, Florida, NPDES# FL0036498, performed from 13 to 15 January, 2004.
continued

Facility:	**Seminole Electric Cooperative, Inc.**		**NPDES#:**	**FL0036498**	Facility Type:	**Electric Generation**	**Analysts:**	Christa Pierini
Location:	Highway 17, Palatka		Contact/District:	J. Richarde/NE		**Facility**		Sarah Prichard
County:	Putnam		Test type:	acute screen renewal				Joshua Ayres
Sample Collection Date:	1/12/2004	Time: 1415	# tests:	4	Receiving Water:	St. John's River		James Daniels
Test Beginning Date:	1/13/2004	Time: 1405	Chlorination Type:	dechlorinated		Class III freshwater		
Test Ending Date:	1/17/2004	Time: 1300	EPA Method:	2021.0		**Page 7 of 8**	**Reviewer:**	Julie Espy

100% sample filtered with 60 um screen to remove detritus and large debris.

Organism: ***Daphnia magna*** Life stage: <24 hours [A]Feeding: YCT/Algae Conductivity
0 - 48 hours Chamber size: 30 ml Food Batch #: #4/#23 Uncorrected

	Sample/Diluent	Number alive			pH (Standard units)			[B] Temperature C			[C] DO (mg/L)			mmhos/cm	
Concentrations	Volume(mL)	0 hr	24 hr	48 hr	0 hr	24 hr	48 hr	0 hr	24 hr	48 hr	0 hr	24 hr	48 hr	0 hr	48 hr
Control A	0/20	5	5	5	8.1	-	7.3	24.0	-	25.4	7.2	-	4.8	0.367	0.395
Control B	0/20	5	5	5	-	-	7.3	-	-	25.2	-	-	4.9	-	0.376
Control C	0/20	5	5	5	-	-	7.3	-	-	24.9	-	-	4.8	-	0.375
Control D	0/20	5	5	5	-	-	7.3	-	-	24.7	-	-	4.6	-	0.389
100% A	20/0	5	5	5	7.4	-	7.5	24.2	-	24.9	7.2	-	6.0	6.12	6.98
100% B	20/0	5	5	5	-	-	7.5	-	-	25.0	-	-	5.7	-	6.50
100% C	20/0	5	5	5	-	-	7.5	-	-	24.8	-	-	5.3	-	7.33
100% D	20/0	5	5	5	-	-	7.4	-	-	24.7	-	-	5.0	-	7.29

[A] Organisms fed prior to testing and before renewal.
[B] Temperatures of room and test incubator were continuously recorded on a strip chart recorder.
[C] DO = dissolved oxygen.
Room Temperature range for the test period was 23.5 - 25.0°C.
Incubator #3 temperature range for the test period was 23.0 - 24.5°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-2004-01-13-16-01
sample number:	726718

Data Transcription Verification
date: 4/09/04
by: Cathy Oaks/James Daniels

Total Residual CL2	mg/L	Method
Field: 100% sample:	-	-
Lab: 100% sample:	<0.03	Hach
Control water:	<0.03	Hach

Ammonia	Total (mg/L)
Control water:	<0.017
100% Sample:	0.422

Alk & Hardness	Alkalinity (mg/L)	Hardness (mg/L)
Control water:	74	93
100% Sample:	76	-

[D] Salinity	ppt
Control water:	<1
100% sample:	4

[D] Salinity based on conductivity and temperature.

Table 1. concluded. Data recorded during the 96-hour acute bioassays of a sample of effluent from Seminole Electric Cooperative, Inc., U.S. 17, Palatka, Putnam County, Florida, NPDES# FL0036498, performed from 13 to 15 January, 2004.

Facility:	**Seminole Electric Cooperative, Inc.**	**NPDES#:**	**FL0036498**	Facility Type:	**Electric Generation Facility**	**Analysts:**	Christa Pierini, Sarah Prichard, Joshua Ayres, James Daniels
Location:	Highway 17, Palatka	Contact/District:	J. Richarde/NE				
County:	Putnam	Test type:	acute screen renewal				
Sample Collection Date:	1/12/2004 Time: 1415	# tests:	4	Receiving Water:	St. John's River Class III freshwater		
Test Beginning Date:	1/13/2004 Time: 1405	Chlorination Type:	dechlorinated				
Test Ending Date:	1/17/2004 Time: 1300	EPA Method:	2021.0		**Page 8 of 8**	**Reviewer:**	Julie Espy

100% sample filtered with 60 um screen to remove detritus and large debris.

Organism: ***Daphnia magna*** Life stage: <24 hours [A]Feeding: YCT/Algae Conductivity Uncorrected
48 - 96 hours Chamber size: 30 ml Food Batch #: #4/#23 mmhos/cm

	Sample/Diluent	Number alive			pH (Standard units)			[B] Temperature C			[C] DO (mg/L)			Conductivity	
Concentrations	Volume(mL)	48 hr	72 hr	96 hr	48 hour	72 hour	96 hour	48 hour	72 hour	96 hour	48 hour	72 hour	96 hour	48 hour	96 hour
Control A	0/20	5	5	5	7.9	-	7.9	25.0	-	25.2	7.5	-	7.6	0.312	0.325
Control B	0/20	5	5	5	-	-	7.9	-	-	25.1	-	-	7.5	-	0.332
Control C	0/20	5	5	5	-	-	7.9	-	-	25.0	-	-	7.4	-	0.335
Control D	0/20	5	5	5	-	-	8.0	-	-	24.7	-	-	7.3	-	0.342
100% A	20/0	5	5	5	7.3	-	7.8	25.0	-	24.4	7.1	-	7.3	6.43	7.53
100% B	20/0	5	5	5	-	-	7.8	-	-	24.6	-	-	7.3	-	7.12
100% C	20/0	5	5	5	-	-	7.8	-	-	24.3	-	-	7.2	-	7.99
100% D	20/0	5	5	5	-	-	7.8	-	-	24.1	-	-	7.2	-	7.86

[A] Organisms fed prior to testing and before renewal.
[B] Temperatures of room and test incubator were continuously recorded on a strip chart recorder.
[C] DO = dissolved oxygen.
Room Temperature range for the test period was 23.5 - 25.0°C.
Incubator #3 temperature range for the test period was 23.0 - 24.5°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-2004-01-13-16-01
sample number:	726718

Data Transcription Verification	
date:	4/09/04
by:	Cathy Oaks/James Daniels

Total Residual CL2	mg/L	Method
Field: 100% sample:	-	-
Lab: 100% sample:	<0.03	Hach
Control water:	<0.03	Hach

Ammonia	Total (mg/L)
Control water:	<0.017
100% Sample:	0.422

Alk & Hardness	Alkalinity (mg/L)	Hardness (mg/L)
Control water:	74	93
100% Sample:	76	-

[D] Salinity	ppt
Control water:	<1
100% sample:	4

[D] Salinity based on conductivity and temperature.

Table 2. *Effluent limits, Class III Criteria and chemical data from samples collected from the* Seminole Electric Cooperative, Inc. sampled on January 12, 2004.

Seminole Electric Cooperative, Inc.	Class III Freshwater Stds	Effluent Limits	Effluent
Organic Constituents (µg/L)			
None Detected	-	-	-
Metals (µg/L unless otherwise noted)			
Aluminum	-	-	736
Arsenic	≤ 50	-	6 U
Beryllium	≤ 0.13	-	1.3 U
Cadmium	≤ 3.4 b	-	0.25 U
Calcium (mg/L)	-	-	668
Chromium-III	≤ 268.2 b	-	3 U
Copper	≤ 30.5 b	≤ 295	26
Iron	≤ 1000	≤ 2330	1050
Lead	≤ 18.6 b	-	1.3
Magnesium (mg/L)	-	-	161
Mercury	≤ 0.012	≤ 0.2	0.1 U
Nickel	≤ 168.5 b	-	3 U
Selenium	≤ 5	≤ 11.7	20 U
Silver	≤ 0.07	≤ 0.07	0.2 U
Zinc	≤ 387.8 b	≤ 419	8.8 I
Nutrients (mg/L)			
Ortho-phosphate	-	-	0.06 Q
Total Phosphorus	-	-	0.19 A
Ammonia	-	-	0.58 A
Unionized Ammonia	≤ 0.02	≤ 0.2	0.01 c
Nitrate+Nitrite	-	-	0.82 A
Total Kjeldahl Nitrogen	-	-	5.3 A
Organic Nitrogen	-	-	4.72 c
Total Nitrogen	-	-	6.12 c
General Physical and Chemical Parameters			
Dissolved Oxygen (mg/L)	≥ 5	-	8.1
pH (S.U.)	-	6.0 - 8.5	7.2
Conductivity (umhos/cm)	≤ 1275	≤ 8653	5700
Temperature (C)	-	-	23.3
Cyanide	≤ 5.2	≤ 19.6	0.008 I
Oil and Grease (mg/l)	≤ 5	≤ 7.68	2.3 I
Hardness (mg/L)	-	-	2331 c
Chlorine (100% sample) field	≤ 0.01	-	-
Chlorine (100% sample) lab	≤ 0.01	-	< 0.03*

A - Value reported is the mean of two or more determinations.
I - Value reported is < the minimum quantitation limit, and ≥ the minimum detection limit .
Q - Sample held beyond normal holding time.
U - Material analyzed for but not detected; value reported is the minimum detection limit.
b - Value is calculated based on hardness.
c - Calculated value.
* - Value reported is laboratory minimum detection limit.

Appendix 1. Chemical Analyses performed on the effluent from Seminole Electric Cooperative, Inc. sampled on January 12, 2004.

DATE SAMPLED	FIELD ID	ANALYSIS GROUP	COMPONENT	RESULT	UNITS	REMARK	MDL	PQL
1/12/2004 13:47	FIELD BLANK	BNA-Water	1,2,4,5-Tetrachlorobenzene	0.97	ug/L	U	0.97	3.9
1/12/2004 13:47	FIELD BLANK	BNA-Water	1,2,4-Trichlorobenzene	0.97	ug/L	U	0.97	3.9
1/12/2004 13:47	FIELD BLANK	BNA-Water	1,2-Dichlorobenzene	0.97	ug/L	U	0.97	3.9
1/12/2004 13:47	FIELD BLANK	BNA-Water	1,3,5-Trinitrobenzene	3.9	ug/L	U	3.9	16
1/12/2004 13:47	FIELD BLANK	BNA-Water	1,3-Dichlorobenzene	0.97	ug/L	U	0.97	3.9
1/12/2004 13:47	FIELD BLANK	BNA-Water	1,3-Dinitrobenzene	1.9	ug/L	U	1.9	7.8
1/12/2004 13:47	FIELD BLANK	BNA-Water	1,4-Dichlorobenzene	0.97	ug/L	U	0.97	3.9
1/12/2004 13:47	FIELD BLANK	BNA-Water	1,4-Naphthoquinone	19	ug/L	U	19	78
1/12/2004 13:47	FIELD BLANK	BNA-Water	1-Naphthylamine	9.7	ug/L	UJ	9.7	39
1/12/2004 13:47	FIELD BLANK	BNA-Water	2,3,4,6-Tetrachlorophenol	1.9	ug/L	U	1.9	7.8
1/12/2004 13:47	FIELD BLANK	BNA-Water	2,4,5-Trichlorophenol	0.97	ug/L	U	0.97	3.9
1/12/2004 13:47	FIELD BLANK	BNA-Water	2,4,6-Trichlorophenol	0.97	ug/L	U	0.97	3.9
1/12/2004 13:47	FIELD BLANK	BNA-Water	2,4-Dichlorophenol	0.97	ug/L	U	0.97	3.9
1/12/2004 13:47	FIELD BLANK	BNA-Water	2,4-Dimethylphenol	49	ug/L	U	49	190
1/12/2004 13:47	FIELD BLANK	BNA-Water	2,4-Dinitrophenol	15	ug/L	U	15	58
1/12/2004 13:47	FIELD BLANK	BNA-Water	2,4-Dinitrotoluene	0.97	ug/L	U	0.97	3.9
1/12/2004 13:47	FIELD BLANK	BNA-Water	2,6-Dichlorophenol	0.97	ug/L	U	0.97	3.9
1/12/2004 13:47	FIELD BLANK	BNA-Water	2,6-Dinitrotoluene	0.97	ug/L	U	0.97	3.9
1/12/2004 13:47	FIELD BLANK	BNA-Water	2-Acetylaminofluorene	0.97	ug/L	U	0.97	3.9
1/12/2004 13:47	FIELD BLANK	BNA-Water	2-Chloronaphthalene	0.97	ug/L	U	0.97	3.9
1/12/2004 13:47	FIELD BLANK	BNA-Water	2-Chlorophenol	0.97	ug/L	U	0.97	3.9
1/12/2004 13:47	FIELD BLANK	BNA-Water	2-Methyl-4,6-dinitrophenol	2.9	ug/L	U	2.9	12
1/12/2004 13:47	FIELD BLANK	BNA-Water	2-Methylnaphthalene	0.97	ug/L	U	0.97	3.9
1/12/2004 13:47	FIELD BLANK	BNA-Water	2-Naphthylamine	9.7	ug/L	UJ	9.7	39
1/12/2004 13:47	FIELD BLANK	BNA-Water	2-Nitroaniline	0.97	ug/L	U	0.97	3.9
1/12/2004 13:47	FIELD BLANK	BNA-Water	2-Nitrophenol	0.97	ug/L	U	0.97	3.9
1/12/2004 13:47	FIELD BLANK	BNA-Water	2-Picoline	0.97	ug/L	U	0.97	3.9
1/12/2004 13:47	FIELD BLANK	BNA-Water	3,3'-Dichlorobenzidine	39	ug/L	U	39	160
1/12/2004 13:47	FIELD BLANK	BNA-Water	3,3'-Dimethylbenzidine	19	ug/L	UJ	19	78
1/12/2004 13:47	FIELD BLANK	BNA-Water	3-Methylcholanthrene	0.97	ug/L	U	0.97	3.9
1/12/2004 13:47	FIELD BLANK	BNA-Water	3-Nitroaniline	0.97	ug/L	U	0.97	3.9
1/12/2004 13:47	FIELD BLANK	BNA-Water	4,4'-DDD	1.5	ug/L	U	1.5	5.8
1/12/2004 13:47	FIELD BLANK	BNA-Water	4,4'-DDE	1.5	ug/L	U	1.5	5.8
1/12/2004 13:47	FIELD BLANK	BNA-Water	4,4'-DDT	1.5	ug/L	U	1.5	5.8
1/12/2004 13:47	FIELD BLANK	BNA-Water	4-Aminobiphenyl	3.9	ug/L	U	3.9	16
1/12/2004 13:47	FIELD BLANK	BNA-Water	4-Bromophenyl phenyl ether	0.97	ug/L	U	0.97	3.9
1/12/2004 13:47	FIELD BLANK	BNA-Water	4-Chloro-3-methylphenol	0.97	ug/L	U	0.97	3.9
1/12/2004 13:47	FIELD BLANK	BNA-Water	4-Chloroaniline	0.97	ug/L	U	0.97	3.9
1/12/2004 13:47	FIELD BLANK	BNA-Water	4-Chlorophenyl phenyl ether	1.9	ug/L	U	1.9	7.8
1/12/2004 13:47	FIELD BLANK	BNA-Water	4-Nitroaniline	0.97	ug/L	U	0.97	3.9
1/12/2004 13:47	FIELD BLANK	BNA-Water	4-Nitrophenol	15	ug/L	U	15	58
1/12/2004 13:47	FIELD BLANK	BNA-Water	5-Nitro-o-toluidine	0.97	ug/L	U	0.97	3.9
1/12/2004 13:47	FIELD BLANK	BNA-Water	7,12-Dimethylbenz(a)anthracene	0.97	ug/L	U	0.97	3.9
1/12/2004 13:47	FIELD BLANK	BNA-Water	Acenaphthene	0.97	ug/L	U	0.97	3.9
1/12/2004 13:47	FIELD BLANK	BNA-Water	Acenaphthylene	0.97	ug/L	U	0.97	3.9
1/12/2004 13:47	FIELD BLANK	BNA-Water	Acetophenone	0.97	ug/L	U	0.97	3.9
1/12/2004 13:47	FIELD BLANK	BNA-Water	Aldrin	1.5	ug/L	U	1.5	5.8
1/12/2004 13:47	FIELD BLANK	BNA-Water	Aniline	0.97	ug/L	U	0.97	3.9
1/12/2004 13:47	FIELD BLANK	BNA-Water	Anthracene	0.97	ug/L	U	0.97	3.9
1/12/2004 13:47	FIELD BLANK	BNA-Water	Azobenzene/1,2-Diphenylhydrazine	0.97	ug/L	U	0.97	3.9
1/12/2004 13:47	FIELD BLANK	BNA-Water	Benzidine	97	ug/L	U	97	390
1/12/2004 13:47	FIELD BLANK	BNA-Water	Benzo(a)anthracene	0.97	ug/L	U	0.97	3.9
1/12/2004 13:47	FIELD BLANK	BNA-Water	Benzo(a)pyrene	0.97	ug/L	U	0.97	3.9
1/12/2004 13:47	FIELD BLANK	BNA-Water	Benzo(b)fluoranthene	0.97	ug/L	U	0.97	3.9
1/12/2004 13:47	FIELD BLANK	BNA-Water	Benzo(g,h,i)perylene	0.97	ug/L	U	0.97	3.9

DATE SAMPLED	FIELD ID	ANALYSIS GROUP	COMPONENT	RESULT	UNITS	REMARK	MDL	PQL
1/12/2004 13:47	FIELD BLANK	BNA-Water	Benzo(k)fluoranthene	0.97	ug/L	U	0.97	3.9
1/12/2004 13:47	FIELD BLANK	BNA-Water	Benzyl alcohol	0.97	ug/L	U	0.97	3.9
1/12/2004 13:47	FIELD BLANK	BNA-Water	Bis(2-chloroethoxy)methane	0.97	ug/L	U	0.97	3.9
1/12/2004 13:47	FIELD BLANK	BNA-Water	Bis(2-chloroethyl)ether	0.97	ug/L	U	0.97	3.9
1/12/2004 13:47	FIELD BLANK	BNA-Water	Bis(2-chloroisopropyl)ether	2.9	ug/L	U	2.9	12
1/12/2004 13:47	FIELD BLANK	BNA-Water	Bis(2-ethylhexyl)phthalate	15	ug/L	U	15	58
1/12/2004 13:47	FIELD BLANK	BNA-Water	Butyl benzyl phthalate	4.9	ug/L	U	4.9	19
1/12/2004 13:47	FIELD BLANK	BNA-Water	Chrysene	0.97	ug/L	U	0.97	3.9
1/12/2004 13:47	FIELD BLANK	BNA-Water	Di-n-butyl phthalate	4.9	ug/L	U	4.9	19
1/12/2004 13:47	FIELD BLANK	BNA-Water	Di-n-octyl phthalate	0.97	ug/L	U	0.97	3.9
1/12/2004 13:47	FIELD BLANK	BNA-Water	Dibenzo(a,h)anthracene	0.97	ug/L	U	0.97	3.9
1/12/2004 13:47	FIELD BLANK	BNA-Water	Dibenzofuran	0.97	ug/L	U	0.97	3.9
1/12/2004 13:47	FIELD BLANK	BNA-Water	Dieldrin	1.5	ug/L	U	1.5	5.8
1/12/2004 13:47	FIELD BLANK	BNA-Water	Diethyl phthalate	0.97	ug/L	U	0.97	3.9
1/12/2004 13:47	FIELD BLANK	BNA-Water	Dimethyl phthalate	49	ug/L	U	49	190
1/12/2004 13:47	FIELD BLANK	BNA-Water	Dimethylaminoazobenzene	0.97	ug/L	U	0.97	3.9
1/12/2004 13:47	FIELD BLANK	BNA-Water	Dinoseb	3.9	ug/L	UJ	3.9	16
1/12/2004 13:47	FIELD BLANK	BNA-Water	Diphenylamine	2.9	ug/L	U	2.9	12
1/12/2004 13:47	FIELD BLANK	BNA-Water	Endosulfan I	3.9	ug/L	U	3.9	16
1/12/2004 13:47	FIELD BLANK	BNA-Water	Endosulfan II	3.9	ug/L	U	3.9	16
1/12/2004 13:47	FIELD BLANK	BNA-Water	Endosulfan sulfate	1.5	ug/L	U	1.5	5.8
1/12/2004 13:47	FIELD BLANK	BNA-Water	Endrin	1.5	ug/L	U	1.5	5.8
1/12/2004 13:47	FIELD BLANK	BNA-Water	Endrin aldehyde	3.9	ug/L	U	3.9	16
1/12/2004 13:47	FIELD BLANK	BNA-Water	Ethyl methanesulfonate	0.97	ug/L	U	0.97	3.9
1/12/2004 13:47	FIELD BLANK	BNA-Water	Fluoranthene	0.97	ug/L	U	0.97	3.9
1/12/2004 13:47	FIELD BLANK	BNA-Water	Fluorene	0.97	ug/L	U	0.97	3.9
1/12/2004 13:47	FIELD BLANK	BNA-Water	Heptachlor	1.5	ug/L	U	1.5	5.8
1/12/2004 13:47	FIELD BLANK	BNA-Water	Heptachlor epoxide	1.5	ug/L	U	1.5	5.8
1/12/2004 13:47	FIELD BLANK	BNA-Water	Hexachlorobenzene	0.97	ug/L	U	0.97	3.9
1/12/2004 13:47	FIELD BLANK	BNA-Water	Hexachlorobutadiene	2.9	ug/L	U	2.9	12
1/12/2004 13:47	FIELD BLANK	BNA-Water	Hexachlorocyclopentadiene	2.9	ug/L	U	2.9	12
1/12/2004 13:47	FIELD BLANK	BNA-Water	Hexachloroethane	2.9	ug/L	U	2.9	12
1/12/2004 13:47	FIELD BLANK	BNA-Water	Hexachloropropene	1.9	ug/L	U	1.9	7.8
1/12/2004 13:47	FIELD BLANK	BNA-Water	Indeno(1,2,3-cd)pyrene	0.97	ug/L	U	0.97	3.9
1/12/2004 13:47	FIELD BLANK	BNA-Water	Isophorone	0.97	ug/L	U	0.97	3.9
1/12/2004 13:47	FIELD BLANK	BNA-Water	Isosafrole	0.97	ug/L	U	0.97	3.9
1/12/2004 13:47	FIELD BLANK	BNA-Water	Methapyrilene	3.9	ug/L	UJ	3.9	16
1/12/2004 13:47	FIELD BLANK	BNA-Water	Methyl methanesulfonate	0.97	ug/L	UJ	0.97	3.9
1/12/2004 13:47	FIELD BLANK	BNA-Water	N-Nitrosodi-n-butylamine	0.97	ug/L	U	0.97	3.9
1/12/2004 13:47	FIELD BLANK	BNA-Water	N-Nitrosodi-n-propylamine	1.9	ug/L	U	1.9	7.8
1/12/2004 13:47	FIELD BLANK	BNA-Water	N-Nitrosodiethylamine	0.97	ug/L	U	0.97	3.9
1/12/2004 13:47	FIELD BLANK	BNA-Water	N-Nitrosodimethylamine	1.9	ug/L	U	1.9	7.8
1/12/2004 13:47	FIELD BLANK	BNA-Water	N-Nitrosodiphenylamine	2.9	ug/L	UJ	2.9	12
1/12/2004 13:47	FIELD BLANK	BNA-Water	N-Nitrosomethylethylamine	1.9	ug/L	U	1.9	7.8
1/12/2004 13:47	FIELD BLANK	BNA-Water	N-Nitrosomorpholine	0.97	ug/L	U	0.97	3.9
1/12/2004 13:47	FIELD BLANK	BNA-Water	N-Nitrosopiperidine	0.97	ug/L	U	0.97	3.9
1/12/2004 13:47	FIELD BLANK	BNA-Water	N-Nitrosopyrrolidine	1.9	ug/L	U	1.9	7.8
1/12/2004 13:47	FIELD BLANK	BNA-Water	Naphthalene	0.97	ug/L	U	0.97	3.9
1/12/2004 13:47	FIELD BLANK	BNA-Water	Nitrobenzene	1.9	ug/L	U	1.9	7.8
1/12/2004 13:47	FIELD BLANK	BNA-Water	Nitroquinoline-1-oxide	19	ug/L	UJ	19	78
1/12/2004 13:47	FIELD BLANK	BNA-Water	Pentachlorobenzene	0.97	ug/L	U	0.97	3.9
1/12/2004 13:47	FIELD BLANK	BNA-Water	Pentachloroethane	49	ug/L	U	49	190
1/12/2004 13:47	FIELD BLANK	BNA-Water	Pentachloronitrobenzene	0.97	ug/L	U	0.97	3.9
1/12/2004 13:47	FIELD BLANK	BNA-Water	Pentachlorophenol	2.9	ug/L	U	2.9	12
1/12/2004 13:47	FIELD BLANK	BNA-Water	Phenacetin	3.9	ug/L	U	3.9	12
1/12/2004 13:47	FIELD BLANK	BNA-Water	Phenanthrene	0.97	ug/L	U	0.97	3.9
1/12/2004 13:47	FIELD BLANK	BNA-Water	Phenol	0.97	ug/L	U	0.97	3.9
1/12/2004 13:47	FIELD BLANK	BNA-Water	Pyrene	0.97	ug/L	U	0.97	3.9
1/12/2004 13:47	FIELD BLANK	BNA-Water	Pyridine	3.9	ug/L	UJ	3.9	16

DATE SAMPLED	FIELD ID	ANALYSIS GROUP	COMPONENT	RESULT	UNITS	REMARK	MDL	PQL
1/12/2004 13:47	FIELD BLANK	BNA-Water	Safrole	0.97	ug/L	U	0.97	3.9
1/12/2004 13:47	FIELD BLANK	BNA-Water	alpha-BHC	1.5	ug/L	U	1.5	5.8
1/12/2004 13:47	FIELD BLANK	BNA-Water	beta-BHC	1.5	ug/L	U	1.5	5.8
1/12/2004 13:47	FIELD BLANK	BNA-Water	delta-BHC	1.5	ug/L	U	1.5	5.8
1/12/2004 13:47	FIELD BLANK	BNA-Water	gamma-BHC	1.5	ug/L	U	1.5	5.8
1/12/2004 13:47	FIELD BLANK	BNA-Water	m,p-Cresols	1.9	ug/L	U	1.9	7.8
1/12/2004 13:47	FIELD BLANK	BNA-Water	o-Cresol	1.9	ug/L	U	1.9	7.8
1/12/2004 13:47	FIELD BLANK	BNA-Water	o-Toluidine	0.97	ug/L	U	0.97	3.9
1/12/2004 13:47	FIELD BLANK	GC-Water	Alachlor	0.58	ug/L	U	0.58	2.32
1/12/2004 13:47	FIELD BLANK	GC-Water	Ametryn	0.048	ug/L	U	0.048	0.192
1/12/2004 13:47	FIELD BLANK	GC-Water	Atrazine	0.048	ug/L	U	0.048	0.192
1/12/2004 13:47	FIELD BLANK	GC-Water	Azinphos Methyl	0.048	ug/L	U	0.048	0.192
1/12/2004 13:47	FIELD BLANK	GC-Water	Bromacil	0.19	ug/L	U	0.19	0.76
1/12/2004 13:47	FIELD BLANK	GC-Water	Butylate	0.19	ug/L	U	0.19	0.76
1/12/2004 13:47	FIELD BLANK	GC-Water	Chlorpyrifos Ethyl	0.048	ug/L	U	0.048	0.192
1/12/2004 13:47	FIELD BLANK	GC-Water	Chlorpyrifos Methyl	0.096	ug/L	U	0.096	0.384
1/12/2004 13:47	FIELD BLANK	GC-Water	Diazinon	0.048	ug/L	U	0.048	0.192
1/12/2004 13:47	FIELD BLANK	GC-Water	Ethion	0.048	ug/L	U	0.048	0.192
1/12/2004 13:47	FIELD BLANK	GC-Water	Ethoprop	0.096	ug/L	U	0.096	0.384
1/12/2004 13:47	FIELD BLANK	GC-Water	Fenamiphos	0.19	ug/L	U	0.19	0.76
1/12/2004 13:47	FIELD BLANK	GC-Water	Fonofos	0.096	ug/L	U	0.096	0.384
1/12/2004 13:47	FIELD BLANK	GC-Water	Hexazinone	0.096	ug/L	U	0.096	0.384
1/12/2004 13:47	FIELD BLANK	GC-Water	Malathion	0.14	ug/L	U	0.14	0.56
1/12/2004 13:47	FIELD BLANK	GC-Water	Metalaxyl	0.24	ug/L	U	0.24	0.96
1/12/2004 13:47	FIELD BLANK	GC-Water	Metolachlor	0.48	ug/L	U	0.48	1.92
1/12/2004 13:47	FIELD BLANK	GC-Water	Metribuzin	0.096	ug/L	U	0.096	0.384
1/12/2004 13:47	FIELD BLANK	GC-Water	Mevinphos	0.19	ug/L	U	0.19	0.76
1/12/2004 13:47	FIELD BLANK	GC-Water	Naled	0.77	ug/L	U	0.77	3.08
1/12/2004 13:47	FIELD BLANK	GC-Water	Norflurazon	0.096	ug/L	U	0.096	0.384
1/12/2004 13:47	FIELD BLANK	GC-Water	Parathion Ethyl	0.14	ug/L	U	0.14	0.56
1/12/2004 13:47	FIELD BLANK	GC-Water	Parathion Methyl	0.096	ug/L	U	0.096	0.384
1/12/2004 13:47	FIELD BLANK	GC-Water	Phorate	0.048	ug/L	U	0.048	0.192
1/12/2004 13:47	FIELD BLANK	GC-Water	Prometryn	0.14	ug/L	U	0.14	0.56
1/12/2004 13:47	FIELD BLANK	GC-Water	Simazine	0.048	ug/L	U	0.048	0.192
1/12/2004 13:47	FIELD BLANK	Mercury-Water	Mercury	0.1	ug/L	U	0.1	0.4
1/12/2004 13:47	FIELD BLANK	Metals-Water	Aluminum	7	ug/L	U	7	28
1/12/2004 13:47	FIELD BLANK	Metals-Water	Arsenic	6	ug/L	U	6	24
1/12/2004 13:47	FIELD BLANK	Metals-Water	Beryllium	0.5	ug/L	U	0.5	2
1/12/2004 13:47	FIELD BLANK	Metals-Water	Cadmium	0.025	ug/L	U	0.025	0.1
1/12/2004 13:47	FIELD BLANK	Metals-Water	Calcium	0.05	mg/L	U	0.05	0.2
1/12/2004 13:47	FIELD BLANK	Metals-Water	Chromium	3	ug/L	U	3	12
1/12/2004 13:47	FIELD BLANK	Metals-Water	Copper	1	ug/L	U	1	4
1/12/2004 13:47	FIELD BLANK	Metals-Water	Iron	15	ug/L	U	15	60
1/12/2004 13:47	FIELD BLANK	Metals-Water	Lead	0.05	ug/L	U	0.05	0.2
1/12/2004 13:47	FIELD BLANK	Metals-Water	Magnesium	0.02	mg/L	U	0.02	0.08
1/12/2004 13:47	FIELD BLANK	Metals-Water	Nickel	3	ug/L	U	3	12
1/12/2004 13:47	FIELD BLANK	Metals-Water	Selenium	1	ug/L	U	1	4
1/12/2004 13:47	FIELD BLANK	Metals-Water	Silver	0.02	ug/L	U	0.02	0.08
1/12/2004 13:47	FIELD BLANK	Metals-Water	Zinc	4	ug/L	U	4	16
1/12/2004 13:47	FIELD BLANK	Nutrients-Liquid	Ammonia-N	0.013	mg N/L	I	0.01	0.02
1/12/2004 13:47	FIELD BLANK	Nutrients-Liquid	Cyanide	0.005	mg CN/L	U	0.005	0.02
1/12/2004 13:47	FIELD BLANK	Nutrients-Liquid	NO2NO3-N	0.013	mg N/L		0.004	0.01
1/12/2004 13:47	FIELD BLANK	Nutrients-Liquid	N_KJEL_TOT	0.06	mg N/L	U	0.06	0.2
1/12/2004 13:47	FIELD BLANK	Nutrients-Liquid	O-Phosphate-P	0.004	mg P/L	UQ	0.004	0.01
1/12/2004 13:47	FIELD BLANK	Nutrients-Liquid	Total-P	0.02	mg P/L	U	0.02	0.06
1/12/2004 13:47	FIELD BLANK	Overflow	Oil and Grease	1.1	mg/l	I		
1/12/2004 14:15	FINAL EFFLUENT	Bio-AGP/LimNut	Algal Growth Potential	no result	mg DryWt/L		0.1	0.3
1/12/2004 14:15	FINAL EFFLUENT	Bio-Chl-a	Chlorophyll-A, Monochromatic, Water	1.7	ug/L	UQ	1.7	5.1
1/12/2004 14:15	FINAL EFFLUENT	Bio-Chl-a	Phaeophytin-A, Monochromatic, Water	1.7	ug/L	UQ	1.7	5.1
1/12/2004 14:15	FINAL EFFLUENT	Bio-Toxicology	Bioassay-Acute-Screen-SW-Fish, LC50	100	LC50	L		

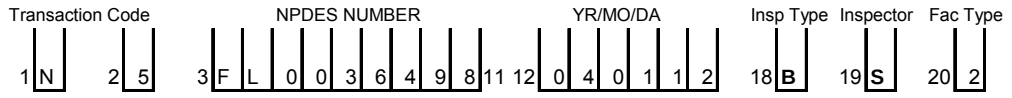
DATE SAMPLED	FIELD ID	ANALYSIS GROUP	COMPONENT	RESULT	UNITS	REMARK	MDL	PQL
1/12/2004 14:15	FINAL EFFLUENT	Bio-Toxicology	Bioassay-Acute-Screen-SW-Mysid, LC50	100	LC50	K		
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	1,2,4,5-Tetrachlorobenzene	0.99	ug/L	U	0.99	4
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	1,2,4-Trichlorobenzene	0.99	ug/L	U	0.99	4
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	1,2-Dichlorobenzene	0.99	ug/L	U	0.99	4
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	1,3,5-Trinitrobenzene	4	ug/L	U	4	16
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	1,3-Dichlorobenzene	0.99	ug/L	U	0.99	4
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	1,3-Dinitrobenzene	2	ug/L	U	2	7.9
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	1,4-Dichlorobenzene	0.99	ug/L	U	0.99	4
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	1,4-Naphthoquinone	20	ug/L	U	20	79
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	1-Naphthylamine	9.9	ug/L	UJ	9.9	40
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	2,3,4,6-Tetrachlorophenol	2	ug/L	U	2	7.9
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	2,4,5-Trichlorophenol	0.99	ug/L	U	0.99	4
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	2,4,6-Trichlorophenol	0.99	ug/L	U	0.99	4
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	2,4-Dichlorophenol	0.99	ug/L	U	0.99	4
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	2,4-Dimethylphenol	50	ug/L	U	50	200
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	2,4-Dinitrophenol	15	ug/L	U	15	59
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	2,4-Dinitrotoluene	0.99	ug/L	U	0.99	4
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	2,6-Dichlorophenol	0.99	ug/L	U	0.99	4
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	2,6-Dinitrotoluene	0.99	ug/L	U	0.99	4
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	2-Acetylaminofluorene	0.99	ug/L	U	0.99	4
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	2-Chloronaphthalene	0.99	ug/L	U	0.99	4
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	2-Chlorophenol	0.99	ug/L	U	0.99	4
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	2-Methyl-4,6-dinitrophenol	3	ug/L	U	3	12
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	2-Methylnaphthalene	0.99	ug/L	U	0.99	4
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	2-Naphthylamine	9.9	ug/L	UJ	9.9	40
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	2-Nitroaniline	0.99	ug/L	U	0.99	4
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	2-Nitrophenol	0.99	ug/L	U	0.99	4
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	2-Picoline	0.99	ug/L	U	0.99	4
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	3,3'-Dichlorobenzidine	40	ug/L	U	40	160
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	3,3'-Dimethylbenzidine	20	ug/L	UJ	20	79
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	3-Methylcholanthrene	0.99	ug/L	U	0.99	4
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	3-Nitroaniline	0.99	ug/L	U	0.99	4
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	4,4'-DDD	1.5	ug/L	U	1.5	5.9
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	4,4'-DDE	1.5	ug/L	U	1.5	5.9
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	4,4'-DDT	1.5	ug/L	U	1.5	5.9
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	4-Aminobiphenyl	4	ug/L	U	4	16
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	4-Bromophenyl phenyl ether	0.99	ug/L	U	0.99	4
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	4-Chloro-3-methylphenol	0.99	ug/L	U	0.99	4
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	4-Chloroaniline	0.99	ug/L	U	0.99	4
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	4-Chlorophenyl phenyl ether	2	ug/L	U	2	7.9
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	4-Nitroaniline	0.99	ug/L	U	0.99	4
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	4-Nitrophenol	15	ug/L	U	15	59
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	5-Nitro-o-toluidine	0.99	ug/L	U	0.99	4
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	7,12-Dimethylbenz(a)anthracene	0.99	ug/L	U	0.99	4
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	Acenaphthene	0.99	ug/L	U	0.99	4
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	Acenaphthylene	0.99	ug/L	U	0.99	4
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	Acetophenone	0.99	ug/L	U	0.99	4
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	Aldrin	1.5	ug/L	U	1.5	5.9
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	Aniline	0.99	ug/L	U	0.99	4
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	Anthracene	0.99	ug/L	U	0.99	4
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	Azobenzene/1,2-Diphenylhydrazine	0.99	ug/L	U	0.99	4
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	Benzidine	99	ug/L	U	99	400
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	Benzo(a)anthracene	0.99	ug/L	U	0.99	4
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	Benzo(a)pyrene	0.99	ug/L	U	0.99	4
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	Benzo(b)fluoranthene	0.99	ug/L	U	0.99	4
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	Benzo(g,h,i)perylene	0.99	ug/L	U	0.99	4
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	Benzo(k)fluoranthene	0.99	ug/L	U	0.99	4
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	Benzyl alcohol	0.99	ug/L	U	0.99	4

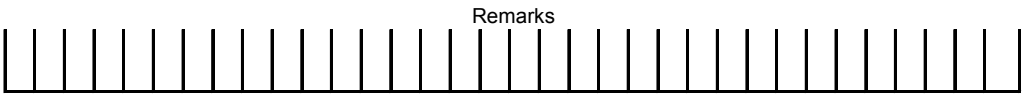
DATE SAMPLED	FIELD ID	ANALYSIS GROUP	COMPONENT	RESULT	UNITS	REMARK	MDL	PQL
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	Bis(2-chloroethoxy)methane	0.99	ug/L	U	0.99	4
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	Bis(2-chloroethyl)ether	0.99	ug/L	U	0.99	4
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	Bis(2-chloroisopropyl)ether	3	ug/L	U	3	12
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	Bis(2-ethylhexyl)phthalate	15	ug/L	U	15	59
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	Butyl benzyl phthalate	5	ug/L	U	5	20
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	Chrysene	0.99	ug/L	U	0.99	4
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	Di-n-butyl phthalate	5	ug/L	U	5	20
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	Di-n-octyl phthalate	0.99	ug/L	U	0.99	4
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	Dibenzo(a,h)anthracene	0.99	ug/L	U	0.99	4
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	Dibenzofuran	0.99	ug/L	U	0.99	4
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	Dieldrin	1.5	ug/L	U	1.5	5.9
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	Diethyl phthalate	0.99	ug/L	U	0.99	4
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	Dimethyl phthalate	50	ug/L	U	50	200
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	Dimethylaminoazobenzene	0.99	ug/L	U	0.99	4
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	Dinoseb	4	ug/L	UJ	4	16
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	Diphenylamine	3	ug/L	U	3	12
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	Endosulfan I	4	ug/L	U	4	16
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	Endosulfan II	4	ug/L	U	4	16
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	Endosulfan sulfate	1.5	ug/L	U	1.5	5.9
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	Endrin	1.5	ug/L	U	1.5	5.9
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	Endrin aldehyde	4	ug/L	U	4	16
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	Ethyl methanesulfonate	0.99	ug/L	U	0.99	4
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	Fluoranthene	0.99	ug/L	U	0.99	4
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	Fluorene	0.99	ug/L	U	0.99	4
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	Heptachlor	1.5	ug/L	U	1.5	5.9
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	Heptachlor epoxide	1.5	ug/L	U	1.5	5.9
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	Hexachlorobenzene	0.99	ug/L	U	0.99	4
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	Hexachlorobutadiene	3	ug/L	U	3	12
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	Hexachlorocyclopentadiene	3	ug/L	U	3	12
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	Hexachloroethane	3	ug/L	U	3	12
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	Hexachloropropene	2	ug/L	U	2	7.9
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	Indeno(1,2,3-cd)pyrene	0.99	ug/L	U	0.99	4
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	Isophorone	0.99	ug/L	U	0.99	4
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	Isosafrole	0.99	ug/L	U	0.99	4
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	Methapyrilene	4	ug/L	UJ	4	16
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	Methyl methanesulfonate	0.99	ug/L	UJ	0.99	4
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	N-Nitrosodi-n-butylamine	0.99	ug/L	U	0.99	4
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	N-Nitrosodi-n-propylamine	2	ug/L	U	2	7.9
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	N-Nitrosodiethylamine	0.99	ug/L	U	0.99	4
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	N-Nitrosodimethylamine	2	ug/L	U	2	7.9
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	N-Nitrosodiphenylamine	3	ug/L	UJ	3	12
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	N-Nitrosomethylethylamine	2	ug/L	U	2	7.9
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	N-Nitrosomorpholine	0.99	ug/L	U	0.99	4
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	N-Nitrosopiperidine	0.99	ug/L	U	0.99	4
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	N-Nitrosopyrrolidine	2	ug/L	U	2	7.9
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	Naphthalene	0.99	ug/L	U	0.99	4
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	Nitrobenzene	2	ug/L	U	2	7.9
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	Nitroquinoline-1-oxide	20	ug/L	UJ	20	79
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	Pentachlorobenzene	0.99	ug/L	U	0.99	4
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	Pentachloroethane	50	ug/L	U	50	200
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	Pentachloronitrobenzene	0.99	ug/L	U	0.99	4
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	Pentachlorophenol	3	ug/L	U	3	12
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	Phenacetin	4	ug/L	U	4	12
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	Phenanthrene	0.99	ug/L	U	0.99	4
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	Phenol	0.99	ug/L	U	0.99	4
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	Pyrene	0.99	ug/L	U	0.99	4
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	Pyridine	4	ug/L	UJ	4	16
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	Safrole	0.99	ug/L	U	0.99	4
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	alpha-BHC	1.5	ug/L	U	1.5	5.9

DATE SAMPLED	FIELD ID	ANALYSIS GROUP	COMPONENT	RESULT	UNITS	REMARK	MDL	PQL
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	beta-BHC	1.5	ug/L	U	1.5	5.9
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	delta-BHC	1.5	ug/L	U	1.5	5.9
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	gamma-BHC	1.5	ug/L	U	1.5	5.9
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	m,p-Cresols	2	ug/L	U	2	7.9
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	o-Cresol	2	ug/L	U	2	7.9
1/12/2004 14:15	FINAL EFFLUENT	BNA-Water	o-Toluidine	0.99	ug/L	U	0.99	4
1/12/2004 14:15	FINAL EFFLUENT	GC-Water	Alachlor	0.59	ug/L	U	0.59	2.36
1/12/2004 14:15	FINAL EFFLUENT	GC-Water	Ametryn	0.05	ug/L	U	0.05	0.2
1/12/2004 14:15	FINAL EFFLUENT	GC-Water	Atrazine	0.05	ug/L	U	0.05	0.2
1/12/2004 14:15	FINAL EFFLUENT	GC-Water	Azinphos Methyl	0.05	ug/L	U	0.05	0.2
1/12/2004 14:15	FINAL EFFLUENT	GC-Water	Bromacil	0.2	ug/L	U	0.2	0.8
1/12/2004 14:15	FINAL EFFLUENT	GC-Water	Butylate	0.2	ug/L	U	0.2	0.8
1/12/2004 14:15	FINAL EFFLUENT	GC-Water	Chlorpyrifos Ethyl	0.05	ug/L	U	0.05	0.2
1/12/2004 14:15	FINAL EFFLUENT	GC-Water	Chlorpyrifos Methyl	0.099	ug/L	U	0.099	0.396
1/12/2004 14:15	FINAL EFFLUENT	GC-Water	Diazinon	0.05	ug/L	U	0.05	0.2
1/12/2004 14:15	FINAL EFFLUENT	GC-Water	Ethion	0.05	ug/L	U	0.05	0.2
1/12/2004 14:15	FINAL EFFLUENT	GC-Water	Ethoprop	0.099	ug/L	U	0.099	0.396
1/12/2004 14:15	FINAL EFFLUENT	GC-Water	Fenamiphos	0.2	ug/L	U	0.2	0.8
1/12/2004 14:15	FINAL EFFLUENT	GC-Water	Fonofos	0.099	ug/L	U	0.099	0.396
1/12/2004 14:15	FINAL EFFLUENT	GC-Water	Hexazinone	0.099	ug/L	U	0.099	0.396
1/12/2004 14:15	FINAL EFFLUENT	GC-Water	Malathion	0.15	ug/L	U	0.15	0.6
1/12/2004 14:15	FINAL EFFLUENT	GC-Water	Metalaxyl	0.25	ug/L	U	0.25	1
1/12/2004 14:15	FINAL EFFLUENT	GC-Water	Metolachlor	0.5	ug/L	U	0.5	2
1/12/2004 14:15	FINAL EFFLUENT	GC-Water	Metribuzin	0.099	ug/L	U	0.099	0.396
1/12/2004 14:15	FINAL EFFLUENT	GC-Water	Mevinphos	0.2	ug/L	U	0.2	0.8
1/12/2004 14:15	FINAL EFFLUENT	GC-Water	Naled	0.79	ug/L	U	0.79	3.16
1/12/2004 14:15	FINAL EFFLUENT	GC-Water	Norflurazon	0.099	ug/L	U	0.099	0.396
1/12/2004 14:15	FINAL EFFLUENT	GC-Water	Parathion Ethyl	0.15	ug/L	U	0.15	0.6
1/12/2004 14:15	FINAL EFFLUENT	GC-Water	Parathion Methyl	0.099	ug/L	U	0.099	0.396
1/12/2004 14:15	FINAL EFFLUENT	GC-Water	Phorate	0.05	ug/L	U	0.05	0.2
1/12/2004 14:15	FINAL EFFLUENT	GC-Water	Prometryn	0.15	ug/L	U	0.15	0.6
1/12/2004 14:15	FINAL EFFLUENT	GC-Water	Simazine	0.05	ug/L	U	0.05	0.2
1/12/2004 14:15	FINAL EFFLUENT	Mercury-Water	Mercury	0.1	ug/L	U	0.1	0.4
1/12/2004 14:15	FINAL EFFLUENT	Metals-Water	Aluminum	736	ug/L		7	28
1/12/2004 14:15	FINAL EFFLUENT	Metals-Water	Arsenic	6	ug/L	U	6	24
1/12/2004 14:15	FINAL EFFLUENT	Metals-Water	Beryllium	1.3	ug/L	U	1.3	5.2
1/12/2004 14:15	FINAL EFFLUENT	Metals-Water	Cadmium	0.25	ug/L	U	0.25	1
1/12/2004 14:15	FINAL EFFLUENT	Metals-Water	Calcium	668	mg/L		0.5	2
1/12/2004 14:15	FINAL EFFLUENT	Metals-Water	Chromium	3	ug/L	U	3	12
1/12/2004 14:15	FINAL EFFLUENT	Metals-Water	Copper	26	ug/L		6	24
1/12/2004 14:15	FINAL EFFLUENT	Metals-Water	Iron	1.05E+03	ug/L		15	60
1/12/2004 14:15	FINAL EFFLUENT	Metals-Water	Lead	1.3	ug/L		0.05	0.2
1/12/2004 14:15	FINAL EFFLUENT	Metals-Water	Magnesium	161	mg/L		0.2	0.8
1/12/2004 14:15	FINAL EFFLUENT	Metals-Water	Nickel	3	ug/L	U	3	12
1/12/2004 14:15	FINAL EFFLUENT	Metals-Water	Selenium	20	ug/L	U	20	80
1/12/2004 14:15	FINAL EFFLUENT	Metals-Water	Silver	0.2	ug/L	U	0.2	0.8
1/12/2004 14:15	FINAL EFFLUENT	Metals-Water	Zinc	8.8	ug/L	I	4	16
1/12/2004 14:15	FINAL EFFLUENT	Nutrients-Liquid	Ammonia-N	0.58	mg N/L	A	0.05	0.1
1/12/2004 14:15	FINAL EFFLUENT	Nutrients-Liquid	Cyanide	0.008	mg CN/L	I	0.005	0.02
1/12/2004 14:15	FINAL EFFLUENT	Nutrients-Liquid	NO2NO3-N	0.82	mg N/L	A	0.04	0.1
1/12/2004 14:15	FINAL EFFLUENT	Nutrients-Liquid	N_KJEL_TOT	5.3	mg N/L	A	0.48	1.6
1/12/2004 14:15	FINAL EFFLUENT	Nutrients-Liquid	O-Phosphate-P	0.06	mg P/L	Q	0.008	0.02
1/12/2004 14:15	FINAL EFFLUENT	Nutrients-Liquid	Total-P	0.19	mg P/L	A	0.02	0.06
1/12/2004 14:15	FINAL EFFLUENT	Overflow	Oil and Grease	2.3	mg/l	I		

The Bioassay of Seminole Electric Cooperative, Inc. effluent sampled on January 12, 2004, NPDES #FL0036498.

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





The Priority Pollutants Analysis for Bioassay of Seminole Electric Cooperative, Inc. effluent sampled on January 12, 2004, NPDES #FL0036498.

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

