

Bioassays of

South Central Regional Wastewater Treatment Facility

Palm Beach County

NPDES #FL0035980

Sampled June 8 and 9, 2003

January 2003 Addendum January 2004

Biology Section
Bureau of Laboratories
Division of Resource Assessment and Management

Quality Manual No. 870346G
NELAC Certification No. E31780

In reference to the addendum for the South Central Regional WWTP Bioassay report dated January 2003, Broward County is incorrectly identified as the county of location for this facility. This information was incorrectly provided to us. Every mention in the report of **Broward** county should read **Palm Beach** county. Also the date on the cover page, **January 2003**, should read **January 2004**.

South Central Regional Wastewater Treatment and Disposal Board, 1801 N. Congress Avenue, Delray Beach, Broward County, Florida, NPDES #FL0035980. Effluent samples for this facility were collected on June 8 and 9, 2003.

Introduction

This wastewater treatment plant has a design flow of 24.0 MGD and an average daily flow of 26.4 MGD (January – March, 2003). Wastewater treatment consists of a complete-mix activated-sludge process, chlorination, and dechlorination. Treated effluent is discharged into the Class III marine surface waters of the Atlantic Ocean. A mixing zone exists for dissolved oxygen, copper, cyanide, and pH (facility information provided by Hubert Philoctete, FDEP, West Palm Beach).

Methods

Samples were collected from the NPDES sampling point by Terry Davis following DEP-SOP-001/01 FS 2400 Wastewater Sampling. Following the NPDES permit for this facility, four separate grab samples were collected at 6-hour intervals over a 24-hour period. These samples were not composited. The sample holding time of 36 hours began when the collection of the last sample was completed. 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_01 and TA07_02. All internal DEP SOP's are available on the web at:
http://www.floridadep.org/labs/cgi-bin/sop/biosop.asp

Toxicity Test Results

Sample 1
Americamysis bahia 96-hr acute definitive – LC50 >100% effluent – Not Toxic
Menidia beryllina 96-hr acute definitive – LC50 = 86.55% effluent - Toxic

Sample 2
Americamysis bahia 96-hr acute definitive– LC50 >100% effluent – Not Toxic
Menidia beryllina 96-hr acute definitive – LC50 >100% effluent – Not Toxic

Sample 3
Americamysis bahia 96-hr acute definitive– LC50 >100% effluent – Not Toxic
Menidia beryllina 96-hr acute definitive – LC50 = 81.43% effluent - Toxic

Sample 4
Americamysis bahia 96-hr acute definitive –LC50 >100% effluent – Not Toxic
Menidia beryllina 96-hr acute definitive–LC50 = 88.16% effluent - Toxic

See Tables 1a through 4c for bioassay bench sheets.

Chemistry Results

Total residual chlorine and total ammonia were detected in all four of the bioassay samples in the laboratory as follows:

Sample 1 - total ammonia- 19.3 mg/L, unionized ammonia- 1.010 mg/L, total residual chlorine-0.22 mg/L.

Sample 2 - total ammonia- 21.7 mg/L, unionized ammonia- 0.738 mg/L, total residual chlorine-1.87 mg/L.

Sample 3 - total ammonia- 23.2 mg/L, unionized ammonia- 0.993 mg/L, total residual chlorine- 1.66 mg/L.

Sample 4 - total ammonia- 21.5 mg/L, unionized ammonia- 0.946 mg/L, total residual chlorine- 1.46 mg/L.

See Table 5 for chemicals detected in the analytical chemistry samples.
See Table 6 for a complete list of chemical analyses performed.

Algal Growth Potential

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 effluent AGP was 132 mg dry wt/L of *Pseudokirchneriella subcapitata*, formerly known as *Selenastrum capricornutum*.

Conclusion

Effluent samples #1, #3 and #4 collected from this facility on June 8 and 9, 2003, showed acute toxicity to *Menidia beryllina* during the 96-hour bioassay tests. The toxicity is attributed primarily to the unionized ammonia concentrations in the samples. The unionized ammonia concentrations in the samples generally exceeded the concentrations reported to have produced 48 hour LC_{50}'s in *Americamysis bahia* (~1.0 mg/L) and *Menidia beryllina* (~0.9 mg/L) (D.C. Miller *et al*, 1990, The *Acute and Chronic Toxicity of Ammonia to Marine Fish and Invertebrates*, Archives of Environmental Contamination and Toxicology 19: 40–48). However, unidentified constituents in the sample cannot be ruled out as contributing to the observed mortality. The effluent AGP result exceeded the "problem" threshold for fresh receiving waters.

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.

Miller, D.C., S. Poucher, J.A. Cardin, and D. Hansen. 1990. The Acute and Chronic Toxicity of Ammonia to Marine Fish and Invertebrates. *Archives of Environmental Contamination and Toxicology* 19: 40-48

Table 1a. Data recorded during the 96-hour acute bioassays of a sample of effluent from South Central Regional Wastewater Treatment and Disposal Board (Sample #1), 1801 N. Congress Ave., Delray Beach, Broward County, Florida, NPDES# FL0035980, performed from 10 to 14 June 2003.

Facility:	**South Central Regional WWTP (sample #1)**		**NPDES#:**	**FL0035980**	Facility Type:	**WWTP**	**Analysts:**	Jacquelyn Brynda
Location:	1801 N. Congress Ave., Delray Beach		Contact/District:	Philoctete/ SE				Joshua Ayres
County:	Broward		Test type:	acute definitive renewal				James Daniels
Sample Collection Date:	6/8/2003	Time: 1510	# tests:	8	Receiving Water:	Atlantic Ocean		Christa Pierini
Test Beginning Date:	6/10/2003	Time: 1600	Chlorination Type:	dechlorinated		Class III Marine		Travis Hill
Test Ending Date:	6/14/2003	Time: 1400	FDEP SOP#:	TA07_03		**Page 1 of 3**	**Reviewer:**	Rob Buda

Organism: ***Americamysis bahia*** Life stage: 5 days [A]Feeding: artemia
Chamber size: 400mL Food Batch #: 01940425G

Concentrations	Sample/Diluent Volume(mL)	SURVIVAL # Alive 0 hr	24 hr	48 hr	pH 0 hour	24 hour	48 hour	Temperature[B] 0 hour	24 hour	48 hour	Dissolved Oxygen[C] 0 hour	24 hour	48 hour	Conductivity Uncorrected mmhos/cm 0 hour	48 hour
Control A	0/200	5	5	5	8.4	-	-	25.1	-	-	6.7	-	-	32.0	-
Control B	0/200	5	5	5	-	8.3	-	-	24.7	-	-	6.3	-	-	-
Control C	0/200	5	5	5	-	-	8.1	-	-	23.0	-	-	5.8	-	30.7
Control D	0/200	5	5	5	-	-	-	-	-	-	-	-	-	-	-
Salt Cntl A	0/200	5	5	5	8.4	-	-	24.9	-	-	6.8	-	-	31.8	-
Salt Cntl B	0/200	5	5	5	-	8.2	-	-	24.6	-	-	6.2	-	-	-
Salt Cntl C	0/200	5	5	5	-	-	7.9	-	-	23.0	-	-	5.5	-	30.9
Salt Cntl D	0/200	5	5	5	-	-	-	-	-	-	-	-	-	-	-
6.25% A	12.5/187.5	5	4	4	8.4	-	-	25.3	-	-	6.9	-	-	31.2	-
6.25% B	12.5/187.5	5	5	5	-	8.2	-	-	24.8	-	-	5.9	-	-	-
6.25% C	12.5/187.5	5	5	5	-	-	8.0	-	-	22.9	-	-	5.6	-	31.2
6.25% D	12.5/187.5	5	5	5	-	-	-	-	-	-	-	-	-	-	-
12.5% A	25/175	5	5	5	8.3	-	-	25.3	-	-	6.8	-	-	31.9	-
12.5% B	25/175	5	5	5	-	8.2	-	-	24.7	-	-	5.9	-	-	-
12.5% C	25/175	5	5	5	-	-	8.0	-	-	22.8	-	-	5.6	-	31.7
12.5%D	25/175	5	3	3	-	-	-	-	-	-	-	-	-	-	-
30% A	60/140	5	5	5	8.1	-	-	25.3	-	-	6.8	-	-	32.0	-
30% B	60/140	5	5	4	-	8.2	-	-	24.5	-	-	5.8	-	-	-
30% C	60/140	5	5	4	-	-	8.0	-	-	22.8	-	-	5.5	-	30.8
30% D	60/140	5	5	5	-	-	-	-	-	-	-	-	-	-	-
50% A	100/100	5	5	5	8.1	-	-	25.2	-	-	6.8	-	-	31.7	-
50% B	100/100	5	5	5	-	8.1	-	-	24.7	-	-	5.8	-	-	-
50% C	100/100	5	5	5	-	-	8.0	-	-	22.8	-	-	5.3	-	32.5
50% D	100/100	5	5	5	-	-	-	-	-	-	-	-	-	-	-
100% A	200/0	5	4	4	7.8	-	-	25.0	-	-	6.7	-	-	31.6	-
100% B	200/0	5	4	4	-	8.1	-	-	24.7	-	-	5.5	-	-	-
100% C	200/0	5	5	5	-	-	8.0	-	-	22.9	-	-	5.1	-	32.4
100% D	200/0	5	4	3	-	-	-	-	-	-	-	-	-	-	-

[A] Organisms fed daily.

[B] Temperatures of room and test incubator were continuously recorded on a strip chart recorder.
Room Temperature range for the test period was 25.0-26.0°C.
Incubator #3 temperature range for the test period was 23.5-25.0°C.

[C] Sample was aerated to increase the initial D.O. above 5.4 mg/L.

LIMS	
Job number:	TLH-2003-06-10-35-01
sample number:	680825

Data Transcription Verification	
date:	8/18/2003
by:	James Daniels / Cathy Oaks

Total Residual CL2	mg/L	Method
Field:	-	-
Lab:	0.22[D]	Hach

Ammonia	**Total (mg/L)**	**Unionized (mg/L)**
Control water:	<0.017	<0.017
100% Sample:	19.300	1.010

Alk & Hardness	**Alkalinity (mg/L)**	**Hardness (mg/L)**
Control water:	215	-
100% Sample:	285	-

Salinity[E]	ppt
Menidia control:	20
100% sample:	<1

[D] Sample was dechlorinated using sodium thiosulfate.

[E] Salinity based on conductivity and temperature.
Sample was salted to 20ppt using 40 fathoms artificial sea salts.

Light Intensity during the test was 50-100 foot candles.
Photoperiod during the test was 16 hours of light : 8 hours of dark.

Table 1b. Data recorded during the 96-hour acute bioassays of a sample of effluent from South Central Regional Wastewater Treatment and Disposal Board (Sample #1), 1801 N. Congress Ave., Delray Beach, Broward County, Florida, NPDES# FL0035980, performed from 10 to 14 June 2003.

Facility:	**South Central Regional WWTP (sample #1)**	**NPDES#:**	**FL0035980**	Facility Type:	**WWTP**	**Analysts:**	Jacquelyn Brynda
Location:	1801 N. Congress Ave., Delray Beach	Contact/District:	Philoctete/ SE				Joshua Ayres
County:	Broward	Test type:	acute definitive renewal				James Daniels
Sample Collection Date:	6/8/2003 Time: 1510	# tests:	8	Receiving Water:	Atlantic Ocean		Christa Pierini
Test Beginning Date:	6/10/2003 Time: 1600	Chlorination Type:	dechlorinated		Class III Marine		Travis Hill
Test Ending Date:	6/14/2003 Time: 1400	FDEP SOP#:	TA07_03		**Page 2 of 3**	**Reviewer:**	Rob Buda

Organism: ***Americamysis bahia*** (After Renewals)

Concentrations	Sample/Diluent Volume(mL)	SURVIVAL # Alive 48 hr	72 hr	96 hr	pH 48 hour	72 hour	96 hour	Temperature[A] 48 hour	72 hour	96 hour	Dissolved Oxygen[B] 48 hour	72 hour	96 hour	Conductivity Uncorrected mmhos/cm 48 hour	96 hour
Control A	0/200	5	5	5	-	-	8.1	-	-	25.1	-	-	5.3	-	35.0
Control B	0/200	5	5	5	-	-	-	-	-	-	-	-	-	-	-
Control C	0/200	5	5	5	8.4	-	-	23.9	-	-	6.2	-	-	32.2	-
Control D	0/200	5	5	5	-	8.1	-	-	24.8	-	-	4.4	-	-	-
Salt Cntl A	0/200	5	5	5	-	-	7.9	-	-	25.3	-	-	5.3	-	34.3
Salt Cntl B	0/200	5	5	5	-	-	-	-	-	-	-	-	-	-	-
Salt Cntl C	0/200	5	5	5	8.4	-	-	23.7	-	-	6.6	-	-	31.4	-
Salt Cntl D	0/200	5	5	5	-	8.1	-	-	24.9	-	-	4.2	-	-	-
6.25% A	12.5/187.5	4	4	4	-	-	8.2	-	-	25.5	-	-	5.8	-	36.8
6.25% B	12.5/187.5	5	4	4	-	-	-	-	-	-	-	-	-	-	-
6.25% C	12.5/187.5	5	5	5	8.3	-	-	23.8	-	-	6.7	-	-	32.6	-
6.25% D	12.5/187.5	5	5	5	-	8.0	-	-	24.7	-	-	4.4	-	-	-
12.5% A	25/175	5	5	5	-	-	8.1	-	-	25.2	-	-	5.5	-	35.5
12.5% B	25/175	5	5	5	-	-	-	-	-	-	-	-	-	-	-
12.5% C	25/175	5	5	5	8.3	-	-	23.9	-	-	6.8	-	-	32.6	-
12.5%D	25/175	3	3	3	-	8.1	-	-	25.3	-	-	4.4	-	-	-
30% A	60/140	5	5	5	-	-	8.1	-	-	25.1	-	-	4.3	-	35.6
30% B	60/140	4	4	4	-	-	-	-	-	-	-	-	-	-	-
30% C	60/140	4	4	4	8.2	-	-	24.1	-	-	6.8	-	-	32.4	-
30% D	60/140	5	5	5	-	8.1	-	-	25.4	-	-	4.4	-	-	-
50% A	100/100	5	5	5	-	-	8.1	-	-	25.1	-	-	4.7	-	34.4
50% B	100/100	5	5	5	-	-	-	-	-	-	-	-	-	-	-
50% C	100/100	5	5	5	8.1	-	-	24.3	-	-	6.9	-	-	31.9	-
50% D	100/100	5	5	5	-	8.1	-	-	24.7	-	-	4.4	-	-	-
100% A	200/0	4	4	4	-	-	-	-	-	25.3	-	-	5.2	-	32.8
100% B	200/0	4	3	3	-	-	-	-	-	-	-	-	-	-	-
100% C	200/0	5	4	4	7.8	-	-	24.8	-	-	7.2	-	-	30.6	-
100% D	200/0	4	4	3	-	8.0	-	-	25.3	-	-	4.8	-	-	-

[A] Temperatures of room and test incubator were continuously recorded on a strip chart recorder.
Room Temperature range for the test period was 25.0-26.0°C.
Incubator #3 temperature range for the test period was 23.5-25.0°C.

[B] Sample was aerated to increase the initial D.O. above 5.4 mg/L.

LIMS

Job number: TLH-2003-06-10-35-01
sample number: 680825

Data Transcription Verification

date: 8/18/2003
by: James Daniels / Oaks

Total Residual CL2	mg/L	Method
Field:	-	-
Lab:	0.22[C]	Hach

Ammonia	Total (mg/L)	Unionized (mg/L)
Control water:	<0.017	<0.017
100% Sample:	19.300	1.010

Alk & Hardness	Alkalinity (mg/L)	Hardness (mg/L)
Control water:	215	-
100% Sample:	285	-

Salinity [D]	ppt
Menidia control:	20
100% sample:	<1

[C] Sample was dechlorinated using sodium thiosulfate.

[D] Salinity based on conductivity and temperature.

Sample was salted to 20ppt using 40 fathoms artificial sea salts.
Light Intensity during the test was 50-100 foot candles.
Photoperiod during the test was 16 hours of light : 8 hours of dark.

Table 1c. Concluded

Data recorded during the 96-hour acute bioassays of a sample of effluent from South Central Regional Wastewater Treatment and Disposal Board (Sample #1), 1801 N. Congress Avenue, Delray Beach, Broward County, Florida, NPDES# FL0035980, performed from 10 to 14 June 2003.

Facility:	**South Central Regional WWTP, Sample #1**	**NPDES#:**	**FL0035980**	Facility Type:	**WWTP**	**Analysts:**	Jacquelyn Brynda
Location:	1801 N. Congress Ave., Delray Beach	Contact/District:	Philoctete/SE				Joshua Ayres
County:	Broward	Test type:	acute definitive renewal				James Daniels
Sample Collection Date:	6/8/2003 Time: 1510	# tests:	8	Receiving Water:	Atlantic Ocean		Travis Hill
Test Beginning Date:	6/10/2003 Time: 1600	Chlorination Type:	dechlorinated		Class III Marine		Christa Pierini
Test Ending Date:	6/14/2003 Time: 1400	FDEP SOP#:	TA07_04		**Page 3 of 3**	**Reviewer:**	Rob Buda

Organism: ***Menidia beryllina*** Life stage: 14days [A]Feeding: artemia
Chamber size: 1L Food Batch #: 01940425G

Concentrations	Sample/Diluent Volume(mL)	SURVIVAL # Alive 0 hr	24 hr	48 hr	pH 0 hour	24 hour	48 hour	Temperature[B] 0 hour	24 hour	48 hour	Dissolved Oxygen[C] 0 hour	24 hour	48 hour	Conductivity Uncorrected mmhos/cm 0 hour	48 hour
Control A	0/400	10	10	9	8.4	8.3	8.2	25.5	23.6	23.0	6.5	5.7	5.6	32.6	31.4
Control B	0/400	10	10	10	8.4	8.3	8.2	25.4	23.7	23.0	6.6	5.8	5.6	33.1	31.8
Salt Cntl A	0/400	10	10	10	8.4	8.1	7.9	25.3	23.6	22.1	6.7	5.6	5.8	32.0	30.9
Salt Cntl B	0/400	10	10	10	8.4	8.1	7.9	25.2	23.3	22.7	6.8	5.5	5.8	31.8	30.6
6.25% A	25/375	10	10	10	8.4	8.2	8.1	25.1	23.3	22.7	6.8	5.7	5.7	31.2	30.2
6.25% B	25/375	10	10	10	8.4	8.2	8.1	25.1	23.3	21.8	6.7	5.8	5.6	31.1	30.1
12.5% A	50/350	10	10	10	8.3	8.2	8.1	25.3	23.1	22.6	6.7	6.0	5.8	32.0	30.8
12.5% B	50/350	10	10	10	8.3	8.2	8.1	25.1	22.9	22.2	6.7	5.9	5.7	32.2	31.0
30% A	120/280	10	10	10	8.1	8.1	8.1	25.1	22.6	22.4	6.7	6.2	5.7	31.9	31.5
30% B	120/280	10	10	10	8.1	8.1	8.1	25.1	23.0	22.6	6.7	6.2	5.7	31.9	31.4
50% A	200/200	10	10	10	8.1	8.1	8.1	25.2	22.9	22.8	6.7	6.1	5.7	32.1	30.6
50% B	200/200	10	9	9	8.1	8.1	8.1	25.1	23.3	22.8	6.7	6.1	5.6	32.0	30.5
100% A	400/0	10	10	4	7.9	8.1	8.2	25.2	23.5	23.0	6.8	6.1	5.7	31.7	30.2
100% B	400/0	10	10	4	7.9	8.1	8.2	24.9	23.4	22.8	6.8	6.0	5.6	31.4	30.3

Organism: ***Menidia beryllina*** (After Renewal)

Concentrations	Sample/Diluent Volume(mL)	SURVIVAL # Alive 48 hr	72 hr	96 hr	pH 48 hour	72 hour	96 hour	Temperature[B] 48 hour	72 hour	96 hour	Dissolved Oxygen[C] 48 hour	72 hour	96 hour	Conductivity Uncorrected mmhos/cm 48 hour	96 hour
Control A	0/400	9	9	9	8.3	8.2	8.2	23.9	24.9	24.6	5.8	4.7	6.2	30.1	34.0
Control B	0/400	10	10	10	8.3	8.2	8.2	23.8	24.6	24.6	5.9	4.9	5.9	32.4	34.6
Salt Cntl A	0/400	10	10	10	8.4	8.0	7.9	23.7	24.4	24.7	6.5	4.7	5.6	31.1	33.1
Salt Cntl B	0/400	10	10	10	8.4	8.0	7.9	23.4	24.2	24.6	6.7	4.6	5.6	30.7	32.6
6.25% A	25/375	10	10	10	8.3	8.3	8.2	23.8	24.5	24.7	7.3	4.4	5.6	32.7	34.3
6.25% B	25/375	10	10	10	8.3	8.3	8.2	23.7	24.4	24.4	7.3	4.4	5.7	32.3	34.2
12.5% A	50/350	10	10	10	8.3	8.2	8.2	23.8	24.2	24.6	6.5	4.6	5.9	32.8	34.2
12.5% B	50/350	10	10	10	8.3	8.2	8.2	23.8	25.1	24.5	6.5	4.7	5.9	32.6	34.1
30% A	120/280	10	10	10	8.2	8.1	8.2	23.8	24.6	24.5	6.6	4.6	5.7	32.6	34.2
30% B	120/280	10	10	10	8.2	8.1	8.2	23.8	24.4	24.3	6.7	4.5	5.9	32.1	34.2
50% A	200/200	10	9	9	8.1	8.1	8.1	23.9	24.8	24.8	6.7	4.4	5.8	31.8	33.3
50% B	200/200	9	8	8	8.1	8.1	8.1	24.0	24.7	24.6	6.7	4.4	5.7	31.3	33.2
100% A	400/0	4	4	4	7.8	8.0	8.2	24.0	25.3	24.6	6.6	4.5	5.9	30.5	31.5
100% B	400/0	4	4	4	7.8	8.0	8.2	24.2	24.7	24.6	6.7	4.5	5.9	30.3	31.7

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-2003-06-10-35-01
sample number: 680825

Data Transcription Verification

date: 8/18/2003
by: James Daniels / Cathy Oaks

Total Residual CL2	mg/L	Method
Field:	-	-
Lab:	0.22[D]	Hach

Ammonia	Total (mg/L)	Unionized (mg/L)
Control water:	<0.017	<0.017
100% Sample:	19.300	1.010

Alk & Hardness	Alkalinity (mg/L)	Hardness (mg/L)
Control water:	215	-
100% Sample:	285	-

Salinity [E]	ppt
Menidia control:	20
100% sample:	<1

[A] Organisms fed prior to loading and prior to renewal.

[B] Temperatures of room and test incubator were continuously recorded on a strip chart recorder.
Room Temperature range for the test period was 25.0-26.0°C.

Incubator #1 temperature range for the test period was 25.0-26.0°C.

[C] Sample was aerated to increase the initial D.O. above 5.4 mg/L.

[D] Sample was dechlorinated using sodium thiosulfate.

[E] Salinity based on conductivity and temperature.
Sample was salted to 20ppt using 40 fathoms artificial sea salts.

Table 2a. Data recorded during the 96-hour acute bioassays of a sample of effluent from South Central Regional Wastewater Treatment and Disposal Board (Sample #2), 1801 N. Congress Ave., Delray Beach, Broward County, Florida, NPDES# FL0035980, performed from 10 to 14 June 2003.

Facility:	**South Central Regional WWTP (sample #2)**		**NPDES#:**	**FL0035980**	Facility Type:	**WWTP**		**Analysts:**	Jacquelyn Brynda
Location:	1801 N. Congress Ave., Delray Beach		Contact/District:	Philoctete/ SE					Joshua Ayres
County:	Broward		Test type:	acute definitive renewal					James Daniels
Sample Collection Date:	6/8/2003	Time: 2100	# tests:	8	Receiving Water:	Atlantic Ocean			Christa Pierini
Test Beginning Date:	6/10/2003	Time: 1615	Chlorination Type:	dechlorinated		Class III Marine			Travis Hill
Test Ending Date:	6/14/2003	Time: 1400	FDEP SOP#:	TA07_03		**Page 1 of 3**		**Reviewer:**	Rob Buda

Organism: ***Americamysis bahia*** Life stage: 5 days [A]Feeding: artemia

Chamber size: 400mL Food Batch #: 01940425G

	Sample/Diluent	SURVIVAL # Alive			pH			Temperature[B]			Dissolved Oxygen			Conductivity Uncorrected mmhos/cm	
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	0/200	5	5	5	8.4	-	-	25.0	-	-	6.8	-	-	32.4	-
Control B	0/200	5	5	5	-	8.2	-	-	24.6	-	-	5.5	-	-	-
Control C	0/200	5	5	5	-	-	8.1	-	-	23.2	-	-	4.7	-	31.3
Control D	0/200	5	5	4	-	-	-	-	-	-	-	-	-	-	-
6.25% A	12.5/187.5	5	5	5	8.4	-	-	25.1	-	-	6.8	-	-	32.0	-
6.25% B	12.5/187.5	5	5	5	-	8.2	-	-	24.8	-	-	5.5	-	-	-
6.25% C	12.5/187.5	5	5	5	-	-	8.0	-	-	23.1	-	-	4.7	-	33.0
6.25% D	12.5/187.5	5	4	4	-	-	-	-	-	-	-	-	-	-	-
12.5% A	25/175	5	5	5	8.3	-	-	25.1	-	-	6.8	-	-	32.2	-
12.5% B	25/175	5	5	5	-	8.2	-	-	25.1	-	-	5.4	-	-	-
12.5% C	25/175	5	5	4	-	-	8.1	-	-	23.1	-	-	5.1	-	33.5
12.5%D	25/175	5	5	4	-	-	-	-	-	-	-	-	-	-	-
30% A	60/140	5	5	5	8.2	-	-	25.1	-	-	6.8	-	-	32.7	-
30% B	60/140	5	5	5	-	8.1	-	-	24.7	-	-	5.4	-	-	-
30% C	60/140	5	4	4	-	-	8.0	-	-	22.9	-	-	5.4	-	32.8
30% D	60/140	5	3	3	-	-	-	-	-	-	-	-	-	-	-
50% A	100/100	5	4	4	8.0	-	-	25.0	-	-	6.8	-	-	32.0	-
50% B	100/100	5	2	2	-	8.1	-	-	24.7	-	-	5.3	-	-	-
50% C	100/100	5	5	5	-	-	8.0	-	-	23.1	-	-	5.5	-	33.8
50% D	100/100	5	4	4	-	-	-	-	-	-	-	-	-	-	-
100% A	200/0	5	4	4	7.7	-	-	25.1	-	-	6.8	-	-	33.0	-
100% B	200/0	5	3	3	-	8.0	-	-	25.1	-	-	5.1	-	-	-
100% C	200/0	5	5	5	-	-	8.1	-	-	23.4	-	-	5.5	-	34.0
100% D	200/0	5	3	3	-	-	-	-	-	-	-	-	-	-	-

[A] Organisms fed daily.

[B] Temperatures of room and test incubator were continuously recorded on a strip chart recorder.
Room Temperature range for the test period was 25.0-26.0°C.
Incubator #3 temperature range for the test period was 23.5-25.0°C.

LIMS	
Job number:	TLH-2003-06-10-35-02
sample number:	680826

Data Transcription Verification	
date:	8/18/2003
by:	James Daniels / Cathy Oaks

Total Residual CL2	mg/L	Method
Field:	-	-
Lab:	1.87[C]	Hach

Ammonia	**Total (mg/L)**	**Unionized (mg/L)**
Control water:	<0.017	<0.017
100% Sample:	21.700	0.738

Alk & Hardness	**Alkalinity (mg/L)**	**Hardness (mg/L)**
Control water:	215	-
100% Sample:	309	-

Salinity [D]	ppt
Menidia control:	20
100% sample:	<1

[C] Sample was dechlorinated using sodium thiosulfate.

[D] Salinity based on conductivity and temperature.
Sample was salted to 20ppt using 40 fathoms artificial sea salts.

[E] See sample #1 for Salt Control data.

Light Intensity during the test was 50-100 foot candles.
Photoperiod during the test was 16 hours of light : 8 hours of dark.

Table 2b. Data recorded during the 96-hour acute bioassays of a sample of effluent from South Central Regional Wastewater Treatment and Disposal Board (Sample #2), 1801 N. Congress Ave., Delray Beach, Broward County, Florida, NPDES# FL0035980, performed from 10 to 14 June 2003.

Facility:	**South Central Regional WWTP (sample #2)**		**NPDES#:**	**FL0035980**	Facility Type:	**WWTP**	**Analysts:**	Jacquelyn Brynda
Location:	1801 N. Congress Ave., Delray Beach		Contact/District:	Philoctete/ SE				Joshua Ayres
County:	Broward		Test type:	acute definitive renewal				James Daniels
Sample Collection Date:	6/8/2003	Time: 2100	# tests:	8	Receiving Water:	Atlantic Ocean		Christa Pierini
Test Beginning Date:	6/10/2003	Time: 1615	Chlorination Type:	dechlorinated		Class III Marine		Travis Hill
Test Ending Date:	6/14/2003	Time: 1400	FDEP SOP#:	TA07_03		**Page 2 of 3**	**Reviewer:**	Rob Buda

Organism: ***Americamysis bahia*** (After Renewals)

	Sample/Diluent	SURVIVAL # Alive			pH			Temperature[A]			Dissolved Oxygen			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	0/200	5	5	5	-	-	8.1	-	-	24.8	-	-	5.2	-	35.0
Control B	0/200	5	5	5	-	-	-	-	-	-	-	-	-	-	-
Control C	0/200	5	5	5	8.4	-	-	24.0	-	-	6.5	-	-	32.0	-
Control D	0/200	4	4	4	-	8.2	-	-	24.0	-	-	5.9	-	-	-
6.25% A	12.5/187.5	5	5	5	-	-	8.1	-	-	24.6	-	-	5.0	-	36.2
6.25% B	12.5/187.5	5	5	4	-	-	-	-	-	-	-	-	-	-	-
6.25% C	12.5/187.5	5	5	5	8.3	-	-	23.9	-	-	6.6	-	-	32.0	-
6.25% D	12.5/187.5	4	4	4	-	8.2	-	-	23.9	-	-	5.6	-	-	-
12.5% A	25/175	5	5	5	-	-	8.1	-	-	24.5	-	-	5.3	-	35.5
12.5% B	25/175	5	5	5	-	-	-	-	-	-	-	-	-	-	-
12.5% C	25/175	4	5	5	8.3	-	-	23.9	-	-	6.6	-	-	32.6	-
12.5%D	25/175	4	4	4	-	8.2	-	-	23.8	-	-	5.2	-	-	-
30% A	60/140	5	5	5	-	-	8.1	-	-	24.7	-	-	4.6	-	35.4
30% B	60/140	5	5	5	-	-	-	-	-	-	-	-	-	-	-
30% C	60/140	4	4	4	8.2	-	-	24.0	-	-	6.7	-	-	32.0	-
30% D	60/140	3	3	3	-	8.1	-	-	23.5	-	-	4.9	-	-	-
50% A	100/100	4	4	4	-	-	8.1	-	-	24.5	-	-	4.4	-	35.5
50% B	100/100	2	2	2	-	-	-	-	-	-	-	-	-	-	-
50% C	100/100	5	5	5	8.1	-	-	24.0	-	-	6.7	-	-	32.2	-
50% D	100/100	4	4	4	-	8.1	-	-	23.4	-	-	4.7	-	-	-
100% A	200/0	4	4	4	-	-	8.1	-	-	24.2	-	-	5.0	-	34.8
100% B	200/0	3	3	3	-	-	-	-	-	-	-	-	-	-	-
100% C	200/0	5	4	4	7.7	-	-	24.0	-	-	6.7	-	-	30.9	-
100% D	200/0	3	3	3	-	8.0	-	-	23.6	-	-	4.8	-	-	-

[A] Temperatures of room and test incubator were continuously recorded on a strip chart recorder.
Room Temperature range for the test period was 25.0-26.0°C.
Incubator #3 temperature range for the test period was 23.5-25.0°C.

LIMS	
Job number:	TLH-2003-06-10-35-02
sample number:	680826

Data Transcription Verification	
date:	8/18/2003
by:	James Daniels / Cathy Oaks

Total Residual CL2	mg/L	Method
Field:	-	-
Lab:	1.87[B]	Hach

Ammonia	**Total (mg/L)**	**Unionized (mg/L)**
Control water:	<0.017	<0.017
100% Sample:	21.700	0.738

Alk & Hardness	**Alkalinity (mg/L)**	**Hardness (mg/L)**
Control water:	215	-
100% Sample:	309	-

Salinity [C]	ppt
Menidia control:	20
100% sample:	<1

[B] Sample was dechlorinated using sodium thiosulfate.
[C] Salinity based on conductivity and temperature.
Sample was salted to 20ppt using 40 fathoms artificial sea salts.
[D] See sample #1 for Salt Control data.
Light Intensity during the test was 50-100 foot candles.
Photoperiod during the test was 16 hours of light : 8 hours of dark.

Table 2c. Concluded

Data recorded during the 96-hour acute bioassays of a sample of effluent from South Central Regional Wastewater Treatment and Disposal Board (Sample #2), 1801 N. Congress Avenue, Delray Beach, Broward County, Florida, NPDES# FL0035980, performed from 10 to 14 June 2003.

Facility:	**South Central Regional WWTP, Sample #2**	**NPDES#:**	**FL0035980**	Facility Type:	**WWTP**	**Analysts:**	Jacquelyn Brynda
Location:	1801 N. Congress Ave., Delray Beach	Contact/District:	Philoctete/SE				Joshua Ayres
County:	Broward	Test type:	acute definitive renewal				James Daniels
Sample Collection Date:	6/8/2003 Time: 2100	# tests:	8	Receiving Water:	Atlantic Ocean		Travis Hill
Test Beginning Date:	6/10/2003 Time: 1615	Chlorination Type:	dechlorinated		Class III Marine		Christa Pierini
Test Ending Date:	6/14/2003 Time: 1400	FDEP SOP#:	TA07_04		**Page 3 of 3**	**Reviewer:**	Rob Buda

Organism: ***Menidia beryllina*** Life stage: 14 days [A]Feeding: artemia Conductivity Uncorrected

Chamber size: 1L Food Batch #: 01940425G

	Sample/Diluent	SURVIVAL # Alive			pH			Temperature[B]			Dissolved Oxygen			mmhos/cm	
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	0/400	10	10	10	8.4	8.3	8.2	25.3	23.4	23.1	6.7	5.7	6.1	32.5	31.8
Control B	0/400	10	10	10	8.4	8.3	8.2	25.3	23.6	23.0	6.7	5.7	5.7	33.0	32.6
6.25% A	25/375	10	10	10	8.4	8.2	8.2	25.2	23.5	22.6	6.8	5.8	5.6	32.5	31.1
6.25% B	25/375	10	10	10	8.4	8.2	8.2	25.2	23.3	22.8	6.8	5.8	5.7	32.1	31.2
12.5% A	50/350	10	10	10	8.3	8.2	8.1	25.3	23.2	22.9	6.7	5.9	5.7	32.5	31.7
12.5% B	50/350	10	10	10	8.3	8.2	8.1	25.2	23.2	22.9	6.7	5.9	5.6	32.5	31.7
30% A	120/280	10	10	9	8.2	8.1	8.1	25.3	23.3	22.8	6.7	5.9	5.5	32.7	31.8
30% B	120/280	10	10	10	8.2	8.1	8.1	25.2	23.1	23.0	6.7	5.8	5.4	32.7	30.8
50% A	200/200	10	10	10	8.0	8.1	8.1	25.1	23.2	22.7	6.7	5.9	5.3	32.4	31.5
50% B	200/200	10	10	10	8.0	8.1	8.1	25.1	23.0	22.4	6.8	5.9	5.4	32.7	31.7
100% A	400/0	10	8	6	7.7	8.1	8.1	25.2	23.7	21.8	6.8	5.8	5.5	33.7	32.3
100% B	400/0	10	10	9	7.7	8.0	8.1	25.1	23.3	22.2	6.8	5.7	5.5	33.5	32.3

Organism: ***Menidia beryllina*** (After Renewal) Conductivity Uncorrected

	Sample/Diluent	SURVIVAL # Alive			pH			Temperature[B]			Dissolved Oxygen			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	0/400	10	10	10	8.4	8.3	8.2	23.8	24.2	25.0	6.7	6.2	6.2	31.9	34.5
Control B	0/400	10	10	10	8.4	8.3	8.2	23.8	24.2	24.6	6.5	5.1	6.0	33.4	34.7
6.25% A	25/375	10	10	10	8.4	8.2	8.2	23.8	24.6	24.7	6.6	4.8	5.6	33.3	34.3
6.25% B	25/375	10	10	10	8.4	8.2	8.2	23.8	24.2	24.7	6.6	4.5	5.6	33.3	34.5
12.5% A	50/350	10	10	10	8.3	8.2	8.1	23.8	24.1	24.6	6.6	4.2	5.5	33.1	34.1
12.5% B	50/350	10	10	10	8.3	8.2	8.1	23.8	24.0	24.8	6.6	4.2	5.1	32.7	34.3
30% A	120/280	9	9	9	8.2	8.1	8	23.8	24.0	24.7	6.5	4.2	3.6	33.0	34.1
30% B	120/280	10	10	9	8.2	8.1	8	23.9	24.1	24.9	6.6	4.0	3.5	32.9	34.1
50% A	200/200	10	10	10	8.1	8.0	8	23.9	24.0	24.9	6.5	4.1	3.5	32.8	34.0
50% B	200/200	10	10	10	8.1	8.0	8	23.9	23.8	24.9	6.5	4.3	3.5	32.7	34.1
100% A	400/0	6	6	5	7.7	7.9	8	23.9	23.9	24.5	6.3	4.6	4.1	29.8	33.7
100% B	400/0	9	9	6	7.7	7.9	8	24.1	24.1	25	6.4	4.7	4.3	30.5	33.4

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-2003-06-10-35-02

sample number: 680826

Data Transcription Verification

date: 8/18/2003

by: James Daniels / Cathy Oaks

Total Residual CL2	mg/L	Method
Field:	-	-
Lab:	1.87[C]	Hach

Ammonia	Total (mg/L)	Unionized (mg/L)
Control water:	<0.017	<0.017
100% Sample:	21.700	0.738

Alk & Hardness	Alkalinity (mg/L)	Hardness (mg/L)
Control water:	215	-
100% Sample:	309	-

Salinity [D]	ppt
Menidia control:	20
100% sample:	<1

[A] Organisms fed prior to loading and prior to renewal.

[B] Temperatures of room and test incubator were continuously recorded on a strip chart recorder.

Room Temperature range for the test period was 25.0-26.0°C.

Incubator #1 temperature range for the test period was 25.0-26.0°C.

[C] Sample was dechlorinated using sodium thiosulfate.

[D] Salinity based on conductivity and temperature.

Sample was salted to 20ppt using 40 fathoms artificial sea salts.

[E] See sample #1 for Salt Control data.

Table 3a. Data recorded during the 96-hour acute bioassays of a sample of effluent from South Central Regional Wastewater Treatment and Disposal Board (Sample #3), 1801 N. Congress Ave., Delray Beach, Broward County, Florida, NPDES# FL0035980, performed from 10 to 14 June 2003.

Facility:	**South Central Regional WWTP (sample #3)**	**NPDES#:**	**FL0035980**	Facility Type:	**WWTP**	**Analysts:**	Jacquelyn Brynda
Location:	1801 N. Congress Ave., Delray Beach	Contact/District:	Philoctete/ SE				Joshua Ayres
County:	Broward	Test type:	acute definitive renewal				James Daniels
Sample Collection Date:	6/9/2003 Time: 0300	# tests:	8	Receiving Water:	Atlantic Ocean		Christa Pierini
Test Beginning Date:	6/10/2003 Time: 1630	Chlorination Type:	dechlorinated		Class III Marine		Travis Hill
Test Ending Date:	6/14/2003 Time: 1400	FDEP SOP#:	TA07_03		**Page 1 of 3**	**Reviewer:**	Rob Buda

Organism: ***Americamysis bahia*** Life stage: 5 days [A]Feeding: artemia
Chamber size: 400mL Food Batch #: 01940425G

Concentrations	Sample/Diluent Volume(mL)	SURVIVAL # Alive 0 hr	24 hr	48 hr	pH 0 hour	24 hour	48 hour	Temperature[B] 0 hour	24 hour	48 hour	Dissolved Oxygen[C] 0 hour	24 hour	48 hour	Conductivity Uncorrected mmhos/cm 0 hour	48 hour
Control A	0/200	5	5	5	8.4	-	-	24.9	-	-	6.8	-	-	31.5	-
Control B	0/200	5	5	5	-	8.1	-	-	24.5	-	-	5.3	-	-	-
Control C	0/200	5	5	5	-	-	8.0	-	-	23.4	-	-	5.2	-	29.5
Control D	0/200	5	5	5	-	-	-	-	-	-	-	-	-	-	-
6.25% A	12.5/187.5	5	5	5	8.4	-	-	25.2	-	-	6.8	-	-	32.0	-
6.25% B	12.5/187.5	5	5	5	-	8.2	-	-	24.4	-	-	5.4	-	-	-
6.25% C	12.5/187.5	5	5	5	-	-	8.1	-	-	23.4	-	-	5.1	-	31.5
6.25% D	12.5/187.5	5	5	5	-	-	-	-	-	-	-	-	-	-	-
12.5% A	25/175	5	5	5	8.3	-	-	25.2	-	-	6.8	-	-	31.8	-
12.5% B	25/175	5	5	5	-	8.1	-	-	23.7	-	-	5.7	-	-	-
12.5% C	25/175	5	5	5	-	-	8.1	-	-	23.5	-	-	5.0	-	31.6
12.5%D	25/175	5	5	5	-	-	-	-	-	-	-	-	-	-	-
30% A	60/140	5	5	5	8.2	-	-	25.1	-	-	6.8	-	-	31.7	-
30% B	60/140	5	5	5	-	8.1	-	-	24.1	-	-	5.8	-	-	-
30% C	60/140	5	5	5	-	-	8.1	-	-	23.5	-	-	5.0	-	32.2
30% D	60/140	5	5	5	-	-	-	-	-	-	-	-	-	-	-
50% A	100/100	5	4	4	8.1	-	-	25.2	-	-	6.9	-	-	31.9	-
50% B	100/100	5	5	5	-	8.1	-	-	24.3	-	-	5.7	-	-	-
50% C	100/100	5	4	4	-	-	8.1	-	-	23.6	-	-	4.9	-	32.7
50% D	100/100	5	5	5	-	-	-	-	-	-	-	-	-	-	-
100% A	200/0	5	4	4	7.9	-	-	25.1	-	-	6.9	-	-	31.6	-
100% B	200/0	5	5	4	-	8.1	-	-	24.8	-	-	5.6	-	-	-
100% C	200/0	5	5	5	-	-	8.1	-	-	23.3	-	-	4.9	-	32.2
100% D	200/0	5	5	5	-	-	-	-	-	-	-	-	-	-	-

[A] Organisms fed daily.

[B] Temperatures of room and test incubator were continuously recorded on a strip chart recorder.
Room Temperature range for the test period was 25.0-26.0°C.
Incubator #3 temperature range for the test period was 23.5-25.0°C.

[C] Sample was aerated to decrease the initial D.O. below 9.7 mg/L.

LIMS

Job number: TLH-2003-06-10-35-03
sample number: 680827

Data Transcription Verification

date: 8/18/2003
by: James Daniels / Cathy Oaks

Total Residual CL2	mg/L	Method
Field:	-	-
Lab:	1.66[D]	Hach

Ammonia	Total (mg/L)	Unionized (mg/L)
Control water:	<0.017	<0.017
100% Sample:	23.200	0.993

Alk & Hardness	Alkalinity (mg/L)	Hardness (mg/L)
Control water:	215	-
100% Sample:	305	-

Salinity [E]	ppt
Menidia control:	20
100% sample:	<1

[D] Sample was dechlorinated using sodium thiosulfate.

[E] Salinity based on conductivity and temperature.

[F] See sample #1 for Salt Control data.

Sample was salted to 20ppt using 40 fathoms artificial sea salts.
Light Intensity during the test was 50-100 foot candles.
Photoperiod during the test was 16 hours of light : 8 hours of dark.

Table 3b. Data recorded during the 96-hour acute bioassays of a sample of effluent from South Central Regional Wastewater Treatment and Disposal Board (Sample #3), 1801 N. Congress Ave., Delray Beach, Broward County, Florida, NPDES# FL0035980, performed from 10 to 14 June 2003.

Facility:	**South Central Regional WWTP (sample #3)**	**NPDES#:**	**FL0035980**	Facility Type:	**WWTP**	**Analysts:**	Jacquelyn Brynda
Location:	1801 N. Congress Ave., Delray Beach	Contact/District:	Philoctete/ SE				Joshua Ayres
County:	Broward	Test type:	acute definitive renewal				James Daniels
Sample Collection Date:	6/9/2003 Time: 0300	# tests:	8	Receiving Water:	Atlantic Ocean		Christa Pierini
Test Beginning Date:	6/10/2003 Time: 1630	Chlorination Type:	dechlorinated		Class III Marine		Travis Hill
Test Ending Date:	6/14/2003 Time: 1400	FDEP SOP#:	TA07_03		**Page 2 of 3**	**Reviewer:**	Rob Buda

Organism: ***Americamysis bahia*** (After Renewals)

Concentrations	Sample/Diluent Volume(mL)	SURVIVAL # Alive 48 hr	72 hr	96 hr	pH 48 hour	72 hour	96 hour	Temperature[A] 48 hour	72 hour	96 hour	Dissolved Oxygen[B] 48 hour	72 hour	96 hour	Conductivity Uncorrected mmhos/cm 48 hour	96 hour
Control A	0/200	5	5	5	-	-	8.1	-	-	24.4	-	-	6.4	-	37.0
Control B	0/200	5	5	5	-	-	-	-	-	-	-	-	-	-	-
Control C	0/200	5	5	5	8.4	-	-	24.0	-	-	7.0	-	-	32.0	-
Control D	0/200	5	5	5	-	8.2	-	-	23.8	-	-	4.7	-	-	-
6.25% A	12.5/187.5	5	5	5	-	-	8.1	-	-	24.3	-	-	5.7	-	35.0
6.25% B	12.5/187.5	5	5	5	-	-	-	-	-	-	-	-	-	-	-
6.25% C	12.5/187.5	5	5	5	7.8	-	-	24.3	-	-	7.0	-	-	31.5	-
6.25% D	12.5/187.5	5	5	5	-	8.2	-	-	23.4	-	-	4.6	-	-	-
12.5% A	25/175	5	5	5	-	-	8.2	-	-	24.7	-	-	5.8	-	36.2
12.5% B	25/175	5	5	5	-	-	-	-	-	-	-	-	-	-	-
12.5% C	25/175	5	5	5	8.3	-	-	24.0	-	-	7.3	-	-	32.3	-
12.5%D	25/175	5	5	5	-	8.1	-	-	24.0	-	-	4.3	-	-	-
30% A	60/140	5	4	4	-	-	8.2	-	-	24.4	-	-	5.7	-	35.6
30% B	60/140	5	5	5	-	-	-	-	-	-	-	-	-	-	-
30% C	60/140	5	5	5	8.2	-	-	24.0	-	-	7.2	-	-	32.6	-
30% D	60/140	5	5	5	-	8.1	-	-	24.7	-	-	4.2	-	-	-
50% A	100/100	4	4	4	-	-	8.1	-	-	24.5	-	-	6.0	-	37.2
50% B	100/100	5	5	5	-	-	-	-	-	-	-	-	-	-	-
50% C	100/100	4	4	4	8.1	-	-	24.2	-	-	7.1	-	-	32.7	-
50% D	100/100	5	5	5	-	8.1	-	-	24.4	-	-	4.4	-	-	-
100% A	200/0	4	4	3	-	-	8.2	-	-	24.9	-	-	5.9	-	35.0
100% B	200/0	4	3	2	-	-	-	-	-	-	-	-	-	-	-
100% C	200/0	5	5	3	7.8	-	-	24.3	-	-	7.2	-	-	31.9	-
100% D	200/0	5	5	5	-	8.1	-	-	24.4	-	-	4.5	-	-	-

LIMS

Job number: TLH-2003-06-10-35-03

sample number: 680827

Data Transcription Verification

date: 8/18/2003

by: James Daniels / Cathy Oaks

Total Residual CL2	mg/L	Method
Field:	-	-
Lab:	1.66[C]	Hach

Ammonia	Total (mg/L)	Unionized (mg/L)
Control water:	<0.017	<0.017
100% Sample:	23.200	0.993

Alk & Hardness	Alkalinity (mg/L)	Hardness (mg/L)
Control water:	215	-
100% Sample:	305	-

Salinity [D]	ppt
Menidia control:	20
100% sample:	<1

[A] Temperatures of room and test incubator were continuously recorded on a strip chart recorder.
Room Temperature range for the test period was 25.0-26.0°C.
Incubator #3 temperature range for the test period was 23.5-25.0°C.

[B] Sample was aerated to decrease the initial D.O. below 9.7 mg/L.

[C] Sample was dechlorinated using sodium thiosulfate.

[D] Salinity based on conductivity and temperature.

[E] See sample #1 for Salt Control data.

Sample was salted to 20ppt using 40 fathoms artificial sea salts.
Light Intensity during the test was 50-100 foot candles.
Photoperiod during the test was 16 hours of light : 8 hours of dark.

Table 3c. Concluded

Data recorded during the 96-hour acute bioassays of a sample of effluent from South Central Regional Wastewater Treatment and Disposal Board (Sample #3), 1801 N. Congress Avenue, Delray Beach, Broward County, Florida, NPDES# FL0035980, performed from 10 to 14 June 2003.

Facility:	**South Central Regional WWTP, Sample #3**	**NPDES#:**	**FL0035980**	Facility Type:	**WWTP**	**Analysts:**	Jacquelyn Brynda
Location:	1801 N. Congress Ave., Delray Beach	Contact/District:	Philoctete/SE				Joshua Ayres
County:	Broward	Test type:	acute definitive renewal				James Daniels
Sample Collection Date:	6/9/2003 Time: 0300	# tests:	8	Receiving Water:	Atlantic Ocean		Travis Hill
Test Beginning Date:	6/10/2003 Time: 1630	Chlorination Type:	dechlorinated		Class III Marine		Christa Pierini
Test Ending Date:	6/14/2003 Time: 1400	FDEP SOP#:	TA07_04		**Page 3 of 3**	**Reviewer:**	Rob Buda

Organism: ***Menidia beryllina*** Life stage: 14 days [A]Feeding: artemia

Chamber size: 1L Food Batch #: 01940425G

Concentrations	Sample/Diluent Volume(mL)	SURVIVAL # Alive 0 hr	24 hr	48 hr	pH 0 hour	24 hour	48 hour	Temperature[B] 0 hour	24 hour	48 hour	Dissolved Oxygen[C] 0 hour	24 hour	48 hour	Conductivity Uncorrected mmhos/cm 0 hour	48 hour
Control A	0/400	10	10	10	8.4	8.3	8.2	25.3	23.3	22.7	6.8	5.9	5.5	32.4	32.5
Control B	0/400	10	10	10	8.4	8.3	8.2	25.3	23.5	22.7	6.7	5.9	5.5	33.1	31.9
6.25% A	25/375	10	10	10	8.4	8.2	8.2	25.3	23.7	22.7	6.7	5.8	5.4	32.3	31.0
6.25% B	25/375	10	10	10	8.4	8.2	8.2	25.3	23.8	22.7	6.7	5.8	5.4	32.3	31.2
12.5% A	50/350	10	10	10	8.3	8.2	8.1	25.3	23.7	22.7	6.8	5.7	5.5	32.5	31.5
12.5% B	50/350	10	10	10	8.3	8.2	8.1	25.3	23.7	22.7	6.8	5.7	5.4	32.4	31.1
30% A	120/280	10	10	10	8.2	8.1	8.1	25.1	23.8	22.8	6.8	5.8	5.3	32.3	31.2
30% B	120/280	10	10	10	8.2	8.1	8.1	25.1	24.0	22.8	6.9	5.7	5.2	32.3	30.9
50% A	200/200	10	10	10	8.1	8.1	8.1	25.2	23.8	22.7	6.9	5.7	5.2	32.0	30.6
50% B	200/200	10	10	10	8.1	8.1	8.1	25.2	23.9	22.8	6.9	5.6	5.2	32.3	31.2
100% A	400/0	10	10	8	7.8	8.0	8.1	25.3	23.8	22.8	7.1	5.3	5.3	32.0	30.6
100% B	400/0	10	10	7	7.8	8.0	8.1	25.3	23.4	22.9	7.1	5.2	5.2	32.0	31.7

Organism: ***Menidia beryllina*** (After Renewal)

Concentrations	Sample/Diluent Volume(mL)	SURVIVAL # Alive 48 hr	72 hr	96 hr	pH 48 hour	72 hour	96 hour	Temperature[B] 48 hour	72 hour	96 hour	Dissolved Oxygen[C] 48 hour	72 hour	96 hour	Conductivity Uncorrected mmhos/cm 48 hour	96 hour
Control A	0/400	10	10	10	8.4	8.3	8.3	24.0	24.7	24.6	6.5	5.6	5.4	32.1	34.5
Control B	0/400	10	10	10	8.4	8.3	8.3	24.0	25.1	24.7	6.4	5.5	5.4	32.7	34.2
6.25% A	25/375	10	10	10	8.4	8.3	8.3	24.1	24.8	24.8	6.5	5.3	5.5	33.4	34.3
6.25% B	25/375	10	10	10	8.4	8.3	8.3	24.2	24.8	24.5	6.6	5.2	5.6	32.8	34.2
12.5% A	50/350	10	10	10	8.4	8.3	8.3	24.2	24.6	24.6	6.6	5.3	5.8	33.5	34.4
12.5% B	50/350	10	10	10	8.4	8.3	8.3	24.1	24.5	24.8	6.6	5.4	5.9	32.9	34.7
30% A	120/280	10	10	10	8.2	8.2	8.2	24.1	24.7	25.2	6.6	5.3	6.0	33.0	34.1
30% B	120/280	10	10	9	8.2	8.2	8.2	24.2	24.7	24.8	6.6	5.1	5.9	32.9	34.1
50% A	200/200	10	10	10	8.1	8.1	8.1	24.2	24.4	25.2	6.7	4.9	5.6	32.7	33.7
50% B	200/200	10	10	10	8.1	8.1	8.1	24.3	24.5	24.9	6.7	4.8	5.4	32.6	33.6
100% A	400/0	8	8	4	7.8	7.9	8.0	24.9	24.7	25.2	6.8	4.7	4.7	31.5	32.6
100% B	400/0	7	7	2	7.8	7.9	8.0	24.6	24.6	25	6.9	4.6	4.6	31.5	32.0

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-2003-06-10-35-03
sample number:	680827

Data Transcription Verification	
date:	8/18/2003
by:	James Daniels / Cathy Oaks

Total Residual CL2	mg/L	Method
Field:	-	-
Lab:	1.66[D]	Hach

Ammonia	**Total (mg/L)**	**Unionized (mg/L)**
Control water:	<0.017	<0.017
100% Sample:	23.200	0.993

Alk & Hardness	**Alkalinity (mg/L)**	**Hardness (mg/L)**
Control water:	215	-
100% Sample:	305	-

Salinity [E]	ppt
Mysid control:	20
100% sample:	<1

[A] Organisms fed prior to loading and before renewal.

[B] Temperatures of room and test incubator were continuously recorded on a strip chart recorder.
Room Temperature range for the test period was 25.0-26.0°C.

Incubator #1 temperature range for the test period was 25.0-26.0°C.

[C] Sample was aerated to decrease the initial D.O. below 9.7 mg/L.

[D] Sample was dechlorinated using sodium thiosulfate.

[E] Salinity based on conductivity and temperature.
Sample was salted to 20ppt using 40 fathoms artificial sea salts.

[F] See sample #1 for Salt Control data.

Table 4a. Data recorded during the 96-hour acute bioassays of a sample of effluent from South Central Regional Wastewater Treatment and Disposal Board (Sample #4), 1801 N. Congress Ave., Delray Beach, Broward County, Florida, NPDES# FL0035980, performed from 10 to 14 June 2003.

Facility:	**South Central Regional WWTP (sample #4)**	**NPDES#:**	**FL0035980**	Facility Type:	**WWTP**	**Analysts:**	Jacquelyn Brynda
Location:	1801 N. Congress Ave., Delray Beach	Contact/District:	Philoctete/ SE				Joshua Ayres
County:	Broward	Test type:	acute definitive renewal				James Daniels
Sample Collection Date:	6/9/2003 Time: 0900	# tests:	8	Receiving Water:	Atlantic Ocean		Christa Pierini
Test Beginning Date:	6/10/2003 Time: 1645	Chlorination Type:	dechlorinated		Class III Marine		Travis Hill
Test Ending Date:	6/14/2003 Time: 1400	FDEP SOP#:	TA07_03		**Page 1 of 3**	**Reviewer:**	Rob Buda

Organism: ***Americamysis bahia*** Life stage: 5 days [A]Feeding: artemia

Chamber size: 400mL Food Batch #: 01940425G

		SURVIVAL # Alive			pH			Temperature[B]			Dissolved Oxygen[C]			Conductivity Uncorrected mmhos/cm	
Concentrations	Sample/Diluent 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	0/200	5	5	5	8.4	-	-	25.0	-	-	6.8	-	-	32.2	-
Control B	0/200	5	5	5	-	8.3	-	-	25.2	-	-	5.4	-	-	-
Control C	0/200	5	5	5	-	-	8.1	-	-	24.3	-	-	5.0	-	30.7
Control D	0/200	5	5	4	-	-	-	-	-	-	-	-	-	-	-
6.25% A	12.5/187.5	5	5	5	8.4	-	-	25.2	-	-	6.8	-	-	31.7	-
6.25% B	12.5/187.5	5	5	5	-	8.2	-	-	24.5	-	-	5.3	-	-	-
6.25% C	12.5/187.5	5	5	5	-	-	8.1	-	-	24.1	-	-	4.8	-	32.9
6.25% D	12.5/187.5	5	5	5	-	-	-	-	-	-	-	-	-	-	-
12.5% A	25/175	5	4	4	8.3	-	-	25.1	-	-	6.8	-	-	31.9	-
12.5% B	25/175	5	5	5	-	8.2	-	-	24.4	-	-	5.4	-	-	-
12.5% C	25/175	5	5	5	-	-	8.1	-	-	24.2	-	-	4.7	-	32.7
12.5%D	25/175	5	5	5	-	-	-	-	-	-	-	-	-	-	-
30% A	60/140	5	5	4	8.2	-	-	25.2	-	-	6.7	-	-	31.9	-
30% B	60/140	5	5	5	-	8.2	-	-	24.4	-	-	5.5	-	-	-
30% C	60/140	5	5	5	-	-	8.1	-	-	24.4	-	-	4.5	-	32.9
30% D	60/140	5	5	5	-	-	-	-	-	-	-	-	-	-	-
50% A	100/100	5	5	5	8.1	-	-	25.2	-	-	6.7	-	-	31.9	-
50% B	100/100	5	5	3	-	8.1	-	-	24.5	-	-	5.5	-	-	-
50% C	100/100	5	5	5	-	-	8.0	-	-	23.8	-	-	4.3	-	33.1
50% D	100/100	5	5	5	-	-	-	-	-	-	-	-	-	-	-
100% A	200/0	5	5	5	7.8	-	-	25.5	-	-	6.7	-	-	31.7	-
100% B	200/0	5	5	5	-	8.1	-	-	24.8	-	-	5.5	-	-	-
100% C	200/0	5	5	5	-	-	8.0	-	-	24.2	-	-	4.3	-	32.9
100% D	200/0	5	4	4	-	-	-	-	-	-	-	-	-	-	-

[A] Organisms fed daily.

[B] Temperatures of room and test incubator were continuously recorded on a strip chart recorder.
Room Temperature range for the test period was 25.0-26.0°C.
Incubator #3 temperature range for the test period was 23.5-25.0°C.

[C] Sample was aerated to decrease the initial D.O. below 10.4 mg/L.

LIMS

Job number: TLH-2003-06-10-35-04

sample number: 680828

Data Transcription Verification

date: 8/18/2003

by: James Daniels / Cathy Oaks

Total Residual CL2	mg/L	Method
Field:	-	-
Lab:	1.46[D]	Hach

Ammonia	Total (mg/L)	Unionized (mg/L)
Control water:	<0.017	<0.017
100% Sample:	21.500	0.946

Alk & Hardness	Alkalinity (mg/L)	Hardness (mg/L)
Control water:	215	-
100% Sample:	290	-

Salinity [E]	ppt
Menidia control:	20
100% sample:	<1

[D] Sample was dechlorinated using sodium thiosulfate.

[E] Salinity based on conductivity and temperature.

[F] See sample #1 for Salt Control data.

Sample was salted to 20ppt using 40 fathoms artificial sea salts.
Light Intensity during the test was 50-100 foot candles.
Photoperiod during the test was 16 hours of light : 8 hours of dark.

Table 4b. Data recorded during the 96-hour acute bioassays of a sample of effluent from South Central Regional Wastewater Treatment and Disposal Board (Sample #4), 1801 N. Congress Ave., Delray Beach, Broward County, Florida, NPDES# FL0035980, performed from 10 to 14 June 2003.

Facility:	**South Central Regional WWTP (sample #4)**		**NPDES#:**	**FL0035980**	Facility Type:	**WWTP**	**Analysts:**	Jacquelyn Brynda
Location:	1801 N. Congress Ave., Delray Beach		Contact/District:	Philoctete/ SE				Joshua Ayres
County:	Broward		Test type:	acute definitive renewal				James Daniels
Sample Collection Date:	6/9/2003	Time: 0900	# tests:	8	Receiving Water:	Atlantic Ocean		Christa Pierini
Test Beginning Date:	6/10/2003	Time: 1645	Chlorination Type:	dechlorinated		Class III Marine		Travis Hill
Test Ending Date:	6/14/2003	Time: 1400	FDEP SOP#:	TA07_03		**Page 2 of 3**	**Reviewer:**	Rob Buda

Organism: ***Americamysis bahia*** (After Renewals)

	Sample/Diluent	SURVIVAL # Alive			pH			Temperature[A]			Dissolved Oxygen[B]			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	0/200	5	5	5	-	-	8.1	-	-	23.8	-	-	6.3	-	36.0
Control B	0/200	5	5	5	-	-	-	-	-	-	-	-	-	-	-
Control C	0/200	5	5	5	8.4	-	-	24.0	-	-	6.6	-	-	32.3	-
Control D	0/200	4	4	4	-	8.1	-	-	24.2	-	-	6.3	-	-	-
6.25% A	12.5/187.5	5	5	5	-	-	8.2	-	-	24.4	-	-	5.5	-	36.4
6.25% B	12.5/187.5	5	5	5	-	-	-	-	-	-	-	-	-	-	-
6.25% C	12.5/187.5	5	5	5	8.4	-	-	24.0	-	-	6.8	-	-	32.8	-
6.25% D	12.5/187.5	5	5	4	-	8.1	-	-	24.3	-	-	5.1	-	-	-
12.5% A	25/175	4	4	4	-	-	8.2	-	-	24.5	-	-	5.7	-	35.6
12.5% B	25/175	5	5	5	-	-	-	-	-	-	-	-	-	-	-
12.5% C	25/175	5	5	5	8.4	-	-	24.0	-	-	6.8	-	-	32.9	-
12.5%D	25/175	5	5	5	-	8.1	-	-	24.3	-	-	4.3	-	-	-
30% A	60/140	4	4	4	-	-	8.1	-	-	24.6	-	-	5.3	-	35.1
30% B	60/140	5	5	5	-	-	-	-	-	-	-	-	-	-	-
30% C	60/140	5	5	5	8.3	-	-	24.1	-	-	6.8	-	-	32.5	-
30% D	60/140	5	5	5	-	8.1	-	-	24.3	-	-	4.1	-	-	-
50% A	100/100	5	5	4	-	-	8.1	-	-	25.0	-	-	5.2	-	35.4
50% B	100/100	3	3	3	-	-	-	-	-	-	-	-	-	-	-
50% C	100/100	5	5	5	8.2	-	-	24.1	-	-	6.9	-	-	32.4	-
50% D	100/100	5	5	5	-	8.0	-	-	24.4	-	-	4.0	-	-	-
100% A	200/0	5	5	5	-	-	8.1	-	-	24.2	-	-	5.3	-	35.0
100% B	200/0	5	5	5	-	-	-	-	-	-	-	-	-	-	-
100% C	200/0	5	5	5	8.0	-	-	24.0	-	-	6.4	-	-	31.8	-
100% D	200/0	4	4	4	-	8.0	-	-	24.5	-	-	4.0	-	-	-

LIMS

Job number: TLH-2003-06-10-35-04

sample number: 680828

Data Transcription Verification

date: 8/18/2003

by: James Daniels / Cathy Oaks

Total Residual CL2	mg/L	Method
Field:	-	-
Lab:	1.46[C]	Hach

Ammonia	Total (mg/L)	Unionized (mg/L)
Control water:	<0.017	<0.017
100% Sample:	21.500	0.946

Alk & Hardness	Alkalinity (mg/L)	Hardness (mg/L)
Control water:	215	-
100% Sample:	290	-

Salinity [D]	ppt
Menidia control:	20
100% sample:	<1

[A] Temperatures of room and test incubator were continuously recorded on a strip chart recorder.
Room Temperature range for the test period was 25.0-26.0°C.
Incubator #3 temperature range for the test period was 23.5-25.0°C.

[B] Sample was aerated to decrease the initial D.O. below 10.4 mg/L.

[C] Sample was dechlorinated using sodium thiosulfate.

[D] Salinity based on conductivity and temperature.
Sample was salted to 20ppt using 40 fathoms artificial sea salts.

[E] See sample #1 for Salt Control data.
Light Intensity during the test was 50-100 foot candles.
Photoperiod during the test was 16 hours of light : 8 hours of dark.

Table 4c. Concluded

Data recorded during the 96-hour acute bioassays of a sample of effluent from South Central Regional Wastewater Treatment and Disposal Board (Sample #4), 1801 N. Congress Avenue, Delray Beach, Broward County, Florida, NPDES# FL0035980, performed from 10 to 14 June 2003.

Facility:	**South Central Regional WWTP, Sample #4**	**NPDES#:**	**FL0035980**	Facility Type:	**WWTP**	**Analysts:**	Jacquelyn Brynda
Location:	1801 N. Congress Ave., Delray Beach	Contact/District:	Philoctete/SE				Joshua Ayres
County:	Broward	Test type:	acute definitive renewal				James Daniels
Sample Collection Date:	6/9/2003 Time: 0900	# tests:	8	Receiving Water:	Atlantic Ocean		Travis Hill
Test Beginning Date:	6/10/2003 Time: 1645	Chlorination Type:	dechlorinated		Class III Marine		Christa Pierini
Test Ending Date:	6/14/2003 Time: 1400	FDEP SOP#:	TA07_04		**Page 3 of 3**	**Reviewer:**	Rob Buda

Organism: ***Menidia beryllina*** Life stage: 14 days [A]Feeding: artemia

Chamber size: 1L Food Batch #: 01940425G

Concentrations	Sample/Diluent Volume(mL)	SURVIVAL # Alive 0 hr	24 hr	48 hr	pH 0 hour	24 hour	48 hour	Temperature[B] 0 hour	24 hour	48 hour	Dissolved Oxygen[C] 0 hour	24 hour	48 hour	Conductivity Uncorrected mmhos/cm 0 hour	48 hour
Control A	0/400	10	10	10	8.4	8.3	8.2	25.3	23.5	23.4	6.8	5.7	5.4	32.4	32.2
Control B	0/400	10	10	10	8.4	8.3	8.2	25.4	23.4	23.6	6.8	5.7	5.3	32.9	32.8
6.25% A	25/375	10	10	10	8.4	8.2	8.1	25.4	23.9	23.4	6.8	5.7	5.3	32.5	31.4
6.25% B	25/375	10	10	10	8.4	8.2	8.1	25.4	23.6	23.3	6.8	5.6	5.3	32.4	31.6
12.5% A	50/350	10	10	10	8.3	8.2	8.1	25.3	23.7	23.0	6.8	5.8	5.3	32.4	31.4
12.5% B	50/350	10	10	10	8.3	8.2	8.1	25.4	24.1	23.2	6.7	5.7	5.3	32.5	31.1
30% A	120/280	10	10	10	8.2	8.2	8.1	25.4	24.3	23.3	6.7	5.6	5.4	32.5	31.2
30% B	120/280	10	10	10	8.2	8.2	8.1	25.4	23.9	23.2	6.7	5.5	5.3	32.5	31.8
50% A	200/200	10	10	10	8.1	8.1	8.1	25.4	23.8	23.3	6.7	5.6	5.4	32.4	31.4
50% B	200/200	10	10	10	8.1	8.1	8.1	25.4	23.8	23.2	6.7	5.6	5.1	32.4	31.5
100% A	400/0	10	10	5	7.8	8.0	8.1	25.6	23.5	23.3	6.6	5.7	5.1	32.1	31.6
100% B	400/0	10	10	10	7.8	8.0	8.1	25.7	23.3	23.2	6.6	5.6	5.2	32.2	31.7

Organism: ***Menidia beryllina*** (After Renewal)

Concentrations	Sample/Diluent Volume(mL)	SURVIVAL # Alive 48 hr	72 hr	96 hr	pH 48 hour	72 hour	96 hour	Temperature[B] 48 hour	72 hour	96 hour	Dissolved Oxygen[C] 48 hour	72 hour	96 hour	Conductivity Uncorrected mmhos/cm 48 hour	96 hour
Control A	0/400	10	10	10	8.4	8.3	8.2	23.9	24.6	24.6	5.7	4.9	5.2	31.9	34.0
Control B	0/400	10	10	10	8.4	8.3	8.2	24.0	24.7	24.6	5.7	5.0	5.2	32.7	34.4
6.25% A	25/375	10	10	10	8.4	8.3	8.2	24.0	24.6	24.5	6.1	5.2	5.3	33.2	34.2
6.25% B	25/375	10	10	10	8.4	8.3	8.2	24.0	24.6	24.5	6.3	5.0	5.2	33.0	34.2
12.5% A	50/350	10	10	10	8.3	8.2	8.1	24.0	24.4	24.7	6.5	5.0	5.0	32.8	33.0
12.5% B	50/350	10	10	10	8.3	8.2	8.1	24.0	24.7	24.6	6.6	5.1	4.5	33.2	34.1
30% A	120/280	10	10	10	8.3	8.2	8.1	24.0	24.5	24.7	6.6	5.2	4.1	33.0	33.9
30% B	120/280	10	10	10	8.3	8.2	8.1	24.2	24.5	24.8	6.7	5.2	4.0	33.0	34.2
50% A	200/200	10	10	9	8.2	8.1	8.0	24.2	24.5	24.7	6.7	5.1	3.5	32.9	33.7
50% B	200/200	10	10	10	8.2	8.1	8.0	24.3	24.5	24.9	6.7	5.0	3.4	32.2	34.0
100% A	400/0	5	5	2	8.0	8.0	8.0	24.4	24.2	24.9	6.8	4.9	3.6	32.6	32.8
100% B	400/0	10	10	6	8.0	8.0	8.0	24.7	24.3	25.1	6.9	5	3.8	32.5	33.0

Light Intensity during the test was 50-100 foot candles.

Photoperiod during the test was 16 hours of light : 8 hours of dark.

Sample was salted to 20ppt using 40 fathoms artificial sea salts.

LIMS

Job number: TLH-2003-06-10-35-04

sample number: 680828

Data Transcription Verification

date: 8/18/2003

by: James Daniels / Cathy Oaks

Total Residual CL2	mg/L	Method
Field:	2.00	-
Lab:	1.46[D]	Hach

Ammonia	Total (mg/L)	Unionized (mg/L)
Control water:	<0.017	<0.017
100% Sample:	21.500	0.946

Alk & Hardness	Alkalinity (mg/L)	Hardness (mg/L)
Control water:	215	-
100% Sample:	290	-

Salinity [E]	ppt
Mysid control:	20
100% sample:	<1

[A] Organisms fed prior to loading and prior to renewal.

[B] Temperatures of room and test incubator were continuously recorded on a strip chart recorder.
Room Temperature range for the test period was 25.0-26.0°C.

Incubator #1 temperature range for the test period was 25.0- 26.0°C.

[C] Sample was aerated to decrease the initial D.O. below 10.4 mg/L.

[D] Sample was dechlorinated using sodium thiosulfate.

[E] Salinity based on conductivity and temperature.

[F] See sample #1 for Salt Control data.

Table 5. Results of chemical analyses on the effluent from South Central Regional Wastewater Treatment and Disposal Board sampled on June 8 and 9, 2003.

Metals

Aluminum	27 ug/L	I
Cadmium	0.028 ug/L	I
Calcium	59.5 mg/L	
Copper	3.2 ug/L	I
Iron	107 ug/L	
Lead	0.29 ug/L	I
Magnesium	4.4 mg/L	
Silver	0.1 ug/L	
Zinc	16 ug/L	

Pesticides and Herbicides

None detected

Nutrients

Ammonia	20 mg N/L	
Nitrates and Nitrites	0.11 mg N/L	
Total Kjeldahl Nitrogen	25 mg N/L	A
Ortho-Phosphates	2.6 mg P/L	
Total Phosphorous	2.9 mg P/L	A

Base, Neutral, & Acid Extractable Organics

Bis(2-ethylhexyl)phthalate	19 ug/L	I
Diethyl phthalate	2 ug/L	I

[A] The reported value is an average of two or more values.
[I] The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.

Table 6. Chemical Analyses performed on the effluent from South Central Regional Wastewater Treatment and Disposal Board, sampled on June 8, 2003.

Date Sampled	Field ID	Analysis Group	Component	Result	Units	Remark	MDL	PQL
6/8/2003 9:40	51-SCR-2	BNA-Water	1,2,4,5-Tetrachlorobenzene	0.97	ug/L	U	0.97	3.9
6/8/2003 9:40	51-SCR-2	BNA-Water	1,2,4-Trichlorobenzene	0.97	ug/L	U	0.97	3.9
6/8/2003 9:40	51-SCR-2	BNA-Water	1,2-Dichlorobenzene	0.97	ug/L	U	0.97	3.9
6/8/2003 9:40	51-SCR-2	BNA-Water	1,3,5-Trinitrobenzene	3.9	ug/L	U	3.9	16
6/8/2003 9:40	51-SCR-2	BNA-Water	1,3-Dichlorobenzene	0.97	ug/L	U	0.97	3.9
6/8/2003 9:40	51-SCR-2	BNA-Water	1,3-Dinitrobenzene	1.9	ug/L	U	1.9	7.8
6/8/2003 9:40	51-SCR-2	BNA-Water	1,4-Dichlorobenzene	0.97	ug/L	U	0.97	3.9
6/8/2003 9:40	51-SCR-2	BNA-Water	1,4-Naphthoquinone	19	ug/L	UJ	19	78
6/8/2003 9:40	51-SCR-2	BNA-Water	1-Naphthylamine	9.7	ug/L	U	9.7	39
6/8/2003 9:40	51-SCR-2	BNA-Water	2,3,4,6-Tetrachlorophenol	1.9	ug/L	U	1.9	7.8
6/8/2003 9:40	51-SCR-2	BNA-Water	2,4,5-Trichlorophenol	0.97	ug/L	U	0.97	3.9
6/8/2003 9:40	51-SCR-2	BNA-Water	2,4,6-Trichlorophenol	0.97	ug/L	U	0.97	3.9
6/8/2003 9:40	51-SCR-2	BNA-Water	2,4-Dichlorophenol	0.97	ug/L	U	0.97	3.9
6/8/2003 9:40	51-SCR-2	BNA-Water	2,4-Dimethylphenol	49	ug/L	U	49	190
6/8/2003 9:40	51-SCR-2	BNA-Water	2,4-Dinitrophenol	15	ug/L	U	15	58
6/8/2003 9:40	51-SCR-2	BNA-Water	2,4-Dinitrotoluene	0.97	ug/L	U	0.97	3.9
6/8/2003 9:40	51-SCR-2	BNA-Water	2,6-Dichlorophenol	0.97	ug/L	U	0.97	3.9
6/8/2003 9:40	51-SCR-2	BNA-Water	2,6-Dinitrotoluene	0.97	ug/L	U	0.97	3.9
6/8/2003 9:40	51-SCR-2	BNA-Water	2-Acetylaminofluorene	0.97	ug/L	U	0.97	3.9
6/8/2003 9:40	51-SCR-2	BNA-Water	2-Chloronaphthalene	0.97	ug/L	U	0.97	3.9
6/8/2003 9:40	51-SCR-2	BNA-Water	2-Chlorophenol	0.97	ug/L	U	0.97	3.9
6/8/2003 9:40	51-SCR-2	BNA-Water	2-Methyl-4,6-dinitrophenol	2.9	ug/L	U	2.9	12
6/8/2003 9:40	51-SCR-2	BNA-Water	2-Methylnaphthalene	0.97	ug/L	U	0.97	3.9
6/8/2003 9:40	51-SCR-2	BNA-Water	2-Naphthylamine	9.7	ug/L	U	9.7	39
6/8/2003 9:40	51-SCR-2	BNA-Water	2-Nitroaniline	0.97	ug/L	U	0.97	3.9
6/8/2003 9:40	51-SCR-2	BNA-Water	2-Nitrophenol	0.97	ug/L	U	0.97	3.9
6/8/2003 9:40	51-SCR-2	BNA-Water	2-Picoline	0.97	ug/L	U	0.97	3.9
6/8/2003 9:40	51-SCR-2	BNA-Water	3,3'-Dichlorobenzidine	39	ug/L	U	39	160
6/8/2003 9:40	51-SCR-2	BNA-Water	3,3'-Dimethylbenzidine	19	ug/L	UJ	19	78
6/8/2003 9:40	51-SCR-2	BNA-Water	3-Methylcholanthrene	0.97	ug/L	U	0.97	3.9
6/8/2003 9:40	51-SCR-2	BNA-Water	3-Nitroaniline	0.97	ug/L	U	0.97	3.9
6/8/2003 9:40	51-SCR-2	BNA-Water	4,4'-DDD	1.5	ug/L	U	1.5	5.8
6/8/2003 9:40	51-SCR-2	BNA-Water	4,4'-DDE	1.5	ug/L	U	1.5	5.8
6/8/2003 9:40	51-SCR-2	BNA-Water	4,4'-DDT	1.5	ug/L	U	1.5	5.8
6/8/2003 9:40	51-SCR-2	BNA-Water	4-Aminobiphenyl	3.9	ug/L	U	3.9	16
6/8/2003 9:40	51-SCR-2	BNA-Water	4-Bromophenyl phenyl ether	0.97	ug/L	U	0.97	3.9
6/8/2003 9:40	51-SCR-2	BNA-Water	4-Chloro-3-methylphenol	0.97	ug/L	U	0.97	3.9
6/8/2003 9:40	51-SCR-2	BNA-Water	4-Chloroaniline	0.97	ug/L	U	0.97	3.9
6/8/2003 9:40	51-SCR-2	BNA-Water	4-Chlorophenyl phenyl ether	1.9	ug/L	U	1.9	7.8
6/8/2003 9:40	51-SCR-2	BNA-Water	4-Nitroaniline	0.97	ug/L	UJ	0.97	3.9
6/8/2003 9:40	51-SCR-2	BNA-Water	4-Nitrophenol	15	ug/L	U	15	58
6/8/2003 9:40	51-SCR-2	BNA-Water	5-Nitro-o-toluidine	0.97	ug/L	U	0.97	3.9
6/8/2003 9:40	51-SCR-2	BNA-Water	7,12-Dimethylbenz(a)anthracene	0.97	ug/L	U	0.97	3.9
6/8/2003 9:40	51-SCR-2	BNA-Water	Acenaphthene	0.97	ug/L	U	0.97	3.9
6/8/2003 9:40	51-SCR-2	BNA-Water	Acenaphthylene	0.97	ug/L	U	0.97	3.9
6/8/2003 9:40	51-SCR-2	BNA-Water	Acetophenone	0.97	ug/L	U	0.97	3.9
6/8/2003 9:40	51-SCR-2	BNA-Water	Aldrin	1.5	ug/L	U	1.5	5.8
6/8/2003 9:40	51-SCR-2	BNA-Water	Aniline	0.97	ug/L	U	0.97	3.9
6/8/2003 9:40	51-SCR-2	BNA-Water	Anthracene	0.97	ug/L	U	0.97	3.9
6/8/2003 9:40	51-SCR-2	BNA-Water	Azobenzene/1,2-Diphenylhydrazine	0.97	ug/L	U	0.97	3.9
6/8/2003 9:40	51-SCR-2	BNA-Water	Benzidine	97	ug/L	U	97	390
6/8/2003 9:40	51-SCR-2	BNA-Water	Benzo(a)anthracene	0.97	ug/L	U	0.97	3.9
6/8/2003 9:40	51-SCR-2	BNA-Water	Benzo(a)pyrene	0.97	ug/L	U	0.97	3.9
6/8/2003 9:40	51-SCR-2	BNA-Water	Benzo(b)fluoranthene	0.97	ug/L	U	0.97	3.9
6/8/2003 9:40	51-SCR-2	BNA-Water	Benzo(g,h,i)perylene	0.97	ug/L	U	0.97	3.9
6/8/2003 9:40	51-SCR-2	BNA-Water	Benzo(k)fluoranthene	0.97	ug/L	U	0.97	3.9

Date Sampled	Field ID	Analysis Group	Component	Result	Units	Remark	MDL	PQL
6/8/2003 9:40	51-SCR-2	BNA-Water	Benzyl alcohol	0.97	ug/L	UJ	0.97	3.9
6/8/2003 9:40	51-SCR-2	BNA-Water	Bis(2-chloroethoxy)methane	0.97	ug/L	U	0.97	3.9
6/8/2003 9:40	51-SCR-2	BNA-Water	Bis(2-chloroethyl)ether	0.97	ug/L	U	0.97	3.9
6/8/2003 9:40	51-SCR-2	BNA-Water	Bis(2-chloroisopropyl)ether	2.9	ug/L	U	2.9	12
6/8/2003 9:40	51-SCR-2	BNA-Water	Bis(2-ethylhexyl)phthalate	15	ug/L	U	15	58
6/8/2003 9:40	51-SCR-2	BNA-Water	Butyl benzyl phthalate	4.9	ug/L	U	4.9	19
6/8/2003 9:40	51-SCR-2	BNA-Water	Chrysene	0.97	ug/L	U	0.97	3.9
6/8/2003 9:40	51-SCR-2	BNA-Water	Di-n-butyl phthalate	4.9	ug/L	U	4.9	19
6/8/2003 9:40	51-SCR-2	BNA-Water	Di-n-octyl phthalate	0.97	ug/L	U	0.97	3.9
6/8/2003 9:40	51-SCR-2	BNA-Water	Dibenzo(a,h)anthracene	0.97	ug/L	U	0.97	3.9
6/8/2003 9:40	51-SCR-2	BNA-Water	Dibenzofuran	0.97	ug/L	U	0.97	3.9
6/8/2003 9:40	51-SCR-2	BNA-Water	Dieldrin	1.5	ug/L	U	1.5	5.8
6/8/2003 9:40	51-SCR-2	BNA-Water	Diethyl phthalate	0.97	ug/L	U	0.97	3.9
6/8/2003 9:40	51-SCR-2	BNA-Water	Dimethyl phthalate	49	ug/L	U	49	190
6/8/2003 9:40	51-SCR-2	BNA-Water	Dimethylaminoazobenzene	0.97	ug/L	U	0.97	3.9
6/8/2003 9:40	51-SCR-2	BNA-Water	Dinoseb	3.9	ug/L	U	3.9	16
6/8/2003 9:40	51-SCR-2	BNA-Water	Diphenylamine	2.9	ug/L	U	2.9	12
6/8/2003 9:40	51-SCR-2	BNA-Water	Endosulfan I	3.9	ug/L	U	3.9	16
6/8/2003 9:40	51-SCR-2	BNA-Water	Endosulfan II	3.9	ug/L	U	3.9	16
6/8/2003 9:40	51-SCR-2	BNA-Water	Endosulfan sulfate	1.5	ug/L	U	1.5	5.8
6/8/2003 9:40	51-SCR-2	BNA-Water	Endrin	1.5	ug/L	U	1.5	5.8
6/8/2003 9:40	51-SCR-2	BNA-Water	Endrin aldehyde	3.9	ug/L	U	3.9	16
6/8/2003 9:40	51-SCR-2	BNA-Water	Ethyl methanesulfonate	0.97	ug/L	U	0.97	3.9
6/8/2003 9:40	51-SCR-2	BNA-Water	Fluoranthene	0.97	ug/L	U	0.97	3.9
6/8/2003 9:40	51-SCR-2	BNA-Water	Fluorene	0.97	ug/L	U	0.97	3.9
6/8/2003 9:40	51-SCR-2	BNA-Water	Heptachlor	1.5	ug/L	U	1.5	5.8
6/8/2003 9:40	51-SCR-2	BNA-Water	Heptachlor epoxide	1.5	ug/L	U	1.5	5.8
6/8/2003 9:40	51-SCR-2	BNA-Water	Hexachlorobenzene	0.97	ug/L	U	0.97	3.9
6/8/2003 9:40	51-SCR-2	BNA-Water	Hexachlorobutadiene	2.9	ug/L	U	2.9	12
6/8/2003 9:40	51-SCR-2	BNA-Water	Hexachlorocyclopentadiene	2.9	ug/L	U	2.9	12
6/8/2003 9:40	51-SCR-2	BNA-Water	Hexachloroethane	2.9	ug/L	U	2.9	12
6/8/2003 9:40	51-SCR-2	BNA-Water	Hexachloropropene	1.9	ug/L	U	1.9	7.8
6/8/2003 9:40	51-SCR-2	BNA-Water	Indeno(1,2,3-cd)pyrene	0.97	ug/L	U	0.97	3.9
6/8/2003 9:40	51-SCR-2	BNA-Water	Isophorone	0.97	ug/L	U	0.97	3.9
6/8/2003 9:40	51-SCR-2	BNA-Water	Isosafrole	0.97	ug/L	U	0.97	3.9
6/8/2003 9:40	51-SCR-2	BNA-Water	Methapyrilene	3.9	ug/L	UJ	3.9	16
6/8/2003 9:40	51-SCR-2	BNA-Water	Methyl methanesulfonate	0.97	ug/L	UJ	0.97	3.9
6/8/2003 9:40	51-SCR-2	BNA-Water	N-Nitrosodi-n-butylamine	0.97	ug/L	U	0.97	3.9
6/8/2003 9:40	51-SCR-2	BNA-Water	N-Nitrosodi-n-propylamine	1.9	ug/L	U	1.9	7.8
6/8/2003 9:40	51-SCR-2	BNA-Water	N-Nitrosodiethylamine	0.97	ug/L	U	0.97	3.9
6/8/2003 9:40	51-SCR-2	BNA-Water	N-Nitrosodimethylamine	1.9	ug/L	U	1.9	7.8
6/8/2003 9:40	51-SCR-2	BNA-Water	N-Nitrosodiphenylamine	2.9	ug/L	U	2.9	12
6/8/2003 9:40	51-SCR-2	BNA-Water	N-Nitrosomethylethylamine	1.9	ug/L	U	1.9	7.8
6/8/2003 9:40	51-SCR-2	BNA-Water	N-Nitrosomorpholine	0.97	ug/L	U	0.97	3.9
6/8/2003 9:40	51-SCR-2	BNA-Water	N-Nitrosopiperidine	0.97	ug/L	U	0.97	3.9
6/8/2003 9:40	51-SCR-2	BNA-Water	N-Nitrosopyrrolidine	1.9	ug/L	U	1.9	7.8
6/8/2003 9:40	51-SCR-2	BNA-Water	Naphthalene	0.97	ug/L	U	0.97	3.9
6/8/2003 9:40	51-SCR-2	BNA-Water	Nitrobenzene	1.9	ug/L	U	1.9	7.8
6/8/2003 9:40	51-SCR-2	BNA-Water	Nitroquinoline-1-oxide	19	ug/L	U	19	78
6/8/2003 9:40	51-SCR-2	BNA-Water	Pentachlorobenzene	0.97	ug/L	U	0.97	3.9
6/8/2003 9:40	51-SCR-2	BNA-Water	Pentachloroethane	49	ug/L	U	49	190
6/8/2003 9:40	51-SCR-2	BNA-Water	Pentachloronitrobenzene	0.97	ug/L	U	0.97	3.9
6/8/2003 9:40	51-SCR-2	BNA-Water	Pentachlorophenol	2.9	ug/L	U	2.9	12
6/8/2003 9:40	51-SCR-2	BNA-Water	Phenacetin	3.9	ug/L	U	3.9	12
6/8/2003 9:40	51-SCR-2	BNA-Water	Phenanthrene	0.97	ug/L	U	0.97	3.9
6/8/2003 9:40	51-SCR-2	BNA-Water	Phenol	0.97	ug/L	U	0.97	3.9
6/8/2003 9:40	51-SCR-2	BNA-Water	Pyrene	0.97	ug/L	U	0.97	3.9
6/8/2003 9:40	51-SCR-2	BNA-Water	Pyridine	3.9	ug/L	U	3.9	16
6/8/2003 9:40	51-SCR-2	BNA-Water	Safrole	0.97	ug/L	U	0.97	3.9

Date Sampled	Field ID	Analysis Group	Component	Result	Units	Remark	MDL	PQL
6/8/2003 9:40	51-SCR-2	BNA-Water	alpha-BHC	1.5	ug/L	U	1.5	5.8
6/8/2003 9:40	51-SCR-2	BNA-Water	beta-BHC	1.5	ug/L	U	1.5	5.8
6/8/2003 9:40	51-SCR-2	BNA-Water	delta-BHC	1.5	ug/L	U	1.5	5.8
6/8/2003 9:40	51-SCR-2	BNA-Water	gamma-BHC	1.5	ug/L	U	1.5	5.8
6/8/2003 9:40	51-SCR-2	BNA-Water	m,p-Cresols	1.9	ug/L	U	1.9	7.8
6/8/2003 9:40	51-SCR-2	BNA-Water	o-Cresol	1.9	ug/L	U	1.9	7.8
6/8/2003 9:40	51-SCR-2	BNA-Water	o-Toluidine	0.97	ug/L	U	0.97	3.9
6/8/2003 9:40	51-SCR-2	GC-Water	Alachlor	0.58	ug/L	U	0.58	2.32
6/8/2003 9:40	51-SCR-2	GC-Water	Ametryn	0.048	ug/L	U	0.048	0.192
6/8/2003 9:40	51-SCR-2	GC-Water	Atrazine	0.048	ug/L	U	0.048	0.192
6/8/2003 9:40	51-SCR-2	GC-Water	Azinphos Methyl	0.048	ug/L	U	0.048	0.192
6/8/2003 9:40	51-SCR-2	GC-Water	Bromacil	0.19	ug/L	U	0.19	0.76
6/8/2003 9:40	51-SCR-2	GC-Water	Butylate	0.19	ug/L	U	0.19	0.76
6/8/2003 9:40	51-SCR-2	GC-Water	Chlorpyrifos Ethyl	0.048	ug/L	U	0.048	0.192
6/8/2003 9:40	51-SCR-2	GC-Water	Chlorpyrifos Methyl	0.097	ug/L	U	0.097	0.388
6/8/2003 9:40	51-SCR-2	GC-Water	Diazinon	0.048	ug/L	U	0.048	0.192
6/8/2003 9:40	51-SCR-2	GC-Water	Ethion	0.048	ug/L	U	0.048	0.192
6/8/2003 9:40	51-SCR-2	GC-Water	Ethoprop	0.097	ug/L	U	0.097	0.388
6/8/2003 9:40	51-SCR-2	GC-Water	Fenamiphos	0.19	ug/L	U	0.19	0.76
6/8/2003 9:40	51-SCR-2	GC-Water	Fonofos	0.097	ug/L	U	0.097	0.388
6/8/2003 9:40	51-SCR-2	GC-Water	Hexazinone	0.097	ug/L	U	0.097	0.388
6/8/2003 9:40	51-SCR-2	GC-Water	Malathion	0.14	ug/L	U	0.14	0.56
6/8/2003 9:40	51-SCR-2	GC-Water	Metalaxyl	0.24	ug/L	U	0.24	0.96
6/8/2003 9:40	51-SCR-2	GC-Water	Metolachlor	0.48	ug/L	U	0.48	1.92
6/8/2003 9:40	51-SCR-2	GC-Water	Metribuzin	0.097	ug/L	U	0.097	0.388
6/8/2003 9:40	51-SCR-2	GC-Water	Mevinphos	0.19	ug/L	U	0.19	0.76
6/8/2003 9:40	51-SCR-2	GC-Water	Naled	0.78	ug/L	U	0.78	3.12
6/8/2003 9:40	51-SCR-2	GC-Water	Norflurazon	0.097	ug/L	U	0.097	0.388
6/8/2003 9:40	51-SCR-2	GC-Water	Parathion Ethyl	0.14	ug/L	U	0.14	0.56
6/8/2003 9:40	51-SCR-2	GC-Water	Parathion Methyl	0.097	ug/L	U	0.097	0.388
6/8/2003 9:40	51-SCR-2	GC-Water	Phorate	0.048	ug/L	U	0.048	0.192
6/8/2003 9:40	51-SCR-2	GC-Water	Prometryn	0.14	ug/L	U	0.14	0.56
6/8/2003 9:40	51-SCR-2	GC-Water	Simazine	0.048	ug/L	U	0.048	0.192
6/8/2003 9:40	51-SCR-2	Metals-Water	Aluminum	10	ug/L	U	10	40
6/8/2003 9:40	51-SCR-2	Metals-Water	Arsenic	7	ug/L	U	7	28
6/8/2003 9:40	51-SCR-2	Metals-Water	Cadmium	0.025	ug/L	U	0.025	0.1
6/8/2003 9:40	51-SCR-2	Metals-Water	Calcium	0.05	mg/L	U	0.05	0.3
6/8/2003 9:40	51-SCR-2	Metals-Water	Chromium	2	ug/L	U	2	8
6/8/2003 9:40	51-SCR-2	Metals-Water	Copper	0.8	ug/L	U	0.8	3.2
6/8/2003 9:40	51-SCR-2	Metals-Water	Iron	10	ug/L	U	10	40
6/8/2003 9:40	51-SCR-2	Metals-Water	Lead	0.1	ug/L	U	0.1	0.4
6/8/2003 9:40	51-SCR-2	Metals-Water	Magnesium	0.01	mg/L	U	0.01	0.04
6/8/2003 9:40	51-SCR-2	Metals-Water	Nickel	2	ug/L	U	2	8
6/8/2003 9:40	51-SCR-2	Metals-Water	Selenium	1	ug/L	U	1	4
6/8/2003 9:40	51-SCR-2	Metals-Water	Silver	0.02	ug/L	U	0.02	0.08
6/8/2003 9:40	51-SCR-2	Metals-Water	Zinc	3.6	ug/L	I	3	12
6/8/2003 9:40	51-SCR-2	Nutrients-Liquid	Ammonia-N	0.01	mg N/L	U	0.01	0.02
6/8/2003 9:40	51-SCR-2	Nutrients-Liquid	NO2NO3-N	0.004	mg N/L	U	0.004	0.01
6/8/2003 9:40	51-SCR-2	Nutrients-Liquid	N_KJEL_TOT	0.06	mg N/L	U	0.06	0.2
6/8/2003 9:40	51-SCR-2	Nutrients-Liquid	O-Phosphate-P	0.004	mg P/L	UQ	0.004	0.01
6/8/2003 9:40	51-SCR-2	Nutrients-Liquid	Total-P	0.015	mg P/L	U	0.015	0.04
6/9/2003 9:00	51-SCR-3	BNA-Water	1,2,4,5-Tetrachlorobenzene	0.97	ug/L	U	0.97	3.9
6/9/2003 9:00	51-SCR-3	BNA-Water	1,2,4-Trichlorobenzene	0.97	ug/L	U	0.97	3.9
6/9/2003 9:00	51-SCR-3	BNA-Water	1,2-Dichlorobenzene	0.97	ug/L	U	0.97	3.9
6/9/2003 9:00	51-SCR-3	BNA-Water	1,3,5-Trinitrobenzene	3.9	ug/L	U	3.9	16
6/9/2003 9:00	51-SCR-3	BNA-Water	1,3-Dichlorobenzene	0.97	ug/L	U	0.97	3.9
6/9/2003 9:00	51-SCR-3	BNA-Water	1,3-Dinitrobenzene	1.9	ug/L	U	1.9	7.8
6/9/2003 9:00	51-SCR-3	BNA-Water	1,4-Dichlorobenzene	0.97	ug/L	U	0.97	3.9
6/9/2003 9:00	51-SCR-3	BNA-Water	1,4-Naphthoquinone	19	ug/L	UJ	19	78

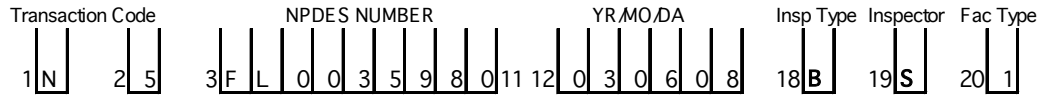
Date Sampled	Field ID	Analysis Group	Component	Result	Units	Remark	MDL	PQL
6/9/2003 9:00	51-SCR-3	BNA-Water	1-Naphthylamine	9.7	ug/L	U	9.7	39
6/9/2003 9:00	51-SCR-3	BNA-Water	2,3,4,6-Tetrachlorophenol	1.9	ug/L	U	1.9	7.8
6/9/2003 9:00	51-SCR-3	BNA-Water	2,4,5-Trichlorophenol	0.97	ug/L	U	0.97	3.9
6/9/2003 9:00	51-SCR-3	BNA-Water	2,4,6-Trichlorophenol	0.97	ug/L	U	0.97	3.9
6/9/2003 9:00	51-SCR-3	BNA-Water	2,4-Dichlorophenol	0.97	ug/L	U	0.97	3.9
6/9/2003 9:00	51-SCR-3	BNA-Water	2,4-Dimethylphenol	49	ug/L	U	49	190
6/9/2003 9:00	51-SCR-3	BNA-Water	2,4-Dinitrophenol	15	ug/L	U	15	58
6/9/2003 9:00	51-SCR-3	BNA-Water	2,4-Dinitrotoluene	0.97	ug/L	U	0.97	3.9
6/9/2003 9:00	51-SCR-3	BNA-Water	2,6-Dichlorophenol	0.97	ug/L	U	0.97	3.9
6/9/2003 9:00	51-SCR-3	BNA-Water	2,6-Dinitrotoluene	0.97	ug/L	U	0.97	3.9
6/9/2003 9:00	51-SCR-3	BNA-Water	2-Acetylaminofluorene	0.97	ug/L	U	0.97	3.9
6/9/2003 9:00	51-SCR-3	BNA-Water	2-Chloronaphthalene	0.97	ug/L	U	0.97	3.9
6/9/2003 9:00	51-SCR-3	BNA-Water	2-Chlorophenol	0.97	ug/L	U	0.97	3.9
6/9/2003 9:00	51-SCR-3	BNA-Water	2-Methyl-4,6-dinitrophenol	2.9	ug/L	U	2.9	12
6/9/2003 9:00	51-SCR-3	BNA-Water	2-Methylnaphthalene	0.97	ug/L	U	0.97	3.9
6/9/2003 9:00	51-SCR-3	BNA-Water	2-Naphthylamine	9.7	ug/L	U	9.7	39
6/9/2003 9:00	51-SCR-3	BNA-Water	2-Nitroaniline	0.97	ug/L	U	0.97	3.9
6/9/2003 9:00	51-SCR-3	BNA-Water	2-Nitrophenol	0.97	ug/L	U	0.97	3.9
6/9/2003 9:00	51-SCR-3	BNA-Water	2-Picoline	0.97	ug/L	U	0.97	3.9
6/9/2003 9:00	51-SCR-3	BNA-Water	3,3'-Dichlorobenzidine	39	ug/L	U	39	160
6/9/2003 9:00	51-SCR-3	BNA-Water	3,3'-Dimethylbenzidine	19	ug/L	UJ	19	78
6/9/2003 9:00	51-SCR-3	BNA-Water	3-Methylcholanthrene	0.97	ug/L	U	0.97	3.9
6/9/2003 9:00	51-SCR-3	BNA-Water	3-Nitroaniline	0.97	ug/L	U	0.97	3.9
6/9/2003 9:00	51-SCR-3	BNA-Water	4,4'-DDD	1.5	ug/L	U	1.5	5.8
6/9/2003 9:00	51-SCR-3	BNA-Water	4,4'-DDE	1.5	ug/L	U	1.5	5.8
6/9/2003 9:00	51-SCR-3	BNA-Water	4,4'-DDT	1.5	ug/L	U	1.5	5.8
6/9/2003 9:00	51-SCR-3	BNA-Water	4-Aminobiphenyl	3.9	ug/L	U	3.9	16
6/9/2003 9:00	51-SCR-3	BNA-Water	4-Bromophenyl phenyl ether	0.97	ug/L	U	0.97	3.9
6/9/2003 9:00	51-SCR-3	BNA-Water	4-Chloro-3-methylphenol	0.97	ug/L	U	0.97	3.9
6/9/2003 9:00	51-SCR-3	BNA-Water	4-Chloroaniline	0.97	ug/L	U	0.97	3.9
6/9/2003 9:00	51-SCR-3	BNA-Water	4-Chlorophenyl phenyl ether	1.9	ug/L	U	1.9	7.8
6/9/2003 9:00	51-SCR-3	BNA-Water	4-Nitroaniline	0.97	ug/L	UJ	0.97	3.9
6/9/2003 9:00	51-SCR-3	BNA-Water	4-Nitrophenol	15	ug/L	U	15	58
6/9/2003 9:00	51-SCR-3	BNA-Water	5-Nitro-o-toluidine	0.97	ug/L	U	0.97	3.9
6/9/2003 9:00	51-SCR-3	BNA-Water	7,12-Dimethylbenz(a)anthracene	0.97	ug/L	U	0.97	3.9
6/9/2003 9:00	51-SCR-3	BNA-Water	Acenaphthene	0.97	ug/L	U	0.97	3.9
6/9/2003 9:00	51-SCR-3	BNA-Water	Acenaphthylene	0.97	ug/L	U	0.97	3.9
6/9/2003 9:00	51-SCR-3	BNA-Water	Acetophenone	0.97	ug/L	U	0.97	3.9
6/9/2003 9:00	51-SCR-3	BNA-Water	Aldrin	1.5	ug/L	U	1.5	5.8
6/9/2003 9:00	51-SCR-3	BNA-Water	Aniline	0.97	ug/L	U	0.97	3.9
6/9/2003 9:00	51-SCR-3	BNA-Water	Anthracene	0.97	ug/L	U	0.97	3.9
6/9/2003 9:00	51-SCR-3	BNA-Water	Azobenzene/1,2-Diphenylhydrazine	0.97	ug/L	U	0.97	3.9
6/9/2003 9:00	51-SCR-3	BNA-Water	Benzidine	97	ug/L	U	97	390
6/9/2003 9:00	51-SCR-3	BNA-Water	Benzo(a)anthracene	0.97	ug/L	U	0.97	3.9
6/9/2003 9:00	51-SCR-3	BNA-Water	Benzo(a)pyrene	0.97	ug/L	U	0.97	3.9
6/9/2003 9:00	51-SCR-3	BNA-Water	Benzo(b)fluoranthene	0.97	ug/L	U	0.97	3.9
6/9/2003 9:00	51-SCR-3	BNA-Water	Benzo(g,h,i)perylene	0.97	ug/L	U	0.97	3.9
6/9/2003 9:00	51-SCR-3	BNA-Water	Benzo(k)fluoranthene	0.97	ug/L	U	0.97	3.9
6/9/2003 9:00	51-SCR-3	BNA-Water	Benzyl alcohol	0.97	ug/L	UJ	0.97	3.9
6/9/2003 9:00	51-SCR-3	BNA-Water	Bis(2-chloroethoxy)methane	0.97	ug/L	U	0.97	3.9
6/9/2003 9:00	51-SCR-3	BNA-Water	Bis(2-chloroethyl)ether	0.97	ug/L	U	0.97	3.9
6/9/2003 9:00	51-SCR-3	BNA-Water	Bis(2-chloroisopropyl)ether	2.9	ug/L	U	2.9	12
6/9/2003 9:00	51-SCR-3	BNA-Water	Bis(2-ethylhexyl)phthalate	19	ug/L	I	15	58
6/9/2003 9:00	51-SCR-3	BNA-Water	Butyl benzyl phthalate	4.9	ug/L	U	4.9	19
6/9/2003 9:00	51-SCR-3	BNA-Water	Chrysene	0.97	ug/L	U	0.97	3.9
6/9/2003 9:00	51-SCR-3	BNA-Water	Di-n-butyl phthalate	4.9	ug/L	U	4.9	19
6/9/2003 9:00	51-SCR-3	BNA-Water	Di-n-octyl phthalate	0.97	ug/L	U	0.97	3.9
6/9/2003 9:00	51-SCR-3	BNA-Water	Dibenzo(a,h)anthracene	0.97	ug/L	U	0.97	3.9
6/9/2003 9:00	51-SCR-3	BNA-Water	Dibenzofuran	0.97	ug/L	U	0.97	3.9

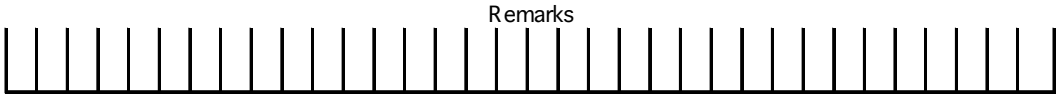
Date Sampled	Field ID	Analysis Group	Component	Result	Units	Remark	MDL	PQL
6/9/2003 9:00	51-SCR-3	BNA-Water	Dieldrin	1.5	ug/L	U	1.5	5.8
6/9/2003 9:00	51-SCR-3	BNA-Water	Diethyl phthalate	2	ug/L	I	0.97	3.9
6/9/2003 9:00	51-SCR-3	BNA-Water	Dimethyl phthalate	49	ug/L	U	49	190
6/9/2003 9:00	51-SCR-3	BNA-Water	Dimethylaminoazobenzene	0.97	ug/L	U	0.97	3.9
6/9/2003 9:00	51-SCR-3	BNA-Water	Dinoseb	3.9	ug/L	U	3.9	16
6/9/2003 9:00	51-SCR-3	BNA-Water	Diphenylamine	2.9	ug/L	U	2.9	12
6/9/2003 9:00	51-SCR-3	BNA-Water	Endosulfan I	3.9	ug/L	U	3.9	16
6/9/2003 9:00	51-SCR-3	BNA-Water	Endosulfan II	3.9	ug/L	U	3.9	16
6/9/2003 9:00	51-SCR-3	BNA-Water	Endosulfan sulfate	1.5	ug/L	U	1.5	5.8
6/9/2003 9:00	51-SCR-3	BNA-Water	Endrin	1.5	ug/L	U	1.5	5.8
6/9/2003 9:00	51-SCR-3	BNA-Water	Endrin aldehyde	3.9	ug/L	U	3.9	16
6/9/2003 9:00	51-SCR-3	BNA-Water	Ethyl methanesulfonate	0.97	ug/L	U	0.97	3.9
6/9/2003 9:00	51-SCR-3	BNA-Water	Fluoranthene	0.97	ug/L	U	0.97	3.9
6/9/2003 9:00	51-SCR-3	BNA-Water	Fluorene	0.97	ug/L	U	0.97	3.9
6/9/2003 9:00	51-SCR-3	BNA-Water	Heptachlor	1.5	ug/L	U	1.5	5.8
6/9/2003 9:00	51-SCR-3	BNA-Water	Heptachlor epoxide	1.5	ug/L	U	1.5	5.8
6/9/2003 9:00	51-SCR-3	BNA-Water	Hexachlorobenzene	0.97	ug/L	U	0.97	3.9
6/9/2003 9:00	51-SCR-3	BNA-Water	Hexachlorobutadiene	2.9	ug/L	U	2.9	12
6/9/2003 9:00	51-SCR-3	BNA-Water	Hexachlorocyclopentadiene	2.9	ug/L	U	2.9	12
6/9/2003 9:00	51-SCR-3	BNA-Water	Hexachloroethane	2.9	ug/L	U	2.9	12
6/9/2003 9:00	51-SCR-3	BNA-Water	Hexachloropropene	1.9	ug/L	U	1.9	7.8
6/9/2003 9:00	51-SCR-3	BNA-Water	Indeno(1,2,3-cd)pyrene	0.97	ug/L	U	0.97	3.9
6/9/2003 9:00	51-SCR-3	BNA-Water	Isophorone	0.97	ug/L	U	0.97	3.9
6/9/2003 9:00	51-SCR-3	BNA-Water	Isosafrole	0.97	ug/L	U	0.97	3.9
6/9/2003 9:00	51-SCR-3	BNA-Water	Methapyrilene	3.9	ug/L	UJ	3.9	16
6/9/2003 9:00	51-SCR-3	BNA-Water	Methyl methanesulfonate	0.97	ug/L	UJ	0.97	3.9
6/9/2003 9:00	51-SCR-3	BNA-Water	N-Nitrosodi-n-butylamine	0.97	ug/L	U	0.97	3.9
6/9/2003 9:00	51-SCR-3	BNA-Water	N-Nitrosodi-n-propylamine	1.9	ug/L	U	1.9	7.8
6/9/2003 9:00	51-SCR-3	BNA-Water	N-Nitrosodiethylamine	0.97	ug/L	U	0.97	3.9
6/9/2003 9:00	51-SCR-3	BNA-Water	N-Nitrosodimethylamine	1.9	ug/L	U	1.9	7.8
6/9/2003 9:00	51-SCR-3	BNA-Water	N-Nitrosodiphenylamine	2.9	ug/L	U	2.9	12
6/9/2003 9:00	51-SCR-3	BNA-Water	N-Nitrosomethylethylamine	1.9	ug/L	U	1.9	7.8
6/9/2003 9:00	51-SCR-3	BNA-Water	N-Nitrosomorpholine	0.97	ug/L	U	0.97	3.9
6/9/2003 9:00	51-SCR-3	BNA-Water	N-Nitrosopiperidine	0.97	ug/L	U	0.97	3.9
6/9/2003 9:00	51-SCR-3	BNA-Water	N-Nitrosopyrrolidine	1.9	ug/L	U	1.9	7.8
6/9/2003 9:00	51-SCR-3	BNA-Water	Naphthalene	0.97	ug/L	U	0.97	3.9
6/9/2003 9:00	51-SCR-3	BNA-Water	Nitrobenzene	1.9	ug/L	U	1.9	7.8
6/9/2003 9:00	51-SCR-3	BNA-Water	Nitroquinoline-1-oxide	19	ug/L	U	19	78
6/9/2003 9:00	51-SCR-3	BNA-Water	Pentachlorobenzene	0.97	ug/L	U	0.97	3.9
6/9/2003 9:00	51-SCR-3	BNA-Water	Pentachloroethane	49	ug/L	U	49	190
6/9/2003 9:00	51-SCR-3	BNA-Water	Pentachloronitrobenzene	0.97	ug/L	U	0.97	3.9
6/9/2003 9:00	51-SCR-3	BNA-Water	Pentachlorophenol	2.9	ug/L	U	2.9	12
6/9/2003 9:00	51-SCR-3	BNA-Water	Phenacetin	3.9	ug/L	U	3.9	12
6/9/2003 9:00	51-SCR-3	BNA-Water	Phenanthrene	0.97	ug/L	U	0.97	3.9
6/9/2003 9:00	51-SCR-3	BNA-Water	Phenol	0.97	ug/L	U	0.97	3.9
6/9/2003 9:00	51-SCR-3	BNA-Water	Pyrene	0.97	ug/L	U	0.97	3.9
6/9/2003 9:00	51-SCR-3	BNA-Water	Pyridine	3.9	ug/L	U	3.9	16
6/9/2003 9:00	51-SCR-3	BNA-Water	Safrole	0.97	ug/L	U	0.97	3.9
6/9/2003 9:00	51-SCR-3	BNA-Water	alpha-BHC	1.5	ug/L	U	1.5	5.8
6/9/2003 9:00	51-SCR-3	BNA-Water	beta-BHC	1.5	ug/L	U	1.5	5.8
6/9/2003 9:00	51-SCR-3	BNA-Water	delta-BHC	1.5	ug/L	U	1.5	5.8
6/9/2003 9:00	51-SCR-3	BNA-Water	gamma-BHC	1.5	ug/L	U	1.5	5.8
6/9/2003 9:00	51-SCR-3	BNA-Water	m,p-Cresols	1.9	ug/L	U	1.9	7.8
6/9/2003 9:00	51-SCR-3	BNA-Water	o-Cresol	1.9	ug/L	U	1.9	7.8
6/9/2003 9:00	51-SCR-3	BNA-Water	o-Toluidine	0.97	ug/L	U	0.97	3.9
6/9/2003 9:00	51-SCR-3	GC-Water	Alachlor	0.6	ug/L	U	0.6	2.4
6/9/2003 9:00	51-SCR-3	GC-Water	Ametryn	0.05	ug/L	U	0.05	0.2
6/9/2003 9:00	51-SCR-3	GC-Water	Atrazine	0.059	ug/L	U	0.05	0.2
6/9/2003 9:00	51-SCR-3	GC-Water	Azinphos Methyl	0.05	ug/L	U	0.05	0.2

Date Sampled	Field ID	Analysis Group	Component	Result	Units	Remark	MDL	PQL
6/9/2003 9:00	51-SCR-3	GC-Water	Bromacil	0.2	ug/L	U	0.2	0.8
6/9/2003 9:00	51-SCR-3	GC-Water	Butylate	0.2	ug/L	U	0.2	0.8
6/9/2003 9:00	51-SCR-3	GC-Water	Chlorpyrifos Ethyl	0.05	ug/L	U	0.05	0.2
6/9/2003 9:00	51-SCR-3	GC-Water	Chlorpyrifos Methyl	0.1	ug/L	U	0.1	0.4
6/9/2003 9:00	51-SCR-3	GC-Water	Diazinon	0.05	ug/L	U	0.05	0.2
6/9/2003 9:00	51-SCR-3	GC-Water	Ethion	0.05	ug/L	U	0.05	0.2
6/9/2003 9:00	51-SCR-3	GC-Water	Ethoprop	0.1	ug/L	U	0.1	0.4
6/9/2003 9:00	51-SCR-3	GC-Water	Fenamiphos	0.2	ug/L	U	0.2	0.8
6/9/2003 9:00	51-SCR-3	GC-Water	Fonofos	0.1	ug/L	U	0.1	0.4
6/9/2003 9:00	51-SCR-3	GC-Water	Hexazinone	0.1	ug/L	U	0.1	0.4
6/9/2003 9:00	51-SCR-3	GC-Water	Malathion	0.15	ug/L	U	0.15	0.6
6/9/2003 9:00	51-SCR-3	GC-Water	Metalaxyl	0.25	ug/L	U	0.25	1
6/9/2003 9:00	51-SCR-3	GC-Water	Metolachlor	0.5	ug/L	U	0.5	2
6/9/2003 9:00	51-SCR-3	GC-Water	Metribuzin	0.1	ug/L	U	0.1	0.4
6/9/2003 9:00	51-SCR-3	GC-Water	Mevinphos	0.2	ug/L	U	0.2	0.8
6/9/2003 9:00	51-SCR-3	GC-Water	Naled	0.8	ug/L	U	0.8	3.2
6/9/2003 9:00	51-SCR-3	GC-Water	Norflurazon	0.1	ug/L	U	0.1	0.4
6/9/2003 9:00	51-SCR-3	GC-Water	Parathion Ethyl	0.15	ug/L	U	0.15	0.6
6/9/2003 9:00	51-SCR-3	GC-Water	Parathion Methyl	0.1	ug/L	U	0.1	0.4
6/9/2003 9:00	51-SCR-3	GC-Water	Phorate	0.05	ug/L	U	0.05	0.2
6/9/2003 9:00	51-SCR-3	GC-Water	Prometryn	0.15	ug/L	U	0.15	0.6
6/9/2003 9:00	51-SCR-3	GC-Water	Simazine	0.05	ug/L	U	0.05	0.2
6/9/2003 9:00	51-SCR-3	Metals-Water	Aluminum	27	ug/L	I	10	40
6/9/2003 9:00	51-SCR-3	Metals-Water	Arsenic	7	ug/L	U	7	28
6/9/2003 9:00	51-SCR-3	Metals-Water	Cadmium	0.028	ug/L	I	0.025	0.1
6/9/2003 9:00	51-SCR-3	Metals-Water	Calcium	59.5	mg/L		0.05	0.3
6/9/2003 9:00	51-SCR-3	Metals-Water	Chromium	2	ug/L	U	2	8
6/9/2003 9:00	51-SCR-3	Metals-Water	Copper	3.2	ug/L	I	0.8	3.2
6/9/2003 9:00	51-SCR-3	Metals-Water	Iron	107	ug/L		10	40
6/9/2003 9:00	51-SCR-3	Metals-Water	Lead	0.29	ug/L	I	0.1	0.4
6/9/2003 9:00	51-SCR-3	Metals-Water	Magnesium	4.4	mg/L		0.01	0.04
6/9/2003 9:00	51-SCR-3	Metals-Water	Nickel	2	ug/L	U	2	8
6/9/2003 9:00	51-SCR-3	Metals-Water	Selenium	1	ug/L	U	1	4
6/9/2003 9:00	51-SCR-3	Metals-Water	Silver	0.1	ug/L		0.02	0.08
6/9/2003 9:00	51-SCR-3	Metals-Water	Zinc	16	ug/L		3	12
6/9/2003 9:00	51-SCR-3	Nutrients-Liquid	Ammonia-N	20	mg N/L		0.01	0.02
6/9/2003 9:00	51-SCR-3	Nutrients-Liquid	NO2NO3-N	0.11	mg N/L		0.004	0.01
6/9/2003 9:00	51-SCR-3	Nutrients-Liquid	N_KJEL_TOT	25	mg N/L	A	0.6	2
6/9/2003 9:00	51-SCR-3	Nutrients-Liquid	O-Phosphate-P	2.6	mg P/L		0.08	0.2
6/9/2003 9:00	51-SCR-3	Nutrients-Liquid	Total-P	2.9	mg P/L	A	0.15	0.4

The Bioassay of South Central Regional WWTP effluent sampled on June 8 and 9, 2003, NPDES #FL0035980.

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





The Priority Pollutants Analysis for Bioassay of South Central Regional WWTP effluent sampled on June 8 and 9, 2003, NPDES #FL0035980.

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

