

Bioassays of

The Royal Court Mobile Home Park North Wastewater Treatment Facility

Duval County

NPDES #FL0043095

Sampled February 23, 2004

June 2004

Biology Section
Bureau of Laboratories
Division of Resource Assessment and Management

Quality Manual No. 870346G
NELAC Certification No. E31780

The Royal Court Mobile Home Park North Wastewater Treatment Facility, 5447 Timuquana Road, Jacksonville, Duval County, Florida, NPDES #FL0043095. Effluent samples for this facility were collected on February 23, 2004.

Introduction

This wastewater treatment facility has a design flow of 0.015 million gallons per day (MGD) and an average daily flow of 0.00955 MGD (based on flow data from January – November 2003). Treatment includes an influent pump station, three 5,000-gallon aeration units, a 1,250-gallon secondary clarifier, a 600-gallon chlorine contact chamber, and a 300-gallon post-aeration unit. Residuals are held in an aerated tank prior to hauling to a residuals management facility for further treatment and land application. Disinfection is accomplished by using chlorine tablets that are placed in the clarifier trough. Dechlorination occurs through detention time in the effluent pipe. There are no mixing zones. The facility is currently permitted to discharge effluent to a stormwater drain, which flows to the Ortega River (a Class III fresh waterbody) at discharge location D-001. However, the permit will be revised to state the actual destination of the effluent. At the time of this inspection, the effluent was flowing through a stormwater drain under Timiquana Road, combining with the discharge from the Royal Court MHP South Wastewater Treatment Facility, and then flowing west through a stormwater drain and into the Class III fresh waters of Fishing Creek (facility information provided by Kathleen Gerard, FDEP, Jacksonville).

Methods

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

Toxicity Test Results

Tests were performed February 24-26, 2004.

Ceriodaphnia dubia 48-hr acute screening bioassay – Toxic; LC_{50} < 100%, 100% mortality in 100% sample in 20 minutes

Ceriodaphnia dubia 48-hr acute screening bioassay – Not Toxic; LC_{50} > 100%, 0% mortality in 100% **dechlorinated** sample at 48 hours

Ceriodaphnia dubia 48-hr acute screening bioassay – Toxic; LC_{50} < 100%, 100% mortality in 100% **pH adjusted** sample in 20 minutes

Pimephales promelas 48-hr acute screening bioassay – Toxic; LC_{50} < 100%, 100% mortality in 100% sample in 20 minutes

Pimephales promelas 48-hr acute screening bioassay – Not Toxic; LC_{50} > 100%, 0% mortality in100% **dechlorinated** sample at 48 hours

Pimephales promelas 48-hr acute screening bioassay – Toxic; LC_{50} < 100%, 100% mortality in100% **pH adjusted** sample in 20 minutes

The bioassay tests showed unacceptable toxicity to both test species and failed to comply with Class III Fresh Water Quality Criteria F.A.C. 62-302.530 (62) and 62-302.200(3). The facility's NPDES permit does not require toxicity testing.

See Table 1 for bioassay bench sheets.

Algal Growth Potential

The effluent Algal Growth Potential (AGP) was 0.136 mg dry wt/L of the unicellular green alga, *Pseudokirchneriella subcapitata*, formerly known as *Selenastrum capricornutum*. As part of preparing the AGP sample for testing, the sample is autoclaved. After the effluent sample was autoclaved, it did not require pH adjustment and there was no detectable residual chlorine in the sample. Raschke and Shultz (1987) found that AGP values above 5.0 mg dry weight/L represent a “problem” threshold for fresh receiving waters, implying nutrient enrichment. The result was <0.0001% of the predicted value based on the nutrient content of the effluent (Table 2, 2,432 mg dry weight/L). The nutrient data suggests that the effluent is nitrogen-limitedThis data suggests potential algal growth inhibition, but an algal growth inhibition toxicity test would be required to make this determination.

See Table 2 for AGP results.

Chemistry Results

Total ammonia was not detected in the bioassay samples in the laboratory. Total residual chlorine (TRC) was measured in the field as >2.20 mg/L in the effluent. TRC was measured in the laboratory at a concentration of 7.94 mg/L. The effluent TRC concentrations exceeded the Class III freshwater Quality Criterion for TRC of ≤ 0.01 mg/L (62-302.530(19) F.A.C.). An aliquot of the bioassay sample was dechlorinated (see **Toxicity Results**) prior to testing by the addition of 2.0 ml of sodium thiosulfate (0.025 N) per liter of sample in order to neutralize the chlorine. The pH of the effluent was 5.9 S.U., an exceedance of permit limit and the Class III Water Quality Criterion (62-302.530(52)(c)). An aliquot of the bioassay sample was pH adjusted (see **Toxicity Results**) by adding 10 drops of 1N NaOH and then 2 drops/L of 1N HCL.

The effluent zinc concentration (601 µg/L) exceeded the Class III Fresh Water Quality Criterion for zinc of ≤ 273 µg/L (62-302.530(60) F.A.C.). Aluminum, cadmium, copper, iron, and lead were detected in the effluent at levels above the practical quantitation level (PQL) and silver was detected in the effluent sample at a level above the method detection limit (MDL) and below the PQL.

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

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

Conclusion

The effluent samples collected from this facility on February 23, 2004 showed unacceptable acute toxicity to both test species during the 48-hour bioassay tests. Toxicity is partially attributed to the concentrations of total residual chlorine and zinc in the sample. However, unidentified constituents in the sample cannot be ruled out as contributing to the observed mortality as the sodium thiosulfate addition can affect constituents in the sample other than chlorine. The effluent AGP result was much lower than predicted by nutrient content and suggests algal growth

inhibition may have occurred. The effluent's zinc concentration exceeded the Class III Fresh Water Quality Criterion. The pH of the effluent failed to comply with facility permit limits and the Class III Fresh Water Quality Criterion.

Literature Cited

Raschke, R. L. and D. A. Schultz. 1987. The use of the algal growth potential test for data assessment. J. Wat. Poll. Cont. Fed. 59(4): 222-227.

Table 1. Data recorded during the 48-hour acute screening bioassays of a sample of effluent from the Royal Court Mobile Home Park North Wastewater Treatment Facility, 5447 Timuquana Road, Jacksonville, Duval County, Florida, NPDES# FL0043095, performed from 24 to 26 February 2004.

Facility:	**Royal Court Mobile Home Park North WWTF**		**NPDES #:**	**FL0043095**	Facility Type:	**Wastewater**	**Analysts:**	Marshall Faircloth
Location:	5447 Timuquana Road, Jacksonville		Contact/District:	O'Connor/NE		**Treatment Facility**		Joshua Ayres
County:	Duval		Test type:	static acute screen				James Daniels
Sample Collection Date:	2/23/2004	Time: 1000	# tests:	2	Receiving Water:	Fishing Creek		Christa A. Pierini
Test Beginning Date:	2/24/2004	Time: 1545	Chlorination Type:	chlorinated		Class III freshwater		Sarah Prichard
Test Ending Date:	2/26/2004	Time: 1400	FDEP SOP#:	TA07_01 / 02		**Page 1 of 1**	**Reviewer:**	Julie Espy

100% sample was dechlorinated using 0.025N Sodium thiosulfate at the rate of 8.5 ml per liter of sample.
100% sample was pH adjusted using 10 drops/L NaOH, overadjusted pH used 2 drops/L HCL.
100% mortality in *both test species* 100% and 100% pH adjsted sample after 20 minutes of loading.

Organism: ***Ceriodaphnia dubia*** (water flea) Life stage: <24 hours Chamber size: 30 mL [A]Feeding: YCT/Algae Food Batch #: #1/#24

	Sample/Diluent	SURVIVAL # Alive			pH			[B]Temperature (C)			Diss. Oxygen (mg/L)			[C]Conductivity	
Concentrations	Volume(mL)	0 hr	24 hr	48 hr	0 hour	24 hour	48 hour	0 hour	24 hour	48 hour	0 hour	24 hour	48 hour	0 hour	48 hour
Control A	0/20	5	5	5	8.0	-	-	24.3	-	-	7.8	-	-	190	-
Control B	0/20	5	5	5	-	-	-	-	-	-	-	-	-	-	-
Control C	0/20	5	5	5	-	-	8.0	-	-	24.5	-	-	7.5	-	205
Control D	0/20	5	5	5	-	-	-	-	-	-	-	-	-	-	-
Dechl. Ctrl A	0/20	5	5	5	8.1	-	-	24.0	-	-	7.8	-	-	210	-
Dechl. Ctrl B	0/20	5	5	5	-	-	-	-	-	-	-	-	-	-	-
Dechl. Ctrl C	0/20	5	5	5	-	-	8.1	-	-	24.4	-	-	7.5	-	245
Dechl. Ctrl D	0/20	5	5	5	-	-	-	-	-	-	-	-	-	-	-
Dechl. 100% A	20/0	5	5	5	6.3	-	-	24.1	-	-	7.8	-	-	1000	-
Dechl. 100% B	20/0	5	5	5	-	-	-	-	-	-	-	-	-	-	-
Dechl. 100% C	20/0	5	5	5	-	-	6.6	-	-	24.5	-	-	7.4	-	1150
Dechl. 100% D	20/0	5	5	5	-	-	-	-	-	-	-	-	-	-	-
100% A	20/0	5	0	-	5.7	-	-	24.4	-	-	7.9	-	-	1025	-
100% B	20/0	5	0	-	-	-	-	-	-	-	-	-	-	-	-
100% C	20/0	5	0	-	-	-	-	-	-	-	-	-	-	-	-
100% D	20/0	5	0	-	-	-	-	-	-	-	-	-	-	-	-
pH adj. 100% A	20/0	5	0	-	7.0	-	-	24.8	-	-	8.2	-	-	1080	-
pH adj. 100% B	20/0	5	0	-	-	-	-	-	-	-	-	-	-	-	-
pH adj. 100% C	20/0	5	0	-	-	-	-	-	-	-	-	-	-	-	-
pH adj. 100% D	20/0	5	0	-	-	-	-	-	-	-	-	-	-	-	-

Organism: ***Pimephales promelas*** (fish) Life stage: 4 days Chamber size: 1000 mL [A]Feeding: *Artemia* Food Batch #: 0194025G

	Sample/Diluent	SURVIVAL # Alive			pH			[B]Temperature (C)			Diss. Oxygen (mg/L)			[C]Conductivity	
Concentrations	Volume(mL)	0 hr	24 hr	48 hr	0 hour	24 hour	48 hour	0 hour	24 hour	48 hour	0 hour	24 hour	48 hour	0 hour	48 hour
Control A	0/500	5	5	5	7.9	-	-	24.1	-	-	7.9	-	-	335	-
Control B	0/500	5	5	5	-	8.0	-	-	25.5	-	-	7.4	-	-	-
Control C	0/500	5	5	5	-	-	7.9	-	-	24.1	-	-	7.6	-	455
Control D	0/500	5	5	5	-	-	-	-	-	-	-	-	-	-	-
Dechl. Ctrl A	0/500	5	5	5	8.0	-	-	24.1	-	-	7.9	-	-	360	-
Dechl. Ctrl B	0/500	5	5	5	-	8.0	-	-	24.4	-	-	7.5	-	-	-
Dechl. Ctrl C	0/500	5	5	5	-	-	8.0	-	-	24.0	-	-	7.6	-	395
Dechl. Ctrl D	0/500	5	5	5	-	-	-	-	-	-	-	-	-	-	-
Dechl. 100% A	500/0	5	5	5	6.3	-	-	24.2	-	-	7.9	-	-	1005	-
Dechl. 100% B	500/0	5	5	5	-	6.3	-	-	24.3	-	-	7.3	-	-	-
Dechl. 100% C	500/0	5	5	5	-	-	6.5	-	-	24.0	-	-	7.5	-	1105
Dechl. 100% D	500/0	5	5	5	-	-	-	-	-	-	-	-	-	-	-
100% A	500/0	5	0	-	5.6	-	-	24.6	-	-	7.9	-	-	1015	-
100% B	500/0	5	0	-	-	-	-	-	-	-	-	-	-	-	-
100% C	500/0	5	0	-	-	-	-	-	-	-	-	-	-	-	-
100% D	500/0	5	0	-	-	-	-	-	-	-	-	-	-	-	-
pH adj. 100% A	500/0	5	0	-	6.9	-	-	24.7	-	-	8.0	-	-	1080	-
ph adj. 100% B	500/0	5	0	-	-	-	-	-	-	-	-	-	-	-	-

LIMS
Job number: TLH-2004-02-24-04
sample number: 737018

Data Transcription Verification
date: 4/15/04
by: James Daniels/Cathy Oaks

Total Residuam Cl2	mg/L	Method
Field 100% sample:	>2.20	field meter
Lab 100% sample:	7.94	Hach
Lab dechl. sample:	<0.03	Hach
Ctrl water (flea):	<0.03	Hach
Ctrl water (fish):	<0.03	Hach

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

Alk & Hardness	Alkalinity (mg/L)	Hardness (mg/L)
Control water (water flea):	85	87
Control water (fish):	82	91
100% Sample:	31	246

Mortality	Percent
Control water (water flea):	0%
100% (water flea):	100%
Control water (fish):	0%
100 % (fish):	100%

[A]Organisms fed prior to testing.
[B]Temperatures of room and test incubator were continuously recorded on a strip chart recorder.
[C]Conductivity value is uncorrected µmhos/cm.
Room Temperature range for the test period was 23.5 - 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.
Incubator #3 temperature range for the test period was 22.5-24.0°C.

Table 2. *Measured and predicted algal growth potential (AGP) for total soluble nitrogen (TSIN) limitation for the effluent sample* .
(Units of mg dry weight/L)

Location	**Effluent Sample**
AGP (Measured)	0.136
Predicted AGP (TSIN) ± 20%	2432.65 ± 486.53
Inorganic N:P ratio	5.33

Table 3. *Effluent limits, Class III Criteria and chemical data*

Royal Court Mobile Home Park North WWTF	Class III Stds	Effluent Limits	Effluent Samples
Organic Constituents (µg/L)			
None Detected			
Metals (µg/L unless otherwise noted)			
Aluminum	-	-	147
Arsenic	≤ 50	-	9 U
Cadmium	≤ 2.4 b	-	0.32
Calcium (mg/L)	-	-	66.1
Chromium-III	≤ 191 b	-	3 U
Copper	≤ 21.4 b	-	12.3
Iron	≤ 1000	-	391
Lead	≤ 11 b	-	0.68
Magnesium (mg/L)	-	-	24.1
Nickel	≤ 118.7 b	-	4 U
Selenium	≤ 5	-	1 U
Silver	≤ 0.07	-	0.048 I
Zinc	≤ 273 b	-	601
Nutrients (mg/L)			
Ortho-phosphate	-	Report	12
Total Phosphorus	-	Report	13 A
Ammonia	-	4.0 s	0.017 I
Unionized Ammonia	≤ 0.02	≤ 0.02	< 0.02
Nitrate+Nitrite	-	Report	64
Total Kjeldahl Nitrogen	-	-	6.5 A
Organic Nitrogen	-	Report	6.48 c
Total Nitrogen	-	Report	70.5 c
General Physical and Chemical Parameters			
Dissolved Oxygen (mg/L)	≥ 5	≥ 6	10.3
pH (S.U.)	6.0 - 8.5	6.0 - 8.5	5.9
Conductivity (umhos/cm)	≤ 1275	-	1024
Temperature (C)	-	-	14.9
Hardness (mg/L)	-	-	264.3 c
TSS (mg/L)	-	60.0 s	12 I
Total Residual Chlorine (mg/L) (100% lab)	≤ 0.01	≤ 0.01	7.94
Total Residual Chlorine (mg/L) (100% field)	≤ 0.01	≤ 0.01	2.2

A - Value reported is the mean of two or more determinations.
b - Value is calculated based on hardness.
c - Calculated value.
s - Single sample.
I - The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
U - Material was analyzed for but not detected. The value reported is the minimum detection limit.

Appendix 1. Chemical analyses performed on the effluent from the Royal Court Mobile Home Park North Wastewater Treatment Facility sampled on February 23, 2004

DATE SAMPLED	FIELD ID	ANALYSIS GROUP	COMPONENT	RESULT	UNITS	REMARK	MDL	PQL
2/23/2004 12:00	FL0043095	Bio-AGP/LimNut	Algal Growth Potential	0.136	mg DryWt/L	I	0.1	0.3
2/23/2004 12:00	FL0043095	Bio-Chl-a	Chlorophyll-A, Monochromatic, Water	1.2	ug/L	U	1.2	3.7
2/23/2004 12:00	FL0043095	Bio-Chl-a	Phaeophytin-A, Monochromatic, Water	1.2	ug/L	U	1.2	3.7
2/23/2004 12:00	FL0043095	Bio-Toxicology	Bioassay-Acute-Screen-FW-C.dubia, LC50	100	LC50	K		
2/23/2004 12:00	FL0043095	Bio-Toxicology	Bioassay-Acute-Screen-FW-Fish, LC50	100	LC50	K		
2/23/2004 12:00	FL0043095	Bio-Toxicology	Bioassay-Acute-Screen-FW-Fish,LC50-pHadj	100	LC50	K		
2/23/2004 12:00	FL0043095	Bio-Toxicology	Bioassay-Acute-Scrn-FW-Cdubia,LC50-pHadj	100	LC50	K		
2/23/2004 12:00	FL0043095	Bio-Toxicology	Bioassay-Acute-Scrn-FW-Fish,LC50-dechlr	100	LC50	L		
2/23/2004 12:00	FL0043095	Bio-Toxicology	Bioassy-Acute-Scrn-FW-Cdubia,LC50-dechlr	100	LC50	L		
2/23/2004 12:00	FL0043095	BNA-Water	1,2,4-Trichlorobenzene	0.97	ug/L	U	0.97	3.9
2/23/2004 12:00	FL0043095	BNA-Water	1,2-Dichlorobenzene	0.97	ug/L	U	0.97	3.9
2/23/2004 12:00	FL0043095	BNA-Water	1,3-Dichlorobenzene	0.97	ug/L	U	0.97	3.9
2/23/2004 12:00	FL0043095	BNA-Water	1,4-Dichlorobenzene	0.97	ug/L	U	0.97	3.9
2/23/2004 12:00	FL0043095	BNA-Water	2,4,5-Trichlorophenol	0.97	ug/L	U	0.97	3.9
2/23/2004 12:00	FL0043095	BNA-Water	2,4-Dichlorophenol	0.97	ug/L	U	0.97	3.9
2/23/2004 12:00	FL0043095	BNA-Water	2,4-Dimethylphenol	49	ug/L	U	49	190
2/23/2004 12:00	FL0043095	BNA-Water	2,4-Dinitrophenol	15	ug/L	U	15	58
2/23/2004 12:00	FL0043095	BNA-Water	2,4-Dinitrotoluene	0.97	ug/L	U	0.97	3.9
2/23/2004 12:00	FL0043095	BNA-Water	2,6-Dinitrotoluene	0.97	ug/L	U	0.97	3.9
2/23/2004 12:00	FL0043095	BNA-Water	2-Chloronaphthalene	0.97	ug/L	U	0.97	3.9
2/23/2004 12:00	FL0043095	BNA-Water	2-Chlorophenol	0.97	ug/L	U	0.97	3.9
2/23/2004 12:00	FL0043095	BNA-Water	2-Methyl-4,6-dinitrophenol	2.9	ug/L	U	2.9	12
2/23/2004 12:00	FL0043095	BNA-Water	2-Nitrophenol	0.97	ug/L	U	0.97	3.9
2/23/2004 12:00	FL0043095	BNA-Water	3,3'-Dichlorobenzidine	39	ug/L	U	39	160
2/23/2004 12:00	FL0043095	BNA-Water	4,4'-DDD	1.5	ug/L	U	1.5	5.8
2/23/2004 12:00	FL0043095	BNA-Water	4,4'-DDE	1.5	ug/L	U	1.5	5.8
2/23/2004 12:00	FL0043095	BNA-Water	4,4'-DDT	1.5	ug/L	UJ	1.5	5.8
2/23/2004 12:00	FL0043095	BNA-Water	4-Bromophenyl phenyl ether	0.97	ug/L	U	0.97	3.9
2/23/2004 12:00	FL0043095	BNA-Water	4-Chloro-3-methylphenol	0.97	ug/L	U	0.97	3.9
2/23/2004 12:00	FL0043095	BNA-Water	4-Chlorophenyl phenyl ether	1.9	ug/L	U	1.9	7.8
2/23/2004 12:00	FL0043095	BNA-Water	4-Nitrophenol	15	ug/L	U	15	58
2/23/2004 12:00	FL0043095	BNA-Water	Acenaphthene	0.97	ug/L	U	0.97	3.9
2/23/2004 12:00	FL0043095	BNA-Water	Acenaphthylene	0.97	ug/L	U	0.97	3.9
2/23/2004 12:00	FL0043095	BNA-Water	Aldrin	1.5	ug/L	U	1.5	5.8
2/23/2004 12:00	FL0043095	BNA-Water	Anthracene	0.97	ug/L	U	0.97	3.9
2/23/2004 12:00	FL0043095	BNA-Water	Benzidine	97	ug/L	U	97	390
2/23/2004 12:00	FL0043095	BNA-Water	Benzo(a)anthracene	0.97	ug/L	U	0.97	3.9

DATE SAMPLED	FIELD ID	ANALYSIS GROUP	COMPONENT	RESULT	UNITS	REMARK	MDL	PQL
2/23/2004 12:00	FL0043095	BNA-Water	Benzo(a)pyrene	0.97	ug/L	U	0.97	3.9
2/23/2004 12:00	FL0043095	BNA-Water	Benzo(b)fluoranthene	0.97	ug/L	U	0.97	3.9
2/23/2004 12:00	FL0043095	BNA-Water	Benzo(g,h,i)perylene	0.97	ug/L	U	0.97	3.9
2/23/2004 12:00	FL0043095	BNA-Water	Benzo(k)fluoranthene	0.97	ug/L	U	0.97	3.9
2/23/2004 12:00	FL0043095	BNA-Water	Bis(2-chloroethoxy)methane	0.97	ug/L	U	0.97	3.9
2/23/2004 12:00	FL0043095	BNA-Water	Bis(2-chloroethyl)ether	0.97	ug/L	U	0.97	3.9
2/23/2004 12:00	FL0043095	BNA-Water	Bis(2-chloroisopropyl)ether	2.9	ug/L	U	2.9	12
2/23/2004 12:00	FL0043095	BNA-Water	Bis(2-ethylhexyl)phthalate	15	ug/L	U	15	58
2/23/2004 12:00	FL0043095	BNA-Water	Butyl benzyl phthalate	4.9	ug/L	U	4.9	19
2/23/2004 12:00	FL0043095	BNA-Water	Chrysene	0.97	ug/L	U	0.97	3.9
2/23/2004 12:00	FL0043095	BNA-Water	Di-n-butyl phthalate	4.9	ug/L	U	4.9	19
2/23/2004 12:00	FL0043095	BNA-Water	Di-n-octyl phthalate	0.97	ug/L	U	0.97	3.9
2/23/2004 12:00	FL0043095	BNA-Water	Dibenzo(a,h)anthracene	0.97	ug/L	U	0.97	3.9
2/23/2004 12:00	FL0043095	BNA-Water	Dieldrin	1.5	ug/L	U	1.5	5.8
2/23/2004 12:00	FL0043095	BNA-Water	Diethyl phthalate	0.97	ug/L	U	0.97	3.9
2/23/2004 12:00	FL0043095	BNA-Water	Dimethyl phthalate	49	ug/L	U	49	190
2/23/2004 12:00	FL0043095	BNA-Water	Endosulfan I	3.9	ug/L	U	3.9	16
2/23/2004 12:00	FL0043095	BNA-Water	Endosulfan II	3.9	ug/L	U	3.9	16
2/23/2004 12:00	FL0043095	BNA-Water	Endosulfan sulfate	1.5	ug/L	U	1.5	5.8
2/23/2004 12:00	FL0043095	BNA-Water	Endrin	1.5	ug/L	UJ	1.5	5.8
2/23/2004 12:00	FL0043095	BNA-Water	Endrin aldehyde	3.9	ug/L	U	3.9	16
2/23/2004 12:00	FL0043095	BNA-Water	Fluoranthene	0.97	ug/L	U	0.97	3.9
2/23/2004 12:00	FL0043095	BNA-Water	Fluorene	0.97	ug/L	U	0.97	3.9
2/23/2004 12:00	FL0043095	BNA-Water	Heptachlor	1.5	ug/L	U	1.5	5.8
2/23/2004 12:00	FL0043095	BNA-Water	Heptachlor epoxide	1.5	ug/L	U	1.5	5.8
2/23/2004 12:00	FL0043095	BNA-Water	Hexachlorobenzene	0.97	ug/L	U	0.97	3.9
2/23/2004 12:00	FL0043095	BNA-Water	Hexachlorobutadiene	2.9	ug/L	U	2.9	12
2/23/2004 12:00	FL0043095	BNA-Water	Hexachlorocyclopentadiene	2.9	ug/L	U	2.9	12
2/23/2004 12:00	FL0043095	BNA-Water	Hexachloroethane	2.9	ug/L	U	2.9	12
2/23/2004 12:00	FL0043095	BNA-Water	Indeno(1,2,3-cd)pyrene	0.97	ug/L	U	0.97	3.9
2/23/2004 12:00	FL0043095	BNA-Water	Isophorone	0.97	ug/L	U	0.97	3.9
2/23/2004 12:00	FL0043095	BNA-Water	N-Nitrosodi-n-propylamine	1.9	ug/L	U	1.9	7.8
2/23/2004 12:00	FL0043095	BNA-Water	N-Nitrosodimethylamine	1.9	ug/L	U	1.9	7.8
2/23/2004 12:00	FL0043095	BNA-Water	N-Nitrosodiphenylamine	2.9	ug/L	U	2.9	12
2/23/2004 12:00	FL0043095	BNA-Water	Naphthalene	0.97	ug/L	U	0.97	3.9
2/23/2004 12:00	FL0043095	BNA-Water	Nitrobenzene	1.9	ug/L	U	1.9	7.8
2/23/2004 12:00	FL0043095	BNA-Water	Pentachlorophenol	2.9	ug/L	U	2.9	12
2/23/2004 12:00	FL0043095	BNA-Water	Phenanthrene	0.97	ug/L	U	0.97	3.9
2/23/2004 12:00	FL0043095	BNA-Water	Phenol	0.97	ug/L	U	0.97	3.9
2/23/2004 12:00	FL0043095	BNA-Water	Pyrene	0.97	ug/L	U	0.97	3.9

DATE SAMPLED	FIELD ID	ANALYSIS GROUP	COMPONENT	RESULT	UNITS	REMARK	MDL	PQL
2/23/2004 12:00	FL0043095	BNA-Water	alpha-BHC	1.5	ug/L	U	1.5	5.8
2/23/2004 12:00	FL0043095	BNA-Water	beta-BHC	1.5	ug/L	U	1.5	5.8
2/23/2004 12:00	FL0043095	BNA-Water	delta-BHC	1.5	ug/L	U	1.5	5.8
2/23/2004 12:00	FL0043095	BNA-Water	gamma-BHC	1.5	ug/L	U	1.5	5.8
2/23/2004 12:00	FL0043095	GC-Water	Alachlor	0.62	ug/L	U	0.62	2.48
2/23/2004 12:00	FL0043095	GC-Water	Ametryn	0.052	ug/L	U	0.052	0.208
2/23/2004 12:00	FL0043095	GC-Water	Atrazine	0.052	ug/L	U	0.052	0.208
2/23/2004 12:00	FL0043095	GC-Water	Azinphos Methyl	0.052	ug/L	UJ	0.052	0.208
2/23/2004 12:00	FL0043095	GC-Water	Bromacil	0.21	ug/L	U	0.21	0.84
2/23/2004 12:00	FL0043095	GC-Water	Butylate	0.21	ug/L	U	0.21	0.84
2/23/2004 12:00	FL0043095	GC-Water	Chlorpyrifos Ethyl	0.052	ug/L	U	0.052	0.208
2/23/2004 12:00	FL0043095	GC-Water	Chlorpyrifos Methyl	0.1	ug/L	U	0.1	0.4
2/23/2004 12:00	FL0043095	GC-Water	Diazinon	0.052	ug/L	U	0.052	0.208
2/23/2004 12:00	FL0043095	GC-Water	Ethion	0.052	ug/L	U	0.052	0.208
2/23/2004 12:00	FL0043095	GC-Water	Ethoprop	0.1	ug/L	UJ	0.1	0.4
2/23/2004 12:00	FL0043095	GC-Water	Fenamiphos	0.21	ug/L	U	0.21	0.84
2/23/2004 12:00	FL0043095	GC-Water	Fonofos	0.1	ug/L	U	0.1	0.4
2/23/2004 12:00	FL0043095	GC-Water	Hexazinone	0.1	ug/L	U	0.1	0.4
2/23/2004 12:00	FL0043095	GC-Water	Malathion	0.16	ug/L	U	0.16	0.64
2/23/2004 12:00	FL0043095	GC-Water	Metalaxyl	0.26	ug/L	U	0.26	1.04
2/23/2004 12:00	FL0043095	GC-Water	Metolachlor	0.52	ug/L	U	0.52	2.08
2/23/2004 12:00	FL0043095	GC-Water	Metribuzin	0.1	ug/L	U	0.1	0.4
2/23/2004 12:00	FL0043095	GC-Water	Mevinphos	0.21	ug/L	UJ	0.21	0.84
2/23/2004 12:00	FL0043095	GC-Water	Naled	0.83	ug/L	UJ	0.83	3.32
2/23/2004 12:00	FL0043095	GC-Water	Norflurazon	0.1	ug/L	UJ	0.1	0.4
2/23/2004 12:00	FL0043095	GC-Water	Parathion Ethyl	0.16	ug/L	U	0.16	0.64
2/23/2004 12:00	FL0043095	GC-Water	Parathion Methyl	0.1	ug/L	U	0.1	0.4
2/23/2004 12:00	FL0043095	GC-Water	Phorate	0.052	ug/L	UJ	0.052	0.208
2/23/2004 12:00	FL0043095	GC-Water	Prometryn	0.16	ug/L	U	0.16	0.64
2/23/2004 12:00	FL0043095	GC-Water	Simazine	0.052	ug/L	U	0.052	0.208
2/23/2004 12:00	FL0043095	Metals-Water	Aluminum	147	ug/L		7	28
2/23/2004 12:00	FL0043095	Metals-Water	Arsenic	9	ug/L	U	9	36
2/23/2004 12:00	FL0043095	Metals-Water	Cadmium	0.32	ug/L		0.025	0.1
2/23/2004 12:00	FL0043095	Metals-Water	Calcium	66.1	mg/L		0.05	0.2
2/23/2004 12:00	FL0043095	Metals-Water	Chromium	3	ug/L	U	3	12
2/23/2004 12:00	FL0043095	Metals-Water	Copper	12.3	ug/L		1	4
2/23/2004 12:00	FL0043095	Metals-Water	Iron	391	ug/L		10	40
2/23/2004 12:00	FL0043095	Metals-Water	Lead	0.68	ug/L		0.05	0.2
2/23/2004 12:00	FL0043095	Metals-Water	Magnesium	24.1	mg/L		0.02	0.08
2/23/2004 12:00	FL0043095	Metals-Water	Nickel	4	ug/L	U	4	16

DATE SAMPLED	FIELD ID	ANALYSIS GROUP	COMPONENT	RESULT	UNITS	REMARK	MDL	PQL
2/23/2004 12:00	FL0043095	Metals-Water	Selenium	1	ug/L	U	1	4
2/23/2004 12:00	FL0043095	Metals-Water	Silver	0.048	ug/L	I	0.02	0.08
2/23/2004 12:00	FL0043095	Metals-Water	Zinc	601	ug/L		5	20
2/23/2004 12:00	FL0043095	Nutrients-Liquid	Ammonia-N	0.017	mg N/L	I	0.01	0.02
2/23/2004 12:00	FL0043095	Nutrients-Liquid	NO2NO3-N	64	mg N/L		0.4	1
2/23/2004 12:00	FL0043095	Nutrients-Liquid	N_KJEL_TOT	6.5	mg N/L	A	0.3	1
2/23/2004 12:00	FL0043095	Nutrients-Liquid	O-Phosphate-P	12	mg P/L		0.48	1.2
2/23/2004 12:00	FL0043095	Nutrients-Liquid	TSS	12	mg/L	I	4	16
2/23/2004 12:00	FL0043095	Nutrients-Liquid	Total-P	13	mg P/L	A	0.4	1.2

The Bioassay of the Royal Court Mobile Home Park North Wastewater Treatment Facility effluent sampled on 23 February 2004, NPDES #FL0043095.

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

Transaction Code		NPDES NUMBER										YR/MO/DA						Insp Type	Inspector	Fac Type
1	N	2	5	3	F	L	0	0	4	3	0	9	5	11 12	0	4	0	2	2	3	18 **B**	19 **S**	20 1

Remarks

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The Priority Pollutants Analysis for Bioassay of the Royal Court Mobile Home Park North Wastewater Treatment Facility effluent sampled on 23 February, 2004, NPDES #FL0043141.

F

Transaction Code		NPDES NUMBER										YR/MO/DA						Insp Type	Inspector	Fac Type
1	N	2	5	3	F	L	0	0	4	3	0	9	5	11 12	0	4	0	2	2	3	18 **X**	19 **S**	20 1

Remarks

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