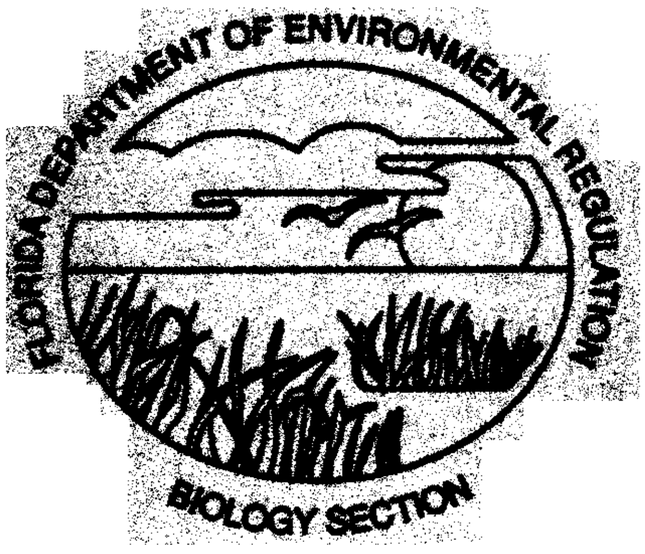


Bioassays of
Gulf Coast Recycling
Tampa, Hillsborough County, Florida
Florida Temporary Operating Permit #DER IT 29-110367
Sampled 6/3/91
(Revised Text)

August 7, 1991

Biology Section
Division of Technical Services

Bioassays of

Gulf Coast Recycling

Tampa, Hillsborough County, Florida

Florida Temporary Operating Permit #DER IT 29-110367

(Revised Text)

Biology Section
Bureau of Laboratories
August 7, 1991

Introduction

Gulf Coast Recycling, Tampa, Hillsborough County, Florida, Temporary Operating Permit #IT 29-110367, on 4 to 6 June, 1991.

Gulf Coast Recycling is a battery recycling plant located at 1901 North 66th Street in Tampa. The process wastewater generated during plant operation is sent to a municipal wastewater treatment facility. The stormwater from around the plant collects in a stormwater retention pond (on the property) which is monitored for pH and conductivity. When these measurements are within acceptable ranges, the water is pumped to a sump, then gravity-fed to an unnamed drainage canal which discharges to the Palm River, which flows into Hillsborough Bay. This stormwater discharge is permitted under a Temporary Operating Permit.

The toxicity tests discussed in this report were performed in accordance with methods described by Peltier and Weber, 1985, *Methods for Measuring the Acute Toxicity of Effluents to Aquatic Organisms*, 3rd Edition, and by the FDER Biology Section, 1985, *Quality Assurance Manual for Performing Acute Toxicity Tests*, 2nd Edition.

Results and Discussion

The FDER Biology Section performed two static acute screening bioassays on a sample of stormwater effluent from this facility. The bioassay test organisms, the water flea, *Ceriodaphnia dubia*, and the fish, *Notropis leedsi*, were used for these tests. The test results indicated that the sample was not toxic to either test organism. The effluent sample was not chlorinated. No further chemical analyses were performed.

Conclusion

The sample of stormwater effluent from this facility was not toxic on 3 June, 1991.

Table 1. Concentration Series and Volumes Used for the Static Acute Screening Bioassays of Gulf Coast Recycling Stormwater Effluent on 4 to 6 June, 1991.

Ceriodaphnia dubia (water flea)

Concentration	Dilution Water	Sample	Total Volume
Control	20.0 mL	0.0 mL	20 mL
100.0%	0.0 mL	20.0 mL	20 mL

Notropis leedsi (bannerfin shiner)

Concentration	Dilution Water	Sample	Total Volume
Control	500 mL	0 mL	500 mL
100.0%	0 mL	500 mL	500 mL

Table 2. Data recorded during the static acute bioassay of a sample of stormwater effluent from Gulf Coast Recycling, Tampa, Hillsborough County, Florida, FL Temporary Operating Permit # IT 29-110367, on 4 to 6 June, 1991.

Facility:	**Gulf Coast Recycling (stormwater)**	**FL Temp Oper Permit #**	**IT29-110367**	Facility Type:	**Chemical Processing (stormwater runoff)**
Location:	1901 66th St. N, Tampa	Contact/District:	G. Millington / SW		
County:	Hillsborough	Test type:	Static Screen	Receiving Water:	Palm River to Hillsborough Bay
Sample Collection Date:	6/3/91 Time: 1420	# tests:	2		
Test Beginning Date:	6/4/91 Time: 1330	Chlorination Type:	**not chlorinated**		
Test Ending Date:	6/6/91 Time: 1330				**Page 1 of 1**

Total Residual Cl2	mg/l	Method
Lab:	0.0	HACH

Alk & Hardness	Alkalinity (mg/l)	Hardness (mg/l)
Control Water (fish):	110	120
Cond. Control Water (daphnids):	62	80
100% Sample:	4*	410

* Alkalinity checked twice

Organism: ***Ceriodaphnia dubia*** Life stage: <24 hours
LC50: -

	SURVIVAL			Dissolved Oxygen			pH			Temperature			Conductivity	
Concentrations	# at 0 hr	Live at 24 hr	Live at 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	5	5	5	9.0	9.0	8.9	8.2	8.3	8.1	21.2	21.8	21.6	172	179
Control	5	5	5	-	-	-	-	-	-	-	-	-	-	-
Control	5	5	5	-	-	-	-	-	-	-	-	-	-	-
Control	5	5	5	-	-	-	-	-	-	-	-	-	-	-
100%	5	5	5	8.7	9.0	9.0	7.6	7.7	7.4	20.8	21.9	21.7	1825	1791
100%	5	5	5	-	-	-	-	-	-	-	-	-	-	-
100%	5	5	5	-	-	-	-	-	-	-	-	-	-	-
100%	5	5	5	-	-	-	-	-	-	-	-	-	-	-

Organism: ***Notropis leedsi*** Age: 19 days
LC50: -

	SURVIVAL			Dissolved Oxygen			pH			Temperature			Conductivity	
Concentrations	# at 0 hr	Live at 24 hr	Live at 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	5	5	5	9.2	9.0	9.1	7.9	8.3	8.2	21.0	21.2	21.0	-	-
Control	5	5	5	9.2	9.0	9.1	7.9	8.3	8.2	-	-	-	243	247
100%	5	5	5	9.0	8.9	9.0	7.6	7.2	6.8	20.0	21.2	21.0	-	-
100%	5	5	5	9.0	9.0	9.0	7.6	7.2	6.8	-	-	-	1930	2020

DER Biology Section — Acute Bioassay Bench Sheet

Sample Source: GULF COAST RECYCLING
Address/City: 1901 66th ST N, TAMPA
County: HILLSBOROUGH
Contact/District: GARY MILLINGTON / SW
NPDES Permit #: [illegible] 29-110367 **Outfall #:** ______

Sample Collection: Date 6-3-91 Time 1420
Test Beginning: Date 6-4-91 Time 1330
Test Ending: Date 6/6/91 Time 1330
Test Organism: CERIODAPHNIA DUBIA
Life Stage/Age: < 24 HOURS

Test Number: 1 of 2 **Test Type:** (Screening) | Definitive
(Static) | Static Renewal | Flow-through

Remarks:

Instrument Calibrations:

	pH	DO	Cond	Temp
0 hr	7@7, 9@9	8.8@22	1390@24.4 @1390	21.9@24.2
24 hr	7@7, 9@9	8.8@22°	1350@24.2@1388	22.0@24.5
48 hr	7@7, 9@9	8.8@22	1365@24.0 @1380	21.0@23.7

Conc.	Chamber #	Number Live 0	Number Live 24	Number Live 48	DO (mg/l) 0	DO (mg/l) 24	DO (mg/l) 48	pH 0	pH 24	pH 48	Temp. (°C) 0	Temp. (°C) 24	Temp. (°C) 48	Cond. (µmhos/cm) 0	Cond. (µmhos/cm) 24	Cond. (µmhos/cm) 48
CONTROL	A	5	5	5	9.0	9.0	8.9	8.2	8.3	8.1	21.2	21.8	21.6	172	175	174
CONTROL	B	5	5	5												
CONTROL	C	5	5	5												
CONTROL	D	5	5	5												
100%	A	5	5	5	8.7	9.0	9.0	7.6	7.7	7.4	20.8	21.9	21.7	1825	1814	1794
100%	B	5	5	5												
100%	C	5	5	5												
100%	D	5	5	5												
Measured/Loaded by:		MF	MF	MF	MF	MF	MF	MF	ME	MF	MF	ME		MF	MF	MF
Recorded by:		MF	MF	AJ	KP	BJ	AJ	KP	BJ	AJ	KP	BJ		KP	AJ	BJ

Investigators' Signatures

Kim Pearce
[illegible signature]
Alison Jordan

Water-quality Parameters

	Well Water	Cond. Water	Sample	Method	Measured by
Field Tot. Resid. Cl	[illegible]	[illegible]	BLANK 0.0	HACH	JMF
Lab Tot. Resid. Cl	[illegible]	[illegible]	0.0	Hach	JMF
Alkalinity	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Hardness	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Total Ammonia					

Reviewer: ______

[illegible]

DER Biology Section — Acute Bioassay Bench Sheet

Sample Source: GULF COAST RECYCLING
Address/City: 1901 66th ST N, TAMPA
County: HILLSBOROUGH
Contact/District: GARY MILLINGTON / SW
NPDES Permit #: _____ Outfall #: _____

Sample Collection: Date 6-3-91 Time 1420
Test Beginning: Date 6-4-91 Time 1330
Test Ending: Date 6/6/91 Time 1330
Test Organism: NOTROPIS LEEDSI
Life Stage/Age: 19 DAYS

Test Number: 2 of 2
Test Type: (Screening) | Definitive
(Static) | Static Renewal | Flow-through

Remarks:

Instrument Calibrations:

	pH	DO	Cond	Temp
0 hr	7@7.99	8.8@22	1390@24.4 @1390	21.9@24.5
24 hr	7@7.99	8.8@22	@1385 1375@24.0	22.0@24.
48 hr	7@7.99	8.8@22	1365@24.0 @1380	21.0@23.7

Conc.	Chamber #	Number Live 0	24	48	DO (mg/l) 0	24	48	pH 0	24	48	Temp. (°C) 0	24	48	Cond. (µmhos/cm) 0	24	48
CONTROL	57	5	5	5	9.2	9.0	9.1	7.9	8.3	8.2	21.0	21.2	21.0			
CONTROL	53	5	5	5	9.2	9.0	9.1	7.9	8.3	8.2				243	245	~~XX~~
100%	37	5	5	5	9.0	8.9	9.0	7.6	7.2	6.8	20.0	21.2	21.0			
100%	48	5	5	5	9.0	9.0	9.0	7.6	7.2	6.8				1930	1954	~~XX~~

AJ 24 M 20

Measured/Loaded by: MF MF AJ MF MF MF MF MF MF MF MF MF MF MF MF MF
Recorded by: MF MF AJ KP [illegible] [illegible] KP [illegible] [illegible] KP [illegible] [illegible] KP [illegible] [illegible]

Investigators' Signatures

Kim Pearce
Alison Jordan

Reviewer

Water-quality Parameters

	Well Water	Cond. Water	Sample	Method	Measured by
Field Tot. Resid. Cl2:			BLANK 0.0	HACH	JMF
Lab Tot. Resid. Cl2:			0.0	HACH	JMF
Alkalinity:	110	62	4	[illegible]	MF
Hardness:	120	80	4.0	[illegible]	MF
Total Ammonia:					

Ammonia meter slope: _____