Bioassays of

Florida Select Citrus
(formerly B & W Canning Company, Inc.)

Groveland, Lake County, Florida

NPDES #FL0002755

Sampled 5/13/91

June 7, 1991

Biology Section
Division of Administrative and Technical Services

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Florida Select Citrus

(formerly B & W Canning Company, Inc.)

Groveland, Lake County, Florida

NPDES #FL0002755

Biology Section
Bureau of Laboratories
June 7, 1991

Introduction

Florida Select Citrus, Groveland, Lake County, Florida, NPDES #FL0002755, on 14 to 16 May, 1991.

The Florida Select Citrus facility, formerly known as B & W Canning Company, Inc., is located at the intersection of State Roads 50 and 19 near Groveland, Florida. The facility is a fruit processing plant which extracts juice from citrus fruit, then concentrates, cans, freezes, and stores the juice before it is sold. Peel from the extracted fruit is dried, stored and sold as feed for cattle. Effluent from this facility consists of non-contact cooling water and stormwater runoff. The average flow is 1.04 MGD which goes to Lake Catherine via an unnamed ditch. The effluent receives no treatment before discharge.

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 Biology Section performed two static acute screening toxicity bioassays on a sample of effluent from this facility. The water flea, *Ceriodaphnia dubia*, and the fish, *Notropis leedsi*, were the organisms used in these tests.

The bioassays indicated that the sample of effluent was not toxic to either *C. dubia* or *N. leedsi*. The sample was not chlorinated. No additional chemical analyses were performed on the sample.

Conclusion

The sample of effluent from this facility was not toxic on 13 May, 1991.

Table 1. Concentration Series and Volumes Used for the Florida Select Citrus facility Static Acute Bioassays.

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 screening bioassay of a sample of discharge from the Florida Select Citrus facility, Groveland, Lake County, Florida, NPDES#0002755, on 14 to 16 May, 1991.

Facility:	**Florida Select Citrus**		NPDES #	FL0002755	Facility Type: **fruit processing**
Location:	Intersection of S.R. 50 and 19, Groveland		Contact/District:	P. Kane / Central	
County:	Lake		Test type:	Static Screen	
Sample Collection Date:	**5/13/91**	Time: 1147	# tests:	2	Receiving Water: unnamed ditch to
Test Beginning Date:	5/14/91	Time: 1100	Chlorination Type:	**not chlorinated**	Lake Catherine
Test Ending Date:	5/16/91	Time: 0900	Dechlor Method:	NA	**Page 1 of 1**

Total Residual Cl2	mg/l	Method
Field:	-	-
Lab:	0.0	Hach
Lab:	-	-

Alk & Hardness	Alkalinity (mg/l)	Hardness (mg/l)
Control Water (fish):	109	121
Cond. Control Water (daphnids):	65	77
100% Sample:	137	145

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	8.4	8.2	9.0	8.0	8.2	8.3	21.2	21.0	21.1	190	210
Control	5	5	4	-	-	-	-	-	-	-	-	-	-	-
Control	5	5	5	-	-	-	-	-	-	-	-	-	-	-
Control	5	5	4	-	-	-	-	-	-	-	-	-	-	-
100%	5	5	4	6.8	8.6	8.9	7.9	8.5	8.6	17.2	21.0	21.2	272	307
100%	5	5	5	-	-	-	-	-	-	-	-	-	-	-
100%	5	5	5	-	-	-	-	-	-	-	-	-	-	-
100%	5	5	5	-	-	-	-	-	-	-	-	-	-	-

Organism: ***Notropis leedsi*** Age: 22 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	8.5	8.5	8.6	7.8	8.1	8.3	20.9	20.5	20.8	240	244
Control	5	5	5	8.5	8.5	8.6	7.8	8.1	8.3	-	-	-	-	-
100%	5	5	5	6.6	8.2	8.5	7.9	8.2	8.4	15.8	20.5	20.8	266	301
100%	5	5	5	6.6	8.2	8.5	7.9	8.2	8.4	-	-	-	-	-

DER Biology Section — Acute Bioassay Bench Sheet

Sample Source: Florida Select Citrus — **Sample Collection:** Date 5/13/11 Time 1147

Address/City: PO B 98, B-W Comm Co, Inc. — **Test Beginning:** Date 5/14/11 Time 1100

County: Lake Groveland FL 32736 — **Test Ending:** Date 5-16-11 Time 0900

Contact/District: Phil Kane / Central — **Test Organism:** Ceriodaphnia dubia

NPDES Permit #: _____ **Outfall #:** _____ **Life Stage/Age:** < 24 hours

Test Number: 1 of 2 **Test Type:** Screening | Definitive

Static | Static Renewal | Flow-through

Remarks: * received 5/13 here Aeration MF

Instrument Calibrations:

	pH	DO	Cond	Temp
0 hr	7.0, 7.0, 9.9	8.8@22°C	1379@2260@336	20.5@25.1°C
24 hr	7.0, 7.0, 9.9	8.4@22°C	1380@2260@332	21.6@23.8°C
48 hr	7.0, 7.0, 9.9	8.9@21.5	1336@24.0@1381	21.0@23.8

		Number Live			DO (mg/l)			pH			Temp. (°C)			Cond. (µmhos/cm)		
Conc.	Chamber #	0	24	48	0	24	48	0	24	48	0	24	48	0	24	48
Control		5	5	5	8.4	8.2	9.0	8.0	8.2	8.3	21.2	21.0	21.1	190	192	210
Control		5	5	4												
Control		5	5*	5												
Control		5	5*	4												
100%		5	5	4	6.8	8.6	8.9	7.9	8.5	8.6	17.2	21.0	21.2	272	277	307
100%		5	5	5												
100%		5	5	5												
100%		5	5	5												
Measured/Loaded by:		KML	MF	MF	JMF	MF	MF	JMF	MF	MF	JMF	MF	MF	JMF	MF	MF
Recorded by:		MF	MF	MF	KML	MF	KP	KML	MF	KP	KML	MF	KP	KML	MF	KP

Investigators' Signatures

Marshall Faircloth

KMLudwig

Kristy Pelizzi

Reviewer

Water-quality Parameters

	Well Water	Cond. Water	Sample	Method	Measured by
Field Tot. Resid. Cl2:			Brown Tech	0.0	MF
Lab Tot. Resid. Cl2:			0.0	Hach	MF
Alkalinity:		65	137	Hach	KMP
Hardness:		77	145	Hach	KMP
Total Ammonia:					

Ammonia meter slope:

DER Biology Section — Acute Bioassay Bench Sheet

Sample Source: Fl Select Citrus (Ben Canning Co. INC)
Address/City: POB 98 Groveland, Fl
County: Lake
Contact/District: Phil Ross / Central
NPDES Permit #: ______ Outfall #: ______

Sample Collection: Date 5/13/91 Time 1147
Test Beginning: Date 5/14/91 Time 1100
Test Ending: Date 5-16-91 Time 0900
Test Organism: Ostracod Rotifer
Life Stage/Age: 22 Days

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

Remarks:

Instrument Calibrations:

	pH	DO	Cond	Temp
0 hr				
24 hr				
48 hr				

Conc.	Chamber #	Number Live			DO (mg/l)			pH			Temp. (°C)			Cond. (µmhos/cm)		
		0	24	48	0	24	48	0	24	48	0	24	48	0	24	48
Control	68	5	5	5	8.5	8.5	8.6	7.8	8.1	8.3	20.9	20.5	20.8	240	242	244
Control	18	5	5	5	8.5	8.5	8.6	7.8	8.1	8.3						
100%	142	5	5	5	6.6	8.2	8.5	7.9	8.2	8.4	15.8	20.5	20.8	266	300	301
100%	50	5	5	5	6.6	8.2	8.5	7.9	8.2	8.4						
Measured/Loaded by		MF	MF	MF	JMF	MF	MF	JMF	MF	MF	JMF	MF	MF	JMF	MF	MF
Recorded by		MF	MF	KP	KML	MF	KP	KML	MF	KP	KML	MF	KP	KML	MF	KP

Investigators' Signatures

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Reviewer

Water-quality Parameters

	Well Water	Cond. Water	Sample	Method	Measured by
Field Tot. Resid. Cl_2:					
Lab Tot. Resid. Cl_2:					
Alkalinity:	109		137	Hach	KMP
Hardness:	121		145	Hach	KMP
Total Ammonia:					

Ammonia meter slope: ______