

Bioassays of

Florida Rock Industries - Fort Pierce Limerock Mine

St. Lucie County

NPDES #FL0140406

Sampled October 23, 2006

January 2007

Biology Section
Bureau of Laboratories
Division of Resource Assessment and Management

Quality Manual No. 870346G
NELAC Certification No. E31780

Florida Rock Industries – Fort Pierce Limerock Mine, 12525 Rangeline Road (CR 609), Port Saint Lucie, St. Lucie County, Florida, NPDES #FL0140406. Effluent samples for this facility were collected on October 23, 2006.

Introduction

Florida Rock Industries – Fort Pierce Limerock Mine is a Coquina-limerock mining facility. The facility is comprised of a 406.71 hectare (ha) (1,005 acre (ac)) North Mine site and a 130.71 ha (323 ac) South Mine site. The North Mine has a 64.8 ha (160 ac) active mine pit, a 33.2 ha (82 ac) future expansion area (to the south), a 26.7 ha (66 ac) previously mined pit, and a 6.1 ha (15 ac) inactive mine pit. The South Mine has a 9.7 ha (24 ac) active mine pit and a 15.4 ha (38 ac) settling pond and a 66.4 ha (164 ac) future expansion area (east and south). The mines are being "wet mined", or mined below the water table, to a depth of approximately 12.2 meters (m) (40 feet (ft)) below grade. The mines are expanded outwardly in successive 304.8 m (1,000 ft) by 30.5 m (100 ft) strips. Under this scheme, the total area for the North Mine site and the South Mine site will increase by 2-2.4 ha (5-6 ac) per year. Overburden soils removed from the active mine pits are backfilled into the preceding mined areas. The North Mine active-mine pit has a permitted maximum daily discharge of 8.64 million gallons per day (MGD) and is dewatered by a single 6,000 gallon per minute (GPM) pump. The South Mine active-mine pit, dewatered by a single 3,600 GPM pump, has a permitted maximum daily discharge of 5.184 MGD. The monthly average flows from January 2006 through September 2006 from the North Mine and South Mine were, respectively, 2.67 MGD and 3.72 MGD. Wastewater treatment at both mines is achieved by natural settling action. Treated effluent from the North Mine is discharged through Outfall D-001 (located approximately at latitude 27º 15' 03" N and longitude 80º 31' 14" W) into an unnamed drainage ditch thence into the Class IV waters of an agricultural ditch system. Treated effluent from the South Mine is discharged through Outfall D-003 (located approximately at latitude 27º 14' 10" N and longitude 80º 28' 31" W) into the Class IV waters of an agricultural ditch system. The agricultural ditch eventually empties into the South Florida Water management District's C-23 canal (Class III freshwater). Actual discharge from the agricultural ditch into the C-23 canal is rare as most of the ditch water is retained behind a control structure and is withdrawn for irrigation on farmlands.

There are no Administrative Orders (AO) or Consent Orders (CO) for this facility. The facility has no mixing zones. There is no toxicity testing requirements for this facility. A review of Discharge Monitoring Report (DMR) data showed no violations during the past year. (Facility information provided by Terry Davis of FDEP Southeast District.)

Methods

Samples were collected from the EFF-01 NPDES sampling point for Outfall D-001 and the EFF-02 NPDES sampling point for Outfall D-003 by Terry Davis (FDEP Southeast District) following DEP-SOP-001/01 FS 2400 Wastewater Sampling. The grab samples collected from the two NPDES sampling points were composited in the field in a 1:1 ratio prior to submittal for analyses. All DEP SOPs are available on the web at: http://www.floridadep.org/labs/qa/sops.htm.

See Appendix A for the completed chain of custody form.

The 48-hour acute screening toxicity tests and algal growth potential test were performed following internal DEP SOPs TA07_01, TA07_02, and TA08_01 through TA08_09. All internal DEP SOPs are available on the web at: http://www.floridadep.org/labs/cgi-bin/sop/biosop.asp.

The Department uses the 48-hour acute screening toxicity test to provide reasonable assurance that the facility does not adversely affect waters of the state.

Toxicity Test Results

Tests were performed October 24 - 26, 2006.

Ceriodaphnia dubia 48-hour acute screening bioassay –	LC_{50} > 100%, 5% mortality* in 100% sample at 48 hours
Cyprinella leedsi 48-hour acute screening bioassay –	LC_{50} > 100%, 15% mortality* in 100% sample at 48 hours

The bioassay samples were not acutely toxic to the test organisms.

See Appendix B for bioassay bench sheets. See Appendix C for results of the last 20 standard reference toxicant (SRT) tests and the bench sheets and statistical analyses of the SRT tests that correspond to these facility tests. See Appendix D for test organism receipts.

*NOTE: In a 48-hour acute screening test of 100% effluent, mortality of <20% provides reasonable assurance that the effluent meets the acute toxicity criterion of Florida's Surface Water Quality Standards (Rule 62-302.500 (1)(a)4, F.A.C.). Mortality between 20-50% indicates low to moderate levels of toxicity, and further action may be required. Mortality of >50% provides reasonable assurance that the effluent fails to meet the minimum requirement to discharge to waters of the state (Rule 62-4.244(3)(a), F.A.C.).

Algal Growth Potential

The effluent Algal Growth Potential (AGP) was 1.37 mg dry wt/L of the unicellular green alga, *Pseudokirchneriella subcapitata*, formerly known as *Selenastrum capricornutum*. 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 analytical chemistry suggests that the effluent is phosphorus-limited. Phosphorus was not detected in the effluent; therefore, the AGP based on phosphorus concentrations could not be predicted (Table 1; Miller et al. 1978).

See Table 1 for AGP results.

Chemistry Results

Total residual chlorine and total ammonia were not detected in the bioassay sample in the laboratory. The total ammonia concentration in the sample collected and preserved for chemical analysis was 0.021 mg/L. Based on the pH, salinity, and temperature of the effluent as collected, the calculated unionized ammonia concentration was < 0.02 mg/L.

The effluent dissolved oxygen (2.89 mg/L) as measured in the field for the South Mine discharge was less than the Class IV freshwater criterion for dissolved oxygen of ≥ 3.0 mg/L (62-302.530(31), F.A.C.)

Iron was detected in the effluent at levels that comply with Class IV freshwater quality criteria. Arsenic, nickel, selenium were detected between the laboratory method detection limits (MDL) and practical quantitation limits (PQL). Aluminum was also detected in the effluent between the MDL and PQL. Zinc was detected in both the effluent and the equipment blank.

See Table 2 for results of analytes detected in the effluent, and corresponding limits. See Appendix E for a complete list of chemical analyses performed.

Conclusion

The composite effluent sample prepared from samples collected from Outfall D-001 and Outfall D-003 for this facility on October 23, 2006, was not acutely toxic to either test species during the 48-hour acute screen bioassays. The effluent AGP result was less than the "problem" threshold for fresh receiving

waters. Effluent dissolved oxygen for the sample collected from Outfall D-003 was in violation of Class IV freshwater quality criterion.

Literature Cited

Miller, W. E., T. E. Maloney, and J. C. Greene. 1978. The *Selenastrum capricornutum* Printz algal assay bottle test. EPA-600/9-78-018. U. S. EPA, Cincinnati, Ohio. 126 p.

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. *Measured and predicted algal growth potential (AGP; mg dry weight/L) of the freshwater species* Psuedokirchneriella subcapitata f*or total soluble inorganic nitrogen (TSIN) and total nitrogen (TN) limitation, and ratios of nitrogen to phosphorus for samples collected from Florida Rock Industries - Fort Pierce Limerock Mine on October 23, 2006* .

Location	**AGP (measured)**	**Predicted AGP (TSIN) ± 20%**	**Predicted AGP (TN) ± 20%**	**Inorganic N:P ratio**	**Total N:P ratio**
Effluent Samples	1.37	1.06 ± 0.212	34.85 ± 6.97	NC	NC

NC- Not calculable because neither orthophosphate nor total phosphate were detected in the sample.

Table 2. Effluent limits, Class IV Freshwater Criteria and chemical data for samples from Florida Rock Industries - Fort Pierce Limerock Mine collected on October 23, 2006.

Florida Rock Industries - Fort Pierce Limerock Mine NPDES #FL0140406	Class IV Freshwater Stds	Effluent Limits	Effluent Samples composited from grab samples except as noted
Organic Constituents (µg/L)			
None Detected	-	-	-
Metals (µg/L unless otherwise noted)			
Aluminum	-	-	7.2 I
Arsenic	≤ 50	-	1.9 I
Cadmium	-	-	0.05 U
Calcium (mg/L)	-	-	89.7 A
Chromium-III	≤ 195.9 b	-	0.3 U
Copper	≤ 500	-	0.2 U
Iron	≤ 1,000	-	93 A
Lead	≤ 50	-	0.2 U
Magnesium (mg/L)	-	-	11.8 A
Nickel	≤ 100	-	1.3 I
Selenium	-	-	1.3 I
Silver	-	-	0.025 U
Zinc	≤ 1,000	-	6.8 I f
Nutrients (mg/L)			
Ortho-phosphate	-	-	0.004 U
Total Phosphorus	-	-	0.02 U
Ammonia	-	-	0.021
Unionized Ammonia	-	-	≤ 0.02
Nitrate+Nitrite	-	-	0.007 I
Total Kjeldahl Nitrogen	-	-	0.91
Organic Nitrogen	-	-	0.89 c
Total Nitrogen	-	-	0.92 c
General Physical and Chemical Parameters			
pH (S.U.) North Mine	6.0 - 8.5 s	6.0 - 8.5 s	7.4 g
pH (S.U.) South Mine	6.0 - 8.5 s	6.0 - 8.5 s	7.1 g
Conductivity (umhos/cm) North Mine	≤ 1,275	Report	545 g
Conductivity (umhos/cm) South Mine	≤ 1,275	Report	960 g
DO (mg/L) North Mine	≥ 3.0 s	-	8.6 g
DO (mg/L) South Mine	≥ 3.0 s	-	2.89 g
Temperature (°C) North Mine	-	-	27.8 g
Temperature (°C) South Mine	-	-	26.3 g
Flow (MGD) North Mine	-	≤ 8.64 a	2.67 a
Flow (MGD) South Mine	-	≤ 5.18 a	3.72 a
Hardness (mg/L)	-	-	272.6 c
Turbidity (NTU)	≤ 29	≤ (Background + 29 NTU) s	1.4

Value exceeds the Class IV Water Quality Criteria (62-302, F.A.C.) and/or Effluent Limits

a - Annual average

b - Value is calculated based on hardness

c - Calculated value

f - zinc was detected in the field blank at a concentration of 6.4 µg/L I.

g - measurement from grab sample prior to compositing

s - Single sample

A - Value reported is the mean of two or more determinations

I - The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.

U - Material analyzed for but not detected; value reported is the method detection limit

Florida Department of Environmental Protection

Central Laboratory Sample Submittal Form

Event ID *

Request Number: RQ-2006-10-23-20
FL Rock-Ft. Pierce Quarry

Requester: Shannan Bogdanov
Field Report Prepared By: T Davis

Customer: SE-DIST
Project ID: FYI3
PMAS: 1163

Collected By: T. Davis
Sampling Agency: DEP - Southeast District
Send Final Report To: Terry Davis or Bill Theil

Lab ID *	Location	Comp / Grab	Collection(begin) Date Time Eastern Central	Collection(end) Date Time Eastern Central	Bottle Group(s)**
	D-001 & D-003	☒ Comp ☐ Grab	23 Oct 04 1025	1108	A
	Field ID: SI-N0-1	Tot Res Chlorine (mg/L)	Diss Oxygen (mg/L) 112% *	Storet Station Number	
	Matrix (Include type e.g. Salt, Fresh, etc): water, fresh	Temp (C): 27.79 *	pH: 7.35 *	SampleDepth: ☒ m ☐ ft .1	545 * ☐ Salinity (PPTh) ☒ Sp Conductance (umho/cm)
	Latitude o ' "	Longitude o ' "	Comments: S. Mine 26.32° 960 umhos 35.8‰ DO. 7.14 ppl		

Lab ID *	Location	Comp / Grab	Collection(begin) Date Time Eastern Central	Collection(end) Date Time Eastern Central	Bottle Group(s)**
	Equip Blank	☐ Comp ☒ Grab	23 Oct 04 1108		B
	Field ID: SI-N0-2	Tot Res Chlorine (mg/L)	Diss Oxygen (mg/L)	Storet Station Number	
	Matrix (Include type e.g. Salt, Fresh, etc): water, d. i.	Temp (C)	pH	SampleDepth: ☒ m ☐ ft .01	☐ Salinity (PPTh) ☐ Sp Conductance (umho/cm)
	Latitude o ' "	Longitude o ' "	Comments		

Lab ID *	Location	Comp / Grab	Collection(begin) Date Time Eastern Central	Collection(end) Date Time Eastern Central	Bottle Group(s)**
		☐ Comp ☐ Grab			
	Field ID	Tot Res Chlorine (mg/L)	Diss Oxygen (mg/L)	Storet Station Number	
	Matrix (Include type e.g. Salt, Fresh, etc)	Temp (C)	pH	SampleDepth: ☐ m ☐ ft	☐ Salinity (PPTh) ☐ Sp Conductance (umho/cm)
	Latitude o ' "	Longitude o ' "	Comments		

Lab ID *	Location	Comp / Grab	Collection(begin) Date Time Eastern Central	Collection(end) Date Time Eastern Central	Bottle Group(s)**
		☐ Comp ☐ Grab			
	Field ID	Tot Res Chlorine (mg/L)	Diss Oxygen (mg/L)	Storet Station Number	
	Matrix (Include type e.g. Salt, Fresh, etc)	Temp (C)	pH	SampleDepth: ☐ m ☐ ft	☐ Salinity (PPTh) ☐ Sp Conductance (umho/cm)
	Latitude o ' "	Longitude o ' "	Comments: J Bossy 9:52 102406 Jenn Daul		

RelinquishedBy:	Date/Time	ShippingMethod:	ReceivedBy:	Date/Time	RelinquishedBy:	Date/Time	ReceivedBy:	Date/Time
T Davis	23Oct04 1130	DHL	ABS	10-24-04 09:00				

* Shaded Areas for Lab use only

** Please see reverse side for Bottle Group information.

last revised October 1, 2003

* Note - Field data for N. Mine

FDEP Biology Section - Acute Screen Bioassay Bench Sheets

Facility: Ft. Pierce - Florida Rock Quarry (Florida Rock Industries - Ft. Pierce Quarry)
Sample Collection: Date: 10.23.06 Time: 1025
Address: 12525 Rangeline Rd (CR 609)
Hold Time Start: Date: 102306 Time: 1025
City: Port St. Lucie County: St. Lucie
Contact/District: T. Davis / South East
NPDES Permit #: FL FL0140406
LIMS Job #: TLH-2006-10-24.13 LIMS Sample #: 960203
Lims Data Entry: 10-27-06 MF Data Entry Verification: 10-27-06 BA

Comments:

Instructions (for below): Circle appropriate wording. If yes is circled, complete blanks.

Test Type: (Screen)
(Static) / Static Renewal / Flow-through
Test Duration: (48) 96 Hours.
Light Intensity : 50 - 100 ft. candles. ✓
Photoperiod : 16 hours light 8 hours dark. ✓

Test 1 validation: Test 1: SOP TA 07_01
Control survival ≥90%: (Yes) No
Temperature Range ≤3°C: (Yes) No

Test 2 validation: Test 2: SOP TA 07_02
Control survival ≥90%: (Yes) No
Temperature Range ≤3°C: (Yes) No

Initial sample handling:
PH adjustment : yes (no) Initial pH: ____ NaOH N HCl N ____ Drops mL Final pH: ____
Aeration : yes (no) Initial DO: ____mg/L Final DO: ____mg/L Duration: ____minutes Rate: ~____bubbles/min
Salinity adjusted (Test 1): yes (no) Initial Salinity: ____ Final Salinity: ____ Salts Hypersaline brine
Salinity adjusted (Test 2): yes (no) Initial Salinity: ____ Final Salinity: ____ Salts Hypersaline brine
Dechlorination: yes (no) ____mL of 0.025N Sodium Thiosulfate per liter of sample. Final TRC: ____

Temperature Range °C
Incubator # 2 Range 24.1-25.4
Room B246: 25.5-24.0
Waterbath: N/A

Sample Validation:
Temperature: Shipped ≤6°C (Yes) No Hand Delivered: Cooling (received °C < collected °C) Yes No
Holding Time: ≤36 Hours (Yes) No (Composite-end of collection; grab-when collected; 4 in 24 - time last sample collected)

Investigators' Signatures
James Daniel
Marshall Faircloth
Bree Baker
Najdé Williams
REVIEWER

Water Quality Parameters	20% DMW 28-06	Moderately Hard Water/ 10-23-06 (Well Water)	Salt Water ASW NSW Test 1	Salt Water ASW NSW Test 2	Other:	Original Sample	Method	Measured by	Verified by
Field Total Residual Cl_2 (mg/L):	N/A	N/A	N/A	N/A		N/A	— not measured		MF
Lab Total Residual Cl_2 (mg/L):	<0.03	<0.03				<0.03	HACH	BA	PDV
Alkalinity (mg/L as $CaCO_3$):	83	144				246	HACH	CW	PDV
Hardness (mg/L as $CaCO_3$):	89	135				171	HACH	CW	PDV
Total Ammonia (mg/L as N):	<0.017	<0.017				<0.017	DENVER	MF	PDV
Salinity (ppth):	<1	<1				<1	YSI / Mettler	JD	MF

V 1.4 9/12/05

Appendix B. (continued)

FDEP Biology Section - Bioassay Survival Sheet

LIMS Sample #: 960203 Test #: 1 Test Started: Date 10/24/06 Time: 1300

Organism: C.dubia SOP #: TA 07_01 Test Ended: Date 10/26/06 Time: 1200

Organism Batch: 44-06 Diluent/ Batch: /

Organism Age: <24hrs old Food: (YCT) (P. subcapitata) Artemia

Chamber Size: 30 mL Batch: 2-06 4-06 —

Test Volume: 20 mL Feeding: (Prior to test) Prior to renewal - Daily

Concentration	Replicate	Chamber #	Test Hour: 0 hr	24 hr	48 hr BR	48 hr AR	72 hr	96 hr
Ctrl	A1	A	5	5	5			
	B	B	5	5	5			
	C	C	5	5	5			
	D	D	5	5	5			
100%	A	A	5	5	5			
	B	B	5	5	4 (1m)			
	C	C	5	5	5			
	D	D	5	5	5			
Organisms loaded by: BK		Checked by:	[redacted]	mF	mF			

Loading Verified by: PW

m = missing d = dead BR = before renewal AR = after renewal

Comments: 1m: 1 missing mF 10-26-06 presumed dead.

Test Results:

% mortality in 100% sample: 5%

LC_{50}: >100 If Calculated: 95% CI______ Method:______

Screening Tests:

Report LC50 as >100%, =100%, or <100%.

Substitue highest test concentration used if other than 100% (example: Ocean outfall tested at 30% concentration).

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Appendix B. (continued)

FDEP Biology Section - Bioassay Survival Sheet

LIMS Sample #: 960203 Test #: 2 Test Started: Date 10.24.06 Time: 1310
Organism: C.dubia Test #: SOP #: TA 07_02 Test Ended: Date 10.26.06 Time: 12:00
Organism Batch: 26-06 Diluent/ Batch: Well H2O / 10.23.06
Organism Age: 12 days Food: YCT P. subcapitata (Artemia) ohr
Chamber Size: 1000 mL Batch: — — GSL-536-90 4-06
Test Volume: 500 mL Feeding: (Prior to test) Prior to renewal - Daily

Concentration	Replicate	Chamber #	Test Hour 0 hr	24 hr	48 hr BR	48 hr AR	72 hr	96 hr
Ctrl	A	A1	5	5	5			
	B	A2	5	5	5			
	C	A3	5	5	5			
	D	A4	5	5	5			
100%	A	A5	5	5	4/D			
	B	A6	5	5	4/D			
	C	A7	5	5	5			
	D	A8	5	5	4/D			
Organisms loaded by: JD / Loading Verified by: PEV		Checked by:	[redacted]	JD	JD			

m = missing d = dead BR = before renewal AR = after renewal

Comments:

Test Results:
% mortality in 100% sample: 15%
LC_{50}: >100% If Calculated: 95% CI__________ Method:__________

Screening Tests:
Report LC50 as >100%, =100%, or <100%.
Substitue highest test concentration used if other than 100% (example: Ocean outfall tested at 30% concentration).

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FDEP Biology Section - Bioassay Parameter Sheet

LIMS Sample # : 960203 Test #: 1 of 2

TEST SOP #: TA07_01 Test Species: (Ceriodaphnia dubia) Cyprinella leedsi Pimephales promelas Americamysis bahia Menidia beryllina Other:_____

Concentration Ctrl	0 Hr.	24 Hr.	48 Hr. before renewal	48 Hr. after renewal	72 Hr.	96 Hr.
Replicate	M		A			
pH (S.U.)	7.9		7.9			
Temperature °C	24.6		24.9			
Dissolved Oxygen mg/L	7.6		7.4			
Conductivity (µmhos) mmhos	174		188			
(initials) Measured by:	BA		MF			
(initials) Recorded by:	BA		MF			

Comments: M = Meter

Concentration 100%	0 Hr.	24 Hr.	48 Hr. before renewal	48 Hr. after renewal	72 Hr.	96 Hr.
Replicate	M		A			
pH (S.U.)	7.8		8.1			
Temperature °C	24.5		24.7			
Dissolved Oxygen mg/L	7.6		7.5			
Conductivity (µmhos) mmhos	857		804			
(initials) Measured by:	BA		MF			
(initials) Recorded by:	BA		MF			

Comments:

Concentration	0 Hr.	24 Hr.	48 Hr. before renewal	48 Hr. after renewal	72 Hr.	96 Hr.
Replicate						
pH (S.U.)						
Temperature °C						
Dissolved Oxygen mg/L						
Conductivity µmhos mmhos						
(initials) Measured by:						
(initials) Recorded by:						

Comments:

Concentration	0 Hr.	24 Hr.	48 Hr. before renewal	48 Hr. after renewal	72 Hr.	96 Hr.
Replicate						
pH (S.U.)						
Temperature °C						
Dissolved Oxygen mg/L						
Conductivity µmhos mmhos						
(initials) Measured by:						
(initials) Recorded by:						

Comments:

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FDEP Biology Section - Bioassay Parameter Sheet

LIMS Sample # : 960203 **Test #:** 2 of 2

TEST SOP #: TA07_ 02 **Test Species:** *Ceriodaphnia dubia* (*Cyprinella leedsi*) *Pimephales promelas* *Americamysis bahia* *Menidia beryllina* Other:_____

Concentration CtrL	0 Hr.	24 Hr.	48 Hr. before renewal	48 Hr. after renewal	72 Hr.	96 Hr.
Replicate	A	B	C			
pH (S.U.)	7.9	8.2	8.3			
Temperature °C	24.0	24.3	24.3			
Dissolved Oxygen mg/L	7.4	7.3	6.9			
Conductivity (µmhos) mmhos	314	273	352			
(initials) Measured by:	JD	JD	JD			
(initials) Recorded by:	JD	JD	JD			

Comments:

Concentration 100%	0 Hr.	24 Hr.	48 Hr. before renewal	48 Hr. after renewal	72 Hr.	96 Hr.
Replicate	A	B	C			
pH (S.U.)	7.9	8.4	8.3			
Temperature °C	24.1	24.5	24.5			
Dissolved Oxygen mg/L	7.2	7.5	7.2			
Conductivity (µmhos) mmhos	891	849	834			
(initials) Measured by:	JD	JD	JD			
(initials) Recorded by:	JD	JD	JD			

Comments:

Concentration	0 Hr.	24 Hr.	48 Hr. before renewal	48 Hr. after renewal	72 Hr.	96 Hr.
Replicate						
pH (S.U.)						
Temperature °C						
Dissolved Oxygen mg/L						
Conductivity µmhos mmhos						
(initials) Measured by:						
(initials) Recorded by:						

Comments:

Concentration	0 Hr.	24 Hr.	48 Hr. before renewal	48 Hr. after renewal	72 Hr.	96 Hr.
Replicate						
pH (S.U.)						
Temperature °C						
Dissolved Oxygen mg/L						
Conductivity µmhos mmhos						
(initials) Measured by:						
(initials) Recorded by:						

Comments:

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Appendix C. SRT Bench Sheets and Statistical Analysis

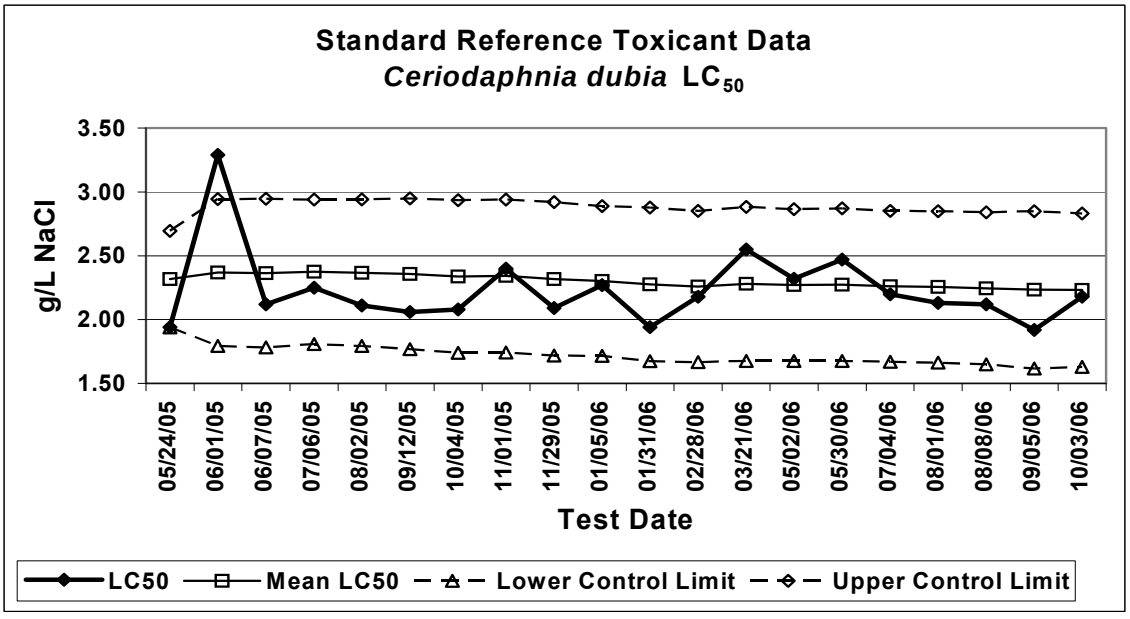
Florida Department of Environmental Protection
Bureau of Laboratories

Standard Reference Toxicant (SRT) Test Data - 48-hour Acute Toxicity
Ceriodaphnia dubia (water flea) - Sodium Chloride (NaCl)

Date	LC50	Mean LC50	Std Dev	Lower Control Limit	Upper Control Limit
05/24/05	1.94	2.32	0.19	1.94	2.70
06/01/05	3.29	2.37	0.29	1.79	2.94
06/07/05	2.12	2.36	0.29	1.78	2.95
07/06/05	2.25	2.37	0.28	1.81	2.94
08/02/05	2.11	2.37	0.29	1.79	2.94
09/12/05	2.06	2.36	0.29	1.77	2.95
10/04/05	2.08	2.34	0.30	1.74	2.94
11/01/05	2.40	2.34	0.30	1.74	2.94
11/29/05	2.09	2.32	0.30	1.72	2.92
01/05/06	2.27	2.30	0.29	1.72	2.89
01/31/06	1.94	2.28	0.30	1.67	2.88
02/28/06	2.18	2.26	0.30	1.67	2.85
03/21/06	2.55	2.28	0.30	1.68	2.88
05/02/06	2.32	2.27	0.30	1.68	2.87
05/30/06	2.47	2.27	0.30	1.68	2.87
07/04/06	2.20	2.26	0.30	1.67	2.85
08/01/06	2.13	2.26	0.30	1.66	2.85
08/08/06	2.12	2.24	0.30	1.65	2.84
09/05/06	1.92	2.23	0.31	1.62	2.85
10/03/06	2.18	2.23	0.30	1.63	2.83

Means are of the last 20 SRT tests.
Lower Confidence Limit = mean - 2 * Std Dev
Upper Confidence Limit = mean + 2 * Std Dev

CV = 13.46
EPA reference 75th quartile CV = 29%



Appendix C. (continued)

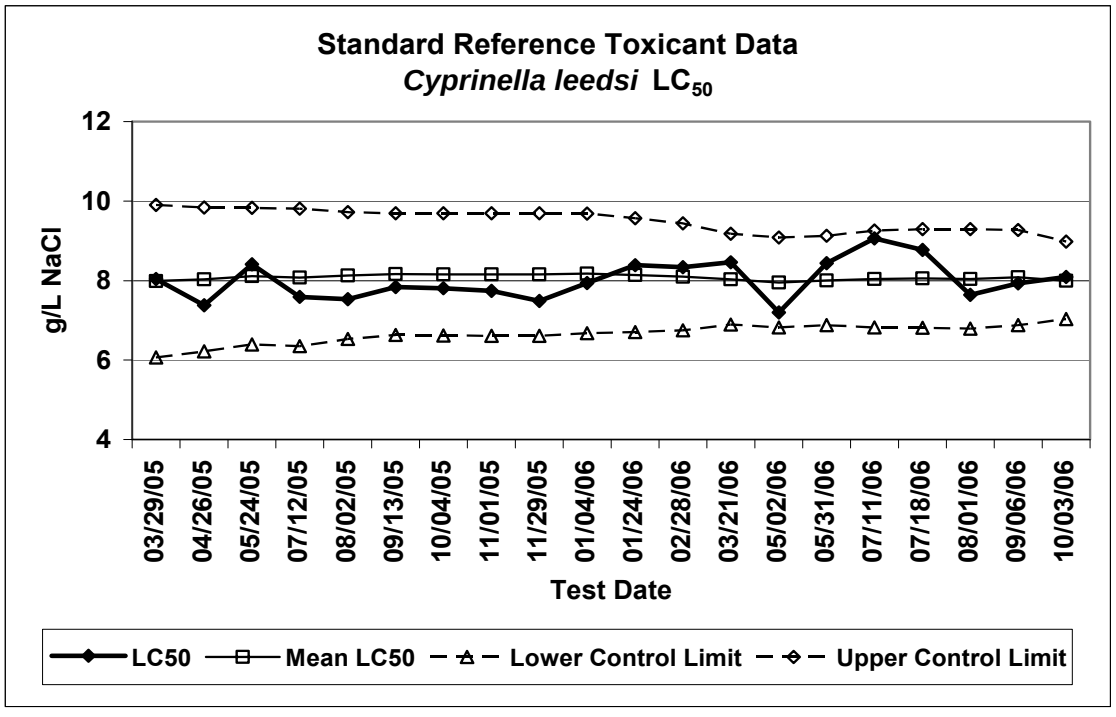
Florida Department of Environmental Protection
Bureau of Laboratories

Standard Reference Toxicant (SRT) Test Data - 48-hour Acute Toxicity
Cyprinella leedsi (bannerfin shiner) - Sodium Chloride (NaCl)

Date	LC50	Mean LC50	Std Dev	Lower Control Limit	Upper Control Limit
03/29/05	8.04	7.99	0.96	6.07	9.91
04/26/05	7.38	8.03	0.90	6.22	9.84
05/24/05	8.41	8.11	0.86	6.40	9.83
07/12/05	7.59	8.08	0.86	6.35	9.81
08/02/05	7.53	8.13	0.80	6.53	9.72
09/13/05	7.84	8.16	0.77	6.63	9.70
10/04/05	7.81	8.16	0.77	6.62	9.69
11/01/05	7.74	8.15	0.77	6.61	9.69
11/29/05	7.49	8.15	0.77	6.61	9.69
01/04/06	7.94	8.18	0.75	6.67	9.68
01/24/06	8.39	8.14	0.72	6.71	9.57
02/28/06	8.34	8.09	0.67	6.75	9.44
03/21/06	8.46	8.04	0.57	6.89	9.18
05/02/06	7.2	7.95	0.57	6.82	9.09
05/31/06	8.44	8.00	0.56	6.88	9.13
07/11/06	9.06	8.04	0.61	6.82	9.26
07/18/06	8.77	8.05	0.62	6.81	9.29
08/01/06	7.64	8.04	0.63	6.79	9.29
09/06/06	7.93	8.08	0.60	6.88	9.27
10/03/06	8.09	8.00	0.49	7.03	8.98

Means are of the last 20 SRT tests.
Lower Confidence Limit = mean - 2 * Std Dev
Upper Confidence Limit = mean + 2 * Std Dev

CV = 8.10
EPA reference 75th quartile CV = 19%



Appendix C. (continued)

FDEP Biology Section - Acute SRT Bench Sheet

Test Organism: *Americamysis bahia* (Method 2007.0) *Menidia beryllina* (Method 2006.0) *Hyalella azteca* (Method 100.1 EPA-600-R-99-064) *Ceriodaphnia dubia* (Method 2002.0) *Cyprinella leedsi* (Method 2000.0) *Pimephales promelas* (Method 2000.0) Other:

Method from EPA-821-R-02-012
Test Type: Definitive
Static / Static Renewal
Test Page 1 of 2

Diluent/ Batch#: DMW / 26-06
Toxicant/ Batch# NACl / 13-06

Test Beginning: Date: 10306 Time: 12:50
Test Ending: Date: 10-7-06 Time: 11:45

Water Quality Parameters:	Diluent	Method	Initials
Total Residual Cl_2 (mg/L):	<0.03	Hach	PPV
Alkalinity (mg/L as $CaCO_3$):	88	Hach	EW
Hardness (mg/L as CaCO3):	88	Hach	EW
Total Ammonia (mg/L as N):	<0.017	Denver	MF
Salinity (ppth):	21	Mettler	BA

Organism Batch #/ Age: 4-06 / 5 BA 24 hours
Feeding: Prior to test / Prior to renewal Daily
Food: YCT / *P.subcapitata* / Artemia
Food Batch: 2-06 / 4-06 / –
Chamber size: 30 mL
Test volume: 20 mL per replicate

Conc. µg/L (g/L)	Rep.	Chamber#	Number Live 0 hr	Number Live 24 hr	Number Live 48 hr	pH (SU) 0 hr	pH (SU) 24 hr	pH (SU) 48 hr	Temperature (° C) 0 hr	Temperature (° C) 24 hr	Temperature (° C) 48 hr	D.O. (mg/l) 0 hr	D.O. (mg/l) 24 hr	D.O. (mg/l) 48 hr	UNCORRECTED Cond. (mmhos/cm) Cond. (µmhom/cm) 0 hr	24 hr	48 hr
			~~48 hr~~	72 hr	96 hr	~~48 hr~~	~~72 hr~~	~~96 hr~~	~~48 hr~~	~~72 hr~~	~~96 hr~~	~~48 hr~~	~~72 hr~~	~~96 hr~~	~~48 hr~~	~~72 hr~~	~~96 hr~~
Control	A	A	5	5	5	7.9		8.0	24.8		24.3	7.1		7.4	0.13		0.216
	B	B	5	5	5												
	C	C	5	5	5												
	D	D	5	5	5												
1.5	A	A	5	5	5	7.9		8.1	25.2		24.0	7.2		7.4	2.9		3.2
	B	B	5	5	5												
	C	C	5	5	5												
	D	D	5	5	5												
2.0	A	A	5	5	5	7.9		8.1	25.3		24.0	7.5		7.4	3.84		4.5
	B	B	5	5	5												
	C	C	5	5	5												
	D	D	5	5	3 2D												
2.5	A	A	5	4 1D	0 4D	8.0		8.1	25.2		~~24.0~~ BA	7.6		7.4	4.74		5.5
	B	B	5	5	0 5D												
	C	C	5	4 1D	0 4D												
	D	D	5	5	0 5D												
3.0	A	A	5	4 1D	0 4D	8.0		8.1	24.8		24.0	7.7		7.3	5.55		6.3
	B	B	5	3 2D	0 3D												
	C	C	5	4 1D	0 4D												
	D	D	5	5	0 5D												
4.0	A	A	5	0 5D	–	8.0	7.7	–	24.7	24.0	–	7.7	7.0	–	7.27	7.5	–
	B	B	5	0 5D	–												
	C	C	5	0 5D	–												
	D	D	5	0 5D	–												
	A																
	B																
	C																
	D																
Loaded / measured by:			MF	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA
Recorded by:			BA	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA	BA

Investigators' Signatures
James Daniel
Marshall Fairbott
REVIEWER

Concentrations prepared by: BA
Loading verified by: BA
Light Intensity: 50-100 Ft. candles
Photoperiod: 16 hours Light / 8 hours dark
Temperature Range °C:
Incubator # 2 min. 24.4 max. 26.0 mean 25.1
Incubator # ____ min. ____ max. ____ mean ____
Room B246 min. 24.4 max. 25.3 mean 24.9

Remarks: (A) 24.0 BA 10-5-06

Statistical Results: Method: Spearman-Karber
(A) 48/96 hour LC50: 2.18
95% Confidence Interval: lower 2.11 upper 2.26

Revised 02/21/06

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Appendix C. (continued)

FDEP Biology Section - Acute SRT Bench Sheet

Test Organism: *Americamysis bahia* (Method 2007.0) *Menidia beryllina* (Method 2006.0) *Hyalella azteca* (Method 100.1 EPA-600-R-99-064)
Ceriodaphnia dubia (Method 2002.0) *Cyprinella leedsi* (Method 2000.0) *Pimephales promelas* (Method 2000.0) Other:_____

Method from EPA-821-R-02-012
Test Type: Definitive
Static / Static Renewal
Test Page 2 of 2

Diluent/ Batch#: DMW 1.26.06
Toxicant/ Batch# NaCl 1.13.06

Test Beginning: Date: 10306 Time: 12:50
Test Ending: Date: 10706 Time: 11:45

Water Quality Parameters:	Diluent	Method	Initials
Total Residual Cl_2 (mg/L):	2003	Hach	PPV
Alkalinity (mg/L as $CaCO_3$):	88	Hach	EW
Hardness (mg/L as CaCO3):	88	Hach	EW
Total Ammonia (mg/L as N):	20.17	Denver	MF
Salinity (ppth):	21	Mettler	BA

Organism Batch #/ Age: 4-06 1-2 24hrs BA
Feeding: Prior to test / Prior to renewal / Daily
Food: YCT / P.subcapitata / Artemia
Food Batch: 2-06 4-06 –
Chamber size: 30 mL
Test volume: 20 mL per replicate

Conc. µg/L (Ni)	Rep.	Chamber#	Number Live 0 hr	Number Live 24 hr	Number Live 48 hr	pH (SU) 0 hr	pH (SU) 24 hr	pH (SU) 48 hr	Temperature (° C) 0 hr	Temperature (° C) 24 hr	Temperature (° C) 48 hr	D.O. (mg/l) 0 hr	D.O. (mg/l) 24 hr	D.O. (mg/l) 48 hr	UNCORRECTED Cond. (mmhos/cm) 0 hr	UNCORRECTED Cond. (mmhos/cm) 24 hr	UNCORRECTED Cond. (mmhos/cm) 48 hr
			(48 hr)	(72 hr)	(96 hr)	48 hr	72 hr	96 hr	48 hr	72 hr	96 hr	48 hr	72 hr	96 hr	48 hr	72 hr	96 hr
Control	A	A	5	5	5	8.1		8.0	24.0		24.0	7.5		7.6	0.184		0.220
	B	B	5	5	5												
	C	C	5	5	5												
	D	D	5	5	5												
1.5	A	A	5	5	5	8.1		7.9	24.0		24.1	7.5		7.7	2.88		3.09
	B	B	5	5	5												
	C	C	5	5	5												
	D	D	5	5	5												
2.0	A	A	5	4D	3D	8.2		7.9	24.0		24.1	7.6		7.7	3.88		4.05
	B	B	5	5	5												
	C	C	5	5	4D												
	D	D	3	3	3												
2.5	A	A	0	–	–	–			—			—			—		
	B	B	–	–	–												
	C	C	–	–	–												
	D	D	–	–	–												
3.0	A	A	–	–	–	—			—			–			—		
	B	B	–	–	–												
	C	C	–	–	–												
	D	D	–	–	–												
4.0	A	A	–	–	–	—				—		—				—	
	B	B	–	–	–												
	C	C	–	–	–												
	D	D	–	–	–												
	A	–															
	B																
	C																
	D																
Loaded / measured by:			BA	BA	JD	BA		JD	BA		JD	BA		JD	BA		JD
Recorded by:			BA	BA	JD	BA		JD	BA		JD	BA		JD	BA		JD

Investigators' Signatures
James Daniels
Bruce Neidig
Marshall Faircloth
Nicki Wallerdorf
REVIEWER

Concentrations prepared by: BA
Loading verified by: BA
Light Intensity: 50-100 Ft. candles
Photoperiod: 16 hours Light / 8 hours dark
Temperature Range °C:
Incubator # 2 min. 24.4 max. 26.0 mean 25.1
Incubator # ____ min. _____ max. _____ mean _____
Room B246 min. 24.4 max. 25.3 mean 24.9

Remarks:

Statistical Results: Method: Spearman-Karber
48 / 96 hour LC50: 2.10
95% Confidence Interval: lower 2.00 upper 2.20

Revised 02/21/06

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Appendix C. (continued)

FDEP Biology Section - Acute SRT Bench Sheet

Test Organism: *Americamysis bahia* (Method 2007.0) *Menidia beryllina* (Method 2006.0) *Hyalella azteca* (Method 100.1 EPA-600-R-99-064) *Ceriodaphnia dubia* (Method 2002.0) *Cyprinella leedsi* (Method 2000.0) *Pimephales promelas* (Method 2000.0) Other:_____

Method from EPA-821-R-02-012
Test Type: Definitive
Static / Static Renewal
Test Page 1 of 2

Diluent/ Batch#: Well H2O / 10-2-06
Toxicant/ Batch# NaCl / 14-06

Test Beginning: Date: 10.3.06 Time: 12:30
Test Ending: Date: 10-7-06 Time: 1140

Water Quality Parameters:	Diluent	Method	Initials
Total Residual Cl_2 (mg/L):	<0.03	Hach	ppv
Alkalinity (mg/L as $CaCO_3$):	134	Hach	ew
Hardness (mg/L as CaCO3):	133	Hach	ew
Total Ammonia (mg/L as N):	<0.07	Denver	mf
Salinity (ppth):	21	Mettler	BA

Organism Batch #/ Age: 24.06 / 12days
Feeding: Prior to test / Prior to renewal / Daily
Food: YCT P.*subcapitata* Artemia
Food Batch: — — 54-536-80
Chamber size: 1000 mL
Test volume: 500 mL per replicate

Conc. µg/L (60)	Rep.	Chamber#	Number Live 0 hr (48 hr)	Number Live 24 hr (72 hr)	Number Live 48 hr (96 hr)	pH (SU) 0 hr (48 hr)	pH (SU) 24 hr (72 hr)	pH (SU) 48 hr (96 hr)	Temperature (°C) 0 hr (48 hr)	Temperature (°C) 24 hr (72 hr)	Temperature (°C) 48 hr (96 hr)	D.O. (mg/l) 0 hr (48 hr)	D.O. (mg/l) 24 hr (72 hr)	D.O. (mg/l) 48 hr (96 hr)	UNCORRECTED Cond. (mmhos/cm) 0 hr (48 hr)	UNCORRECTED Cond. (mmhos/cm) 24 hr (72 hr)	UNCORRECTED Cond. (mmhos/cm) 48 hr (96 hr)
Control	A	F1	10	10	10	7.8		8.0	24.9		24.0	7.8		7.8	0.263		0.309
	B	F2	10	10	10		8.0			25.2			6.2			0.600 (B)	
	C										24.8 (C)						
	D																
60	A	F3	10	10	10	7.8		7.9	24.8		24.0	7.8		6.8	10.7		11.0
	B	F4	10	10	10		8.0			25.1			6.1			10.2	
	C										Steady Pack mf (Retired) 10-11-06						
	D																
70	A	F5	10	9(D)	8(D)	7.8		8.0	24.7		24.0	7.6		6.7	12.4		12.8
	B	F6	10	10	9(D)		8.0			25.1			6.1			12.2	
	C																
	D																
80	A	F7	10	7(3D)	7	7.8		8.0	24.6		24.1	7.5		6.5	13.9		14.3
	B	F8	10	7(3D)	7 (A) (3D)		7.9			25.0			5.9			13.7	
	C																
	D																
90	A	F9	10	2(8D)	2	7.8		8.1	24.6		24.2	7.5		6.5	15.4		15.8
	B	F10	10	1(9D)	0(9D)		7.9			25.1			5.8			15.6	
	C																
	D																
100	A	F11	10	0(10D)	—	7.8		—	24.4		—	7.5		—	16.8		—
	B	F12	10	0(10D)	/		8.0			25.1			5.7			17.1	
	C																
	D																
	A																
	B																
	C																
	D																
Loaded / measured by:			JD	JD	JD	BA	JD	BA	BA	JD	JD	BA	JD	BA	BA	JD	BA
Recorded by:			BA	JD	JD	BA	JD	BA	BA	JD	JD	BA	JD	BA	BA	JD	BA

Investigators' Signatures
Peggy P Rose
James Danish
Brooke Glutton
Marshall Faircloth
Erin Lacy
Nicole Willenby
REVIEWER

Concentrations prepared by: JD
Loading verified by: MF
Light Intensity: 50-100 Ft. candles
Photoperiod: 16 hours Light / 8 hours dark
Temperature Range °C:
Incubator # 2 min. 24.4 max. 26.0 mean 25.1
Incubator # ____ min. ____ max. ____ mean ____
Room B246 min. 24.1 max. 25.3 mean 24.9

Remarks:
(A) 96hr 60B Transcription error ID. 10.5.06
(B) 24hr C1C1B cond. was high, rep A was as expected.
(C) transcription error ID. 10.5.06

Statistical Results: Method: Spearman-Karber
(48) 96 hour LC50: 8.09
95% Confidence Interval: lower 7.79 upper 8.40

Revised 02/21/06

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Appendix C. (continued)

FDEP Biology Section - Acute SRT Bench Sheet

Test Organism: *Americamysis bahia* Method 2007.0 | *Menidia beryllina* Method 2006.0 | *Hyalella azteca* Method 100.1 EPA-600-R-99-064
Ceriodaphnia dubia Method 2002.0 | (*Cyprinella leedsi* Method 2000.0) | *Pimephales promelas* Method 2000.0 | Other:_____

Method from EPA-821-R-02-012
Test Type: Definitive
Static / (Static Renewal)
Test Page 2 of 2

Diluent/ Batch#: 60/H2O / 10-2-06
Toxicant/ Batch# NaCl / 1-19-06

Test Beginning: Date: 10306 Time: 12:30
Test Ending: Date: 10706 Time: 11:40

Water Quality Parameters:

	Diluent	Method	Initials
Total Residual Cl_2 (mg/L):	<0.03	Hach	PPV
Alkalinity (mg/L as $CaCO_3$):	134	Hach	CW
Hardness (mg/L as CaCO3):	133	Hach	CW
Total Ammonia (mg/L as N):	<0.07	Denver	MF
Salinity (ppth):	21	Mettler	BA

Organism Batch #/ Age: 24.06 / 12days
Feeding: (Prior to test) (Prior to renewal) Daily
Food: YCT P.*subcapitata* (Artemia)
Food Batch: — — gs5-5-90
Chamber size: 1000 mL
Test volume: 500 mL per replicate

Conc. µg/L (TI)	Rep.	Chamber#	Number Live 0 hr	24 hr	48 hr	pH (SU) 0 hr	24 hr	48 hr	Temperature (° C) 0 hr	24 hr	48 hr	D.O. (mg/l) 0 hr	24 hr	48 hr	UNCORRECTED Cond. (mmhos/cm) 0 hr	24 hr	48 hr
			(48 hr)	72 hr	96 hr	(48 hr)	72 hr	96 hr	(48 hr)	72 hr	96 hr	(48 hr)	72 hr	96 hr	(48 hr) Cond. (µmhos/cm)	72 hr	96 hr
Control	A	F1	10	10	10	8.0		8.1	25.0		24.1	7.1		7.1	0.224		0.283
	B	F2	10	10	10		8.0			24.0			7.5			0.28	
	C																
	D																
6.0	A	F3	10	10	10	8.0		8.0	24.9		24.4	7.1		7.0	859		917
	B	F4	10	9/10	9		7.9			24.1			7.0			9.29	
	C																
	D																
7.0	A	F5	8	8	8	7.9		8.1	24.9		24.6	7.1		7.0	12.9		12.3
	B	F6	9	9	9		7.9			24.6			6.8			13.22	
	C																
	D																
8.0	A	F7	7	7	7	7.9		8.2	24.9		24.7	7.2		7.0	14.2		14.1
	B	F8	7	6/10	6		7.9			24.7			6.7			14.4	
	C																
	D																
9.0	A	F9	2	2	1/10	8.0		8.2	24.9	24.8	24.6	7.2	(A)	7.0	15.5	(A)	15.9
	B	F10	0	—	—		8.0						6.7			15.8	
	C																
	D																
10.0	A	F11	—	—	—	—		—	—		—	—		—	—		—
	B	F12	—	—	—		—			—			—			—	
	C																
	D																
	A																
	B																
	C																
	D																
Loaded / measured by:			BA	JD	JD	JD	BA	JD	JD	JD	JD	JD	BA	JD	JD	BA	JD
Recorded by:			BA	JD	JD	JD	BA	JD	JD	BA	JD	JD	BA	JD	JD	BA	JD

Investigators' Signatures
Steve Parker
James Daniels
Marshall Faircloth
Bruce Albertson
Chris Lange
Mirta Wellendorf
REVIEWER

Concentrations prepared by: JD
Loading verified by: NA
Light Intensity: 50-100 Ft. candles
Photoperiod: 16 hours Light / 8 hours dark
Temperature Range °C:
Incubator # 2 min. 24.4 max. 26.0 mean 25.1
Incubator # ____ min. ____ max. ____ mean ____
Room B246 min. 24.4 max. 25.3 mean 24.9

Remarks: (A) 72hr, 96hr samples taken from Rep A's BA 10-6-06

Statistical Results: Method: Spearman-Karber
48 (96) hour LC50: 8.01
95% Confidence Interval: lower 7.69 upper 8.34

Revised 02/21/06

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Appendix C. (continued)

***Ceriodaphnia dubia* Acute Standard Reference Toxicant Test**

DATE: 10/03/06 DURATION: 48 h TOXICANT : NaCl
SPECIES: *C. Dubia*

RAW DATA: Concentration (g/L)	Number Exposed	Mortalities
.00	20	0
1.50	20	0
2.00	20	2
2.50	20	20
3.00	20	20
4.00	20	20

SPEARMAN-KARBER TRIM: .00%

SPEARMAN-KARBER ESTIMATES: LC50: 2.18
95% LOWER CONFIDENCE: 2.11
95% UPPER CONFIDENCE: 2.26

***Cyprinella leedsi* Acute Standard Reference Toxicant Test**

DATE: 10-03-06 DURATION: 48 h TOXICANT : NaCl
SPECIES: *C. leedsi*

RAW DATA: Concentration (g/L)	Number Exposed	Mortalities
.00	20	0
6.00	20	0
7.00	20	3
8.00	20	6
9.00	20	18
10.00	20	20

SPEARMAN-KARBER TRIM: .00%

SPEARMAN-KARBER ESTIMATES: LC50: 8.09
95% LOWER CONFIDENCE: 7.79
95% UPPER CONFIDENCE: 8.40

Appendix D. Test Organism Receipt

MBL Aquaculture
4569 Samuel Street
Sarasota, Florida 34233
TEL: (800) 889-0384
FAX: (941) 922-3874
EMAIL: sales@mblaquaculture.com
WEB: www.MBLAquaculture.com

NELAC Accredited

Organism Shipment Record

State of Florida Aquaculture Certificate Number AQ0668007

Date: 10/2/06

Shipped to: FDEP

P.O. No: _____

Species	Quantity	Age	Brood Number	Temperature	Salinity
Mysidopsis bahia	150+	4 Days	MS060928	25°C	~20‰
Menidia beryllina	150+	12 Days	SS060930	25°C	~30‰
Cyprinella leedsi	200+	11 Days	CL060901	25°C	
Pimephales promelas	150+	7 Days	FM060925-1550	25°C	

Packed by: Frank Gan

Shipped Via: FedEx

Notes: FedEx

Thank you for your order

Appendix D. (continued)

MBL Aquaculture
4569 Samuel Street
Sarasota, Florida 34233
TEL: (800) 889-0384
FAX: (941) 922-3874
EMAIL: sales@mblaquaculture.com
WEB: www.MBLAquaculture.com

NELAC Accredited

Organism Shipment Record

State of Florida Aquaculture Certificate Number AQ0668007

Date: 10/23/06

Shipped to: FDEP

P.O. No: _____

Species	Quantity	Age	Brood Number	Temperature	Salinity
Mysidopsis bahia	100+	4 Days	MS061019	25°C	~30‰
Menidia beryllina	100+	12 Days	SS061011	25°C	~30‰
Cyprinella leedsi	100+	11 Days	CL061012	25°C	
Pimephales promelas					

Packed by: Frank Gauzi

Shipped Via: FedEx

Notes: _____

Thank you for your order.

Appendix E. Chemical Analyses performed on composited effluent from the Florida Rock Industries - Fort Pierce Limerock Mine Outfall D-001 and Outfall D-003, sampled on October 23, 2006.

Date Sampled	Field ID	Analysis Group	Component	Result	Units	Remark	MDL	PQL
10/23/2006 11:08	51-RO-1	Bio-AGP/LimNut	Algal Growth Potential	1.37	mg DryWt/L		0.3	0.9
10/23/2006 11:08	51-RO-1	Bio-Chl-a	Chlorophyll-A, Monochromatic, Water	0.85	ug/L	U	0.85	2.6
10/23/2006 11:08	51-RO-1	Bio-Chl-a	Phaeophytin-A, Monochromatic, Water	1.5	ug/L	U	1.5	4.5
10/23/2006 11:08	51-RO-1	Bio-Toxicology	Bioassay-Acute-Screen-FW-C.dubia, LC50	100	LC50	L		
10/23/2006 11:08	51-RO-1	Bio-Toxicology	Bioassay-Acute-Screen-FW-Fish, LC50	100	LC50	L		
10/23/2006 11:08	51-RO-1	BNA-Water	1,2,4-Trichlorobenzene	0.96	ug/L	U	0.96	3.8
10/23/2006 11:08	51-RO-1	BNA-Water	1,2-Dichlorobenzene	0.96	ug/L	U	0.96	3.8
10/23/2006 11:08	51-RO-1	BNA-Water	1,3-Dichlorobenzene	0.96	ug/L	U	0.96	3.8
10/23/2006 11:08	51-RO-1	BNA-Water	1,4-Dichlorobenzene	0.96	ug/L	U	0.96	3.8
10/23/2006 11:08	51-RO-1	BNA-Water	2,4,6-Trichlorophenol	0.96	ug/L	U	0.96	3.8
10/23/2006 11:08	51-RO-1	BNA-Water	2,4-Dichlorophenol	0.96	ug/L	U	0.96	3.8
10/23/2006 11:08	51-RO-1	BNA-Water	2,4-Dimethylphenol	48	ug/L	U	48	190
10/23/2006 11:08	51-RO-1	BNA-Water	2,4-Dinitrophenol	14	ug/L	U	14	58
10/23/2006 11:08	51-RO-1	BNA-Water	2,4-Dinitrotoluene	0.96	ug/L	U	0.96	3.8
10/23/2006 11:08	51-RO-1	BNA-Water	2,6-Dinitrotoluene	0.96	ug/L	U	0.96	3.8
10/23/2006 11:08	51-RO-1	BNA-Water	2-Chloronaphthalene	0.96	ug/L	U	0.96	3.8
10/23/2006 11:08	51-RO-1	BNA-Water	2-Chlorophenol	0.96	ug/L	U	0.96	3.8
10/23/2006 11:08	51-RO-1	BNA-Water	2-Methyl-4,6-dinitrophenol	2.9	ug/L	U	2.9	12
10/23/2006 11:08	51-RO-1	BNA-Water	2-Nitrophenol	0.96	ug/L	UJ	0.96	3.8
10/23/2006 11:08	51-RO-1	BNA-Water	3,3'-Dichlorobenzidine	38	ug/L	UJ	38	150
10/23/2006 11:08	51-RO-1	BNA-Water	4,4'-DDD	1.4	ug/L	U	1.4	5.8
10/23/2006 11:08	51-RO-1	BNA-Water	4,4'-DDE	1.4	ug/L	U	1.4	5.8
10/23/2006 11:08	51-RO-1	BNA-Water	4,4'-DDT	1.4	ug/L	U	1.4	5.8
10/23/2006 11:08	51-RO-1	BNA-Water	4-Bromophenyl phenyl ether	0.96	ug/L	U	0.96	3.8
10/23/2006 11:08	51-RO-1	BNA-Water	4-Chloro-3-methylphenol	0.96	ug/L	U	0.96	3.8
10/23/2006 11:08	51-RO-1	BNA-Water	4-Chlorophenyl phenyl ether	1.9	ug/L	U	1.9	7.7
10/23/2006 11:08	51-RO-1	BNA-Water	4-Nitrophenol	14	ug/L	U	14	58
10/23/2006 11:08	51-RO-1	BNA-Water	Acenaphthene	0.96	ug/L	U	0.96	3.8
10/23/2006 11:08	51-RO-1	BNA-Water	Acenaphthylene	0.96	ug/L	U	0.96	3.8
10/23/2006 11:08	51-RO-1	BNA-Water	Aldrin	1.4	ug/L	U	1.4	5.8
10/23/2006 11:08	51-RO-1	BNA-Water	Anthracene	0.96	ug/L	U	0.96	3.8
10/23/2006 11:08	51-RO-1	BNA-Water	Benzidine	96	ug/L	U	96	380
10/23/2006 11:08	51-RO-1	BNA-Water	Benzo(a)anthracene	0.96	ug/L	U	0.96	3.8
10/23/2006 11:08	51-RO-1	BNA-Water	Benzo(a)pyrene	0.96	ug/L	U	0.96	3.8
10/23/2006 11:08	51-RO-1	BNA-Water	Benzo(b)fluoranthene	0.96	ug/L	U	0.96	3.8
10/23/2006 11:08	51-RO-1	BNA-Water	Benzo(g,h,i)perylene	0.96	ug/L	U	0.96	3.8

Appendix E. (continued)

Date Sampled	Field ID	Analysis Group	Component	Result	Units	Remark	MDL	PQL
10/23/2006 11:08	51-RO-1	BNA-Water	Benzo(k)fluoranthene	0.96	ug/L	U	0.96	3.8
10/23/2006 11:08	51-RO-1	BNA-Water	Bis(2-chloroethoxy)methane	0.96	ug/L	U	0.96	3.8
10/23/2006 11:08	51-RO-1	BNA-Water	Bis(2-chloroethyl)ether	0.96	ug/L	U	0.96	3.8
10/23/2006 11:08	51-RO-1	BNA-Water	Bis(2-chloroisopropyl)ether	2.9	ug/L	U	2.9	12
10/23/2006 11:08	51-RO-1	BNA-Water	Bis(2-ethylhexyl)phthalate	14	ug/L	U	14	58
10/23/2006 11:08	51-RO-1	BNA-Water	Butyl benzyl phthalate	4.8	ug/L	U	4.8	19
10/23/2006 11:08	51-RO-1	BNA-Water	Chrysene	0.96	ug/L	U	0.96	3.8
10/23/2006 11:08	51-RO-1	BNA-Water	Di-n-butyl phthalate	4.8	ug/L	U	4.8	19
10/23/2006 11:08	51-RO-1	BNA-Water	Di-n-octyl phthalate	0.96	ug/L	U	0.96	3.8
10/23/2006 11:08	51-RO-1	BNA-Water	Dibenzo(a,h)anthracene	0.96	ug/L	U	0.96	3.8
10/23/2006 11:08	51-RO-1	BNA-Water	Dieldrin	1.4	ug/L	U	1.4	5.8
10/23/2006 11:08	51-RO-1	BNA-Water	Diethyl phthalate	0.96	ug/L	U	0.96	3.8
10/23/2006 11:08	51-RO-1	BNA-Water	Dimethyl phthalate	48	ug/L	U	48	190
10/23/2006 11:08	51-RO-1	BNA-Water	Endosulfan I	3.8	ug/L	U	3.8	15
10/23/2006 11:08	51-RO-1	BNA-Water	Endosulfan II	3.8	ug/L	U	3.8	15
10/23/2006 11:08	51-RO-1	BNA-Water	Endosulfan sulfate	1.4	ug/L	U	1.4	5.8
10/23/2006 11:08	51-RO-1	BNA-Water	Endrin	1.4	ug/L	UJ	1.4	5.8
10/23/2006 11:08	51-RO-1	BNA-Water	Endrin aldehyde	3.8	ug/L	U	3.8	15
10/23/2006 11:08	51-RO-1	BNA-Water	Fluoranthene	0.96	ug/L	U	0.96	3.8
10/23/2006 11:08	51-RO-1	BNA-Water	Fluorene	0.96	ug/L	U	0.96	3.8
10/23/2006 11:08	51-RO-1	BNA-Water	Heptachlor	1.4	ug/L	U	1.4	5.8
10/23/2006 11:08	51-RO-1	BNA-Water	Heptachlor epoxide	1.4	ug/L	U	1.4	5.8
10/23/2006 11:08	51-RO-1	BNA-Water	Hexachlorobenzene	0.96	ug/L	U	0.96	3.8
10/23/2006 11:08	51-RO-1	BNA-Water	Hexachlorobutadiene	2.9	ug/L	U	2.9	12
10/23/2006 11:08	51-RO-1	BNA-Water	Hexachlorocyclopentadiene	2.9	ug/L	U	2.9	12
10/23/2006 11:08	51-RO-1	BNA-Water	Hexachloroethane	2.9	ug/L	U	2.9	12
10/23/2006 11:08	51-RO-1	BNA-Water	Indeno(1,2,3-cd)pyrene	0.96	ug/L	U	0.96	3.8
10/23/2006 11:08	51-RO-1	BNA-Water	Isophorone	0.96	ug/L	U	0.96	3.8
10/23/2006 11:08	51-RO-1	BNA-Water	N-Nitrosodi-n-propylamine	1.9	ug/L	U	1.9	7.7
10/23/2006 11:08	51-RO-1	BNA-Water	N-Nitrosodimethylamine	1.9	ug/L	U	1.9	7.7
10/23/2006 11:08	51-RO-1	BNA-Water	N-nitrosodiphenylamine/diphenylamine	2.9	ug/mL	U	2.9	12
10/23/2006 11:08	51-RO-1	BNA-Water	Naphthalene	0.96	ug/L	U	0.96	3.8
10/23/2006 11:08	51-RO-1	BNA-Water	Nitrobenzene	1.9	ug/L	U	1.9	7.7
10/23/2006 11:08	51-RO-1	BNA-Water	Pentachlorophenol	2.9	ug/L	U	2.9	12
10/23/2006 11:08	51-RO-1	BNA-Water	Phenanthrene	0.96	ug/L	U	0.96	3.8
10/23/2006 11:08	51-RO-1	BNA-Water	Phenol	0.96	ug/L	U	0.96	3.8
10/23/2006 11:08	51-RO-1	BNA-Water	Pyrene	0.96	ug/L	U	0.96	3.8

Appendix E. (continued)

Date Sampled	Field ID	Analysis Group	Component	Result	Units	Remark	MDL	PQL
10/23/2006 11:08	51-RO-1	BNA-Water	alpha-BHC	1.4	ug/L	U	1.4	5.8
10/23/2006 11:08	51-RO-1	BNA-Water	beta-BHC	1.4	ug/L	U	1.4	5.8
10/23/2006 11:08	51-RO-1	BNA-Water	delta-BHC	1.4	ug/L	U	1.4	5.8
10/23/2006 11:08	51-RO-1	BNA-Water	gamma-BHC	1.4	ug/L	U	1.4	5.8
10/23/2006 11:00	Equipment Blank	BNA-Water	1,2,4-Trichlorobenzene	0.96	ug/L	U	0.96	3.8
10/23/2006 11:00	Equipment Blank	BNA-Water	1,2-Dichlorobenzene	0.96	ug/L	U	0.96	3.8
10/23/2006 11:00	Equipment Blank	BNA-Water	1,3-Dichlorobenzene	0.96	ug/L	U	0.96	3.8
10/23/2006 11:00	Equipment Blank	BNA-Water	1,4-Dichlorobenzene	0.96	ug/L	U	0.96	3.8
10/23/2006 11:00	Equipment Blank	BNA-Water	2,4,6-Trichlorophenol	0.96	ug/L	U	0.96	3.8
10/23/2006 11:00	Equipment Blank	BNA-Water	2,4-Dichlorophenol	0.96	ug/L	U	0.96	3.8
10/23/2006 11:00	Equipment Blank	BNA-Water	2,4-Dimethylphenol	48	ug/L	U	48	190
10/23/2006 11:00	Equipment Blank	BNA-Water	2,4-Dinitrophenol	14	ug/L	U	14	58
10/23/2006 11:00	Equipment Blank	BNA-Water	2,4-Dinitrotoluene	0.96	ug/L	U	0.96	3.8
10/23/2006 11:00	Equipment Blank	BNA-Water	2,6-Dinitrotoluene	0.96	ug/L	U	0.96	3.8
10/23/2006 11:00	Equipment Blank	BNA-Water	2-Chloronaphthalene	0.96	ug/L	U	0.96	3.8
10/23/2006 11:00	Equipment Blank	BNA-Water	2-Chlorophenol	0.96	ug/L	U	0.96	3.8
10/23/2006 11:00	Equipment Blank	BNA-Water	2-Methyl-4,6-dinitrophenol	2.9	ug/L	U	2.9	12
10/23/2006 11:00	Equipment Blank	BNA-Water	2-Nitrophenol	0.96	ug/L	UJ	0.96	3.8
10/23/2006 11:00	Equipment Blank	BNA-Water	3,3'-Dichlorobenzidine	38	ug/L	UJ	38	150
10/23/2006 11:00	Equipment Blank	BNA-Water	4,4'-DDD	1.4	ug/L	U	1.4	5.8
10/23/2006 11:00	Equipment Blank	BNA-Water	4,4'-DDE	1.4	ug/L	U	1.4	5.8
10/23/2006 11:00	Equipment Blank	BNA-Water	4,4'-DDT	1.4	ug/L	U	1.4	5.8
10/23/2006 11:00	Equipment Blank	BNA-Water	4-Bromophenyl phenyl ether	0.96	ug/L	U	0.96	3.8
10/23/2006 11:00	Equipment Blank	BNA-Water	4-Chloro-3-methylphenol	0.96	ug/L	U	0.96	3.8
10/23/2006 11:00	Equipment Blank	BNA-Water	4-Chlorophenyl phenyl ether	1.9	ug/L	U	1.9	7.7
10/23/2006 11:00	Equipment Blank	BNA-Water	4-Nitrophenol	14	ug/L	U	14	58
10/23/2006 11:00	Equipment Blank	BNA-Water	Acenaphthene	0.96	ug/L	U	0.96	3.8
10/23/2006 11:00	Equipment Blank	BNA-Water	Acenaphthylene	0.96	ug/L	U	0.96	3.8
10/23/2006 11:00	Equipment Blank	BNA-Water	Aldrin	1.4	ug/L	U	1.4	5.8
10/23/2006 11:00	Equipment Blank	BNA-Water	Anthracene	0.96	ug/L	U	0.96	3.8
10/23/2006 11:00	Equipment Blank	BNA-Water	Benzidine	96	ug/L	U	96	380
10/23/2006 11:00	Equipment Blank	BNA-Water	Benzo(a)anthracene	0.96	ug/L	U	0.96	3.8
10/23/2006 11:00	Equipment Blank	BNA-Water	Benzo(a)pyrene	0.96	ug/L	U	0.96	3.8
10/23/2006 11:00	Equipment Blank	BNA-Water	Benzo(b)fluoranthene	0.96	ug/L	U	0.96	3.8
10/23/2006 11:00	Equipment Blank	BNA-Water	Benzo(g,h,i)perylene	0.96	ug/L	U	0.96	3.8
10/23/2006 11:00	Equipment Blank	BNA-Water	Benzo(k)fluoranthene	0.96	ug/L	U	0.96	3.8
10/23/2006 11:00	Equipment Blank	BNA-Water	Bis(2-chloroethoxy)methane	0.96	ug/L	U	0.96	3.8

Appendix E. (continued)

Date Sampled	Field ID	Analysis Group	Component	Result	Units	Remark	MDL	PQL
10/23/2006 11:00	Equipment Blank	BNA-Water	Bis(2-chloroethyl)ether	0.96	ug/L	U	0.96	3.8
10/23/2006 11:00	Equipment Blank	BNA-Water	Bis(2-chloroisopropyl)ether	2.9	ug/L	U	2.9	12
10/23/2006 11:00	Equipment Blank	BNA-Water	Bis(2-ethylhexyl)phthalate	14	ug/L	U	14	58
10/23/2006 11:00	Equipment Blank	BNA-Water	Butyl benzyl phthalate	4.8	ug/L	U	4.8	19
10/23/2006 11:00	Equipment Blank	BNA-Water	Chrysene	0.96	ug/L	U	0.96	3.8
10/23/2006 11:00	Equipment Blank	BNA-Water	Di-n-butyl phthalate	4.8	ug/L	U	4.8	19
10/23/2006 11:00	Equipment Blank	BNA-Water	Di-n-octyl phthalate	0.96	ug/L	U	0.96	3.8
10/23/2006 11:00	Equipment Blank	BNA-Water	Dibenzo(a,h)anthracene	0.96	ug/L	U	0.96	3.8
10/23/2006 11:00	Equipment Blank	BNA-Water	Dieldrin	1.4	ug/L	U	1.4	5.8
10/23/2006 11:00	Equipment Blank	BNA-Water	Diethyl phthalate	0.96	ug/L	U	0.96	3.8
10/23/2006 11:00	Equipment Blank	BNA-Water	Dimethyl phthalate	48	ug/L	U	48	190
10/23/2006 11:00	Equipment Blank	BNA-Water	Endosulfan I	3.8	ug/L	U	3.8	15
10/23/2006 11:00	Equipment Blank	BNA-Water	Endosulfan II	3.8	ug/L	U	3.8	15
10/23/2006 11:00	Equipment Blank	BNA-Water	Endosulfan sulfate	1.4	ug/L	U	1.4	5.8
10/23/2006 11:00	Equipment Blank	BNA-Water	Endrin	1.4	ug/L	UJ	1.4	5.8
10/23/2006 11:00	Equipment Blank	BNA-Water	Endrin aldehyde	3.8	ug/L	U	3.8	15
10/23/2006 11:00	Equipment Blank	BNA-Water	Fluoranthene	0.96	ug/L	U	0.96	3.8
10/23/2006 11:00	Equipment Blank	BNA-Water	Fluorene	0.96	ug/L	U	0.96	3.8
10/23/2006 11:00	Equipment Blank	BNA-Water	Heptachlor	1.4	ug/L	U	1.4	5.8
10/23/2006 11:00	Equipment Blank	BNA-Water	Heptachlor epoxide	1.4	ug/L	U	1.4	5.8
10/23/2006 11:00	Equipment Blank	BNA-Water	Hexachlorobenzene	0.96	ug/L	U	0.96	3.8
10/23/2006 11:00	Equipment Blank	BNA-Water	Hexachlorobutadiene	2.9	ug/L	U	2.9	12
10/23/2006 11:00	Equipment Blank	BNA-Water	Hexachlorocyclopentadiene	2.9	ug/L	U	2.9	12
10/23/2006 11:00	Equipment Blank	BNA-Water	Hexachloroethane	2.9	ug/L	U	2.9	12
10/23/2006 11:00	Equipment Blank	BNA-Water	Indeno(1,2,3-cd)pyrene	0.96	ug/L	U	0.96	3.8
10/23/2006 11:00	Equipment Blank	BNA-Water	Isophorone	0.96	ug/L	U	0.96	3.8
10/23/2006 11:00	Equipment Blank	BNA-Water	N-Nitrosodi-n-propylamine	1.9	ug/L	U	1.9	7.7
10/23/2006 11:00	Equipment Blank	BNA-Water	N-Nitrosodimethylamine	1.9	ug/L	U	1.9	7.7
10/23/2006 11:00	Equipment Blank	BNA-Water	N-nitrosodiphenylamine/diphenylamine	2.9	ug/mL	U	2.9	12
10/23/2006 11:00	Equipment Blank	BNA-Water	Naphthalene	0.96	ug/L	U	0.96	3.8
10/23/2006 11:00	Equipment Blank	BNA-Water	Nitrobenzene	1.9	ug/L	U	1.9	7.7
10/23/2006 11:00	Equipment Blank	BNA-Water	Pentachlorophenol	2.9	ug/L	U	2.9	12
10/23/2006 11:00	Equipment Blank	BNA-Water	Phenanthrene	0.96	ug/L	U	0.96	3.8
10/23/2006 11:00	Equipment Blank	BNA-Water	Phenol	0.96	ug/L	U	0.96	3.8
10/23/2006 11:00	Equipment Blank	BNA-Water	Pyrene	0.96	ug/L	U	0.96	3.8
10/23/2006 11:00	Equipment Blank	BNA-Water	alpha-BHC	1.4	ug/L	U	1.4	5.8
10/23/2006 11:00	Equipment Blank	BNA-Water	beta-BHC	1.4	ug/L	U	1.4	5.8

Appendix E. (continued)

Date Sampled	Field ID	Analysis Group	Component	Result	Units	Remark	MDL	PQL
10/23/2006 11:00	Equipment Blank	BNA-Water	delta-BHC	1.4	ug/L	U	1.4	5.8
10/23/2006 11:00	Equipment Blank	BNA-Water	gamma-BHC	1.4	ug/L	U	1.4	5.8
10/23/2006 11:08	51-RO-1	GC-Water	Alachlor	0.6	ug/L	UJ	0.6	2.4
10/23/2006 11:08	51-RO-1	GC-Water	Ametryn	0.05	ug/L	U	0.05	0.2
10/23/2006 11:08	51-RO-1	GC-Water	Atrazine	0.05	ug/L	U	0.05	0.2
10/23/2006 11:08	51-RO-1	GC-Water	Azinphos Methyl	0.2	ug/L	U	0.2	0.8
10/23/2006 11:08	51-RO-1	GC-Water	Bromacil	0.2	ug/L	UJ	0.2	0.8
10/23/2006 11:08	51-RO-1	GC-Water	Butylate	0.2	ug/L	UJ	0.2	0.8
10/23/2006 11:08	51-RO-1	GC-Water	Chlorpyrifos Ethyl	0.05	ug/L	U	0.05	0.2
10/23/2006 11:08	51-RO-1	GC-Water	Chlorpyrifos Methyl	0.1	ug/L	U	0.1	0.4
10/23/2006 11:08	51-RO-1	GC-Water	Diazinon	0.05	ug/L	UJ	0.05	0.2
10/23/2006 11:08	51-RO-1	GC-Water	Ethion	0.05	ug/L	U	0.05	0.2
10/23/2006 11:08	51-RO-1	GC-Water	Ethoprop	0.1	ug/L	U	0.1	0.4
10/23/2006 11:08	51-RO-1	GC-Water	Fenamiphos	0.2	ug/L	U	0.2	0.8
10/23/2006 11:08	51-RO-1	GC-Water	Fonofos	0.1	ug/L	U	0.1	0.4
10/23/2006 11:08	51-RO-1	GC-Water	Hexazinone	0.1	ug/L	U	0.1	0.4
10/23/2006 11:08	51-RO-1	GC-Water	Malathion	0.15	ug/L	U	0.15	0.6
10/23/2006 11:08	51-RO-1	GC-Water	Metalaxyl	0.25	ug/L	UJ	0.25	1
10/23/2006 11:08	51-RO-1	GC-Water	Metolachlor	0.5	ug/L	U	0.5	2
10/23/2006 11:08	51-RO-1	GC-Water	Metribuzin	0.1	ug/L	U	0.1	0.4
10/23/2006 11:08	51-RO-1	GC-Water	Mevinphos	0.2	ug/L	U	0.2	0.8
10/23/2006 11:08	51-RO-1	GC-Water	Naled	0.8	ug/L	U	0.8	3.2
10/23/2006 11:08	51-RO-1	GC-Water	Norflurazon	0.15	ug/L	U	0.15	0.6
10/23/2006 11:08	51-RO-1	GC-Water	Parathion Ethyl	0.15	ug/L	U	0.15	0.6
10/23/2006 11:08	51-RO-1	GC-Water	Parathion Methyl	0.1	ug/L	U	0.1	0.4
10/23/2006 11:08	51-RO-1	GC-Water	Phorate	0.05	ug/L	U	0.05	0.2
10/23/2006 11:08	51-RO-1	GC-Water	Prometryn	0.15	ug/L	U	0.15	0.6
10/23/2006 11:08	51-RO-1	GC-Water	Simazine	0.05	ug/L	U	0.05	0.2
10/23/2006 11:00	Equipment Blank	GC-Water	Alachlor	0.58	ug/L	UJ	0.58	2.3
10/23/2006 11:00	Equipment Blank	GC-Water	Ametryn	0.049	ug/L	U	0.049	0.2
10/23/2006 11:00	Equipment Blank	GC-Water	Atrazine	0.049	ug/L	U	0.049	0.2
10/23/2006 11:00	Equipment Blank	GC-Water	Azinphos Methyl	0.19	ug/L	U	0.19	0.76
10/23/2006 11:00	Equipment Blank	GC-Water	Bromacil	0.19	ug/L	UJ	0.19	0.76
10/23/2006 11:00	Equipment Blank	GC-Water	Butylate	0.19	ug/L	UJ	0.19	0.76
10/23/2006 11:00	Equipment Blank	GC-Water	Chlorpyrifos Ethyl	0.049	ug/L	U	0.049	0.2
10/23/2006 11:00	Equipment Blank	GC-Water	Chlorpyrifos Methyl	0.097	ug/L	U	0.097	0.39
10/23/2006 11:00	Equipment Blank	GC-Water	Diazinon	0.049	ug/L	UJ	0.049	0.2

Appendix E. (continued)

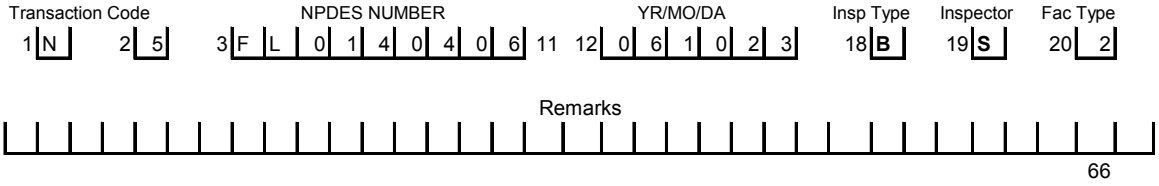
Date Sampled	Field ID	Analysis Group	Component	Result	Units	Remark	MDL	PQL
10/23/2006 11:00	Equipment Blank	GC-Water	Ethion	0.049	ug/L	U	0.049	0.2
10/23/2006 11:00	Equipment Blank	GC-Water	Ethoprop	0.097	ug/L	U	0.097	0.39
10/23/2006 11:00	Equipment Blank	GC-Water	Fenamiphos	0.19	ug/L	U	0.19	0.76
10/23/2006 11:00	Equipment Blank	GC-Water	Fonofos	0.097	ug/L	U	0.097	0.39
10/23/2006 11:00	Equipment Blank	GC-Water	Hexazinone	0.097	ug/L	U	0.097	0.39
10/23/2006 11:00	Equipment Blank	GC-Water	Malathion	0.15	ug/L	U	0.15	0.6
10/23/2006 11:00	Equipment Blank	GC-Water	Metalaxyl	0.24	ug/L	UJ	0.24	0.96
10/23/2006 11:00	Equipment Blank	GC-Water	Metolachlor	0.49	ug/L	U	0.49	2
10/23/2006 11:00	Equipment Blank	GC-Water	Metribuzin	0.097	ug/L	U	0.097	0.39
10/23/2006 11:00	Equipment Blank	GC-Water	Mevinphos	0.19	ug/L	U	0.19	0.76
10/23/2006 11:00	Equipment Blank	GC-Water	Naled	0.78	ug/L	U	0.78	3.1
10/23/2006 11:00	Equipment Blank	GC-Water	Norflurazon	0.15	ug/L	U	0.15	0.6
10/23/2006 11:00	Equipment Blank	GC-Water	Parathion Ethyl	0.15	ug/L	U	0.15	0.6
10/23/2006 11:00	Equipment Blank	GC-Water	Parathion Methyl	0.097	ug/L	U	0.097	0.39
10/23/2006 11:00	Equipment Blank	GC-Water	Phorate	0.049	ug/L	U	0.049	0.2
10/23/2006 11:00	Equipment Blank	GC-Water	Prometryn	0.15	ug/L	U	0.15	0.6
10/23/2006 11:00	Equipment Blank	GC-Water	Simazine	0.049	ug/L	U	0.049	0.2
10/23/2006 11:08	51-RO-1	Metals-Water	Aluminum	7.2	ug/L	I	4	16
10/23/2006 11:08	51-RO-1	Metals-Water	Arsenic	1.9	ug/L	I	0.5	2
10/23/2006 11:08	51-RO-1	Metals-Water	Cadmium	0.05	ug/L	U	0.05	0.2
10/23/2006 11:08	51-RO-1	Metals-Water	Calcium	89.7	mg/L	A	0.02	0.08
10/23/2006 11:08	51-RO-1	Metals-Water	Chromium	0.3	ug/L	U	0.3	1.2
10/23/2006 11:08	51-RO-1	Metals-Water	Copper	0.2	ug/L	U	0.2	0.8
10/23/2006 11:08	51-RO-1	Metals-Water	Iron	93	ug/L	A	5	20
10/23/2006 11:08	51-RO-1	Metals-Water	Lead	0.2	ug/L	U	0.2	0.8
10/23/2006 11:08	51-RO-1	Metals-Water	Magnesium	11.8	mg/L	A	0.005	0.02
10/23/2006 11:08	51-RO-1	Metals-Water	Nickel	1.3	ug/L	I	1	4
10/23/2006 11:08	51-RO-1	Metals-Water	Selenium	1.3	ug/L	I	0.5	2
10/23/2006 11:08	51-RO-1	Metals-Water	Silver	0.025	ug/L	U	0.025	0.1
10/23/2006 11:08	51-RO-1	Metals-Water	Zinc	6.8	ug/L	I	3	12
10/23/2006 11:00	Equipment Blank	Metals-Water	Aluminum	4	ug/L	U	4	16
10/23/2006 11:00	Equipment Blank	Metals-Water	Arsenic	0.5	ug/L	U	0.5	2
10/23/2006 11:00	Equipment Blank	Metals-Water	Cadmium	0.05	ug/L	U	0.05	0.2
10/23/2006 11:00	Equipment Blank	Metals-Water	Calcium	0.032	mg/L	I	0.02	0.08
10/23/2006 11:00	Equipment Blank	Metals-Water	Chromium	0.3	ug/L	U	0.3	1.2
10/23/2006 11:00	Equipment Blank	Metals-Water	Copper	0.2	ug/L	U	0.2	0.8
10/23/2006 11:00	Equipment Blank	Metals-Water	Iron	5	ug/L	U	5	20

Appendix E. (continued)

Date Sampled	Field ID	Analysis Group	Component	Result	Units	Remark	MDL	PQL
10/23/2006 11:00	Equipment Blank	Metals-Water	Lead	0.2	ug/L	U	0.2	0.8
10/23/2006 11:00	Equipment Blank	Metals-Water	Magnesium	0.005	mg/L	U	0.005	0.02
10/23/2006 11:00	Equipment Blank	Metals-Water	Nickel	1	ug/L	U	1	4
10/23/2006 11:00	Equipment Blank	Metals-Water	Selenium	0.5	ug/L	U	0.5	2
10/23/2006 11:00	Equipment Blank	Metals-Water	Silver	0.025	ug/L	U	0.025	0.1
10/23/2006 11:00	Equipment Blank	Metals-Water	Zinc	6.4	ug/L	I	3	12
10/23/2006 11:08	51-RO-1	Nutrients-Liquid	Ammonia-N	0.021	mg N/L		0.01	0.02
10/23/2006 11:08	51-RO-1	Nutrients-Liquid	Kjeldahl Nitrogen	0.91	mg N/L		0.08	0.2
10/23/2006 11:08	51-RO-1	Nutrients-Liquid	NO2NO3-N	0.007	mg N/L	I	0.004	0.01
10/23/2006 11:08	51-RO-1	Nutrients-Liquid	O-Phosphate-P	0.004	mg P/L	U	0.004	0.01
10/23/2006 11:08	51-RO-1	Nutrients-Liquid	Specific_Conductance	775	umhos/cm		2	8
10/23/2006 11:08	51-RO-1	Nutrients-Liquid	Total-P	0.02	mg P/L	U	0.02	0.06
10/23/2006 11:08	51-RO-1	Nutrients-Liquid	Turbidity	1.4	NTU		0.05	0.05
10/23/2006 11:00	Equipment Blank	Nutrients-Liquid	Ammonia-N	0.01	mg N/L	U	0.01	0.02
10/23/2006 11:00	Equipment Blank	Nutrients-Liquid	Kjeldahl Nitrogen	0.08	mg N/L	U	0.08	0.2
10/23/2006 11:00	Equipment Blank	Nutrients-Liquid	NO2NO3-N	0.004	mg N/L	U	0.004	0.01
10/23/2006 11:00	Equipment Blank	Nutrients-Liquid	O-Phosphate-P	0.004	mg P/L	U	0.004	0.01
10/23/2006 11:00	Equipment Blank	Nutrients-Liquid	Total-P	0.02	mg P/L	U	0.02	0.06

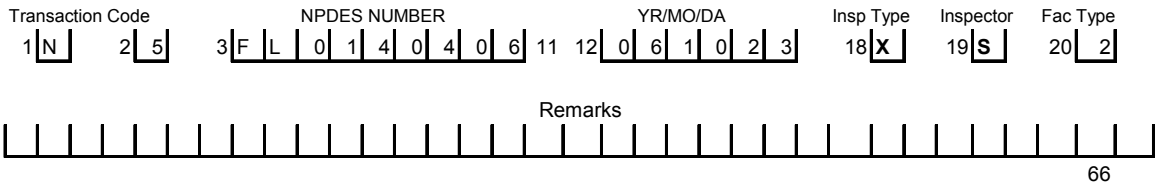
The Bioassay of Florida Rock Industries - Fort Pierce Limerock Mine effluent sampled on October 23, 2006. NPDES #FL0140406.

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



The Priority Pollutants Analysis of Florida Rock Industries - Fort Pierce Limerock Mine effluent sampled on October 23, 2006. NPDES #FL0140406.

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



Biological Analyses of Florida Rock Industries - Fort Pierce Limerock Mine effluent sampled on October 23, 2006. NPDES #FL0140406.

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

