

Effluent Quality Assessment

Mosaic Fertilizer, L.L.C. - Four Corners Mine

Polk, Hardee, Hillsborough, & Manatee Counties

NPDES #FL0036412

Sampled October 8, 2007

January 2008

Biology Section
Bureau of Laboratories
Division of Resource Assessment and Management

Quality Manual No. 870346G
NELAC Certification No. E31780

Mosaic Fertilizer, L.L.C. - Four Corners Mine, 11200 State Rd 37 South, Bradley. Polk, Hardee, Hillsborough, & Manatee Counties, Florida, NPDES #FL0036412. Effluent samples for this facility were collected on October 8, 2007.

Introduction

Mosaic Fertilizer, L.L.C. – Four Corners Mine, is a Phosphate Mine and Beneficiation facility. Discharge is dependent on rainfall contributions in excess of the available storage capacity, and the inflow of groundwater into the mine cuts. The mean flow from October 2006 through September 2007 was 13.94 million gallons per day (MGD). The flow during the October 8, 2007, sampling event was 45.1 MGD. For wastewater treatment, mine dewatering and process-generated wastewater from the phosphate mining and beneficiation operations, and stormwater-runoff in excess of the normal operating levels of the recirculation system, are sent to the settling areas where sedimentation of solids occurs. The clarified water is then returned to the beneficiation plant for reuse, or discharged through Outfall D-001 to Alderman Creek, a tributary of the Little Manatee River, and Outfall D-002, which discharges into a series of reclamation lakes, then into Payne Creek, a tributary of the Peace River; both receiving waters are Class III fresh water bodies. Only Outfall D-002 was discharging during the sampling event. Outfall D-001 is located at approximately latitude 27° 38' 47" N and longitude 82° 06' 06" W. Outfall D-002 is located at approximately latitude 27° 04' 13" N and longitude 82° 03' 40" W.

There are no Administrative Orders or Consent Orders for this facility. The facility has no mixing zones. A review of discharge monitoring report (DMR) data for the past year revealed no permit violations. (Facility information provided by Jacquelyn Champion of FDEP Bureau of Mine Reclamation (BMR)-Phosphate Management).

Methods

Samples were collected from the EFF-02 NPDES sampling point for Outfall D-002 by Jacquelyn Champion and Scott Rose (FDEP BMR-Phosphate Management) following DEP-SOP-001/01 FS 2400 Wastewater Sampling. 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. Although the 48-hour acute screening toxicity test does not reflect the required permit conditions, passing test results provide confidence that the required permit conditions would likely be met.

Toxicity Test Results

Tests were performed October 9 - 11, 2007.

Ceriodaphnia dubia 48-hour acute screening bioassay – LC_{50} > 100%, 0% mortality* in 100% sample at 48 hours

Cyprinella leedsi 48-hour acute screening bioassay – LC_{50} > 100%, 0% mortality* in 100% sample at 48 hours

The bioassay sample was 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 confidence 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% indicates 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 7.3 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 nitrogen-limited. The predicted AGP based on inorganic nitrogen concentrations was 2.7 (±20%) mg dry wt/L (Table 1; Miller et al. 1978).

See Table 1 for AGP results.

Chemistry Results

The total residual chlorine (TRC; 0.05 mg/L) detected in the bioassay sample in the laboratory is thought be due to interference in the sample since the effluent is not currently chlorinated. Total ammonia was not detected in the bioassay sample in the laboratory. The total ammonia concentration in the sample collected and preserved for chemical analysis was 0.058 mg/L. Based on the pH, salinity, and temperature of the effluent as collected, the calculated unionized ammonia concentration was ≤ 0.02 mg/L.

Arsenic, cadmium, lead, nickel, selenium, combined Radium 226 and Radium 228, and total alpha particle activity were detected in the effluent at levels that comply with Class III fresh water quality criteria (62-302.530, F.A.C.). Chromium III, copper, and iron were detected between the laboratory method detection limits (MDL) and practical quantitation limits (PQL). Aluminum was also detected in the effluent.

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 effluent sample collected from the EFF-02 NPDES sampling point for Outfall D-002 for this facility on October 8, 2007, was not acutely toxic to either test species during the 48-hour acute screening bioassays. The effluent AGP result exceeded the "problem" threshold for fresh receiving waters, suggesting nutrient enrichment may be an issue. Effluent water quality samples did not exceed any applicable water quality standards or violate any permit conditions.

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) for total soluble inorganic nitrogen (TSIN) and total nitrogen (TN) limitation of the freshwater species *Pseudokirchneriella subcapitata* for samples collected from Mosaic Fertilizer, L.L.C.- Four Corners Mine on October 8, 2007.

Mosaic Fertilizer, L.L.C. - Four Corners Mine					
Location	AGP (measured)	Predicted AGP (TSIN) ± 20%	Predicted AGP (TN) ± 20%	Inorganic N:P ratio	Total N:P ratio
Effluent	7.3	2.7 ± 0.5	29.8 ± 6.0	0.1	0.5

Table 2. Effluent limits, Class III Freshwater Criteria and chemical data for samples collected from Mosaic Fertilizer, L.L.C.- Four Corners Mine on October 8, 2007.

Mosaic Fertilizer, L.L.C. - Four Corners Mine NPDES# FL0036412	Class III Criteria	Effluent Limits	Effluent	
Organic Constituents (µg/L)				
None Detected	-	-	-	
Metals (µg/L unless otherwise noted)				
Aluminum	-	-	400	
Arsenic	≤ 50	-	16.1	
Cadmium	≤ 0.37 b	-	0.11	
Calcium (mg/L)	-	-	38.8	
Chromium-III	≤ 121.2 b	-	1.8	I
Copper	≤ 13.3 b	-	0.77	I
Iron	≤ 1,000	-	100	I
Lead	≤ 5.4 b	-	0.93	
Magnesium (mg/L)	-	-	13.3	
Nickel	≤ 74.2 b	-	1.54	
Selenium	≤ 5.0	-	2.8	
Silver	≤ 0.07	-	0.025	U
Zinc	≤ 170.5 b	-	5	U
Nutrients (mg/L)				
Ortho-phosphate	-	-	0.82	
Total Phosphorus	-	≤ 5 s	1.6	
Total Ammonia	-	-	0.058	
Un-ionized Ammonia	≤ 0.02 s	-	≤ 0.02	c
Nitrate and Nitrite	-	-	0.014	
Total Kjeldahl Nitrogen	-	-	0.77	
Organic Nitrogen	-	-	0.712	c
Total Nitrogen	-	≤ 3 s	0.784	c
General Physical and Chemical Parameters				
Dissolved Oxygen (mg/L)	≥ 5.0	≥ 5.0 s	6.4	
pH (SU)	6.0 - 8.5	6.0 - 8.5 s	7.6	
Conductivity (µmhos/cm)	≤ 1,275	≤ 1,275 s	592	
Temperature °C	-	Report	27.4	
Total Residual Chlorine (mg/L)	≤ 0.01	-	0.05	£
Total Suspended Solids (mg/L)	-	≤ 60 s	10	I
Total Non-volatile, Non-Filterable Residue (mg/L)	-	≤ 25 s	-	
Total Dissolved Solids (mg/L)	-	-	405	
Turbidity (NTU)	< 29 t	-	11	A
Color (pt-Co)	-	-	50	
Chloride (mg/L)	-	-	13	
Fluoride (mg/L)	≤ 10	≤ 10 s	1.5	
Sulfate (mg/L)	-	Report	180	
Alpha, Total (pCi/L)	≤ 15	-	9.5	
Alpha-Counting Error (pCi/L)	-	-	1.2	
Radium 226 (pCi/L)	-	-	1.7	f
Radium 226-Counting Error (pCi/L)	-	-	0.3	
Radium 228 (pCi/L)	-	-	1	U
Radium 228-Counting Error (pCi/L)	-	-	0.6	
Radium 226 + 228 (pCi/L)	≤ 5	-	1.7	c
Flow (MGD)	-	Report	13.94	a
Hardness (mg $CaCO_3$)	-	-	151.65	c

Value exceeds the Class III Water Quality Criteria or permit limits

a - Annual average
b - Value is calculated based on hardness
c - Value is calculated
f - Analyte was detected in the field blank and the sample
s - Single sample
t - Shall not exceed 29 NTUs above background
A - Value reported is the mean of two or more determinations
I - The reported value is between the laboratory MDL and the laboratory PQL
U - Material analyzed for but not detected; value reported is the MDL
£- Measured in Bioassay Laboratory. Result thought to be due to interference within the sample.

Florida Department of Environmental Protection

Central Laboratory Sample Submittal Form

Event ID *

Request Number: RQ-2007-10-08-35
Mosaic Fertilizer - Four Corners Mine

Requester: Michael Tanski
Field Report Prepared By: Jachi Champion

Customer: BMR-TAMPA
Collected By: Jachi Champion / Scott Rose
Send Final Report To Vishwas Sathe

Project ID: FYI3
Sampling Agency: FDEP

PMAS: 1163

Lab ID *	Location	Collection (begin)	Collection (end)	Bottle Group(s)**
	Mosaic Four Corners Mine	☐ Comp ☒ Grab Date 10/8/07 Time 11:40 Eastern/Central	Date — Time — Eastern/Central	A
	Field ID: Outfall 002	Tot Res Chlorine (mg/L) — Diss Oxygen (mg/L): 6.39	Storet Station Number	
	Matrix (Include type e.g. Salt, Fresh, etc): Fresh Water — Temp (C): 27.42 — pH: 7.62	Sample Depth ☐ m ☐ ft: — 592	☐ Salinity (PPTh) ☒ Sp Conductance (umho/cm)	NPDES Number
	Latitude o ' " — Longitude o ' "	Comments		

Lab ID *	Location	Collection (begin)	Collection (end)	Bottle Group(s)**
	Mosaic Four Corners Mine	☐ Comp ☒ Grab Date 10/8/07 Time 11:40 Eastern/Central	Date — Time — Eastern/Central	A
	Field ID: Outfall 002	Tot Res Chlorine (mg/L) — Diss Oxygen (mg/L): 6.39	Storet Station Number	
	Matrix (Include type e.g. Salt, Fresh, etc): Freshwater — Temp (C): 27.42 — pH: 7.62	Sample Depth ☐ m ☐ ft: — 592	☐ Salinity (PPTh) ☒ Sp Conductance (umho/cm)	NPDES Number
	Latitude o ' " — Longitude o ' "	Comments: Bioassay Samples		

Lab ID *	Location	Collection (begin)	Collection (end)	Bottle Group(s)**
	Mosaic Four Corners Mine	☐ Comp ☒ Grab Date 10/8/07 Time 12:25 Eastern/Central	Date — Time — Eastern/Central	B
	Field ID: Blank	Tot Res Chlorine (mg/L) — Diss Oxygen (mg/L)	Storet Station Number	
	Matrix (Include type e.g. Salt, Fresh, etc): Fresh Water — Temp (C) — pH	Sample Depth ☐ m ☐ ft	☐ Salinity (PPTh) ☐ Sp Conductance (umho/cm)	NPDES Number
	Latitude o ' " — Longitude o ' "	Comments		

Lab ID *	Location	Collection (begin)	Collection (end)	Bottle Group(s)**
		☐ Comp ☐ Grab Date Time Eastern/Central	Date Time Eastern/Central	
	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	Sample Depth ☐ m ☐ ft	☐ Salinity (PPTh) ☐ Sp Conductance (umho/cm)	NPDES Number
	Latitude o ' " — Longitude o ' "	Comments: 2 bioassay 9:30 10.9.07 J.D.		

Relinquished By:	Date/Time	Shipping Method:	Received By:	Date/Time	Relinquished By:	Date/Time	Received By:	Date/Time
Jachi Champion	10/9/07 7:15 pm	DHL					SK	10-9-07 8:35

* Shaded Areas for Lab use only.

** Please see reverse side for Bottle Group information.

last revised October 1, 2003

FDEP Biology Laboratory - Acute Screen Bioassay Bench Sheets

Facility: Mosaic - Four corners mine

Address: 11200 State Road 37 south

City: Bradley County: Polk, Hardee, Hillsborough, & Manatee

Contact/District: SW-Dist /

NPDES Permit #: FL 0036412

LIMS Job #: TLH-2007-12-19 38 01 LIMS Sample #: 105759

Lims Data Entry: 10-12-07 MF Data Entry Verification: 10-12-07 JD

Sample Collection: Date: 10.8.07 Time: 11:40

Hold Time Start: Date: 10.8.07 Time: 11:40

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.

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: ____

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)

Light Intensity: 50 - 100 ft. candles

Photoperiod: 16 light 8 dark

Temperature Range °C:

Incubator # 2 min. 24.9 max. 25.9 mean 25.5

Incubator # ____ min. ____ max. ____ mean ____

Room B246 min. 24.8 max. 26.0 mean 25.6

Investigators' Signatures

Reviewer

Water Quality Parameters	20% DMW	Moderately Hard Water/ (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		Not Measured			MF
Lab Total Residual Cl_2 (mg/L):	<0.03	<0.03				<0.05	HACH	JD	BA
Alkalinity (mg/L as $CaCO_3$):	83	143				117	HACH	BA	JD
Hardness (mg/L as $CaCO_3$):	82	137				138	HACH	BA	JD
Total Ammonia (mg/L as N):	<0.017	<0.017				<0.01	DENVER	MF	BA
Salinity (ppth):	<1	<1				<1	YSI / Mettler	DA	JD

V 1.4 9/12/05

Appendix B. (continued)

FDEP Biology Laboratory - Bioassay Survival Bench Sheet

LIMS Sample #: 1051759 Test #: 1/2 SOP#:TA 07 01 Test Started: Date 10.9.07 Time: 10:45
Organism/Batch/Age: C. dubia/ 90.. / <24hrs old Test Ended: Date 10-11-07 Time: 10:15
Chamber/Test Volume: 30 / 20 ml Diluent/ Batch: DMW / 10-9-07
Food/Batch: YCT 7-26-07 P.sub 4-4-07 Artemia 0hr — 24hr — 48hr — 72hr — Artemia Lot# —
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	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	5			
	C	C	5	5	5			
	D	D	5	5	5			
Loaded/Verified by: JJ / BA	Checked by:		JJ	JJ	BA			

m = missing d = dead BR/AR = Before/After Renewal

Comments:

Test Results:
Screening Tests: Report LC50 as >100%, =100%, or <100%.
% mortality in 100% sample: Ø LC50: >100%
If Calculated: 95% CI ______ Method ______

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

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000002

Appendix B. (continued)

FDEP Biology Laboratory - Bioassay Survival Bench Sheet

LIMS Sample #: 1051759 Test #: 2/2 SOP#:TA 07 02 Test Started: Date 10.9.07 Time: 11:00

Organism/Batch/Age: C.dubia/10.9.07/13days Test Ended: Date 10.11.07 Time: 10:10

Chamber/Test Volume: 1000 / 500 ml Diluent/ Batch: Well / 10.8.07 JD

Food/Batch: YCT — P.sub — Artemia 0hr 14-07 24hr — 48hr — 72hr — Artemia Lot# 651-636-40

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	C17	5	5	5			
	B	C18	5	5	5			
	C	C19	5	5	5			
	D	C20	5	5	5			
100%	A	C21	5	5	5			
	B	C22	5	5	5			
	C	C23	5	5	5			
	D	C24	5	5	5			
Loaded/Verified by: JD /BA		Checked by:	JD	JD	JD			

m = missing d = dead BR/AR = Before/After Renewal

Comments:

Test Results:

Screening Tests: Report LC50 as >100%, =100%, or <100%.

% mortality in 100% sample: Ø LC50: >100%

If Calculated: 95% CI________ Method________

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

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000003

FDEP Biology Laboratory - Bioassay Parameter Bench Sheet

LIMS Sample # : 105759 **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		M			
pH (S.U.)	8.1		8.0			
Temperature °C	24.4		24.2			
Dissolved Oxygen mg/L	7.6		7.5			
Conductivity (µmhos) mmhos	179		205			
(initials) Measured by:	JJ		BA			
(initials) Recorded by:	JJ		BA			

Comments:

Concentration 100%	0 Hr.	24 Hr.	48 Hr. before renewal	48 Hr. after renewal	72 Hr.	96 Hr.
Replicate	M		M			
pH (S.U.)	7.8		8.3			
Temperature °C	25.0		24.2			
Dissolved Oxygen mg/L	7.4		7.4			
Conductivity (µmhos) mmhos	675		682			
(initials) Measured by:	JJ		BA			
(initials) Recorded by:	JJ		BA			

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:

000004

V 2.0 2/24/04

FDEP Biology Laboratory - Bioassay Parameter Bench Sheet

LIMS Sample # : 1051754 **Test #:** 2 of 2

TEST SOP #: TA07_ 612 **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	8.4			
Temperature °C	24.8	24.0	24.0			
Dissolved Oxygen mg/L	7.5	7.4	7.2			
Conductivity µmhos mmhos	267	279	288			
(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.)	7.8	8.1	8.2			
Temperature °C	25.3	24.1	24.1			
Dissolved Oxygen mg/L	7.2	7.3	7.2			
Conductivity µmhos mmhos	619	629	644			
(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:

Appendix C. SRT Bench Sheets and Statistical Analysis

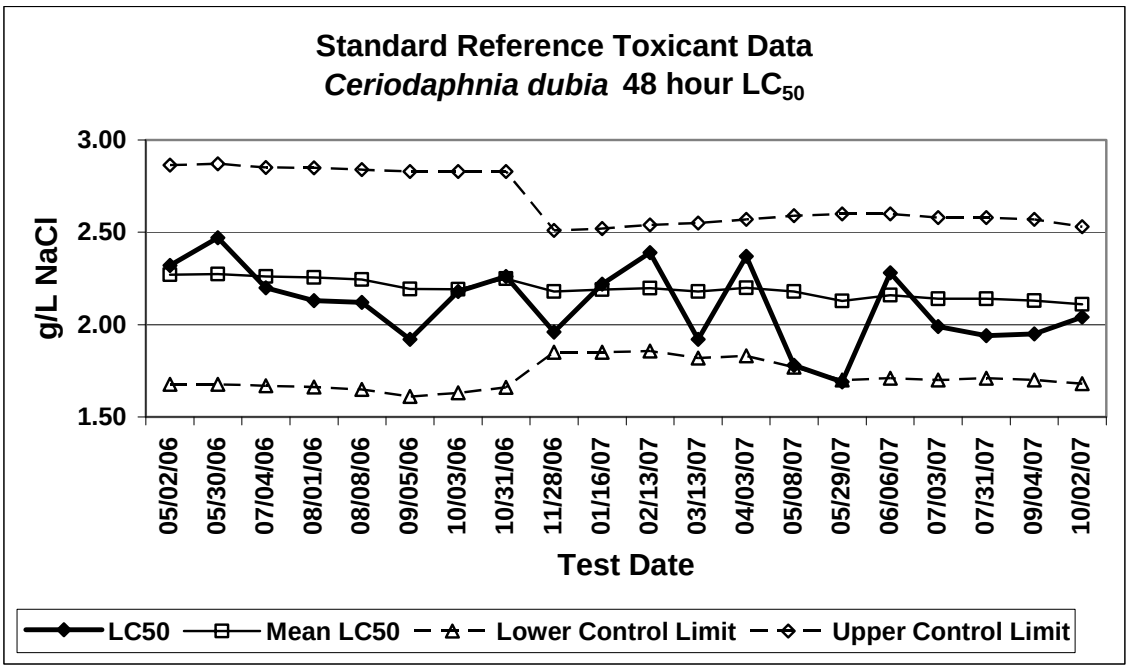
Florida Department of Environmental Protection
Bureau of Laboratories

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
05/02/06	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	2.19	0.30	1.61	2.83
10/03/06	2.18	2.19	0.30	1.63	2.83
10/31/06	2.26	2.25	0.29	1.66	2.83
11/28/06	1.96	2.18	0.17	1.85	2.51
01/16/07	2.22	2.19	0.17	1.85	2.52
02/13/07	2.39	2.20	0.17	1.86	2.54
03/13/07	1.92	2.18	0.18	1.82	2.55
04/03/07	2.37	2.20	0.18	1.83	2.57
05/08/07	1.78	2.18	0.21	1.77	2.59
05/29/07	1.69	2.13	0.23	1.70	2.60
06/06/07	2.28	2.16	0.22	1.71	2.60
07/03/07	1.99	2.14	0.22	1.70	2.58
07/31/07	1.94	2.14	0.22	1.71	2.58
09/04/07	1.95	2.13	0.22	1.70	2.57
10/02/07	2.04	2.11	0.21	1.68	2.53

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

CV = 10.15
EPA reference 75th quartile CV = 29%



Appendix C. (continued)

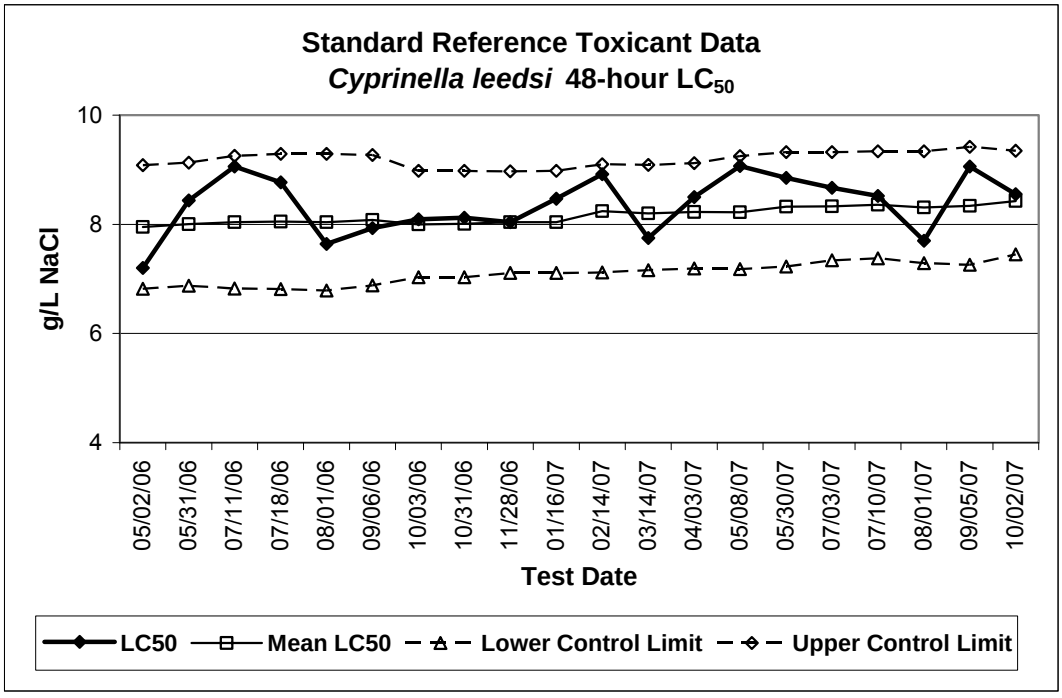
Florida Department of Environmental Protection
Bureau of Laboratories

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
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
10/31/06	8.12	8.01	0.49	7.03	8.98
11/28/06	8.04	8.04	0.46	7.11	8.97
01/16/07	8.47	8.04	0.54	7.11	8.98
02/14/07	8.92	8.24	0.56	7.12	9.10
03/14/07	7.75	8.20	0.55	7.16	9.09
04/03/07	8.50	8.23	0.53	7.19	9.12
05/08/07	9.07	8.22	0.52	7.18	9.25
05/30/07	8.85	8.32	0.56	7.23	9.32
07/03/07	8.67	8.33	0.50	7.34	9.32
07/10/07	8.52	8.36	0.49	7.38	9.34
08/01/07	7.7	8.31	0.51	7.29	9.34
09/05/07	9.06	8.34	0.54	7.26	9.42
10/02/07	8.55	8.43	0.47	7.45	9.35

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

CV = 5.58
EPA reference 75th quartile CV = 19%



Appendix C. (continued)

FDEP Biology Laboratory - 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: 48 hour non-renewal / (7) day renewal
Test Page 1 of 2

Diluent/ Batch #: brw / 1 9.22.07
Toxicant/ Batch#: NaCl / 1.10.407

Test Beginning: Date: 10-2-07 Time: 13:30
Test Ending: Date: 10-6-07 Time: 11:00

Water Quality Parameters	Diluent	Method	Initials
Total Residual Cl_2 (mg/L):	<0.03	Hach	JD
Alkalinity (mg/L as $CaCO_3$):	85	Hach	BA
Hardness (mg.L as $CaCO_3$):	84	Hach	BA
Total Ammonia (mg/L as N):	<0.07	Denver	MF
Salinity (ppth):	21	Mettler	BA

Organism Batch #/ Age: 39.07 / <24 hours
Feeding: (Prior to test) (Prior to renewal) / Daily
Food: YCT, P.subcapitata, Artemia: Lot # –
Food Batch: 7-24-07 4-4-07 0hr – 24hr – 48hr – 72hr –
Chamber size: 30 mL
Test volume: 20 mL per replicate

Conc. g/L µg/L mg/L	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 Conductivity (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	8.0		7.9	24.0		24.7	7.3		7.6	0.176		0.182
	B	B	5	5	5												
	C	C	5	5	5												
	D	D	5	5	5												
1.5	A	A	5	5	5	8.0		7.9	24.0		24.4	7.3		7.4	3.07		3.44
	B	B	5	5	5												
	C	C	5	5	5												
	D	D	5	5	5												
2.0	A	A	5	5	4 1D	8.1		8.0	24.0		24.3	7.3		7.5	4.00		4.59
	B	B	5	5	5												
	C	C	5	5	3 2D												
	D	D	5	5	1 4D												
2.5	A	A	5	5	0 5D	8.1		8.0	24.0		24.2	7.3		7.5	4.9		5.12
	B	B	5	5	0 5D												
	C	C	5	5	0 5D												
	D	D	5	5	0 5D												
3.0	A	A	5	2 3D	0 2D	8.1		8.0	24.0		24.2	7.3		7.3	5.85		6.35
	B	B	5	4D	CHD												
	C	C	5	0 5D	-												
	D	D	5	3 3D	0 2D												
4.0	A	A	5	0 5D	—	8.1	8.1		24.0	24.0		7.3	7.3		7.61	7.69	
	B	B	5	0 5D	—												
	C	C	5	0 5D	—												
	D	D	5	0 5D	—												
	A																
	B																
	C																
	D																
Loaded / measured by:			BA	JD	BA	BA	JD	BA	BA	JD	BA	BA	JD	BA	BA	JD	BA
Recorded by:			NA	JD	BA	BA	JD	BA	BA	JD	BA	BA	JD	BA	BA	JD	BA

Investigators' Signatures
James Daniel
Bruce Beck
Marshall Faircloth
Loretta C Wolfe
REVIEWER

Concentrations prepared: BA
Loading verified by: MF
Light Intensity: 50-100 Ft. candles
Photoperiod: 16 hours Light / 8 hours dark
Temperature Range °C:
Incubator # 2 min 24.8 max 25.7 mean 25.3
Incubator # ___ min ___ max ___ mean ___
Room B246 min 24.7 max 25.4 mean 25.3

Comments:

Statistics: Method: Spearman-Karber
48 / 96 hour LC_{50}: 2.04
95% Confidence Interval: lower 1.94 upper 2.16

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Appendix C. (continued)

FDEP Biology Laboratory - 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: 48 hour non-renewal
(96) hour renewal
Test Page 2 of 2

Diluent/ Batch #: DMW / 922.07
Toxicant/ Batch#: NaCl / 10107

Test Beginning: Date: 10-2-07 Time: 1330
Test Ending: Date: 10-6-07 Time: 1100

Water Quality Parameters	Diluent	Method	Initials
Total Residual Cl_2 (mg/L):	20.13	Hach	JD
Alkalinity (mg/L as $CaCO_3$):	85	Hach	BA
Hardness (mg.L as $CaCO_3$):	84	Hach	BA
Total Ammonia (mg/L as N):	20.017	Denver	MF
Salinity (ppth):	21	Mettler	BA

Organism Batch #/ Age: 39-07 / <24hours
Feeding: Prior to test / Prior to renewal / Daily
Food: YCT & *P.subcapitata* Artemia: Lot #_____
Food Batch: 7-24-07 4-4-07 0hr — 24hr — 48hr — 72hr —
Chamber size: 30 mL
Test volume: 20 mL per replicate

Conc. g/L µg/L mg/L	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 Conductivity (umhom/cm) 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 / 72 hr / 96 hr
Control	A	A	5 / 5 / 5	8.0 / / 8.2	24.5 / / 24.0	7.4 / / 7.9	0.15 / / 0.137
	B	B	5 / 5 / 5				
	C	C	5 / 5 / 5				
	D	D	5 / 5 / 5				
1.5	A	A	5 / 5 / 5	8.0 / / 8.2	24.8 / / 24.0	7.5 / / 7.9	3.05 / / 3.30
	B	B	5 / 4 10 / 4				
	C	C	5 / 5 / 5				
	D	D	5 / 4 10 / 4				
2.0	A	A	4 / 2 20 / 0 20	8.0 / / 8.1	24.9 / / 24.0	7.5 / / 7.9	4.01 / / 4.27
	B	B	5 / 3 20 / 1 20				
	C	C	3 / 1 20 / 0 10				
	D	D	1 / 0 10 / —	/ 8.0 /	/ 24.7 /	/ 7.8 /	/ 4.09 /
2.5	A	A	— / — / —	8.0 / / —	24.8 / / —	7.5 / / —	4.49 / / —
	B	B	— / — / —	/ — /	/ — /	/ — /	/ — /
	C	C	— / — / —				
	D	D	— / — / —				
3.0	A	A	— / — / —	8.0 / /	24.7 / /	7.4 / /	5.96 / /
	B	B	— / — / —				
	C	C	— / — / —				
	D	D	— / — / —				
4.0	A	A	— / — / —	— / / —	— / / —	— / / —	— / / —
	B	B	— / — / —	/ — /	/ — /	/ — /	/ — /
	C	C	— / — / —				
	D	D	— / — / —				
	A		/ /	/ /	/ /	/ /	/ /
	B		/ /				
	C		/ /				
	D		/ /				
Loaded / measured by:			BA / MF / JD	BA / MF / JD	BA / MF / JD	BA / MF / JD	BA / MF / JD
Recorded by:			BA / MF / JD	BA / MF / JD	BA / MF / JD	BA / MF / JD	BA / MF / JD

Investigators' Signatures
James Davis
Marshall Faircloth
Bruce Nordan
Martha C. Wolfe
REVIEWER

Concentrations prepared by: BA
Loading verified by: MF
Light Intensity: 50-100 Ft. candles
Photoperiod: 16 hours Light / 8 hours dark
Temperature Range °C:
Incubator # 2 min. 24.3 max. 25.7 mean 25.3
Incubator # ___ min. ___ max. ___ mean ___
Room B246 min. 24.7 max. 25.9 mean 25.3

Comments:

Statistics: Method: Spearman-Karber
48 / (96) hour LC_{50}: 1.72
95% Confidence Interval: lower 1.67 upper 1.77

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Appendix C. (continued)

FDEP Biology Laboratory - 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: 48 hour non-renewal / 96 hour renewal
Test Page 1 of 2

Diluent/ Batch #: Well / 10.1.07
Toxicant/ Batch#: NaCl / 10.1.07

Test Beginning: Date: 10.2.07 Time: 12:30
Test Ending: Date: 10-6-07 Time: 11:15

Water Quality Parameters	Diluent	Method	Initials
Total Residual Cl_2 (mg/L):	<0.03	Hach	JD
Alkalinity (mg/L as $CaCO_3$):	142	Hach	BA
Hardness (mg.L as $CaCO_3$):	136	Hach	BA
Total Ammonia (mg/L as N):	<0.017	Denver	MF
Salinity (ppth):	<1	Mettler	BA

Organism Batch #/ Age: 10-2-07 / 13days
Feeding: (Prior to test) / (Prior to renewal) / Daily
Food: YCT — P.subcapitata — Artemia: Lot # GSL-536-90
Food Batch: — — 0hr MF 24hr — 48hr MF 72hr —
142-07 14407
Chamber size: 1000 mL
Test volume: 500 mL per replicate

Conc.			Number Live			pH (SU)			Temperature (° C)			D.O. (mg/L)			Uncorrected Conductivity µmhom/cm (mmhos/cm)		
µg/L mg/L	Rep.	Chamber #	0 hr	24 hr	48 hr	0 hr	24 hr	48 hr	0 hr	24 hr	48 hr	0 hr	24 hr	48 hr	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	D1	10	10	10	8.0		8.2	24.0		24.5	7.3		6.6	0.223		0.338
	B	D2	10	10	10		8.2			24.3			6.4			0.286	
	C																
	D																
6	A	D3	10	10	10	7.9		8.0	24.1		24.6	7.0		6.7	10.5		10.9
	B	D4	10	10	10		8.1			24.3			6.7			10.5	
	C																
	D																
7	A	D5	10	~~7~~ 10	10	7.9		8.0	24.1		24.7	7.1		6.5	12.8		12.7
	B	D6	10	10	9 10		8.0			24.3			6.6			12.8	
	C																
	D																
8	A	D7	10	>30	7	7.8		8.1	24.1		24.4	7.1		6.5	14.3		14.6
	B	D8	10	10	10		8.0			24.2			6.5			14.0	
	C																
	D																
9	A	D9	10	6 40	5 10	7.8		8.1	24.0		24.5	7.2		6.6	15.8		15.9
	B	D10	10	1 40	1		8.0			24.1			6.5			15.5	
	C																
	D																
10	A	D11	10	0 10	—	7.8		—	24.0		—	7.1		—	17.6		—
	B	D12	10	0 10	—		7.9			24.2			6.2			12.4	
	C																
	D																
	A																
	B																
	C																
	D																
Loaded / measured by:			JD	JD	MF	JD	JD	BA	JD	JD	BA	JD	JD	BA	JD	JD	BA
Recorded by:			JD	JD	MF	JD	JD	BA	JD	JD	BA	JD	JD	BA	JD	JD	BA

Investigators' Signatures
James Dardis
Marshall Faircloth
Drue Aitken
Loretta C. Wolfe
REVIEWER

Concentrations prepared by: JD
Loading verified by: BA
Light Intensity: 50-100 Ft. candles
Photoperiod: 16 hours Light / 8 hours dark
Temperature Range °C:
Incubator # 2 min. 24.8 max. 25.7 mean 25.3
Incubator # ___ min. ___ max. ___ mean ___
Room B246 min. 24.7 max. 25.9 mean 25.3

Comments:
@ 24hr 7A-10 JD

Statistics: Method: Spearman-Karber
48 / 96 hour LC_{50}: 8.55
95% Confidence Interval: lower 8.27 upper 8.84

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Appendix C. (continued)

FDEP Biology Laboratory - 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: 48 hour non-renewal (96 hour renewal)

Test Page 2 of 2

Diluent/ Batch #: Well / 10.1.07

Toxicant/ Batch#: NaCl / 10.1.07

Test Beginning: Date: 10.2.07 Time: 12:30

Test Ending: Date: 10.6.07 Time: 1115

Water Quality Parameters	Diluent	Method	Initials
Total Residual Cl_2 (mg/L):	<0.03	Hach	SD
Alkalinity (mg/L as $CaCO_3$):	142	Hach	BA
Hardness (mg.L as $CaCO_3$):	136	Hach	BA
Total Ammonia (mg/L as N):	<0.07	Denver	MF
Salinity (ppth):	21	Mettler	BA

Organism Batch #/ Age: 10.2.07 / 13days

Feeding: (Prior to test) (Prior to renewal) Daily

Food: YCT *P.subcapitata* Artemia: Lot # GSL-536-90

Food Batch: — —

Chamber size: 1000 mL

Test volume: 500 mL per replicate

0hr ~~10.2.07~~ 10.3.07 24hr — 48hr ~~10.4.07~~ 10.5.07 72hr —

10.4.07 MF

Conc.	Rep.	Chamber #	Number Live			pH (SU)			Temperature (° C)			D.O. (mg/L)			Uncorrected Conductivity µmhom/cm (mmhos/cm)		
			~~0 hr~~ 48 hr	~~24 hr~~ 72 hr	~~48 hr~~ 96 hr	~~0 hr~~ 48 hr	~~24 hr~~ 72 hr	~~48 hr~~ 96 hr	~~0 hr~~ 48 hr	~~24 hr~~ 72 hr	~~48 hr~~ 96 hr	~~0 hr~~ 48 hr	~~24 hr~~ 72 hr	~~48 hr~~ 96 hr	~~0 hr~~ 48 hr	~~24 hr~~ 72 hr	~~48 hr~~ 96 hr
Control	A	D1	10	10	10	8.0		8.1	24.0		24.0	7.6		6.8	0.298		0.487
	B	D2	10	10	10		7.9			24.3			5.6			0.323	
	C																
	D																
6	A	D3	10	10	10	8.0		8.0	24.0		24.1	7.0		6.7	10.8		10.8
	B	D4	10	10	10		7.8			24.3			4.8			10.9	
	C																
	D																
7	A	D5	10	10	10	8.0		8.0	24.0		24.0	7.0		6.7	12.7		13.2
	B	D6	9	9	8D		7.8			24.2			4.8			12.8	
	C																
	D																
8	A	D7	7	7	7	8.1		8.0	24.0		24.0	6.9		6.7	14.4		14.9
	B	D8	10	8 2D	8		7.8			24.2			4.9			14.6	
	C																
	D																
9	A	D9	5	5	5	8.0		8.1	24.0		24.0	7.0		6.7	15.8		16.2
	B	D10	1	0	—		7.9			24.2			5.9			16.0	
	C																
	D																
10	A	D11	—	—	—	—		—	—		—	—		—	—		—
	B	D12	—	—	—		—			—			—			—	
	C																
	D																
	A																
	B																
	C																
	D																
Loaded / measured by:			MF	MF	~~SD~~	BA	MF	SD	BA	MF	SD	BA	MF	SD	BA	MF	SD
Recorded by:			MF	MF	SD	BA	MF	SD	BA	MF	SD	BA	MF	SD	BA	MF	SD

Investigators' Signatures

James Davis

Marshall Faircloth

Bruce Abalos

Martha C. Wolfe
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 24.8 max 25.7 mean 25.3

Incubator # ___ min ___ max ___ mean ___

Room B246 min 24.7 max 25.9 mean 25.3

Comments:

Statistics: Method: Spearman-Karber

48 / (96) hour LC_{50}: 8.33

95% Confidence Interval: lower 8.03 upper 8.66

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Appendix C. (continued)

DATE: 10/02/07 TEST NUMBER: 1 DURATION: 48 h
TOXICANT : NaCl
SPECIES: *Ceriodaphnia dubia*

RAW DATA: Concentration (g/L)	Number Exposed	Mortalities
.00	20	0
1.50	20	0
2.00	20	7
2.50	20	20
3.00	20	20
4.00	20	20

SPEARMAN-KARBER TRIM: .00%

SPEARMAN-KARBER ESTIMATES: LC50: 2.04
95% LOWER CONFIDENCE: 1.94
95% UPPER CONFIDENCE: 2.16

DATE: 10/02/07 TEST NUMBER: 1 DURATION: 48 h
TOXICANT : NaCl
SPECIES: *Cyprinella leedsi*

RAW DATA: Concentration (g/L)	Number Exposed	Mortalities
.00	20	0
6.00	20	0
7.00	20	1
8.00	20	3
9.00	20	14
10.00	20	20

SPEARMAN-KARBER TRIM: .00%

SPEARMAN-KARBER ESTIMATES: LC50: 8.55
95% LOWER CONFIDENCE: 8.27
95% UPPER CONFIDENCE: 8.84

Appendix D. Test Organism Receipts

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: 10/1/07

Shipped to: FDEP

P.O. No: N/A

Species	Quantity	Age	Brood Number	Temperature	Salinity
Mysidopsis bahia	150	4 DAYS	MS070927	25°C	20
Menidia beryllina	150	12 DAYS	SS070919	25°C	20
Cyprinella leedsi	150	12 DAYS	CL070919	25°C	
Pimephales promelas	150	7 DAYS	FM070924	25°C	

Packed by: JW

Shipped Via: Fed Ex

Notes:

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: 10/8/07

Shipped to: FDEP

P.O. No: N/A

Species	Quantity	Age	Brood Number	Temperature	Salinity
Mysidopsis bahia					
Menidia beryllina					
Cyprinella leedsi	150	12 DAY	CL070926	25°C	
Pimephales promelas					

Packed by:

Shipped Via: FedEx.

Notes:

Thank you for your order.

Appendix E. Chemical Analyses performed on the effluent from the Mosaic Fertilizer, L.L.C. – Four Corners Mine Outfall D-002, sampled on October 8, 2007.

Date Sampled	Field ID	Analysis Group	Component	Result	Remark	Units	MDL	PQL
10/8/2007 11:40	Effluent	AGP/LN	Algal Growth Potential	7.32		mg DryWt/L	0.3	0.9
10/8/2007 11:40	Effluent	Toxicology	BSY-AS-FW-C.dubia, LC50	100	L	LC50		
10/8/2007 11:40	Effluent	Toxicology	BSY-AS-FW-Fish, LC50	100	L	LC50		
10/8/2007 11:40	Effluent	Metals	Calcium	38.8		mg/L	0.02	0.08
10/8/2007 11:40	Effluent	Metals	Chromium	1.8	I	ug/L	1	4
10/8/2007 11:40	Effluent	Metals	Zinc	5	U	ug/L	5	20
10/8/2007 11:40	Effluent	Metals	Magnesium	13.3		mg/L	0.04	0.16
10/8/2007 11:40	Effluent	Metals	Copper	0.77	I	ug/L	0.25	1
10/8/2007 11:40	Effluent	Metals	Aluminum	400		ug/L	60	240
10/8/2007 11:40	Effluent	Metals	Silver	0.025	U	ug/L	0.025	0.1
10/8/2007 11:40	Effluent	Metals	Iron	100	I	ug/L	30	120
10/8/2007 11:40	Effluent	Metals	Cadmium	0.11		ug/L	0.02	0.08
10/8/2007 11:40	Effluent	Metals	Arsenic	16.1		ug/L	0.5	2
10/8/2007 11:40	Effluent	Metals	Nickel	1.54		ug/L	0.25	1
10/8/2007 11:40	Effluent	Metals	Lead	0.93		ug/L	0.2	0.8
10/8/2007 11:40	Effluent	Metals	Selenium	2.8		ug/L	0.5	2
10/8/2007 11:40	Effluent	Nutrients	Color	50		PCU	5	5
10/8/2007 11:40	Effluent	Nutrients	Ammonia-N	0.058		mg N/L	0.01	0.02
10/8/2007 11:40	Effluent	Nutrients	Total-P	1.6		mg P/L	0.1	0.3
10/8/2007 11:40	Effluent	Nutrients	Turbidity	11	A	NTU	0.05	0.05
10/8/2007 11:40	Effluent	Nutrients	O-Phosphate-P	0.82		mg P/L	0.04	0.1
10/8/2007 11:40	Effluent	Nutrients	Sulfate	180		mg SO4/L	1	2.5
10/8/2007 11:40	Effluent	Nutrients	TDS	405		mg/L	15	60
10/8/2007 11:40	Effluent	Nutrients	Kjeldahl Nitrogen	0.77		mg N/L	0.08	0.2
10/8/2007 11:40	Effluent	Nutrients	Specific_Conductance	610		umhos/cm	2	8
10/8/2007 11:40	Effluent	Nutrients	Fluoride	1.5		mg F/L	0.05	0.1
10/8/2007 11:40	Effluent	Nutrients	Chloride	13		mg Cl/L	1	2.5
10/8/2007 11:40	Effluent	Nutrients	TSS	10	I	mg/L	4	16
10/8/2007 11:40	Effluent	Nutrients	NO2NO3-N	0.014		mg N/L	0.004	0.01
10/8/2007 11:40	Effluent	Overflow	Alpha, Total	9.5		pCi/L		
10/8/2007 11:40	Effluent	Overflow	Radium 228	1	U	pCi/L		
10/8/2007 11:40	Effluent	Overflow	Alpha-Counting Error	1.2		pCi/L		
10/8/2007 11:40	Effluent	Overflow	Radium 226-Counting Error	0.3		pCi/L		
10/8/2007 11:40	Effluent	Overflow	Oil and Grease	1.7	U	mg/L		

Appendix E. (continued)

Date Sampled	Field ID	Analysis Group	Component	Result	Remark	Units	MDL	PQL
10/8/2007 11:40	Effluent	Overflow	Radium 226	1.7		pCi/L		
10/8/2007 11:40	Effluent	Overflow	Radium 228-Counting Error	0.6		pCi/L		
10/8/2007 11:40	Effluent	Pesticides	Ethoprop	0.1	U	ug/L	0.1	0.4
10/8/2007 11:40	Effluent	Pesticides	Metolachlor	0.5	U	ug/L	0.5	2
10/8/2007 11:40	Effluent	Pesticides	Mevinphos	0.2	U	ug/L	0.2	0.8
10/8/2007 11:40	Effluent	Pesticides	Norflurazon	0.15	U	ug/L	0.15	0.6
10/8/2007 11:40	Effluent	Pesticides	Azinphos Methyl	0.2	UJ	ug/L	0.2	0.8
10/8/2007 11:40	Effluent	Pesticides	Chlorpyrifos Ethyl	0.05	U	ug/L	0.05	0.2
10/8/2007 11:40	Effluent	Pesticides	Chlorpyrifos Methyl	0.1	U	ug/L	0.1	0.4
10/8/2007 11:40	Effluent	Pesticides	Malathion	0.15	U	ug/L	0.15	0.6
10/8/2007 11:40	Effluent	Pesticides	Metalaxyl	0.25	U	ug/L	0.25	1
10/8/2007 11:40	Effluent	Pesticides	Metribuzin	0.1	U	ug/L	0.1	0.4
10/8/2007 11:40	Effluent	Pesticides	Parathion Methyl	0.1	U	ug/L	0.1	0.4
10/8/2007 11:40	Effluent	Pesticides	Fenamiphos	0.2	U	ug/L	0.2	0.8
10/8/2007 11:40	Effluent	Pesticides	Naled	0.8	U	ug/L	0.8	3.2
10/8/2007 11:40	Effluent	Pesticides	Parathion Ethyl	0.15	U	ug/L	0.15	0.6
10/8/2007 11:40	Effluent	Pesticides	Simazine	0.05	U	ug/L	0.05	0.2
10/8/2007 11:40	Effluent	Pesticides	Alachlor	0.6	U	ug/L	0.6	2.4
10/8/2007 11:40	Effluent	Pesticides	Ametryn	0.05	U	ug/L	0.05	0.2
10/8/2007 11:40	Effluent	Pesticides	Phorate	0.05	U	ug/L	0.05	0.2
10/8/2007 11:40	Effluent	Pesticides	Atrazine	0.05	U	ug/L	0.05	0.2
10/8/2007 11:40	Effluent	Pesticides	Hexazinone	0.1	U	ug/L	0.1	0.4
10/8/2007 11:40	Effluent	Pesticides	Fonofos	0.1	U	ug/L	0.1	0.4
10/8/2007 11:40	Effluent	Pesticides	Diazinon	0.05	U	ug/L	0.05	0.2
10/8/2007 11:40	Effluent	Pesticides	Butylate	0.2	U	ug/L	0.2	0.8
10/8/2007 11:40	Effluent	Pesticides	Bromacil	0.2	U	ug/L	0.2	0.8
10/8/2007 11:40	Effluent	Pesticides	Ethion	0.05	U	ug/L	0.05	0.2
10/8/2007 11:40	Effluent	Pesticides	Prometryn	0.15	U	ug/L	0.15	0.6
10/8/2007 11:40	Effluent	Priority Organic Pollutants	Acenaphthene	1.1	U	ug/L	1.1	4.2
10/8/2007 11:40	Effluent	Priority Organic Pollutants	Benzo(b)fluoranthene	1.1	U	ug/L	1.1	4.2
10/8/2007 11:40	Effluent	Priority Organic Pollutants	Bis(2-chloroethoxy)methane	1.1	U	ug/L	1.1	4.2
10/8/2007 11:40	Effluent	Priority Organic Pollutants	Bis(2-ethylhexyl)phthalate	16	U	ug/L	16	63
10/8/2007 11:40	Effluent	Priority Organic Pollutants	Di-n-octyl phthalate	1.1	U	ug/L	1.1	4.2
10/8/2007 11:40	Effluent	Priority Organic Pollutants	Dibenzo(a,h)anthracene	1.1	U	ug/L	1.1	4.2
10/8/2007 11:40	Effluent	Priority Organic Pollutants	Hexachloroethane	3.2	U	ug/L	3.2	13

Appendix E. (continued)

Date Sampled	Field ID	Analysis Group	Component	Result	Remark	Units	MDL	PQL
10/8/2007 11:40	Effluent	Priority Organic Pollutants	Pentachlorophenol	3.2	U	ug/L	3.2	13
10/8/2007 11:40	Effluent	Priority Organic Pollutants	delta-BHC	1.6	U	ug/L	1.6	6.3
10/8/2007 11:40	Effluent	Priority Organic Pollutants	Anthracene	1.1	U	ug/L	1.1	4.2
10/8/2007 11:40	Effluent	Priority Organic Pollutants	Dimethyl phthalate	53	U	ug/L	53	210
10/8/2007 11:40	Effluent	Priority Organic Pollutants	Endosulfan I	4.2	U	ug/L	4.2	17
10/8/2007 11:40	Effluent	Priority Organic Pollutants	Heptachlor epoxide	1.6	U	ug/L	1.6	6.3
10/8/2007 11:40	Effluent	Priority Organic Pollutants	Isophorone	1.1	U	ug/L	1.1	4.2
10/8/2007 11:40	Effluent	Priority Organic Pollutants	Naphthalene	1.1	U	ug/L	1.1	4.2
10/8/2007 11:40	Effluent	Priority Organic Pollutants	Phenanthrene	1.1	U	ug/L	1.1	4.2
10/8/2007 11:40	Effluent	Priority Organic Pollutants	beta-BHC	1.6	U	ug/L	1.6	6.3
10/8/2007 11:40	Effluent	Priority Organic Pollutants	gamma-BHC	1.6	U	ug/L	1.6	6.3
10/8/2007 11:40	Effluent	Priority Organic Pollutants	2-Chloronaphthalene	1.1	U	ug/L	1.1	4.2
10/8/2007 11:40	Effluent	Priority Organic Pollutants	2-Methyl-4,6-dinitrophenol	3.2	U	ug/L	3.2	13
10/8/2007 11:40	Effluent	Priority Organic Pollutants	4-Bromophenyl phenyl ether	1.1	U	ug/L	1.1	4.2
10/8/2007 11:40	Effluent	Priority Organic Pollutants	Benzidine	110	U	ug/L	110	420
10/8/2007 11:40	Effluent	Priority Organic Pollutants	Benzo(a)pyrene	1.1	U	ug/L	1.1	4.2
10/8/2007 11:40	Effluent	Priority Organic Pollutants	Di-n-butyl phthalate	5.3	U	ug/L	5.3	21
10/8/2007 11:40	Effluent	Priority Organic Pollutants	Dieldrin	1.6	U	ug/L	1.6	6.3
10/8/2007 11:40	Effluent	Priority Organic Pollutants	Endosulfan sulfate	1.6	U	ug/L	1.6	6.3
10/8/2007 11:40	Effluent	Priority Organic Pollutants	Fluorene	1.1	U	ug/L	1.1	4.2
10/8/2007 11:40	Effluent	Priority Organic Pollutants	Heptachlor	1.6	U	ug/L	1.6	6.3
10/8/2007 11:40	Effluent	Priority Organic Pollutants	2,4-Dinitrotoluene	1.1	U	ug/L	1.1	4.2
10/8/2007 11:40	Effluent	Priority Organic Pollutants	Bis(2-chloroethyl)ether	1.1	U	ug/L	1.1	4.2
10/8/2007 11:40	Effluent	Priority Organic Pollutants	Diethyl phthalate	1.1	U	ug/L	1.1	4.2
10/8/2007 11:40	Effluent	Priority Organic Pollutants	N-Nitrosodi-n-propylamine	2.1	U	ug/L	2.1	8.4
10/8/2007 11:40	Effluent	Priority Organic Pollutants	N-Nitrosodiphenylamine/ Diphenylamine	3.2	U	ug/L	3.2	13
10/8/2007 11:40	Effluent	Priority Organic Pollutants	Phenol	1.1	U	ug/L	1.1	4.2
10/8/2007 11:40	Effluent	Priority Organic Pollutants	Pyrene	1.1	U	ug/L	1.1	4.2
10/8/2007 11:40	Effluent	Priority Organic Pollutants	4,4'-DDD	1.6	U	ug/L	1.6	6.3
10/8/2007 11:40	Effluent	Priority Organic Pollutants	4,4'-DDE	1.6	U	ug/L	1.6	6.3
10/8/2007 11:40	Effluent	Priority Organic Pollutants	Acenaphthylene	1.1	U	ug/L	1.1	4.2
10/8/2007 11:40	Effluent	Priority Organic Pollutants	Benzo(k)fluoranthene	1.1	U	ug/L	1.1	4.2
10/8/2007 11:40	Effluent	Priority Organic Pollutants	Bis(2-chloroisopropyl)ether	3.2	U	ug/L	3.2	13
10/8/2007 11:40	Effluent	Priority Organic Pollutants	Butyl benzyl phthalate	5.3	U	ug/L	5.3	21
10/8/2007 11:40	Effluent	Priority Organic Pollutants	Endrin aldehyde	4.2	U	ug/L	4.2	17

Appendix E. (continued)

Date Sampled	Field ID	Analysis Group	Component	Result	Remark	Units	MDL	PQL
10/8/2007 11:40	Effluent	Priority Organic Pollutants	Fluoranthene	1.1	U	ug/L	1.1	4.2
10/8/2007 11:40	Effluent	Priority Organic Pollutants	Hexachlorocyclopentadiene	3.2	U	ug/L	3.2	13
10/8/2007 11:40	Effluent	Priority Organic Pollutants	Indeno(1,2,3-cd)pyrene	1.1	U	ug/L	1.1	4.2
10/8/2007 11:40	Effluent	Priority Organic Pollutants	N-Nitrosodimethylamine	2.1	U	ug/L	2.1	8.4
10/8/2007 11:40	Effluent	Priority Organic Pollutants	1,2,4-Trichlorobenzene	1.1	U	ug/L	1.1	4.2
10/8/2007 11:40	Effluent	Priority Organic Pollutants	2,4-Dinitrophenol	16	U	ug/L	16	63
10/8/2007 11:40	Effluent	Priority Organic Pollutants	2,6-Dinitrotoluene	1.1	U	ug/L	1.1	4.2
10/8/2007 11:40	Effluent	Priority Organic Pollutants	2-Chlorophenol	1.1	U	ug/L	1.1	4.2
10/8/2007 11:40	Effluent	Priority Organic Pollutants	4-Chloro-3-methylphenol	1.1	U	ug/L	1.1	4.2
10/8/2007 11:40	Effluent	Priority Organic Pollutants	Aldrin	1.6	U	ug/L	1.6	6.3
10/8/2007 11:40	Effluent	Priority Organic Pollutants	Benzo(g,h,i)perylene	1.1	U	ug/L	1.1	4.2
10/8/2007 11:40	Effluent	Priority Organic Pollutants	Hexachlorobenzene	1.1	U	ug/L	1.1	4.2
10/8/2007 11:40	Effluent	Priority Organic Pollutants	Hexachlorobutadiene	3.2	U	ug/L	3.2	13
10/8/2007 11:40	Effluent	Priority Organic Pollutants	2,4-Dichlorophenol	1.1	U	ug/L	1.1	4.2
10/8/2007 11:40	Effluent	Priority Organic Pollutants	2-Nitrophenol	1.1	U	ug/L	1.1	4.2
10/8/2007 11:40	Effluent	Priority Organic Pollutants	3,3'-Dichlorobenzidine	42	U	ug/L	42	170
10/8/2007 11:40	Effluent	Priority Organic Pollutants	4-Chlorophenyl phenyl ether	2.1	U	ug/L	2.1	8.4
10/8/2007 11:40	Effluent	Priority Organic Pollutants	Benzo(a)anthracene	1.1	U	ug/L	1.1	4.2
10/8/2007 11:40	Effluent	Priority Organic Pollutants	Endosulfan II	4.2	U	ug/L	4.2	17
10/8/2007 11:40	Effluent	Priority Organic Pollutants	Nitrobenzene	2.1	U	ug/L	2.1	8.4
10/8/2007 11:40	Effluent	Priority Organic Pollutants	2,4,6-Trichlorophenol	1.1	U	ug/L	1.1	4.2
10/8/2007 11:40	Effluent	Priority Organic Pollutants	4,4'-DDT	1.6	U	ug/L	1.6	6.3
10/8/2007 11:40	Effluent	Priority Organic Pollutants	Chrysene	1.1	U	ug/L	1.1	4.2
10/8/2007 11:40	Effluent	Priority Organic Pollutants	Endrin	1.6	U	ug/L	1.6	6.3
10/8/2007 11:40	Effluent	Priority Organic Pollutants	alpha-BHC	1.6	U	ug/L	1.6	6.3
10/8/2007 11:40	Effluent	Priority Organic Pollutants	2,4-Dimethylphenol	11	U	ug/L	11	42
10/8/2007 11:40	Effluent	Priority Organic Pollutants	4-Nitrophenol	16	U	ug/L	16	63
10/8/2007 11:40	Effluent	Field Parameters	pH	7.62				
10/8/2007 11:40	Effluent	Field Parameters	Specific Conductance	592		umhos/cm		
10/8/2007 11:40	Effluent	Field Parameters	Temperature	27.42		C		
10/8/2007 11:40	Effluent	Field Parameters	Dissolved Oxygen	6.39		mg/L		
10/8/2007 12:25	Blank	Metals	Copper	0.25	U	ug/L	0.25	1
10/8/2007 12:25	Blank	Metals	Zinc	5	U	ug/L	5	20
10/8/2007 12:25	Blank	Metals	Magnesium	0.04	U	mg/L	0.04	0.16
10/8/2007 12:25	Blank	Metals	Silver	0.025	U	ug/L	0.025	0.1

Appendix E. (continued)

Date Sampled	Field ID	Analysis Group	Component	Result	Remark	Units	MDL	PQL
10/8/2007 12:25	Blank	Metals	Calcium	0.02	U	mg/L	0.02	0.08
10/8/2007 12:25	Blank	Metals	Aluminum	60	U	ug/L	60	240
10/8/2007 12:25	Blank	Metals	Selenium	0.5	U	ug/L	0.5	2
10/8/2007 12:25	Blank	Metals	Iron	30	U	ug/L	30	120
10/8/2007 12:25	Blank	Metals	Lead	0.2	U	ug/L	0.2	0.8
10/8/2007 12:25	Blank	Metals	Cadmium	0.02	U	ug/L	0.02	0.08
10/8/2007 12:25	Blank	Metals	Nickel	0.25	U	ug/L	0.25	1
10/8/2007 12:25	Blank	Metals	Chromium	1	U	ug/L	1	4
10/8/2007 12:25	Blank	Metals	Arsenic	0.5	U	ug/L	0.5	2
10/8/2007 12:25	Blank	Nutrients	Chloride	0.2	U	mg Cl/L	0.2	0.5
10/8/2007 12:25	Blank	Nutrients	Kjeldahl Nitrogen	0.08	U	mg N/L	0.08	0.2
10/8/2007 12:25	Blank	Nutrients	O-Phosphate-P	0.004	U	mg P/L	0.004	0.01
10/8/2007 12:25	Blank	Nutrients	Sulfate	0.2	U	mg SO4/L	0.2	0.5
10/8/2007 12:25	Blank	Nutrients	Fluoride	0.05	U	mg F/L	0.05	0.1
10/8/2007 12:25	Blank	Nutrients	Total-P	0.02	U	mg P/L	0.02	0.06
10/8/2007 12:25	Blank	Nutrients	NO2NO3-N	0.004	U	mg N/L	0.004	0.01
10/8/2007 12:25	Blank	Nutrients	Ammonia-N	0.01	U	mg N/L	0.01	0.02
10/8/2007 12:25	Blank	Overflow	Radium 226-Counting Error	0.1		pCi/L		
10/8/2007 12:25	Blank	Overflow	Radium 226	0.1		pCi/L		
10/8/2007 12:25	Blank	Overflow	Radium 228	1	U	pCi/L		
10/8/2007 12:25	Blank	Overflow	Oil and Grease	2.7	I	mg/L		
10/8/2007 12:25	Blank	Overflow	Radium 228-Counting Error	0.6		pCi/L		
10/8/2007 12:25	Blank	Overflow	Alpha, Total	0.5	U	pCi/L		
10/8/2007 12:25	Blank	Overflow	Alpha-Counting Error	0.4		pCi/L		
10/8/2007 12:25	Blank	Pesticides	Prometryn	0.15	U	ug/L	0.15	0.6
10/8/2007 12:25	Blank	Pesticides	Norflurazon	0.15	U	ug/L	0.15	0.6
10/8/2007 12:25	Blank	Pesticides	Metribuzin	0.1	U	ug/L	0.1	0.4
10/8/2007 12:25	Blank	Pesticides	Metalaxyl	0.25	U	ug/L	0.25	1
10/8/2007 12:25	Blank	Pesticides	Hexazinone	0.1	U	ug/L	0.1	0.4
10/8/2007 12:25	Blank	Pesticides	Ethoprop	0.1	U	ug/L	0.1	0.4
10/8/2007 12:25	Blank	Pesticides	Ethion	0.05	U	ug/L	0.05	0.2
10/8/2007 12:25	Blank	Pesticides	Ametryn	0.05	U	ug/L	0.05	0.2
10/8/2007 12:25	Blank	Pesticides	Chlorpyrifos Methyl	0.1	U	ug/L	0.1	0.4
10/8/2007 12:25	Blank	Pesticides	Azinphos Methyl	0.2	UJ	ug/L	0.2	0.8
10/8/2007 12:25	Blank	Pesticides	Malathion	0.15	U	ug/L	0.15	0.6

Appendix E. (continued)

Date Sampled	Field ID	Analysis Group	Component	Result	Remark	Units	MDL	PQL
10/8/2007 12:25	Blank	Pesticides	Fonofos	0.1	U	ug/L	0.1	0.4
10/8/2007 12:25	Blank	Pesticides	Bromacil	0.2	U	ug/L	0.2	0.8
10/8/2007 12:25	Blank	Pesticides	Parathion Ethyl	0.15	U	ug/L	0.15	0.6
10/8/2007 12:25	Blank	Pesticides	Mevinphos	0.2	U	ug/L	0.2	0.8
10/8/2007 12:25	Blank	Pesticides	Atrazine	0.05	U	ug/L	0.05	0.2
10/8/2007 12:25	Blank	Pesticides	Alachlor	0.6	U	ug/L	0.6	2.4
10/8/2007 12:25	Blank	Pesticides	Metolachlor	0.5	U	ug/L	0.5	2
10/8/2007 12:25	Blank	Pesticides	Fenamiphos	0.2	U	ug/L	0.2	0.8
10/8/2007 12:25	Blank	Pesticides	Chlorpyrifos Ethyl	0.05	U	ug/L	0.05	0.2
10/8/2007 12:25	Blank	Pesticides	Simazine	0.05	U	ug/L	0.05	0.2
10/8/2007 12:25	Blank	Pesticides	Phorate	0.05	U	ug/L	0.05	0.2
10/8/2007 12:25	Blank	Pesticides	Parathion Methyl	0.1	U	ug/L	0.1	0.4
10/8/2007 12:25	Blank	Pesticides	Naled	0.8	U	ug/L	0.8	3.2
10/8/2007 12:25	Blank	Pesticides	Butylate	0.2	U	ug/L	0.2	0.8
10/8/2007 12:25	Blank	Pesticides	Diazinon	0.05	U	ug/L	0.05	0.2
10/8/2007 12:25	Blank	Priority Organic Pollutants	2,6-Dinitrotoluene	0.96	U	ug/L	0.96	3.8
10/8/2007 12:25	Blank	Priority Organic Pollutants	2-Nitrophenol	0.96	U	ug/L	0.96	3.8
10/8/2007 12:25	Blank	Priority Organic Pollutants	3,3'-Dichlorobenzidine	38	U	ug/L	38	150
10/8/2007 12:25	Blank	Priority Organic Pollutants	4,4'-DDT	1.4	U	ug/L	1.4	5.8
10/8/2007 12:25	Blank	Priority Organic Pollutants	Bis(2-ethylhexyl)phthalate	14	U	ug/L	14	58
10/8/2007 12:25	Blank	Priority Organic Pollutants	Di-n-butyl phthalate	4.8	U	ug/L	4.8	19
10/8/2007 12:25	Blank	Priority Organic Pollutants	Di-n-octyl phthalate	0.96	U	ug/L	0.96	3.8
10/8/2007 12:25	Blank	Priority Organic Pollutants	Heptachlor	1.4	U	ug/L	1.4	5.8
10/8/2007 12:25	Blank	Priority Organic Pollutants	2,4-Dinitrotoluene	0.96	U	ug/L	0.96	3.8
10/8/2007 12:25	Blank	Priority Organic Pollutants	4,4'-DDE	1.4	U	ug/L	1.4	5.8
10/8/2007 12:25	Blank	Priority Organic Pollutants	Benzo(a)anthracene	0.96	U	ug/L	0.96	3.8
10/8/2007 12:25	Blank	Priority Organic Pollutants	Dibenzo(a,h)anthracene	0.96	U	ug/L	0.96	3.8
10/8/2007 12:25	Blank	Priority Organic Pollutants	Hexachloroethane	2.9	U	ug/L	2.9	12
10/8/2007 12:25	Blank	Priority Organic Pollutants	delta-BHC	1.4	U	ug/L	1.4	5.8
10/8/2007 12:25	Blank	Priority Organic Pollutants	2,4-Dichlorophenol	0.96	U	ug/L	0.96	3.8
10/8/2007 12:25	Blank	Priority Organic Pollutants	Acenaphthylene	0.96	U	ug/L	0.96	3.8
10/8/2007 12:25	Blank	Priority Organic Pollutants	Bis(2-chloroethoxy)methane	0.96	U	ug/L	0.96	3.8
10/8/2007 12:25	Blank	Priority Organic Pollutants	Chrysene	0.96	U	ug/L	0.96	3.8
10/8/2007 12:25	Blank	Priority Organic Pollutants	Endosulfan II	3.8	U	ug/L	3.8	15
10/8/2007 12:25	Blank	Priority Organic Pollutants	Indeno(1,2,3-cd)pyrene	0.96	U	ug/L	0.96	3.8

Appendix E. (continued)

Date Sampled	Field ID	Analysis Group	Component	Result	Remark	Units	MDL	PQL
10/8/2007 12:25	Blank	Priority Organic Pollutants	N-Nitrosodi-n-propylamine	1.9	U	ug/L	1.9	7.7
10/8/2007 12:25	Blank	Priority Organic Pollutants	Nitrobenzene	1.9	U	ug/L	1.9	7.7
10/8/2007 12:25	Blank	Priority Organic Pollutants	Phenanthrene	0.96	U	ug/L	0.96	3.8
10/8/2007 12:25	Blank	Priority Organic Pollutants	2-Chlorophenol	0.96	U	ug/L	0.96	3.8
10/8/2007 12:25	Blank	Priority Organic Pollutants	4-Bromophenyl phenyl ether	0.96	U	ug/L	0.96	3.8
10/8/2007 12:25	Blank	Priority Organic Pollutants	Benzo(a)pyrene	0.96	U	ug/L	0.96	3.8
10/8/2007 12:25	Blank	Priority Organic Pollutants	Benzo(b)fluoranthene	0.96	U	ug/L	0.96	3.8
10/8/2007 12:25	Blank	Priority Organic Pollutants	Diethyl phthalate	0.96	U	ug/L	0.96	3.8
10/8/2007 12:25	Blank	Priority Organic Pollutants	Endosulfan sulfate	1.4	U	ug/L	1.4	5.8
10/8/2007 12:25	Blank	Priority Organic Pollutants	Hexachlorobenzene	0.96	U	ug/L	0.96	3.8
10/8/2007 12:25	Blank	Priority Organic Pollutants	Hexachlorocyclopentadiene	2.9	U	ug/L	2.9	12
10/8/2007 12:25	Blank	Priority Organic Pollutants	N-Nitrosodiphenylamine/ Diphenylamine	2.9	U	ug/L	2.9	12
10/8/2007 12:25	Blank	Priority Organic Pollutants	Phenol	0.96	U	ug/L	0.96	3.8
10/8/2007 12:25	Blank	Priority Organic Pollutants	alpha-BHC	1.4	U	ug/L	1.4	5.8
10/8/2007 12:25	Blank	Priority Organic Pollutants	beta-BHC	1.4	U	ug/L	1.4	5.8
10/8/2007 12:25	Blank	Priority Organic Pollutants	2,4,6-Trichlorophenol	0.96	U	ug/L	0.96	3.8
10/8/2007 12:25	Blank	Priority Organic Pollutants	2,4-Dimethylphenol	9.6	U	ug/L	9.6	38
10/8/2007 12:25	Blank	Priority Organic Pollutants	4-Chloro-3-methylphenol	0.96	U	ug/L	0.96	3.8
10/8/2007 12:25	Blank	Priority Organic Pollutants	Acenaphthene	0.96	U	ug/L	0.96	3.8
10/8/2007 12:25	Blank	Priority Organic Pollutants	Benzo(g,h,i)perylene	0.96	U	ug/L	0.96	3.8
10/8/2007 12:25	Blank	Priority Organic Pollutants	Bis(2-chloroethyl)ether	0.96	U	ug/L	0.96	3.8
10/8/2007 12:25	Blank	Priority Organic Pollutants	Butyl benzyl phthalate	4.8	U	ug/L	4.8	19
10/8/2007 12:25	Blank	Priority Organic Pollutants	Dimethyl phthalate	48	U	ug/L	48	190
10/8/2007 12:25	Blank	Priority Organic Pollutants	Hexachlorobutadiene	2.9	U	ug/L	2.9	12
10/8/2007 12:25	Blank	Priority Organic Pollutants	Pyrene	0.96	U	ug/L	0.96	3.8
10/8/2007 12:25	Blank	Priority Organic Pollutants	2,4-Dinitrophenol	14	U	ug/L	14	58
10/8/2007 12:25	Blank	Priority Organic Pollutants	Benzidine	96	U	ug/L	96	380
10/8/2007 12:25	Blank	Priority Organic Pollutants	Endosulfan I	3.8	U	ug/L	3.8	15
10/8/2007 12:25	Blank	Priority Organic Pollutants	Fluorene	0.96	U	ug/L	0.96	3.8
10/8/2007 12:25	Blank	Priority Organic Pollutants	Pentachlorophenol	2.9	U	ug/L	2.9	12
10/8/2007 12:25	Blank	Priority Organic Pollutants	gamma-BHC	1.4	U	ug/L	1.4	5.8
10/8/2007 12:25	Blank	Priority Organic Pollutants	1,2,4-Trichlorobenzene	0.96	U	ug/L	0.96	3.8
10/8/2007 12:25	Blank	Priority Organic Pollutants	2-Methyl-4,6-dinitrophenol	2.9	U	ug/L	2.9	12
10/8/2007 12:25	Blank	Priority Organic Pollutants	4,4'-DDD	1.4	U	ug/L	1.4	5.8
10/8/2007 12:25	Blank	Priority Organic Pollutants	Benzo(k)fluoranthene	0.96	U	ug/L	0.96	3.8

Appendix E. (continued)

Date Sampled	Field ID	Analysis Group	Component	Result	Remark	Units	MDL	PQL
10/8/2007 12:25	Blank	Priority Organic Pollutants	Bis(2-chloroisopropyl)ether	2.9	U	ug/L	2.9	12
10/8/2007 12:25	Blank	Priority Organic Pollutants	Dieldrin	1.4	U	ug/L	1.4	5.8
10/8/2007 12:25	Blank	Priority Organic Pollutants	Endrin aldehyde	3.8	U	ug/L	3.8	15
10/8/2007 12:25	Blank	Priority Organic Pollutants	Fluoranthene	0.96	U	ug/L	0.96	3.8
10/8/2007 12:25	Blank	Priority Organic Pollutants	Heptachlor epoxide	1.4	U	ug/L	1.4	5.8
10/8/2007 12:25	Blank	Priority Organic Pollutants	Isophorone	0.96	U	ug/L	0.96	3.8
10/8/2007 12:25	Blank	Priority Organic Pollutants	N-Nitrosodimethylamine	1.9	U	ug/L	1.9	7.7
10/8/2007 12:25	Blank	Priority Organic Pollutants	2-Chloronaphthalene	0.96	U	ug/L	0.96	3.8
10/8/2007 12:25	Blank	Priority Organic Pollutants	4-Chlorophenyl phenyl ether	1.9	U	ug/L	1.9	7.7
10/8/2007 12:25	Blank	Priority Organic Pollutants	4-Nitrophenol	14	U	ug/L	14	58
10/8/2007 12:25	Blank	Priority Organic Pollutants	Aldrin	1.4	U	ug/L	1.4	5.8
10/8/2007 12:25	Blank	Priority Organic Pollutants	Anthracene	0.96	U	ug/L	0.96	3.8
10/8/2007 12:25	Blank	Priority Organic Pollutants	Endrin	1.4	U	ug/L	1.4	5.8
10/8/2007 12:25	Blank	Priority Organic Pollutants	Naphthalene	0.96	U	ug/L	0.96	3.8

The Bioassay of Mosaic Fertilizer, L.L.C. - Four Corners Mine effluent sampled on October 8, 2007. NPDES #FL0036412.

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 3 6 4 1 2 11	12 0 7 1 0 0 8	18 **B**	19 **S**	20 2

Remarks

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The Priority Pollutants Analysis of Mosaic Fertilizer, L.L.C. - Four Corners Mine effluent sampled on October 8, 2007. NPDES #FL0036412.

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 3 6 4 1 2 11	12 0 7 1 0 0 8	18 **X**	19 **S**	20 2

Remarks

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Biological Analyses of Mosaic Fertilizer, L.L.C. - Four Corners Mine effluent sampled on October 8, 2007. NPDES #FL0036412.

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 3 6 4 1 2 11	12 0 7 1 0 0 8	18 **S**	19 **S**	20 2

Remarks

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