

Effluent Quality Assessment

Mosaic Fertilizer, L.L.C. – Hopewell Mine

Hillsborough County

NPDES #FL0032590

Sampled February 11, 2008

May 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. - Hopewell Mine (formerly known as IMC Phosphates Company- Hopewell Mine), 6811 State Rd. 39 South, Plant City, Hillsborough County, Florida 33566, NPDES #FL0032590. Effluent samples for this facility were collected on February 11, 2008.

Introduction

Mosaic Fertilizer, L.L.C- Hopewell mine, formerly known as IMC Phosphates Company- Hopewell Mine, is a phosphate mining and beneficiation facility. The facility has no design flow. Discharge is intermittent and is dependent on stormwater contributions in excess of storage capacity and influx of groundwater into the mining cuts. The annual average daily flow (AADF) from February 2007 to January 2008 was 1.95 million gallons daily (MGD). Discharge to surface waters only occurred from August 2007 to November 2007. Flow during the sampling event was 2.97 MGD. The wastewater treatment process includes:

- Phosphatic clay settling areas
- Sand tailings disposal area
- Gravity settling of sands, clays and other suspended solids in earthen-diked settling areas
- Clarified water, gravity-fed into the mine water recirculation system

Operations at the plant include: Mined ore is slurried into a pit and pumped to the beneficiation plant, where the phosphate ore is separated from the fine clays and sand by washing, screening, and double flotation. The wet phosphate rock is transported to another location for further processing. Waste-clay slurry is pumped to the above-grade earthen-diked settling impoundments where phosphatic clays settle out. Sands segregated during flotation are pumped to mined areas to be used as reclamation fill. Process wastewater from the beneficiation process and stormwater runoff undergoes sedimentation in clay settling areas. Decanted water from the settling area is pumped into the mine water recirculation system or discharged through Outfall D-001, a 13 foot steel rectangular weir with end contractions, into the Class III freshwaters of Medard Reservoir, and then to Turkey creek, a tributary to the Alafia River. Outfall D-001 is located approximately at latitude 27º 54” 56” N, and longitude 82º 08’ 10” W.

The facility has no Administrative Orders or Consent Orders. The facility has no mixing zones. A review of Discharge Monitoring Report (DMR) data for the past year did not reveal any violations of permit conditions. (Facility information provided by Jacki Champion of FDEP BMR-Tampa District.)

Methods

Samples were collected from the EFF-01 NPDES sampling point for Outfall D-001 by Jacki Champion, Scott Rose, and Aiah Yassin (FDEP BMR- Tampa District) 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 February 12 - 14, 2008.

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 14.9 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 5.9 (±20%) mg dry wt/L (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 (0.015 mg/L) in the sample collected and preserved for chemical analysis was between the laboratory method detection limit (MDL) and the laboratory practical quantitation limit (PQL). Based on the pH, salinity and temperature of the effluent as collected, the calculated unionized ammonia concentration was ≤ 0.02 mg/L.

Iron, fluoride, combined radium 226 and radium 228 and total alpha particles were detected in the effluent at levels that comply with Class III fresh water quality criteria (62-302.530, F.A.C.). Arsenic and nickel were detected between their respective laboratory MDL and laboratory 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-01 NPDES sampling point for Outfall D-001for this facility on February 11, 2008, 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- Hopewell Mine on February 11, 2008.

Mosaic Fertilizer - Hopewell Mine					
Location	AGP (measured)	Predicted AGP (TSIN) ± 20%	Predicted AGP (TN) ± 20%	Inorganic N:P ratio	Total N:P ratio
Effluent	14.9	5.9 ± 1.2	20.9 ± 4.2	0.5	1.0

Table 2. Effluent limits, Class III Freshwater Criteria and chemical data for samples collected from Mosaic Fertilizer- Hopewell Mine on February 11, 2008.

Mosaic Fertilizer - Hopewell Mine NPDES# FL0032590	Class III Criteria	Effluent Limits	Effluent	
Metals (µg/L unless otherwise noted)				
Aluminum	-	-	290	
Arsenic	≤ 50	-	1.6	I
Cadmium	≤ 0.4 b	-	0.37	U
Calcium (mg/L)	-	-	36.9	
Chromium-III	≤ 120.0 b	-	1	U
Copper	≤ 13.2 b	-	0.5	U
Iron	≤ 1,000	-	150	
Lead	≤ 5.3 b	-	0.2	U
Magnesium (mg/L)	-	-	14	
Nickel	≤ 73.4 b	-	0.67	I
Selenium	≤ 5.0	-	0.5	U
Silver	≤ 0.07	-	0.025	U
Zinc	≤ 168.7 b	-	5	U
Nutrients (mg/L)				
Ortho-phosphate	-	-	0.34	
Total Phosphorus	-	≤ 5.0 s	0.57	
Total Ammonia	-	-	0.015	I
Un-ionized Ammonia	≤ 0.02 s	-	≤ 0.02	c
Nitrate and Nitrite	-	-	0.14	
Total Kjeldahl Nitrogen	-	-	0.41	
Organic Nitrogen	-	-	0.395	c
Total Nitrogen	-	≤ 3.0 s	0.55	c
General Physical and Chemical Parameters				
Dissolved Oxygen (mg/L)	≥ 5.0	≥ 5.0 s	8.5	
pH (SU)	6.0 - 8.5	6.0 - 8.5 s	7.4	
Conductivity (µmhos/cm)	≤ 1,275	≤ 1,275 s	463	
Chlorophyll a (µg/L)	-	Report	9.0	
Temperature °C	-	Report	17.7	
Total Residual Chlorine (mg/L)	≤ 0.01	-	≤ 0.03	U£
Total Suspended Solids (mg/L)	-	≤ 60.0 s	5	I
Total Dissolved Solids (mg/L)	-	-	259	
Turbidity (NTU)	< 29 t	-	6.2	
Fluoride (mg/L)	≤ 10	≤ 10 s	1.3	
Sulfate (mg/L)	-	Report	80	
Oils and Greases (mg/L)	≤ 5	-	1.7	U
Chloride (mg/L)	-	-	13	
Alpha, Total (pCi/L)	≤ 15	-	5.8	
Radium 226 (pCi/L)	-	-	0.5	
Radium 228 (pCi/L)	-	-	1	U
Radium 226 + 228 (pCi/L)	≤ 5	-	0.5	c
Flow (MGD)	-	Report	1.95	a *
Hardness (mg $CaCO_3$)	-	-	149.79	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

s - Single sample

t - Shall not exceed 29 NTUs above background

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

* - Flow only occurred from August 2007 -November 2007

£ - Measured in Central Lab

Florida Department of Environmental Protection

Central Laboratory Sample Submittal Form

Event ID *

Request Number: RQ-2008-02-11-31
Mosaic Fertilizer, LLC - Hopewell Mine

Requester: Jennifer Paris
Field Report Prepared By: Jachi Champion
Collected By: Jachi Champion / Scott Rose / Aish Yassin
Send Final Report To: Vishwas Sathe
Sampling Agency: FDEP

Customer: BMR-TAMPA
Project ID: FYI5
PMAS: 1163

Lab ID *	Location	Comp / Grab	Collection (begin) Date / Time / Eastern Central	Collection (end) Date / Time / Eastern Central	Bottle Group(s)**
	Mosaic Hopewell Mine	X Grab	2/11/08 Time 945 Eastern Central	Date Time Eastern Central	A
	Field ID: Outfall 001	Tot Res Chlorine (mg/L)	Diss Oxygen (mg/L): 8.45	Storet Station Number	
	Matrix (Include type e.g. Salt, Fresh, etc): Fresh Water; Temp (C): 17.74; pH: 7.39	Sample Depth ☐ m ☐ ft	463 ☐ Salinity (PPTh) ☒ Sp Conductance (umho/cm)	NPDES Number	
	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)**
	Mosaic Hopewell Mine	X Grab	2/11/08 Time 945 Eastern Central	Date Time Eastern Central	A
	Field ID: Outfall 001	Tot Res Chlorine (mg/L)	Diss Oxygen (mg/L): 8.45	Storet Station Number	
	Matrix (Include type e.g. Salt, Fresh, etc): Fresh Water; Temp (C): 17.74; pH: 7.39	Sample Depth ☐ m ☐ ft	463 ☐ Salinity (PPTh) ☒ Sp Conductance (umho/cm)	NPDES Number	
	Latitude o ' "	Longitude o ' "	Comments: Bioassay Samples		

Lab ID *	Location	Comp / Grab	Collection (begin) Date / Time / Eastern Central	Collection (end) Date / Time / Eastern Central	Bottle Group(s)**
	Mosaic Hopewell Mine	X Grab	2/11/08 Time 1020 Eastern Central	Date Time Eastern Central	B
	Field ID: Blanks	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	Comp / Grab	Collection (begin) Date / Time / Eastern Central	Collection (end) Date / Time / Eastern Central	Bottle Group(s)**
		☐ 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 Rec'd in Lab 1602 2.12.08 JD		

Relinquished By:	Date/Time	Shipping Method:	Received By:	Date/Time	Relinquished By:	Date/Time	Received By:	Date/Time
Jachi Champion	2/11/08 1100	DHL						2-12-08 / 911.5a

* 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 (Im Phosphate) - Hopewell Mine

Address : 6811 State Rd 39 South

City: Plant City **County:** Hillsborough

Contact/District: Jacki Champion / BPM - BMR Southeast

NPDES Permit #: FL 0032590

LIMS Job #: TLH- 2008-02-12-02 **LIMS Sample #:** 1082114

Lims Data Entry: 2-22-08 MF Data Entry Verification: 2.27.08 JD

Sample Collection: Date: 2/11/2008 Time: 0945

Hold Time Start: Date: 2/11/2008 Time: 0945

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 25.9 max 26.4 mean 26.2
Incubator # ____ min.____ max.____ mean____
Room B246 min 22.8 max 25.1 mean 24.0

Investigators' Signatures

James Daniel
Bdc Aeuch
~~James Daniel~~ Double entry
Marshall Faircloth

Laritta C. Wolfe
REVIEWER

Water Quality Parameters	20% DMW 2/11/08	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				<0.03	HACH	MF	JD
Alkalinity (mg/L as $CaCO_3$):	~~148~~ 83	142				148	HACH	BA	JD
Hardness (mg/L as $CaCO_3$):	~~144~~ 81	135				149	HACH	BA	JD
Total Ammonia (mg/L as N):	<0.017	<0.017				<0.017	DENVER	MF	BA
Salinity (ppth):	<1	<1				<1	YSI (Mettler)	JD	MF

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Appendix B. (continued

FDEP Biology Laboratory - Bioassay Survival Bench Sheet

LIMS Sample #: 1082114 Test #: 1/2 SOP#:TA 07 01 Test Started: Date 2/11/08 Time: 1230

Organism/Batch/Age: C.dubia /6-08/<24 hours Test Ended: Date 2-14-08 Time: 1100

Chamber/Test Volume: 30 / 20 ml Diluent/ Batch: DMW / 2-11-08

Food/Batch: (YCT) 1-26-07 (P.sub) 1-31-08 Artemia 0hr — 24hr — 48hr — 72hr — Artemia Lot# ~~GSL 536-90~~ mF

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	4 1 D			
	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: mF/BA		Checked by:	BA	mF	mF			

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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Appendix B. (continued)

FDEP Biology Laboratory - Bioassay Survival Bench Sheet

LIMS Sample #: 108214 Test #: 2/2 SOP#:TA 07 02 Test Started: Date 2/12/08 Time: 1240
Organism/Batch/Age: C.tenuis / 2-12-08 / 12 days old Test Ended: Date 2.14.08 Time: 1115
Chamber/Test Volume: 1000 / 300 ml Diluent/ Batch: well water / 2-11-08
Food/Batch: YCT — P.sub — Artemia 0hr 24-08 24hr — 48hr 2600 72hr — Artemia Lot# GSL-536-90
Feeding: Prior to Test Prior to Renewal Daily
MF not counted/recorded

Concentration	Replicate	Chamber #	Test Hour 0 hr	24 hr	48 hr BR	48 hr AR	72 hr	96 hr
ctrl	A	D17	5	5	5	~~5~~ 4 d		
	B	D18	5	5	5	~~5~~ 4 d		
	C	D19	5	5	5			
	D	D20	5	5	5			
100%	A	D21	5	5	5			
	B	D22	5	5	5			
	C	D23	5	5	5			
	D	D24	5	5	5			
Loaded/Verified by: JD / BA		Checked by:	BA	JD	JD			

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

Test Results:
Screening Tests: Report LC50 as >100%, =100%, or <100%.
% mortality in 100% sample: 0 LC50: >100%
If Calculated: 95% CI_____ Method_____
Substitue highest test concentration used if other than 100% (example: Ocean outfall tested at 30% concentration).

Comments:

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Appendix B. (continued)

FDEP Biology Laboratory - Bioassay Parameter Bench Sheet

LIMS Sample # : 108211H 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	25.5		24.3			
Dissolved Oxygen mg/L	8.1		7.7			
Conductivity (µmhos) mmhos	175		193			
(initials) Measured by:	MF		MF			
(initials) Recorded by:	MF		MF			

Comments: M = Matrix Viol MF 2-12-08

Concentration 10 e%	0 Hr.	24 Hr.	48 Hr. before renewal	48 Hr. after renewal	72 Hr.	96 Hr.
Replicate	M		M			
pH (S.U.)	7.8		8.2			
Temperature °C	25.8		24.3			
Dissolved Oxygen mg/L	7.5		7.5			
Conductivity (µmhos) mmhos	455		485			
(initials) Measured by:	MF	MF				
(initials) Recorded by:	MF	MF				

Comments: M = Matrix Viol MF 2-12-08

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: 34 ppt

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FDEP Biology Laboratory - Bioassay Parameter Bench Sheet

LIMS Sample # : 108214 **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	8.4			
Temperature °C	25.4	24.2	24.0			
Dissolved Oxygen mg/L	7.6	7.0	7.5			
Conductivity µmhos mmhos	269	281	283			
(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	84			
Temperature °C	25.9	24.3	24.3			
Dissolved Oxygen mg/L	7.6	6.8	7.3			
Conductivity µmhos mmhos	470	480	484			
(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:

35 mL

Appendix C. SRT Bench Sheets and Statistical Analysis

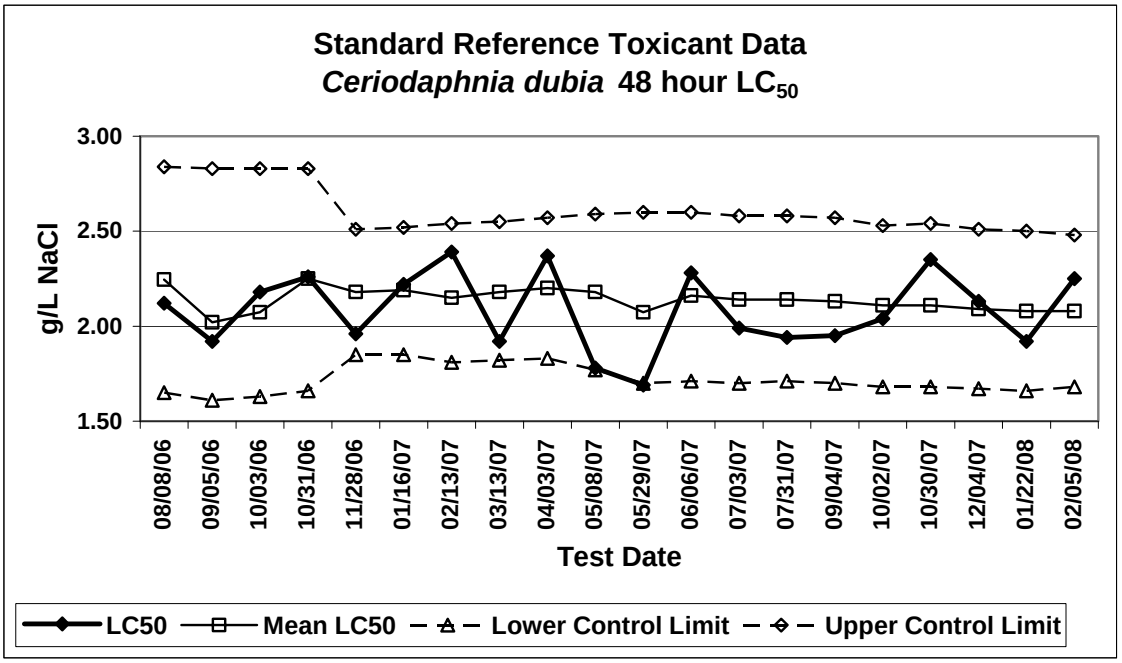
Florida Department of Environmental Protection
Bureau of Laboratories

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
08/08/06	2.12	2.24	0.30	1.65	2.84
09/05/06	1.92	2.02	0.30	1.61	2.83
10/03/06	2.18	2.07	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	2.15	0.17	1.81	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	2.07	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
10/30/07	2.35	2.11	0.21	1.68	2.54
12/04/07	2.13	2.09	0.20	1.67	2.51
01/22/08	1.92	2.08	0.20	1.66	2.50
02/05/08	2.25	2.08	0.20	1.68	2.48

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

CV = 9.65
EPA reference 75th quartile CV = 29%



Appendix C. (continued)

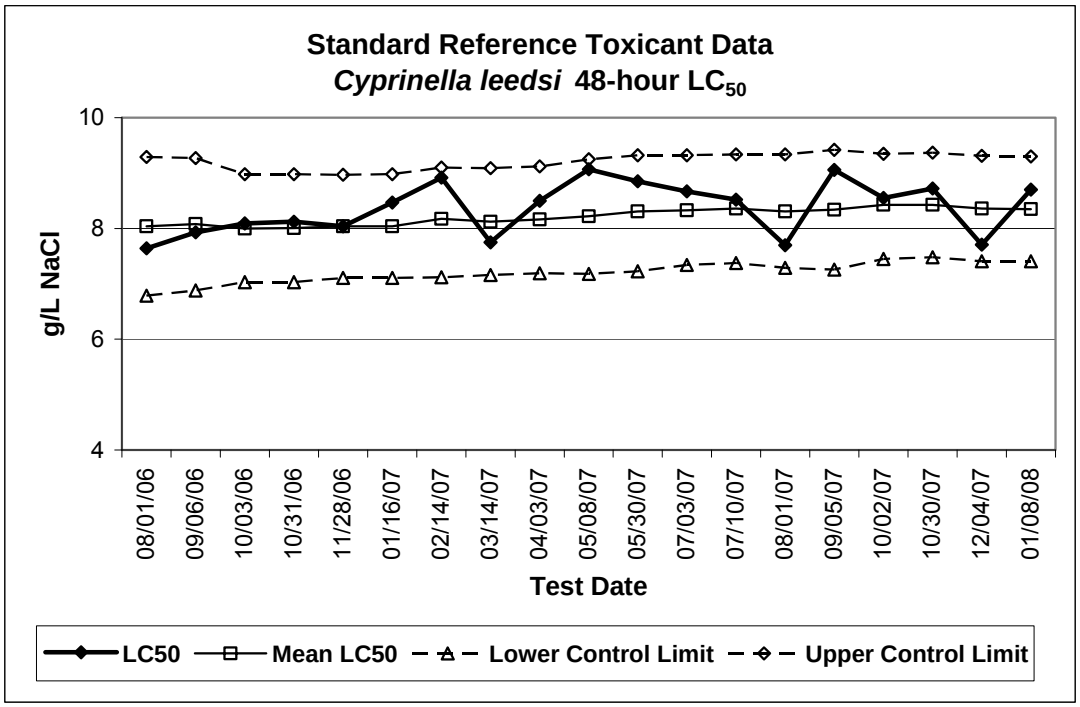
Florida Department of Environmental Protection
Bureau of Laboratories

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
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	0.27	7.11	8.98
02/14/07	8.92	8.17	0.41	7.12	9.10
03/14/07	7.75	8.12	0.41	7.16	9.09
04/03/07	8.50	8.16	0.40	7.19	9.12
05/08/07	9.07	8.22	0.52	7.18	9.25
05/30/07	8.85	8.31	0.49	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
10/30/07	8.72	8.43	0.47	7.48	9.37
12/04/07	7.71	8.36	0.47	7.41	9.31
01/08/08	8.7	8.35	0.47	7.41	9.30
02/05/08	8.92	8.42	0.46	7.50	9.33

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

CV = 5.42
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; **(96 hour renewal)**

Test Page 1 of 2

Diluent/ Batch #: DMW 1-31-08

Toxicant/ Batch#: NaCl 12-4-08

Test Beginning: Date: 2-5-08 Time: 13:30

Test Ending: Date: 2-9-08 Time: 1000

Water Quality Parameters	Diluent	Method	Initials
Total Residual Cl_2 (mg/L):	<0.03	Hach	MF
Alkalinity (mg/L as $CaCO_3$):	82	Hach	BA
Hardness (mg.L as $CaCO_3$):	86	Hach	BA
Total Ammonia (mg/L as N):	<0.07	Denver	MF
Salinity (ppth):	<1	Mettler	BA

Organism Batch #/ Age: 5-08/<24hr

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

Food: **(YCT)** **(*P.subcapitata*)** Artemia: Lot #_____

Food Batch: 7-26-07 1-31-08 0hr — 24hr — 48hr — 72hr —

Chamber size: 30 mL

Test volume: 20 mL per replicate

Conc.			Number Live			pH (SU)			Temperature (° C)			D.O. (mg/L)			Uncorrected Conductivity µmhos/cm **(mmhos/cm)**		
(%) µg/L mg/L	Rep.	Chamber #	**(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	A	5	5	5	8.0		8.1	24.0		24.0	7.9		7.7	0.179		0.181
	B	B	5	5	5												
	C	C	5	5	5												
	D	D	5	5	5												
1.5	A	A	5	5	5	8.0		8.0	24.0		24.0	7.5		7.4	2.90		2.93
	B	B	5	5	5												
	C	C	5	5	5												
	D	D	5	5	5												
2.0	A	A	5	5	4 1D	8.0		8.0	24.1		24.0	7.5		7.3	3.94		4.14
	B	B	5	5	5												
	C	C	5	5	5												
	D	D	5	5	4 1D												
2.5	A	A	5	2 3D	1 1D	8.0		8.0	24.2		24.0	7.4		7.3	4.79		5.01
	B	B	5	4 1D	0 4D												
	C	C	5	5	0 5D												
	D	D	5	4 1D	0 4D												
3.0	A	A	5	2 3D	0 2D	8.0		8.0	24.0		24.0	7.4		7.3	5.65		5.62
	B	B	5	2 3D	0 2D												
	C	C	5	2 3D	0 2D												
	D	D	5	2 3D	0 2D												
4.0	A	A	5	0 5D	—	8.1	8.0	—	24.1	25.3	—	7.2	7.6	—	7.4	7.1	—
	B	B	5	0 5D	—												
	C	C	5	0 5D	—												
	D	D	5	0 5D	—												
	A																
	B																
	C																
	D																
Loaded / measured by:			MF	MF	BA	BA	MF	BA	BA	MF	BA	BA	MF	BA	BA	MF	BA
Recorded by:			BA	MF	BA	BA	MF	BA	BA	MF	BA	BA	MF	BA	BA	MF	BA

Investigators' Signatures

Bruce Ahrendt

Marshall Fairchild

Jason Davis

Loretta 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. 25.6 max. 26.6 mean 26.0

Incubator # ___ min. _____ max. _____ mean _____

Room B246 min. 23.6 max. 25.2 mean 24.4

Comments:

Statistics: Method: Spearman-Karber

(48/) 96 hour LC_{50}: 2.25

95% Confidence Interval: lower 2.14 upper 2.36

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revised 08/24/06 SP

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 12-4-08
Toxicant/ Batch#: NaCl 12-4-08

Test Beginning: Date: 2-5-08 Time: 1320
Test Ending: Date: 2-9-08 Time: 1010

Water Quality Parameters	Diluent	Method	Initials
Total Residual Cl_2 (mg/L):	<0.03	Hach	MF
Alkalinity (mg/L as $CaCO_3$):	144	Hach	BA
Hardness (mg.L as $CaCO_3$):	143	Hach	BA
Total Ammonia (mg/L as N):	<0.07	Denver	MF
Salinity (ppth):	21	Mettler	BA

Organism Batch #/ Age: 2-5-08A / 10 Daily
Feeding: Prior to test / Prior to renewal / Daily
Food: YCT P.subcapitata Artemia: Lot # 6SL536-90
Food Batch: — — 0hr 20 24hr — 48hr 22-48 72hr —
Chamber size: 1000 mL
Test volume: 500 mL per replicate

Conc.			Number Live			pH (SU)			Temperature (°C)			D.O. (mg/L)			Uncorrected Conductivity µmhos/cm mmhos/cm		
			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
µg/L mg/L	Rep.	Chamber #	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	B13	(A)5[10]	10	10	7.8		8.2	24.1		24.0	7.1		7.0	0.585		0.590
	B	B14	5[10]	10	10		7.9			24.5			6.3			0.284	
	C		5														
	D		5														
6.0	A	B15	5[10]	10	10	7.8		8.0	24.7		24.0	7.2		6.4	10.73		10.3
	B	B16	5[10]	8[20]	8		7.8			24.9			6.1			10.0	
	C		5														
	D		5														
7.0	A	B17	5[10]	10	10	7.8		8.0	25.0		24.0	7.3		6.5	12.54		11.8
	B	B18	5[10]	9[10]	9		7.8			24.8			5.7			11.7	
	C		5														
	D		5														
8.0	A	B19	5[10]	9[10]	9	7.8		8.0	25.2		24.0	7.4		6.5	14.07		13.5
	B	B20	5[10]	8[20]	8		7.9			24.6			6.2			13.1	
	C		5														
	D		5														
9.0	A	B21	5[10]	6[40]	4[20]	7.8		8.0	25.2		24.0	7.3		6.5	15.66		15.0
	B	B22	5[10]	8[20]	7[10]		7.9			24.3			6.2			14.8	
	C		5														
	D		5														
10.0	A	B23	5[10]	1[40]	0[10]	7.8		8.1	25.3		24.0 5[20]	7.3		6.5	17.28		16.4
	B	B24	5[10]	2[80]	1[10]		7.9			24.2			6.2			16.7	
	C		5														
	D		5														
	A																
	B																
	C																
	D																
Loaded / measured by:			JD	JD	JD	BA	JD	JD	BA	JD	JD	BA	JD	JD	BA	DD	DD
Recorded by:			BA	JD	JD	BA	JD	JD	BA	JD	JD	BA	JD	JD	BA	DD	DD

Investigators' Signatures
Bruce Atkins
Marshall Faircloth
Jamie Davis
Loretta C. Wolfe
REVIEWER

Concentrations prepared by: MF
Loading verified by: MF
Light Intensity: 50-100 Ft. candles
Photoperiod: 16 hours Light / 8 hours dark
Temperature Range °C:
Incubator # 2 min 25.6 max 26.6 mean 26.0
Incubator # ___ min. ___ max. ___ mean ___
Room B246 min 23.6 max 25.2 mean 24.4

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Comments:
(A) Wrong number transcribed BA 2-5-08

Statistics: Method: Spearman-Karber
48/ 96 hour LC_{50}: 8.92
95% Confidence Interval: lower 8.58 upper 9.27

revised 08/24/06 SP

Appendix C. (continued)

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

DATE: 2-5-08 DURATION: 48 hr TOXICANT: NaCl
SPECIES: C. dubia

RAW DATA: Concentration (g/L)	Number Exposed	Mortalities
0.00	20	0
1.50	20	0
2.00	20	2
2.50	20	17
3.00	20	20
4.00	20	20

SPEARMAN-KARBER TRIM: .00%

SPEARMAN-KARBER ESTIMATES: LC50: 2.25
95% LOWER CONFIDENCE: 2.14
95% UPPER CONFIDENCE: 2.36

***Cyprinella leedsi* Acute Standard Reference Toxicity Test**

DATE: 2-5-08 DURATION: 48 hr TOXICANT: NaCl
SPECIES: C. leedsi

RAW DATA: Concentration (g/L)	Number Exposed	Mortalities
0.00	20	0
6.00	20	2
7.00	20	1
8.00	20	3
9.00	20	9
10.00	20	19

SPEARMAN-KARBER TRIM: 7.50%

SPEARMAN-KARBER ESTIMATES: LC50: 8.92
95% LOWER CONFIDENCE: 8.58
95% UPPER CONFIDENCE: 9.27

NOTE: MORTALITY PROPORTIONS WERE NOT MONOTONICALLY INCREASING.
ADJUSTMENTS WERE MADE PRIOR TO SPEARMAN-KARBER ESTIMATION.

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: 2/4/08

Shipped to: FDEP

P.O. No: N/A

Species	Quantity	Age	Brood Number	Temperature	Salinity
Mysidopsis bahia	150	4 DAYS	MS080131	25°C	20 ‰
Menidia beryllina	150	12 DAYS	SS080123	25°C	20 ‰
Cyprinella leedsi	200	9 DAYS	CL080126	25°C	
Pimephales promelas	150	10 days	FM080125	25°C	

Packed by:

Shipped Via: FedEx

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: 2/11/08

Shipped to: FDEP

P.O. No: N/A

Species	Quantity	Age	Brood Number	Temperature	Salinity
Mysidopsis bahia	150	4 DAYS	MS080207	25°C	20 °/oo
	50	6 DAYS	MS080205	25°C	20 °/oo
Menidia beryllina					
Cyprinella leedsi	100	11 days	CL080131	25°C	
Pimephales promelas					

Packed by: D.C.

Shipped Via: FedEx

Notes:

Thank you for your order.

Appendix E. Chemical Analyses performed on the effluent from the Mosaic Fertilizer, L.L.C. – Hopewell Mine Outfall D-001, sampled on February 11, 2008.

Date Sampled	Field ID	Analysis Group	Components	Results	Remarks	Units	MDL	PQL
2/11/2008 9:45	Effluent	AGP/LN	Algal Growth Potential	14.9		mg DryWt/L	0.3	0.9
2/11/2008 9:45	Effluent	Chlorophyll/Grain Size/BOD	Chlorophyll-a, Corrected	9.0		ug/L	0.55	1.7
2/11/2008 9:45	Effluent	Chlorophyll/Grain Size/BOD	Phaeophytin-a	1.6		ug/L	0.24	0.71
2/11/2008 9:45	Effluent	Toxicology	Bioassay-Acute-Screen-FW-Fish, LC50	100	L	LC50		
2/11/2008 9:45	Effluent	Toxicology	Bioassay-Acute-Screen-FW-C.dubia, LC50	100	L	LC50		
2/11/2008 9:45	Effluent	Metals	Zinc	5	U	ug/L	5	20
2/11/2008 9:45	Effluent	Metals	Selenium	0.5	U	ug/L	0.5	2
2/11/2008 9:45	Effluent	Metals	Copper	0.5	U	ug/L	0.5	2
2/11/2008 9:45	Effluent	Metals	Cadmium	0.37	U	ug/L	0.37	1.5
2/11/2008 9:45	Effluent	Metals	Calcium	36.9		mg/L	0.075	0.3
2/11/2008 9:45	Effluent	Metals	Lead	0.2	U	ug/L	0.2	0.8
2/11/2008 9:45	Effluent	Metals	Magnesium	14		mg/L	0.04	0.16
2/11/2008 9:45	Effluent	Metals	Iron	150		ug/L	30	120
2/11/2008 9:45	Effluent	Metals	Aluminum	290		ug/L	60	240
2/11/2008 9:45	Effluent	Metals	Chromium	1	U	ug/L	1	4
2/11/2008 9:45	Effluent	Metals	Nickel	0.67	I	ug/L	0.62	2.5
2/11/2008 9:45	Effluent	Metals	Arsenic	1.6	I	ug/L	0.5	2
2/11/2008 9:45	Effluent	Metals	Silver	0.025	U	ug/L	0.025	0.1
2/11/2008 9:45	Effluent	Nutrients	Kjeldahl Nitrogen	0.41		mg N/L	0.08	0.2
2/11/2008 9:45	Effluent	Nutrients	TDS	259		mg/L	15	60
2/11/2008 9:45	Effluent	Nutrients	Total-P	0.57		mg P/L	0.02	0.06
2/11/2008 9:45	Effluent	Nutrients	Fluoride	1.3		mg F/L	0.05	0.1
2/11/2008 9:45	Effluent	Nutrients	Ammonia-N	0.015	I	mg N/L	0.01	0.02
2/11/2008 9:45	Effluent	Nutrients	NO2NO3-N	0.14		mg N/L	0.004	0.01
2/11/2008 9:45	Effluent	Nutrients	O-Phosphate-P	0.34		mg P/L	0.012	0.03
2/11/2008 9:45	Effluent	Nutrients	Sulfate	80		mg SO4/L	0.4	1
2/11/2008 9:45	Effluent	Nutrients	TSS	5	I	mg/L	4	16
2/11/2008 9:45	Effluent	Nutrients	Turbidity	6.2		NTU	0.05	0.05
2/11/2008 9:45	Effluent	Nutrients	Chloride	13		mg Cl/L	0.4	2
2/11/2008 9:45	Effluent	Overflow	Alpha-Counting Error	1.9		pCi/L		
2/11/2008 9:45	Effluent	Overflow	Alpha, Total	5.8		pCi/L		
2/11/2008 9:45	Effluent	Overflow	Radium 228-Counting Error	0.7		pCi/L		
2/11/2008 9:45	Effluent	Overflow	Radium 226	0.5		pCi/L		

Appendix E. (continued)

Date Sampled	Field ID	Analysis Group	Components	Results	Remarks	Units	MDL	PQL
2/11/2008 9:45	Effluent	Overflow	Radium 226-Counting Error	0.1		pCi/L		
2/11/2008 9:45	Effluent	Overflow	Radium 228	1	U	pCi/L		
2/11/2008 9:45	Effluent	Overflow	Oil and Grease	1.7	U	mg/L	1.7	5
2/11/2008 9:45	Effluent	Pesticides	Azinphos Methyl	0.2	U	ug/L	0.2	0.8
2/11/2008 9:45	Effluent	Pesticides	Chlorpyrifos Methyl	0.1	U	ug/L	0.1	0.4
2/11/2008 9:45	Effluent	Pesticides	Ethoprop	0.1	U	ug/L	0.1	0.4
2/11/2008 9:45	Effluent	Pesticides	Fenamiphos	0.2	U	ug/L	0.2	0.8
2/11/2008 9:45	Effluent	Pesticides	Ethion	0.05	U	ug/L	0.05	0.2
2/11/2008 9:45	Effluent	Pesticides	Fonofos	0.1	U	ug/L	0.1	0.4
2/11/2008 9:45	Effluent	Pesticides	Norflurazon	0.15	U	ug/L	0.15	0.6
2/11/2008 9:45	Effluent	Pesticides	Prometryn	0.15	U	ug/L	0.15	0.6
2/11/2008 9:45	Effluent	Pesticides	Butylate	0.2	U	ug/L	0.2	0.8
2/11/2008 9:45	Effluent	Pesticides	Metalaxyl	0.25	U	ug/L	0.25	1
2/11/2008 9:45	Effluent	Pesticides	Parathion Ethyl	0.15	U	ug/L	0.15	0.6
2/11/2008 9:45	Effluent	Pesticides	Bromacil	0.2	U	ug/L	0.2	0.8
2/11/2008 9:45	Effluent	Pesticides	Simazine	0.05	U	ug/L	0.05	0.2
2/11/2008 9:45	Effluent	Pesticides	Ametryn	0.05	U	ug/L	0.05	0.2
2/11/2008 9:45	Effluent	Pesticides	Chlorpyrifos Ethyl	0.05	U	ug/L	0.05	0.2
2/11/2008 9:45	Effluent	Pesticides	Metribuzin	0.1	U	ug/L	0.1	0.4
2/11/2008 9:45	Effluent	Pesticides	Diazinon	0.05	U	ug/L	0.05	0.2
2/11/2008 9:45	Effluent	Pesticides	Parathion Methyl	0.1	U	ug/L	0.1	0.4
2/11/2008 9:45	Effluent	Pesticides	Phorate	0.05	U	ug/L	0.05	0.2
2/11/2008 9:45	Effluent	Pesticides	Hexazinone	0.1	U	ug/L	0.1	0.4
2/11/2008 9:45	Effluent	Pesticides	Metolachlor	0.5	U	ug/L	0.5	2
2/11/2008 9:45	Effluent	Pesticides	Naled	0.8	U	ug/L	0.8	3.2
2/11/2008 9:45	Effluent	Pesticides	Alachlor	0.6	U	ug/L	0.6	2.4
2/11/2008 9:45	Effluent	Pesticides	Atrazine	0.05	U	ug/L	0.05	0.2
2/11/2008 9:45	Effluent	Pesticides	Malathion	0.15	U	ug/L	0.15	0.6
2/11/2008 9:45	Effluent	Pesticides	Mevinphos	0.2	U	ug/L	0.2	0.8
2/11/2008 9:45	Effluent	Priority Organic Pollutants	Dimethyl phthalate	11	U	ug/L	11	43
2/11/2008 9:45	Effluent	Priority Organic Pollutants	Hexachlorobenzene	1.1	UJ	ug/L	1.1	4.3
2/11/2008 9:45	Effluent	Priority Organic Pollutants	Indeno(1,2,3-cd)pyrene	1.1	U	ug/L	1.1	4.3
2/11/2008 9:45	Effluent	Priority Organic Pollutants	N-Nitrosodi-n-propylamine	2.1	U	ug/L	2.1	8.5
2/11/2008 9:45	Effluent	Priority Organic Pollutants	2,6-Dinitrotoluene	1.1	U	ug/L	1.1	4.3
2/11/2008 9:45	Effluent	Priority Organic Pollutants	4-Bromophenyl phenyl ether	1.1	U	ug/L	1.1	4.3

Appendix E. (continued)

Date Sampled	Field ID	Analysis Group	Components	Results	Remarks	Units	MDL	PQL
2/11/2008 9:45	Effluent	Priority Organic Pollutants	Aldrin	1.6	UJ	ug/L	1.6	6.4
2/11/2008 9:45	Effluent	Priority Organic Pollutants	Endrin aldehyde	4.3	UJ	ug/L	4.3	17
2/11/2008 9:45	Effluent	Priority Organic Pollutants	Naphthalene	1.1	U	ug/L	1.1	4.3
2/11/2008 9:45	Effluent	Priority Organic Pollutants	2,4,6-Trichlorophenol	1.1	U	ug/L	1.1	4.3
2/11/2008 9:45	Effluent	Priority Organic Pollutants	2,4-Dichlorophenol	1.1	U	ug/L	1.1	4.3
2/11/2008 9:45	Effluent	Priority Organic Pollutants	4,4'-DDE	1.6	U	ug/L	1.6	6.4
2/11/2008 9:45	Effluent	Priority Organic Pollutants	4-Chlorophenyl phenyl ether	2.1	U	ug/L	2.1	8.5
2/11/2008 9:45	Effluent	Priority Organic Pollutants	Benzo(a)pyrene	1.1	U	ug/L	1.1	4.3
2/11/2008 9:45	Effluent	Priority Organic Pollutants	Bis(2-ethylhexyl)phthalate	16	U	ug/L	16	64
2/11/2008 9:45	Effluent	Priority Organic Pollutants	Dieldrin	1.6	U	ug/L	1.6	6.4
2/11/2008 9:45	Effluent	Priority Organic Pollutants	Endrin	1.6	U	ug/L	1.6	6.4
2/11/2008 9:45	Effluent	Priority Organic Pollutants	Fluoranthene	1.1	U	ug/L	1.1	4.3
2/11/2008 9:45	Effluent	Priority Organic Pollutants	Hexachloroethane	3.2	U	ug/L	3.2	13
2/11/2008 9:45	Effluent	Priority Organic Pollutants	Pentachlorophenol	3.2	UJ	ug/L	3.2	13
2/11/2008 9:45	Effluent	Priority Organic Pollutants	Phenanthrene	1.1	U	ug/L	1.1	4.3
2/11/2008 9:45	Effluent	Priority Organic Pollutants	Acenaphthylene	1.1	U	ug/L	1.1	4.3
2/11/2008 9:45	Effluent	Priority Organic Pollutants	Benzo(b)fluoranthene	1.1	U	ug/L	1.1	4.3
2/11/2008 9:45	Effluent	Priority Organic Pollutants	Di-n-butyl phthalate	5.3	U	ug/L	5.3	21
2/11/2008 9:45	Effluent	Priority Organic Pollutants	Endosulfan I	4.3	U	ug/L	4.3	17
2/11/2008 9:45	Effluent	Priority Organic Pollutants	Fluorene	1.1	U	ug/L	1.1	4.3
2/11/2008 9:45	Effluent	Priority Organic Pollutants	Heptachlor	1.6	U	ug/L	1.6	6.4
2/11/2008 9:45	Effluent	Priority Organic Pollutants	Heptachlor epoxide	1.6	UJ	ug/L	1.6	6.4
2/11/2008 9:45	Effluent	Priority Organic Pollutants	beta-BHC	1.6	U	ug/L	1.6	6.4
2/11/2008 9:45	Effluent	Priority Organic Pollutants	delta-BHC	1.6	U	ug/L	1.6	6.4
2/11/2008 9:45	Effluent	Priority Organic Pollutants	2-Nitrophenol	1.1	U	ug/L	1.1	4.3
2/11/2008 9:45	Effluent	Priority Organic Pollutants	4-Chloro-3-methylphenol	1.1	U	ug/L	1.1	4.3
2/11/2008 9:45	Effluent	Priority Organic Pollutants	Bis(2-chloroethyl)ether	1.1	U	ug/L	1.1	4.3
2/11/2008 9:45	Effluent	Priority Organic Pollutants	Hexachlorocyclopentadiene	3.2	U	ug/L	3.2	13
2/11/2008 9:45	Effluent	Priority Organic Pollutants	Isophorone	1.1	U	ug/L	1.1	4.3
2/11/2008 9:45	Effluent	Priority Organic Pollutants	Anthracene	1.1	U	ug/L	1.1	4.3
2/11/2008 9:45	Effluent	Priority Organic Pollutants	Benzo(g,h,i)perylene	1.1	U	ug/L	1.1	4.3
2/11/2008 9:45	Effluent	Priority Organic Pollutants	Benzo(k)fluoranthene	1.1	U	ug/L	1.1	4.3
2/11/2008 9:45	Effluent	Priority Organic Pollutants	Bis(2-chloroethoxy)methane	1.1	U	ug/L	1.1	4.3
2/11/2008 9:45	Effluent	Priority Organic Pollutants	Dibenzo(a,h)anthracene	1.1	U	ug/L	1.1	4.3
2/11/2008 9:45	Effluent	Priority Organic Pollutants	Endosulfan II	4.3	U	ug/L	4.3	17

Appendix E. (continued)

Date Sampled	Field ID	Analysis Group	Components	Results	Remarks	Units	MDL	PQL
2/11/2008 9:45	Effluent	Priority Organic Pollutants	Pyrene	1.1	U	ug/L	1.1	4.3
2/11/2008 9:45	Effluent	Priority Organic Pollutants	alpha-BHC	1.6	U	ug/L	1.6	6.4
2/11/2008 9:45	Effluent	Priority Organic Pollutants	gamma-BHC	1.6	U	ug/L	1.6	6.4
2/11/2008 9:45	Effluent	Priority Organic Pollutants	2,4-Dinitrophenol	16	U	ug/L	16	64
2/11/2008 9:45	Effluent	Priority Organic Pollutants	3,3'-Dichlorobenzidine	43	UJ	ug/L	43	170
2/11/2008 9:45	Effluent	Priority Organic Pollutants	4,4'-DDD	1.6	U	ug/L	1.6	6.4
2/11/2008 9:45	Effluent	Priority Organic Pollutants	4,4'-DDT	1.6	U	ug/L	1.6	6.4
2/11/2008 9:45	Effluent	Priority Organic Pollutants	Acenaphthene	1.1	U	ug/L	1.1	4.3
2/11/2008 9:45	Effluent	Priority Organic Pollutants	Bis(2-chloroisopropyl)ether	3.2	U	ug/L	3.2	13
2/11/2008 9:45	Effluent	Priority Organic Pollutants	Chrysene	1.1	U	ug/L	1.1	4.3
2/11/2008 9:45	Effluent	Priority Organic Pollutants	Diethyl phthalate	1.1	U	ug/L	1.1	4.3
2/11/2008 9:45	Effluent	Priority Organic Pollutants	Endosulfan sulfate	1.6	U	ug/L	1.6	6.4
2/11/2008 9:45	Effluent	Priority Organic Pollutants	Hexachlorobutadiene	3.2	U	ug/L	3.2	13
2/11/2008 9:45	Effluent	Priority Organic Pollutants	2-Methyl-4,6-dinitrophenol	3.2	U	ug/L	3.2	13
2/11/2008 9:45	Effluent	Priority Organic Pollutants	4-Nitrophenol	16	U	ug/L	16	64
2/11/2008 9:45	Effluent	Priority Organic Pollutants	N-Nitrosodimethylamine	2.1	U	ug/L	2.1	8.5
2/11/2008 9:45	Effluent	Priority Organic Pollutants	Nitrobenzene	2.1	U	ug/L	2.1	8.5
2/11/2008 9:45	Effluent	Priority Organic Pollutants	Phenol	1.1	U	ug/L	1.1	4.3
2/11/2008 9:45	Effluent	Priority Organic Pollutants	1,2,4-Trichlorobenzene	1.1	U	ug/L	1.1	4.3
2/11/2008 9:45	Effluent	Priority Organic Pollutants	2,4-Dimethylphenol	11	U	ug/L	11	43
2/11/2008 9:45	Effluent	Priority Organic Pollutants	2,4-Dinitrotoluene	1.1	U	ug/L	1.1	4.3
2/11/2008 9:45	Effluent	Priority Organic Pollutants	2-Chloronaphthalene	1.1	U	ug/L	1.1	4.3
2/11/2008 9:45	Effluent	Priority Organic Pollutants	2-Chlorophenol	1.1	U	ug/L	1.1	4.3
2/11/2008 9:45	Effluent	Priority Organic Pollutants	Benzidine	110	U	ug/L	110	430
2/11/2008 9:45	Effluent	Priority Organic Pollutants	Benzo(a)anthracene	1.1	U	ug/L	1.1	4.3
2/11/2008 9:45	Effluent	Priority Organic Pollutants	Butyl benzyl phthalate	5.3	U	ug/L	5.3	21
2/11/2008 9:45	Effluent	Priority Organic Pollutants	Di-n-octyl phthalate	1.1	U	ug/L	1.1	4.3
2/11/2008 9:45	Effluent	Field Parameters	Temperature	17.74		C		
2/11/2008 9:45	Effluent	Field Parameters	Specific Conductance	463		umhos/cm		
2/11/2008 9:45	Effluent	Field Parameters	pH	7.39				
2/11/2008 9:45	Effluent	Field Parameters	Dissolved Oxygen	8.45		mg/L		
2/11/2008 10:20	Blanks	Metals	Cadmium	0.02	U	ug/L	0.02	0.08
2/11/2008 10:20	Blanks	Metals	Calcium	0.075	U	mg/L	0.075	0.3
2/11/2008 10:20	Blanks	Metals	Lead	0.2	U	ug/L	0.2	0.8
2/11/2008 10:20	Blanks	Metals	Chromium	1	U	ug/L	1	4

Appendix E. (continued)

Date Sampled	Field ID	Analysis Group	Components	Results	Remarks	Units	MDL	PQL
2/11/2008 10:20	Blanks	Metals	Iron	30	U	ug/L	30	120
2/11/2008 10:20	Blanks	Metals	Zinc	5	U	ug/L	5	20
2/11/2008 10:20	Blanks	Metals	Nickel	0.25	U	ug/L	0.25	1
2/11/2008 10:20	Blanks	Metals	Aluminum	60	U	ug/L	60	240
2/11/2008 10:20	Blanks	Metals	Arsenic	0.5	U	ug/L	0.5	2
2/11/2008 10:20	Blanks	Metals	Silver	0.025	U	ug/L	0.025	0.1
2/11/2008 10:20	Blanks	Metals	Magnesium	0.04	U	mg/L	0.04	0.16
2/11/2008 10:20	Blanks	Metals	Copper	0.5	U	ug/L	0.5	2
2/11/2008 10:20	Blanks	Metals	Selenium	0.5	U	ug/L	0.5	2
2/11/2008 10:20	Blanks	Nutrients	O-Phosphate-P	0.004	U	mg P/L	0.004	0.01
2/11/2008 10:20	Blanks	Nutrients	Total-P	0.02	U	mg P/L	0.02	0.06
2/11/2008 10:20	Blanks	Nutrients	TSS	4	U	mg/L	4	16
2/11/2008 10:20	Blanks	Nutrients	NO2NO3-N	0.004	U	mg N/L	0.004	0.01
2/11/2008 10:20	Blanks	Nutrients	Ammonia-N	0.01	U	mg N/L	0.01	0.02
2/11/2008 10:20	Blanks	Nutrients	Kjeldahl Nitrogen	0.08	U	mg N/L	0.08	0.2
2/11/2008 10:20	Blanks	Nutrients	TDS	15	U	mg/L	15	60
2/11/2008 10:20	Blanks	Nutrients	Fluoride	0.05	U	mg F/L	0.05	0.1
2/11/2008 10:20	Blanks	Nutrients	Chloride	0.2	U	mg Cl/L	0.2	1
2/11/2008 10:20	Blanks	Nutrients	Sulfate	0.2	U	mg SO4/L	0.2	0.5
2/11/2008 10:20	Blanks	Overflow	Alpha, Total	0.6	U	pCi/L		
2/11/2008 10:20	Blanks	Overflow	Radium 226	0.1		pCi/L		
2/11/2008 10:20	Blanks	Overflow	Radium 228-Counting Error	0.6		pCi/L		
2/11/2008 10:20	Blanks	Overflow	Radium 228	1	U	pCi/L		
2/11/2008 10:20	Blanks	Overflow	Alpha-Counting Error	0.4		pCi/L		
2/11/2008 10:20	Blanks	Overflow	Radium 226-Counting Error	0.1		pCi/L		
2/11/2008 10:20	Blanks	Overflow	Oil and Grease	1.7	U	mg/L	1.7	5
2/11/2008 10:20	Blanks	Pesticides	Bromacil	0.21	U	ug/L	0.21	0.84
2/11/2008 10:20	Blanks	Pesticides	Mevinphos	0.21	U	ug/L	0.21	0.84
2/11/2008 10:20	Blanks	Pesticides	Simazine	0.053	U	ug/L	0.053	0.21
2/11/2008 10:20	Blanks	Pesticides	Ametryn	0.053	U	ug/L	0.053	0.21
2/11/2008 10:20	Blanks	Pesticides	Metalaxyl	0.27	U	ug/L	0.27	1.1
2/11/2008 10:20	Blanks	Pesticides	Metolachlor	0.53	U	ug/L	0.53	2.1
2/11/2008 10:20	Blanks	Pesticides	Alachlor	0.64	U	ug/L	0.64	2.6
2/11/2008 10:20	Blanks	Pesticides	Chlorpyrifos Methyl	0.11	U	ug/L	0.11	0.44
2/11/2008 10:20	Blanks	Pesticides	Fonofos	0.11	U	ug/L	0.11	0.44

Appendix E. (continued)

Date Sampled	Field ID	Analysis Group	Components	Results	Remarks	Units	MDL	PQL
2/11/2008 10:20	Blanks	Pesticides	Phorate	0.053	U	ug/L	0.053	0.21
2/11/2008 10:20	Blanks	Pesticides	Chlorpyrifos Ethyl	0.053	U	ug/L	0.053	0.21
2/11/2008 10:20	Blanks	Pesticides	Prometryn	0.16	U	ug/L	0.16	0.64
2/11/2008 10:20	Blanks	Pesticides	Atrazine	0.053	U	ug/L	0.053	0.21
2/11/2008 10:20	Blanks	Pesticides	Azinphos Methyl	0.21	U	ug/L	0.21	0.84
2/11/2008 10:20	Blanks	Pesticides	Naled	0.85	U	ug/L	0.85	3.4
2/11/2008 10:20	Blanks	Pesticides	Norflurazon	0.16	U	ug/L	0.16	0.64
2/11/2008 10:20	Blanks	Pesticides	Parathion Ethyl	0.16	U	ug/L	0.16	0.64
2/11/2008 10:20	Blanks	Pesticides	Butylate	0.21	U	ug/L	0.21	0.84
2/11/2008 10:20	Blanks	Pesticides	Fenamiphos	0.21	U	ug/L	0.21	0.84
2/11/2008 10:20	Blanks	Pesticides	Metribuzin	0.11	U	ug/L	0.11	0.44
2/11/2008 10:20	Blanks	Pesticides	Parathion Methyl	0.11	U	ug/L	0.11	0.44
2/11/2008 10:20	Blanks	Pesticides	Diazinon	0.053	U	ug/L	0.053	0.21
2/11/2008 10:20	Blanks	Pesticides	Ethoprop	0.11	U	ug/L	0.11	0.44
2/11/2008 10:20	Blanks	Pesticides	Hexazinone	0.11	U	ug/L	0.11	0.44
2/11/2008 10:20	Blanks	Pesticides	Malathion	0.16	U	ug/L	0.16	0.64
2/11/2008 10:20	Blanks	Pesticides	Ethion	0.053	U	ug/L	0.053	0.21
2/11/2008 10:20	Blanks	Priority Organic Pollutants	4,4'-DDT	1.5	U	ug/L	1.5	5.9
2/11/2008 10:20	Blanks	Priority Organic Pollutants	4-Bromophenyl phenyl ether	0.98	U	ug/L	0.98	3.9
2/11/2008 10:20	Blanks	Priority Organic Pollutants	Acenaphthylene	0.98	U	ug/L	0.98	3.9
2/11/2008 10:20	Blanks	Priority Organic Pollutants	Benzo(b)fluoranthene	0.98	U	ug/L	0.98	3.9
2/11/2008 10:20	Blanks	Priority Organic Pollutants	Bis(2-chloroethoxy)methane	0.98	U	ug/L	0.98	3.9
2/11/2008 10:20	Blanks	Priority Organic Pollutants	Di-n-butyl phthalate	4.9	U	ug/L	4.9	20
2/11/2008 10:20	Blanks	Priority Organic Pollutants	Fluorene	0.98	U	ug/L	0.98	3.9
2/11/2008 10:20	Blanks	Priority Organic Pollutants	Pentachlorophenol	2.9	UJ	ug/L	2.9	12
2/11/2008 10:20	Blanks	Priority Organic Pollutants	Phenanthrene	0.98	U	ug/L	0.98	3.9
2/11/2008 10:20	Blanks	Priority Organic Pollutants	Acenaphthene	0.98	U	ug/L	0.98	3.9
2/11/2008 10:20	Blanks	Priority Organic Pollutants	Benzidine	98	U	ug/L	98	390
2/11/2008 10:20	Blanks	Priority Organic Pollutants	Dieldrin	1.5	U	ug/L	1.5	5.9
2/11/2008 10:20	Blanks	Priority Organic Pollutants	Endosulfan I	3.9	U	ug/L	3.9	16
2/11/2008 10:20	Blanks	Priority Organic Pollutants	Hexachloroethane	2.9	U	ug/L	2.9	12
2/11/2008 10:20	Blanks	Priority Organic Pollutants	2-Methyl-4,6-dinitrophenol	2.9	U	ug/L	2.9	12
2/11/2008 10:20	Blanks	Priority Organic Pollutants	3,3'-Dichlorobenzidine	39	UJ	ug/L	39	160
2/11/2008 10:20	Blanks	Priority Organic Pollutants	4-Nitrophenol	15	U	ug/L	15	59
2/11/2008 10:20	Blanks	Priority Organic Pollutants	Bis(2-chloroisopropyl)ether	2.9	U	ug/L	2.9	12

Appendix E. (continued)

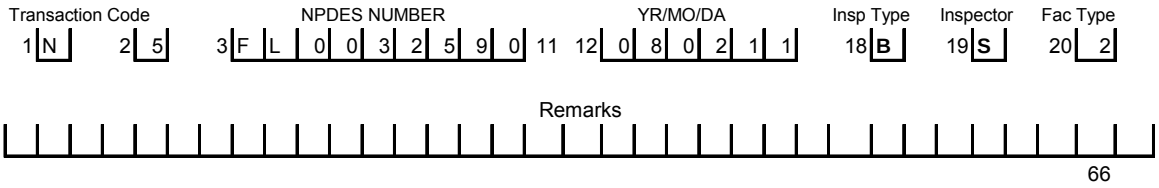
Date Sampled	Field ID	Analysis Group	Components	Results	Remarks	Units	MDL	PQL
2/11/2008 10:20	Blanks	Priority Organic Pollutants	Heptachlor epoxide	1.5	UJ	ug/L	1.5	5.9
2/11/2008 10:20	Blanks	Priority Organic Pollutants	Hexachlorobutadiene	2.9	U	ug/L	2.9	12
2/11/2008 10:20	Blanks	Priority Organic Pollutants	Hexachlorocyclopentadiene	2.9	U	ug/L	2.9	12
2/11/2008 10:20	Blanks	Priority Organic Pollutants	Isophorone	0.98	U	ug/L	0.98	3.9
2/11/2008 10:20	Blanks	Priority Organic Pollutants	Nitrobenzene	2	U	ug/L	2	7.8
2/11/2008 10:20	Blanks	Priority Organic Pollutants	delta-BHC	1.5	U	ug/L	1.5	5.9
2/11/2008 10:20	Blanks	Priority Organic Pollutants	2-Nitrophenol	0.98	U	ug/L	0.98	3.9
2/11/2008 10:20	Blanks	Priority Organic Pollutants	Aldrin	1.5	UJ	ug/L	1.5	5.9
2/11/2008 10:20	Blanks	Priority Organic Pollutants	Anthracene	0.98	U	ug/L	0.98	3.9
2/11/2008 10:20	Blanks	Priority Organic Pollutants	Bis(2-chloroethyl)ether	0.98	U	ug/L	0.98	3.9
2/11/2008 10:20	Blanks	Priority Organic Pollutants	Chrysene	0.98	U	ug/L	0.98	3.9
2/11/2008 10:20	Blanks	Priority Organic Pollutants	Hexachlorobenzene	0.98	UJ	ug/L	0.98	3.9
2/11/2008 10:20	Blanks	Priority Organic Pollutants	Indeno(1,2,3-cd)pyrene	0.98	U	ug/L	0.98	3.9
2/11/2008 10:20	Blanks	Priority Organic Pollutants	N-Nitrosodi-n-propylamine	2	U	ug/L	2	7.8
2/11/2008 10:20	Blanks	Priority Organic Pollutants	Phenol	0.98	U	ug/L	0.98	3.9
2/11/2008 10:20	Blanks	Priority Organic Pollutants	beta-BHC	1.5	U	ug/L	1.5	5.9
2/11/2008 10:20	Blanks	Priority Organic Pollutants	4-Chlorophenyl phenyl ether	2	U	ug/L	2	7.8
2/11/2008 10:20	Blanks	Priority Organic Pollutants	Benzo(a)pyrene	0.98	U	ug/L	0.98	3.9
2/11/2008 10:20	Blanks	Priority Organic Pollutants	Benzo(k)fluoranthene	0.98	U	ug/L	0.98	3.9
2/11/2008 10:20	Blanks	Priority Organic Pollutants	Butyl benzyl phthalate	4.9	U	ug/L	4.9	20
2/11/2008 10:20	Blanks	Priority Organic Pollutants	Dibenzo(a,h)anthracene	0.98	U	ug/L	0.98	3.9
2/11/2008 10:20	Blanks	Priority Organic Pollutants	Dimethyl phthalate	9.8	U	ug/L	9.8	39
2/11/2008 10:20	Blanks	Priority Organic Pollutants	Fluoranthene	0.98	U	ug/L	0.98	3.9
2/11/2008 10:20	Blanks	Priority Organic Pollutants	Heptachlor	1.5	U	ug/L	1.5	5.9
2/11/2008 10:20	Blanks	Priority Organic Pollutants	N-Nitrosodimethylamine	2	U	ug/L	2	7.8
2/11/2008 10:20	Blanks	Priority Organic Pollutants	2,4-Dichlorophenol	0.98	U	ug/L	0.98	3.9
2/11/2008 10:20	Blanks	Priority Organic Pollutants	4-Chloro-3-methylphenol	0.98	U	ug/L	0.98	3.9
2/11/2008 10:20	Blanks	Priority Organic Pollutants	Benzo(a)anthracene	0.98	U	ug/L	0.98	3.9
2/11/2008 10:20	Blanks	Priority Organic Pollutants	Endosulfan II	3.9	U	ug/L	3.9	16
2/11/2008 10:20	Blanks	Priority Organic Pollutants	Endrin	1.5	U	ug/L	1.5	5.9
2/11/2008 10:20	Blanks	Priority Organic Pollutants	Naphthalene	0.98	U	ug/L	0.98	3.9
2/11/2008 10:20	Blanks	Priority Organic Pollutants	Pyrene	0.98	U	ug/L	0.98	3.9
2/11/2008 10:20	Blanks	Priority Organic Pollutants	2,4-Dinitrophenol	15	U	ug/L	15	59
2/11/2008 10:20	Blanks	Priority Organic Pollutants	2-Chlorophenol	0.98	U	ug/L	0.98	3.9
2/11/2008 10:20	Blanks	Priority Organic Pollutants	4,4'-DDD	1.5	U	ug/L	1.5	5.9

Appendix E. (continued)

Date Sampled	Field ID	Analysis Group	Components	Results	Remarks	Units	MDL	PQL
2/11/2008 10:20	Blanks	Priority Organic Pollutants	Benzo(g,h,i)perylene	0.98	U	ug/L	0.98	3.9
2/11/2008 10:20	Blanks	Priority Organic Pollutants	Bis(2-ethylhexyl)phthalate	15	U	ug/L	15	59
2/11/2008 10:20	Blanks	Priority Organic Pollutants	alpha-BHC	1.5	U	ug/L	1.5	5.9
2/11/2008 10:20	Blanks	Priority Organic Pollutants	2,4,6-Trichlorophenol	0.98	U	ug/L	0.98	3.9
2/11/2008 10:20	Blanks	Priority Organic Pollutants	2,4-Dimethylphenol	9.8	U	ug/L	9.8	39
2/11/2008 10:20	Blanks	Priority Organic Pollutants	2,6-Dinitrotoluene	0.98	U	ug/L	0.98	3.9
2/11/2008 10:20	Blanks	Priority Organic Pollutants	2-Chloronaphthalene	0.98	U	ug/L	0.98	3.9
2/11/2008 10:20	Blanks	Priority Organic Pollutants	Di-n-octyl phthalate	0.98	U	ug/L	0.98	3.9
2/11/2008 10:20	Blanks	Priority Organic Pollutants	Diethyl phthalate	0.98	U	ug/L	0.98	3.9
2/11/2008 10:20	Blanks	Priority Organic Pollutants	Endosulfan sulfate	1.5	U	ug/L	1.5	5.9
2/11/2008 10:20	Blanks	Priority Organic Pollutants	Endrin aldehyde	3.9	UJ	ug/L	3.9	16
2/11/2008 10:20	Blanks	Priority Organic Pollutants	gamma-BHC	1.5	U	ug/L	1.5	5.9
2/11/2008 10:20	Blanks	Priority Organic Pollutants	1,2,4-Trichlorobenzene	0.98	U	ug/L	0.98	3.9
2/11/2008 10:20	Blanks	Priority Organic Pollutants	2,4-Dinitrotoluene	0.98	U	ug/L	0.98	3.9
2/11/2008 10:20	Blanks	Priority Organic Pollutants	4,4'-DDE	1.5	U	ug/L	1.5	5.9

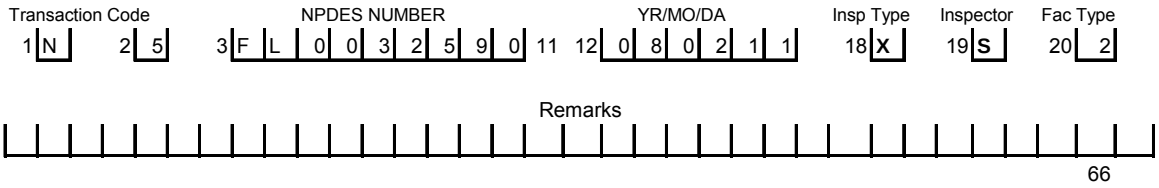
The Bioassay of Mosaic Fertilizer, L.L.C. - Hopewell Mine effluent sampled on February 11, 2008. NPDES #FL0032590.

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



The Priority Pollutants Analysis of Mosaic Fertilizer, L.L.C. - Hopewell Mine effluent sampled on February 11, 2008. NPDES #FL0032590.

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



Biological Analyses of Mosaic Fertilizer, L.L.C. - Hopewell Mine effluent sampled on February 11, 2008. NPDES #FL0032590.

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

