

Bioassays of

Mead Westvaco Corporation-Lake City

Columbia County

NPDES #FL0038300

Sampled May 16, 2005

July 2005

Biology Section
Bureau of Laboratories
Division of Resource Assessment and Management

Quality Manual No. 870346G
NELAC Certification No. E31780

Mead Westvaco Corporation-Lake City, State Road 100 and US 90, Lake City, Columbia County, Florida, NPDES #FL0038300. Effluent samples for this facility were collected on May 16, 2005.

Introduction

The Mead Westvaco Corporation-Lake City facility was formerly known as the Westvaco Corporation (ownership transferred April 17, 2002). The facility produced an adhesive for printing ink prior to cessation of manufacturing operations in 1986. The current NPDES permit is for the discharge associated with a groundwater remediation system. The estimated average flow in the permit is 0.048 million gallons per day (MGD). The average flow from April 2004 through March 2005 was 0.043 MGD. The groundwater at the site is contaminated with volatile organic chemicals. Groundwater pumped from the seventeen (17) recovery wells is processed through an air stripper prior to being discharged through Outfall D-001 (approximate location Latitude 30º11'08" N and Longitude 82º36'11" W) into an unnamed drainage ditch thence into the Class III freshwaters of Alligator Creek, and ultimately into Alligator Lake.

Chlorination of wastewater is not authorized by the permit. The facility has a mixing zone for total recoverable iron (granted with the April 17, 2002, permit revision). The mixing zone extends 150 meters (164 yards) downstream from the point of discharge (Outfall D-001) into the unnamed ditch. This facility does not have a toxicity testing requirement (facility information provided by Jeremy RiCharde of FDEP Northeast District).

Methods

Samples were collected from the D-001 NPDES sampling point by Jeremy RiCharde and William Fletcher (FDEP Northeast District) following DEP-SOP-001/01 FS 2400 Wastewater Sampling. All DEP SOP's are available on the web at: http://www.floridadep.org/labs/qa/sops.htm.

The acute screening toxicity tests and algal growth potential test were performed following internal DEP SOP's TA07_01,TA07_02, and TA08_01 through TA08_07. All internal DEP SOP's are available on the web at: http://www.floridadep.org/labs/cgi-bin/sop/biosop.asp.

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

Toxicity Test Results

Tests were performed May 17 - 19, 2005.

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

See Appendix 1 for bioassay bench sheets.

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

Algal Growth Potential

The effluent Algal Growth Potential (AGP) was 0.825 mg dry wt/L of the unicellular green alga, *Pseudokirchneriella subcapitata*, formerly known as *Selenastrum capricornutum*. This value is between the laboratory method detection limit (MDL) and practical quantitation limit (PQL) of 0.300 and 0.900 mg dry wt/L, respectively. Raschke and Shultz (1987) found that AGP values above 5.0 mg dry weight/L represent a “problem” threshold for fresh receiving waters, implying nutrient enrichment. The analytical chemistry suggests that the effluent is phosphorus-limited. Total phosphorus and ortho-phosphate were not detected in chemistry sample; therefore, neither AGP predictions nor nitrogen to phosphorus ratios are calculable.

See Table 1 for AGP results.

Chemistry Results

Total residual chlorine was not measured in the field and was not detected in the bioassay sample in the laboratory. Total ammonia was detected at a concentration of 0.299 mg/L in the bioassay sample in the laboratory. The unionized ammonia concentration in the bioassay sample was < 0.02 mg/L based on calculations using sample parameters taken in the lab. The total ammonia concentration in the sample collected and preserved for chemical analysis was 0.37 mg/L. Based on the pH, salinity and temperature of the effluent as collected, the calculated unionized ammonia concentration was < 0.02 mg/L.

Aluminum and iron were detected in the effluent at levels that comply with Class III freshwater quality criteria. Zinc was detected between the laboratory minimum detection limit (MDL) and practical quantitation limit (PQL). The effluent copper concentration (9.4 µg/L) exceeded the Class III freshwater quality criteria of ≤ 3.3 µg/L for copper (62-302.530(24), F.A.C.).

See Table 2 for results of analytes detected in the effluent, and corresponding limits.

See Appendix 2 for a complete list of chemical analyses performed.

Conclusion

The effluent sample collected from Outfall D-001 for this facility on May 16, 2005, was not acutely toxic to either test species during the 48-hour screening bioassays. The effluent AGP result was less than the "problem” threshold for fresh receiving waters. Copper was detected in the effluent at a concentration that exceeded the Class III freshwater quality criteria.

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. Algal growth potential (AGP; mg dry wt/L) of Pseudokirchneriella subcapitata *for the sample collected from Mead Westvaco Corporation- Lake City on May 16, 2005.*

Location	AGP (measured)	Predicted AGP (TP) ± 20%	Predicted AGP (OP) ± 20%	Inorganic N:P ratio	Total N:P ratio
Effluent Samples	0.825 I	Not Applicable*	Not Applicable*	Not Applicable*	Not Applicable*

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

*Ortho-phosphate and total phosphorus were not detected in the analytical chemistry sample, so predictions could not be made and N:P ratios could not be calculated.

Table 2. Effluent limits, Class III Freshwater Criteria, and chemical data for samples collected from Mead Westvaco Corporation- Lake City on May 16, 2005.

Mead Westvaco Corporation- Lake City NPDES# FL0038300	Class III Freshwater Stds	Effluent Limits	Effluent Samples
Organic Constituents (µg/L)			
Total VOCs	-	200	na
Benzene	≤71.28a	1	na
Metals (µg/L unless otherwise noted)			
Aluminum	-	-	44
Arsenic	≤ 50	-	6 U
Cadmium	≤ 0.4 b	-	0.05 U
Calcium (mg/L)	-	-	8.1
Chromium-III	≤ 32.2 b	-	2 U
Copper	≤ 3.3 b	-	9.4
Iron	≤ 1,000	< 5,000*	303**
Lead	≤ 0.7 b	-	0.27 U
Magnesium (mg/L)	-	-	2.4
Nickel	≤ 18.9 b	-	2 U
Selenium	≤ 5	-	0.5 U
Silver	≤ 0.07	-	0.025 U
Zinc	≤ 43.3 b	-	3.3 I
Nutrients (mg/L)			
Ortho-phosphate	-	-	0.004 U
Total Phosphorus	-	-	0.02 U
Ammonia	-	-	0.37 A
Unionized Ammonia	≤ 0.02	-	0.01 c
Nitrate+Nitrite	-	-	0.75
Total Kjeldahl Nitrogen	-	-	0.7
Organic Nitrogen	-	-	0.33 c
Total Nitrogen	-	-	1.45 c
General Physical and Chemical Parameters			
Dissolved Oxygen (mg/L)	≥ 5	> 5	8.7
pH (S.U.)	6.0-8.5	6.0-8.5	7.8
Conductivity (umhos/cm)	≤ 1,275	-	102
Temperature (C)	-	-	23.9
Flow (MGD)	-	Report	0.048
Hardness (mg/L)	-	-	30.1 c

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

* Limit is at edge of mixing zone.

**Result from effluent sample.

na - an analysis was not performed for this analyte

a - Annual average

b - Value is calculated based on hardness

c - calculated value

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

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

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

FDEP Biology Section - Acute
Bioassay Bench Sheets

Facility: Mead Westvaco Corporation - Lake City

Address: US100 and Baya Avenue

City: Lake City County: Columbia

Contact/District: Jeremy Richards / Northeast

NPDES Permit #: FL 0038300

LIMS Job #: TLH-2005-05-17-33 LIMS Sample #: 836653

Sample Collection: Date: 5-16-05 Time: 11:00

Hold time Start: Date: 5-16-05 Time: 11:00

Comments:

Lims Data Entry: 5-27-05 MF Data Entry Verification: 5-27-05 SP

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

Test Type: ~~Screening~~/Definitive

(Static) Static Renewal / Flow-through

Test Duration: (48) 96 Hours.

Light Intensity : 50 - 100 ft. candles.

Photoperiod : 16 hours light 8 hours dark.

Initial sample handling:

Test 1 validation: SOP TA07-01

Control survival ≥90%: (Yes) No

Temperature Range ≤3°C: (Yes) No

Test 2 validation: SOPM07-02

Control survival ≥90%: (Yes) No

Temperature Range ≤3°C: (Yes) No

PH adjustment : yes (no) Initial pH NaOH N HCl N Drops mL Final pH

Aeration : yes (no) Initial DO: mg/L Final DO: mg/L Duration: minutes Rate: - bubbles/min

Salinity adjusted (Test 1): yes (no) Initial Salinity: Final Salinity: Salts Hypersaline brine

Salinity adjusted (Test 2): yes (no) Initial Salinity: Final Salinity: Salts Hypersaline brine

Dechlorination: yes (no) mL of 0.025N Sodium Thiosulfate per liter of sample. Final TRC

Temperature Range °C

Incubator # 3 Range 23.5-23.9

Room B246: 23.6 - 24.7

Waterbath: N/A

Sample Validation:

Temperature: Shipped ≤6°C (Yes) No Hand Delivered: Cooling (received °C < collected °C) Yes No

Holding Time: ≤36 Hours (Yes) No (Composite-end of collection; grab-when collected; 4 in 24 - time last sample collected)

Investigators' Signatures

Joseph Pinchard

Jenn Danish

Kristin Nicholson

Marshall Faircloth

Mark Wellborn

REVIEWER

Water Quality Parameters	20% DMW	Well Water	Salt Water ASW NSW Test 1	Salt Water ASW NSW Test 2	Moderately Hard Water	Original Sample	Method	Measured by	Verified by
Field Total Residual Cl2 (mg/L):	N/A	N/A	N/A	N/A	N/A	not measured		—	MF
Lab Total Residual Cl2 (mg/L):	<0.03	<0.03				<0.03	HACH	DN	SP
Alkalinity (mg/L as $CaCO_3$):	95	135				32	HACH	SP	DN
Hardness (mg/L as $CaCO_3$):	105	134				33	HACH	SP	DN
Total Ammonia (mg/L as N):	<0.017	<0.017				0.299	DENVER	MF	SP
Salinity (ppth):	<1	<1				<1	YSI Mettler	MF	SP

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Appendix 1. Bench Sheets (continued)

FDEP Biology Section - - Bioassay Bench Sheet
Survival

LIMS Sample #: 836653 Test #: 1 Test Started: Date 5-17-05 Time: 1400
Organism: C. dubia Test Ended: Date 5-19-05 Time: 1240
Organism Batch: 15-05 Diluent/ Batch: DMW / 14-05
Organism Age: <24 hrs Food: YCT P. subcapitata Artemia
Chamber Size 30 mL Batch: 2-05 1-05
Test Volume 20 mL Feeding: Prior to test Prior to renewal - Daily

Concentration	Replicate	Chamber #	Test Hour 0 hr	24 hr	48 hr BR	48 hr AR	72 hr	96 hr
CTRL	A	A	5	5	5			
	B	B	5	5	5			
	C	C	5	5	5			
	D	D	5	5	4 1m			
~~6.25~~ 100%	A	A	5	5	5			
	B	B	5	5	5			
	C	C	5	5	5			
	D	D	5	5	5			
Organisms loaded by: SP / Loading verified at 0 hours by: JD	Checked by: DN (initials)			DN	MF			

Comments:

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

Test Results:
% mortality in 100% sample ~~5%~~ Ø (MF mistake; 5% 1 missing, none)
LC_{50}: >100% If Calculated: 95% CI ________ Method: ________

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

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Appendix 1. Bench Sheets (continued)

FDEP Biology Section - - Bioassay Bench Sheet
Survival

LIMS Sample #: 836653 Test #: 2 Test Started: Date 5-17-05 Time: 1400
Organism: C. leedsi Test Ended: Date 5-19-05 Time: 1300
Organism Batch: 13-05 Diluent/ Batch: Well / NA
Organism Age: 11 days Food: YCT P. subcapitata Artemia
Chamber Size 1000 mL Batch: 35138425GB
Test Volume 500 mL Feeding: Prior to test - Prior to renewal - Daily

Concentration	Replicate	Chamber #	Test Hour 0 hr	24 hr	48 hr BR	48 hr AR	72 hr	96 hr
CTRL	A	D1	5	5	5			
	B	D2	5	5	5			
	C	D3	5	5	5			
	D	D4	5	5	5			
100%	A	D5	5	5	5			
	B	D6	5	5	5			
	C	D7	5	5	5			
	D	D8	5	5	5			
Organisms loaded by: JD		Checked by:	[redacted]	JD	JD			

Loading verified at 0 hours by: JH (initials)

Comments:

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

Test Results:

% mortality in 100% sample Ø

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

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

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

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Appendix 1. Bench Sheets (continued)

Bioassay Parameters

LIMS Sample #: 836053 Test #: 1 of 2

TEST SOP: TA07 01 Test Species: (Ceriodaphnia dubia) Cyprinella lootsi Pimephales promelas Americamysis bahia Menidia beryllina Other:

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Concentration CTRL	0 Hr.	24 Hr.	48 Hr. before renewal	48 Hr. after renewal	72 Hr.	96 Hr.
Replicate	A	(d) B(DW)	B DW			
pH (S.U.)	8.1		8.4			
Temperature °C	24.5		24.3			
Dissolved Oxygen mg/L	7.8		7.5			
Conductivity ~~µmhos~~ mmhos	176		240			
(initials) Measured by:	SF	DN	DN			
(initials) Recorded by:	SF	DN	DN			

Comments: (d) No parameters measured @ 24 hrs. DW. 5/18/04 Entry error.

Concentration 100%	0 Hr.	24 Hr.	48 Hr. before renewal	48 Hr. after renewal	72 Hr.	96 Hr.
Replicate	A	(d) B(DW)	B			
pH (S.U.)	7.5		7.8			
Temperature °C	24.4		24.3			
Dissolved Oxygen mg/L	8.0		7.6			
Conductivity ~~µmhos~~ mmhos	95.8		140			
(initials) Measured by:	SP	DN	DN			
(initials) Recorded by:	SF	DN	DN			

Comments:

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

Comments:

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

Comments:

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Bioassay Parameters

LIMS Sample # : 8366053 **Test # :** 2 **of** 2

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

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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.)	7.8	8.2	8.4			
Temperature °C	24.3	24.5	24.2			
Dissolved Oxygen mg/L	7.8	7.2	7.6			
Conductivity (µmhos) mmhos	259	275	275			
(initials) Measured by:	SB	JD	MF / DN			
(initials) Recorded by:	SB	JD	MF / DN			

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.)	7.6	8.1	7.6			
Temperature °C	24.3	24.1	24.4			
Dissolved Oxygen mg/L	8.0	6.8	~~7.6~~ (1)			
Conductivity (µmhos) mmhos	94.8	104.1	105			
(initials) Measured by:	SB	JD	MF / DN			
(initials) Recorded by:	SB	JD	MF / DN			

Comments: (1) D.O. = 7.4 mg/L, 1st value entered was the pH measurement. DN 5/19/05

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

Comments:

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

Comments:

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Appendix 2. Chemical Analyses performed on the effluent from the Mead Westvaco Corporation- Lake City Outfall D-001, sampled on May 16, 2005.

Date Sampled	Field ID	Analysis	Component	Result	Units	Remark	MDL	PQL
5/16/2005 11:00	FINAL EFFLUENT	Bio-AGP/LimNut	Algal Growth Potential	0.825	mg DryWt/L	I	0.3	0.9
5/16/2005 11:00	FINAL EFFLUENT	Bio-Chl-a	Chlorophyll-A, Monochromatic, Water	1.2	ug/L	U	1.2	3.7
5/16/2005 11:00	FINAL EFFLUENT	Bio-Chl-a	Phaeophytin-A, Monochromatic, Water	1.2	ug/L	U	1.2	3.7
5/16/2005 11:00	FINAL EFFLUENT	Bio-Toxicology	Bioassay-Acute-Screen-FW-C.dubia, LC50	100	LC50	L		
5/16/2005 11:00	FINAL EFFLUENT	Bio-Toxicology	Bioassay-Acute-Screen-FW-Fish, LC50	100	LC50	L		
5/16/2005 11:54	EQUIPMENT BLK	BNA-Water	1,2,4-Trichlorobenzene	0.97	ug/L	U	0.97	3.9
5/16/2005 11:54	EQUIPMENT BLK	BNA-Water	1,2-Dichlorobenzene	0.97	ug/L	U	0.97	3.9
5/16/2005 11:54	EQUIPMENT BLK	BNA-Water	1,3-Dichlorobenzene	0.97	ug/L	U	0.97	3.9
5/16/2005 11:54	EQUIPMENT BLK	BNA-Water	1,4-Dichlorobenzene	0.97	ug/L	U	0.97	3.9
5/16/2005 11:54	EQUIPMENT BLK	BNA-Water	2,4,6-Trichlorophenol	0.97	ug/L	U	0.97	3.9
5/16/2005 11:54	EQUIPMENT BLK	BNA-Water	2,4-Dichlorophenol	0.97	ug/L	U	0.97	3.9
5/16/2005 11:54	EQUIPMENT BLK	BNA-Water	2,4-Dimethylphenol	49	ug/L	U	49	190
5/16/2005 11:54	EQUIPMENT BLK	BNA-Water	2,4-Dinitrophenol	15	ug/L	UJ	15	58
5/16/2005 11:54	EQUIPMENT BLK	BNA-Water	2,4-Dinitrotoluene	0.97	ug/L	U	0.97	3.9
5/16/2005 11:54	EQUIPMENT BLK	BNA-Water	2,6-Dinitrotoluene	0.97	ug/L	U	0.97	3.9
5/16/2005 11:54	EQUIPMENT BLK	BNA-Water	2-Chloronaphthalene	0.97	ug/L	U	0.97	3.9
5/16/2005 11:54	EQUIPMENT BLK	BNA-Water	2-Chlorophenol	0.97	ug/L	U	0.97	3.9
5/16/2005 11:54	EQUIPMENT BLK	BNA-Water	2-Methyl-4,6-dinitrophenol	2.9	ug/L	UJ	2.9	12
5/16/2005 11:54	EQUIPMENT BLK	BNA-Water	2-Nitrophenol	0.97	ug/L	U	0.97	3.9
5/16/2005 11:54	EQUIPMENT BLK	BNA-Water	3,3'-Dichlorobenzidine	39	ug/L	UJ	39	160
5/16/2005 11:54	EQUIPMENT BLK	BNA-Water	4,4'-DDD	1.5	ug/L	U	1.5	5.8
5/16/2005 11:54	EQUIPMENT BLK	BNA-Water	4,4'-DDE	1.5	ug/L	U	1.5	5.8
5/16/2005 11:54	EQUIPMENT BLK	BNA-Water	4,4'-DDT	1.5	ug/L	U	1.5	5.8
5/16/2005 11:54	EQUIPMENT BLK	BNA-Water	4-Bromophenyl phenyl ether	0.97	ug/L	U	0.97	3.9
5/16/2005 11:54	EQUIPMENT BLK	BNA-Water	4-Chloro-3-methylphenol	0.97	ug/L	UJ	0.97	3.9
5/16/2005 11:54	EQUIPMENT BLK	BNA-Water	4-Chlorophenyl phenyl ether	1.9	ug/L	U	1.9	7.8
5/16/2005 11:54	EQUIPMENT BLK	BNA-Water	4-Nitrophenol	15	ug/L	U	15	58
5/16/2005 11:54	EQUIPMENT BLK	BNA-Water	Acenaphthene	0.97	ug/L	U	0.97	3.9
5/16/2005 11:54	EQUIPMENT BLK	BNA-Water	Acenaphthylene	0.97	ug/L	U	0.97	3.9
5/16/2005 11:54	EQUIPMENT BLK	BNA-Water	Aldrin	1.5	ug/L	U	1.5	5.8
5/16/2005 11:54	EQUIPMENT BLK	BNA-Water	alpha-BHC	1.5	ug/L	U	1.5	5.8
5/16/2005 11:54	EQUIPMENT BLK	BNA-Water	Anthracene	0.97	ug/L	U	0.97	3.9
5/16/2005 11:54	EQUIPMENT BLK	BNA-Water	Benzidine	97	ug/L	UJ	97	390
5/16/2005 11:54	EQUIPMENT BLK	BNA-Water	Benzo(a)anthracene	0.97	ug/L	U	0.97	3.9

Appendix 2. Chemical Analyses (continued)

Date Sampled	Field ID	Analysis	Component	Result	Units	Remark	MDL	PQL
5/16/2005 11:54	EQUIPMENT BLK	BNA-Water	Benzo(a)pyrene	0.97	ug/L	U	0.97	3.9
5/16/2005 11:54	EQUIPMENT BLK	BNA-Water	Benzo(b)fluoranthene	0.97	ug/L	U	0.97	3.9
5/16/2005 11:54	EQUIPMENT BLK	BNA-Water	Benzo(g,h,i)perylene	0.97	ug/L	U	0.97	3.9
5/16/2005 11:54	EQUIPMENT BLK	BNA-Water	Benzo(k)fluoranthene	0.97	ug/L	U	0.97	3.9
5/16/2005 11:54	EQUIPMENT BLK	BNA-Water	beta-BHC	1.5	ug/L	U	1.5	5.8
5/16/2005 11:54	EQUIPMENT BLK	BNA-Water	Bis(2-chloroethoxy)methane	0.97	ug/L	U	0.97	3.9
5/16/2005 11:54	EQUIPMENT BLK	BNA-Water	Bis(2-chloroethyl)ether	0.97	ug/L	U	0.97	3.9
5/16/2005 11:54	EQUIPMENT BLK	BNA-Water	Bis(2-chloroisopropyl)ether	2.9	ug/L	UJ	2.9	12
5/16/2005 11:54	EQUIPMENT BLK	BNA-Water	Bis(2-ethylhexyl)phthalate	15	ug/L	U	15	58
5/16/2005 11:54	EQUIPMENT BLK	BNA-Water	Butyl benzyl phthalate	4.9	ug/L	U	4.9	19
5/16/2005 11:54	EQUIPMENT BLK	BNA-Water	Chrysene	0.97	ug/L	U	0.97	3.9
5/16/2005 11:54	EQUIPMENT BLK	BNA-Water	delta-BHC	1.5	ug/L	U	1.5	5.8
5/16/2005 11:54	EQUIPMENT BLK	BNA-Water	Dibenzo(a,h)anthracene	0.97	ug/L	U	0.97	3.9
5/16/2005 11:54	EQUIPMENT BLK	BNA-Water	Dieldrin	1.5	ug/L	U	1.5	5.8
5/16/2005 11:54	EQUIPMENT BLK	BNA-Water	Diethyl phthalate	0.97	ug/L	U	0.97	3.9
5/16/2005 11:54	EQUIPMENT BLK	BNA-Water	Dimethyl phthalate	49	ug/L	U	49	190
5/16/2005 11:54	EQUIPMENT BLK	BNA-Water	Di-n-butyl phthalate	4.9	ug/L	U	4.9	19
5/16/2005 11:54	EQUIPMENT BLK	BNA-Water	Di-n-octyl phthalate	0.97	ug/L	U	0.97	3.9
5/16/2005 11:54	EQUIPMENT BLK	BNA-Water	Endosulfan I	3.9	ug/L	U	3.9	16
5/16/2005 11:54	EQUIPMENT BLK	BNA-Water	Endosulfan II	3.9	ug/L	U	3.9	16
5/16/2005 11:54	EQUIPMENT BLK	BNA-Water	Endosulfan sulfate	1.5	ug/L	U	1.5	5.8
5/16/2005 11:54	EQUIPMENT BLK	BNA-Water	Endrin	1.5	ug/L	U	1.5	5.8
5/16/2005 11:54	EQUIPMENT BLK	BNA-Water	Endrin aldehyde	3.9	ug/L	U	3.9	16
5/16/2005 11:54	EQUIPMENT BLK	BNA-Water	Fluoranthene	0.97	ug/L	U	0.97	3.9
5/16/2005 11:54	EQUIPMENT BLK	BNA-Water	Fluorene	0.97	ug/L	U	0.97	3.9
5/16/2005 11:54	EQUIPMENT BLK	BNA-Water	gamma-BHC	1.5	ug/L	U	1.5	5.8
5/16/2005 11:54	EQUIPMENT BLK	BNA-Water	Heptachlor	1.5	ug/L	U	1.5	5.8
5/16/2005 11:54	EQUIPMENT BLK	BNA-Water	Heptachlor epoxide	1.5	ug/L	U	1.5	5.8
5/16/2005 11:54	EQUIPMENT BLK	BNA-Water	Hexachlorobenzene	0.97	ug/L	U	0.97	3.9
5/16/2005 11:54	EQUIPMENT BLK	BNA-Water	Hexachlorobutadiene	2.9	ug/L	U	2.9	12
5/16/2005 11:54	EQUIPMENT BLK	BNA-Water	Hexachlorocyclopentadiene	2.9	ug/L	UJ	2.9	12
5/16/2005 11:54	EQUIPMENT BLK	BNA-Water	Hexachloroethane	2.9	ug/L	UJ	2.9	12
5/16/2005 11:54	EQUIPMENT BLK	BNA-Water	Indeno(1,2,3-cd)pyrene	0.97	ug/L	U	0.97	3.9
5/16/2005 11:54	EQUIPMENT BLK	BNA-Water	Isophorone	0.97	ug/L	U	0.97	3.9
5/16/2005 11:54	EQUIPMENT BLK	BNA-Water	Naphthalene	0.97	ug/L	U	0.97	3.9
5/16/2005 11:54	EQUIPMENT BLK	BNA-Water	Nitrobenzene	1.9	ug/L	U	1.9	7.8
5/16/2005 11:54	EQUIPMENT BLK	BNA-Water	N-Nitrosodimethylamine	1.9	ug/L	U	1.9	7.8
5/16/2005 11:54	EQUIPMENT BLK	BNA-Water	N-Nitrosodi-n-propylamine	1.9	ug/L	UJ	1.9	7.8

Appendix 2. Chemical Analyses (continued)

Date Sampled	Field ID	Analysis	Component	Result	Units	Remark	MDL	PQL
5/16/2005 11:54	EQUIPMENT BLK	BNA-Water	N-Nitrosodiphenylamine	2.9	ug/L	UJ	2.9	12
5/16/2005 11:54	EQUIPMENT BLK	BNA-Water	Pentachlorophenol	2.9	ug/L	U	2.9	12
5/16/2005 11:54	EQUIPMENT BLK	BNA-Water	Phenanthrene	0.97	ug/L	U	0.97	3.9
5/16/2005 11:54	EQUIPMENT BLK	BNA-Water	Phenol	0.97	ug/L	UJ	0.97	3.9
5/16/2005 11:54	EQUIPMENT BLK	BNA-Water	Pyrene	0.97	ug/L	U	0.97	3.9
5/16/2005 11:00	FINAL EFFLUENT	BNA-Water	1,2,4-Trichlorobenzene	1	ug/L	U	1	4
5/16/2005 11:00	FINAL EFFLUENT	BNA-Water	1,2-Dichlorobenzene	1	ug/L	U	1	4
5/16/2005 11:00	FINAL EFFLUENT	BNA-Water	1,3-Dichlorobenzene	1	ug/L	U	1	4
5/16/2005 11:00	FINAL EFFLUENT	BNA-Water	1,4-Dichlorobenzene	1	ug/L	U	1	4
5/16/2005 11:00	FINAL EFFLUENT	BNA-Water	2,4,6-Trichlorophenol	1	ug/L	U	1	4
5/16/2005 11:00	FINAL EFFLUENT	BNA-Water	2,4-Dichlorophenol	1	ug/L	U	1	4
5/16/2005 11:00	FINAL EFFLUENT	BNA-Water	2,4-Dimethylphenol	50	ug/L	U	50	200
5/16/2005 11:00	FINAL EFFLUENT	BNA-Water	2,4-Dinitrophenol	15	ug/L	UJ	15	60
5/16/2005 11:00	FINAL EFFLUENT	BNA-Water	2,4-Dinitrotoluene	1	ug/L	U	1	4
5/16/2005 11:00	FINAL EFFLUENT	BNA-Water	2,6-Dinitrotoluene	1	ug/L	U	1	4
5/16/2005 11:00	FINAL EFFLUENT	BNA-Water	2-Chloronaphthalene	1	ug/L	U	1	4
5/16/2005 11:00	FINAL EFFLUENT	BNA-Water	2-Chlorophenol	1	ug/L	U	1	4
5/16/2005 11:00	FINAL EFFLUENT	BNA-Water	2-Methyl-4,6-dinitrophenol	3	ug/L	UJ	3	12
5/16/2005 11:00	FINAL EFFLUENT	BNA-Water	2-Nitrophenol	1	ug/L	U	1	4
5/16/2005 11:00	FINAL EFFLUENT	BNA-Water	3,3'-Dichlorobenzidine	40	ug/L	UJ	40	160
5/16/2005 11:00	FINAL EFFLUENT	BNA-Water	4,4'-DDD	1.5	ug/L	U	1.5	6
5/16/2005 11:00	FINAL EFFLUENT	BNA-Water	4,4'-DDE	1.5	ug/L	U	1.5	6
5/16/2005 11:00	FINAL EFFLUENT	BNA-Water	4,4'-DDT	1.5	ug/L	U	1.5	6
5/16/2005 11:00	FINAL EFFLUENT	BNA-Water	4-Bromophenyl phenyl ether	1	ug/L	U	1	4
5/16/2005 11:00	FINAL EFFLUENT	BNA-Water	4-Chloro-3-methylphenol	1	ug/L	UJ	1	4
5/16/2005 11:00	FINAL EFFLUENT	BNA-Water	4-Chlorophenyl phenyl ether	2	ug/L	U	2	8
5/16/2005 11:00	FINAL EFFLUENT	BNA-Water	4-Nitrophenol	15	ug/L	U	15	60
5/16/2005 11:00	FINAL EFFLUENT	BNA-Water	Acenaphthene	1	ug/L	U	1	4
5/16/2005 11:00	FINAL EFFLUENT	BNA-Water	Acenaphthylene	1	ug/L	U	1	4
5/16/2005 11:00	FINAL EFFLUENT	BNA-Water	Aldrin	1.5	ug/L	U	1.5	6
5/16/2005 11:00	FINAL EFFLUENT	BNA-Water	alpha-BHC	1.5	ug/L	U	1.5	6
5/16/2005 11:00	FINAL EFFLUENT	BNA-Water	Anthracene	1	ug/L	U	1	4
5/16/2005 11:00	FINAL EFFLUENT	BNA-Water	Benzidine	100	ug/L	UJ	100	400
5/16/2005 11:00	FINAL EFFLUENT	BNA-Water	Benzo(a)anthracene	1	ug/L	U	1	4
5/16/2005 11:00	FINAL EFFLUENT	BNA-Water	Benzo(a)pyrene	1	ug/L	U	1	4
5/16/2005 11:00	FINAL EFFLUENT	BNA-Water	Benzo(b)fluoranthene	1	ug/L	U	1	4
5/16/2005 11:00	FINAL EFFLUENT	BNA-Water	Benzo(g,h,i)perylene	1	ug/L	U	1	4
5/16/2005 11:00	FINAL EFFLUENT	BNA-Water	Benzo(k)fluoranthene	1	ug/L	U	1	4

Appendix 2. Chemical Analyses (continued)

Date Sampled	Field ID	Analysis	Component	Result	Units	Remark	MDL	PQL
5/16/2005 11:00	FINAL EFFLUENT	BNA-Water	beta-BHC	1.5	ug/L	U	1.5	6
5/16/2005 11:00	FINAL EFFLUENT	BNA-Water	Bis(2-chloroethoxy)methane	1	ug/L	U	1	4
5/16/2005 11:00	FINAL EFFLUENT	BNA-Water	Bis(2-chloroethyl)ether	1	ug/L	U	1	4
5/16/2005 11:00	FINAL EFFLUENT	BNA-Water	Bis(2-chloroisopropyl)ether	3	ug/L	UJ	3	12
5/16/2005 11:00	FINAL EFFLUENT	BNA-Water	Bis(2-ethylhexyl)phthalate	15	ug/L	U	15	60
5/16/2005 11:00	FINAL EFFLUENT	BNA-Water	Butyl benzyl phthalate	5	ug/L	U	5	20
5/16/2005 11:00	FINAL EFFLUENT	BNA-Water	Chrysene	1	ug/L	U	1	4
5/16/2005 11:00	FINAL EFFLUENT	BNA-Water	delta-BHC	1.5	ug/L	U	1.5	6
5/16/2005 11:00	FINAL EFFLUENT	BNA-Water	Dibenzo(a,h)anthracene	1	ug/L	U	1	4
5/16/2005 11:00	FINAL EFFLUENT	BNA-Water	Dieldrin	1.5	ug/L	U	1.5	6
5/16/2005 11:00	FINAL EFFLUENT	BNA-Water	Diethyl phthalate	1	ug/L	U	1	4
5/16/2005 11:00	FINAL EFFLUENT	BNA-Water	Dimethyl phthalate	50	ug/L	U	50	200
5/16/2005 11:00	FINAL EFFLUENT	BNA-Water	Di-n-butyl phthalate	5	ug/L	U	5	20
5/16/2005 11:00	FINAL EFFLUENT	BNA-Water	Di-n-octyl phthalate	1	ug/L	U	1	4
5/16/2005 11:00	FINAL EFFLUENT	BNA-Water	Endosulfan I	4	ug/L	U	4	16
5/16/2005 11:00	FINAL EFFLUENT	BNA-Water	Endosulfan II	4	ug/L	U	4	16
5/16/2005 11:00	FINAL EFFLUENT	BNA-Water	Endosulfan sulfate	1.5	ug/L	U	1.5	6
5/16/2005 11:00	FINAL EFFLUENT	BNA-Water	Endrin	1.5	ug/L	U	1.5	6
5/16/2005 11:00	FINAL EFFLUENT	BNA-Water	Endrin aldehyde	4	ug/L	U	4	16
5/16/2005 11:00	FINAL EFFLUENT	BNA-Water	Fluoranthene	1	ug/L	U	1	4
5/16/2005 11:00	FINAL EFFLUENT	BNA-Water	Fluorene	1	ug/L	U	1	4
5/16/2005 11:00	FINAL EFFLUENT	BNA-Water	gamma-BHC	1.5	ug/L	U	1.5	6
5/16/2005 11:00	FINAL EFFLUENT	BNA-Water	Heptachlor	1.5	ug/L	U	1.5	6
5/16/2005 11:00	FINAL EFFLUENT	BNA-Water	Heptachlor epoxide	1.5	ug/L	U	1.5	6
5/16/2005 11:00	FINAL EFFLUENT	BNA-Water	Hexachlorobenzene	1	ug/L	U	1	4
5/16/2005 11:00	FINAL EFFLUENT	BNA-Water	Hexachlorobutadiene	3	ug/L	U	3	12
5/16/2005 11:00	FINAL EFFLUENT	BNA-Water	Hexachlorocyclopentadiene	3	ug/L	UJ	3	12
5/16/2005 11:00	FINAL EFFLUENT	BNA-Water	Hexachloroethane	3	ug/L	UJ	3	12
5/16/2005 11:00	FINAL EFFLUENT	BNA-Water	Indeno(1,2,3-cd)pyrene	1	ug/L	U	1	4
5/16/2005 11:00	FINAL EFFLUENT	BNA-Water	Isophorone	1	ug/L	U	1	4
5/16/2005 11:00	FINAL EFFLUENT	BNA-Water	Naphthalene	1	ug/L	U	1	4
5/16/2005 11:00	FINAL EFFLUENT	BNA-Water	Nitrobenzene	2	ug/L	U	2	8
5/16/2005 11:00	FINAL EFFLUENT	BNA-Water	N-Nitrosodimethylamine	2	ug/L	U	2	8
5/16/2005 11:00	FINAL EFFLUENT	BNA-Water	N-Nitrosodi-n-propylamine	2	ug/L	UJ	2	8
5/16/2005 11:00	FINAL EFFLUENT	BNA-Water	N-Nitrosodiphenylamine	3	ug/L	UJ	3	12
5/16/2005 11:00	FINAL EFFLUENT	BNA-Water	Pentachlorophenol	3	ug/L	U	3	12
5/16/2005 11:00	FINAL EFFLUENT	BNA-Water	Phenanthrene	1	ug/L	U	1	4
5/16/2005 11:00	FINAL EFFLUENT	BNA-Water	Phenol	1	ug/L	UJ	1	4

Appendix 2. Chemical Analyses (continued)

Date Sampled	Field ID	Analysis	Component	Result	Units	Remark	MDL	PQL
5/16/2005 11:00	FINAL EFFLUENT	BNA-Water	Pyrene	1	ug/L	U	1	4
5/16/2005 11:54	EQUIPMENT BLK	GC-Water	Alachlor	0.58	ug/L	U	0.58	2.3
5/16/2005 11:54	EQUIPMENT BLK	GC-Water	Ametryn	0.048	ug/L	U	0.048	0.19
5/16/2005 11:54	EQUIPMENT BLK	GC-Water	Atrazine	0.048	ug/L	U	0.048	0.19
5/16/2005 11:54	EQUIPMENT BLK	GC-Water	Azinphos Methyl	0.048	ug/L	U	0.048	0.19
5/16/2005 11:54	EQUIPMENT BLK	GC-Water	Bromacil	0.19	ug/L	U	0.19	0.76
5/16/2005 11:54	EQUIPMENT BLK	GC-Water	Butylate	0.19	ug/L	U	0.19	0.76
5/16/2005 11:54	EQUIPMENT BLK	GC-Water	Chlorpyrifos Ethyl	0.048	ug/L	U	0.048	0.19
5/16/2005 11:54	EQUIPMENT BLK	GC-Water	Chlorpyrifos Methyl	0.096	ug/L	U	0.096	0.38
5/16/2005 11:54	EQUIPMENT BLK	GC-Water	Diazinon	0.048	ug/L	UJ	0.048	0.19
5/16/2005 11:54	EQUIPMENT BLK	GC-Water	Ethion	0.048	ug/L	U	0.048	0.19
5/16/2005 11:54	EQUIPMENT BLK	GC-Water	Ethoprop	0.096	ug/L	U	0.096	0.38
5/16/2005 11:54	EQUIPMENT BLK	GC-Water	Fenamiphos	0.19	ug/L	U	0.19	0.76
5/16/2005 11:54	EQUIPMENT BLK	GC-Water	Fonofos	0.096	ug/L	U	0.096	0.38
5/16/2005 11:54	EQUIPMENT BLK	GC-Water	Hexazinone	0.096	ug/L	U	0.096	0.38
5/16/2005 11:54	EQUIPMENT BLK	GC-Water	Malathion	0.14	ug/L	UJ	0.14	0.56
5/16/2005 11:54	EQUIPMENT BLK	GC-Water	Metalaxyl	0.24	ug/L	U	0.24	0.96
5/16/2005 11:54	EQUIPMENT BLK	GC-Water	Metolachlor	0.48	ug/L	U	0.48	1.9
5/16/2005 11:54	EQUIPMENT BLK	GC-Water	Metribuzin	0.096	ug/L	U	0.096	0.38
5/16/2005 11:54	EQUIPMENT BLK	GC-Water	Mevinphos	0.19	ug/L	U	0.19	0.76
5/16/2005 11:54	EQUIPMENT BLK	GC-Water	Naled	0.77	ug/L	U	0.77	3.1
5/16/2005 11:54	EQUIPMENT BLK	GC-Water	Norflurazon	0.096	ug/L	U	0.096	0.38
5/16/2005 11:54	EQUIPMENT BLK	GC-Water	Parathion Ethyl	0.14	ug/L	U	0.14	0.56
5/16/2005 11:54	EQUIPMENT BLK	GC-Water	Parathion Methyl	0.096	ug/L	U	0.096	0.38
5/16/2005 11:54	EQUIPMENT BLK	GC-Water	Phorate	0.048	ug/L	U	0.048	0.19
5/16/2005 11:54	EQUIPMENT BLK	GC-Water	Prometryn	0.14	ug/L	U	0.14	0.56
5/16/2005 11:54	EQUIPMENT BLK	GC-Water	Simazine	0.048	ug/L	U	0.048	0.19
5/16/2005 11:00	FINAL EFFLUENT	GC-Water	Alachlor	0.58	ug/L	U	0.58	2.3
5/16/2005 11:00	FINAL EFFLUENT	GC-Water	Ametryn	0.049	ug/L	U	0.049	0.2
5/16/2005 11:00	FINAL EFFLUENT	GC-Water	Atrazine	0.049	ug/L	U	0.049	0.2
5/16/2005 11:00	FINAL EFFLUENT	GC-Water	Azinphos Methyl	0.049	ug/L	U	0.049	0.2
5/16/2005 11:00	FINAL EFFLUENT	GC-Water	Bromacil	0.19	ug/L	U	0.19	0.76
5/16/2005 11:00	FINAL EFFLUENT	GC-Water	Butylate	0.19	ug/L	U	0.19	0.76
5/16/2005 11:00	FINAL EFFLUENT	GC-Water	Chlorpyrifos Ethyl	0.049	ug/L	U	0.049	0.2
5/16/2005 11:00	FINAL EFFLUENT	GC-Water	Chlorpyrifos Methyl	0.097	ug/L	U	0.097	0.39
5/16/2005 11:00	FINAL EFFLUENT	GC-Water	Diazinon	0.049	ug/L	UJ	0.049	0.2
5/16/2005 11:00	FINAL EFFLUENT	GC-Water	Ethion	0.049	ug/L	U	0.049	0.2
5/16/2005 11:00	FINAL EFFLUENT	GC-Water	Ethoprop	0.097	ug/L	U	0.097	0.39

Appendix 2. Chemical Analyses (continued)

Date Sampled	Field ID	Analysis	Component	Result	Units	Remark	MDL	PQL
5/16/2005 11:00	FINAL EFFLUENT	GC-Water	Fenamiphos	0.19	ug/L	U	0.19	0.76
5/16/2005 11:00	FINAL EFFLUENT	GC-Water	Fonofos	0.097	ug/L	U	0.097	0.39
5/16/2005 11:00	FINAL EFFLUENT	GC-Water	Hexazinone	0.097	ug/L	U	0.097	0.39
5/16/2005 11:00	FINAL EFFLUENT	GC-Water	Malathion	0.15	ug/L	UJ	0.15	0.6
5/16/2005 11:00	FINAL EFFLUENT	GC-Water	Metalaxyl	0.24	ug/L	U	0.24	0.96
5/16/2005 11:00	FINAL EFFLUENT	GC-Water	Metolachlor	0.49	ug/L	U	0.49	2
5/16/2005 11:00	FINAL EFFLUENT	GC-Water	Metribuzin	0.097	ug/L	U	0.097	0.39
5/16/2005 11:00	FINAL EFFLUENT	GC-Water	Mevinphos	0.19	ug/L	U	0.19	0.76
5/16/2005 11:00	FINAL EFFLUENT	GC-Water	Naled	0.78	ug/L	U	0.78	3.1
5/16/2005 11:00	FINAL EFFLUENT	GC-Water	Norflurazon	0.097	ug/L	U	0.097	0.39
5/16/2005 11:00	FINAL EFFLUENT	GC-Water	Parathion Ethyl	0.15	ug/L	U	0.15	0.6
5/16/2005 11:00	FINAL EFFLUENT	GC-Water	Parathion Methyl	0.097	ug/L	U	0.097	0.39
5/16/2005 11:00	FINAL EFFLUENT	GC-Water	Phorate	0.049	ug/L	U	0.049	0.2
5/16/2005 11:00	FINAL EFFLUENT	GC-Water	Prometryn	0.15	ug/L	U	0.15	0.6
5/16/2005 11:00	FINAL EFFLUENT	GC-Water	Simazine	0.049	ug/L	U	0.049	0.2
5/16/2005 11:54	EQUIPMENT BLK	Metals-Water	Aluminum	5	ug/L	U	5	20
5/16/2005 11:54	EQUIPMENT BLK	Metals-Water	Arsenic	6	ug/L	U	6	24
5/16/2005 11:54	EQUIPMENT BLK	Metals-Water	Cadmium	0.05	ug/L	U	0.05	0.2
5/16/2005 11:54	EQUIPMENT BLK	Metals-Water	Calcium	0.075	mg/L	U	0.075	0.3
5/16/2005 11:54	EQUIPMENT BLK	Metals-Water	Chromium	2	ug/L	U	2	8
5/16/2005 11:54	EQUIPMENT BLK	Metals-Water	Copper	0.5	ug/L	U	0.5	2
5/16/2005 11:54	EQUIPMENT BLK	Metals-Water	Iron	10	ug/L	U	10	40
5/16/2005 11:54	EQUIPMENT BLK	Metals-Water	Lead	0.075	ug/L	U	0.075	0.3
5/16/2005 11:54	EQUIPMENT BLK	Metals-Water	Magnesium	0.02	mg/L	U	0.02	0.08
5/16/2005 11:54	EQUIPMENT BLK	Metals-Water	Nickel	2	ug/L	U	2	8
5/16/2005 11:54	EQUIPMENT BLK	Metals-Water	Selenium	0.5	ug/L	U	0.5	2
5/16/2005 11:54	EQUIPMENT BLK	Metals-Water	Silver	0.025	ug/L	U	0.025	0.1
5/16/2005 11:54	EQUIPMENT BLK	Metals-Water	Zinc	3	ug/L	U	3	12
5/16/2005 11:00	FINAL EFFLUENT	Metals-Water	Aluminum	44	ug/L		5	20
5/16/2005 11:00	FINAL EFFLUENT	Metals-Water	Arsenic	6	ug/L	U	6	24
5/16/2005 11:00	FINAL EFFLUENT	Metals-Water	Cadmium	0.05	ug/L	U	0.05	0.2
5/16/2005 11:00	FINAL EFFLUENT	Metals-Water	Calcium	8.1	mg/L		0.075	0.3
5/16/2005 11:00	FINAL EFFLUENT	Metals-Water	Chromium	2	ug/L	U	2	8
5/16/2005 11:00	FINAL EFFLUENT	Metals-Water	Copper	9.4	ug/L		0.5	2
5/16/2005 11:00	FINAL EFFLUENT	Metals-Water	Iron	303	ug/L		10	40
5/16/2005 11:00	FINAL EFFLUENT	Metals-Water	Lead	0.27	ug/L	U	0.27	1.1
5/16/2005 11:00	FINAL EFFLUENT	Metals-Water	Magnesium	2.4	mg/L		0.02	0.08
5/16/2005 11:00	FINAL EFFLUENT	Metals-Water	Nickel	2	ug/L	U	2	8

Appendix 2. Chemical Analyses (continued)

Date Sampled	Field ID	Analysis	Component	Result	Units	Remark	MDL	PQL
5/16/2005 11:00	FINAL EFFLUENT	Metals-Water	Selenium	0.5	ug/L	U	0.5	2
5/16/2005 11:00	FINAL EFFLUENT	Metals-Water	Silver	0.025	ug/L	U	0.025	0.1
5/16/2005 11:00	FINAL EFFLUENT	Metals-Water	Zinc	3.3	ug/L	I	3	12
5/16/2005 11:54	EQUIPMENT BLK	Nutrients-Liquid	Ammonia-N	0.01	mg N/L	U	0.01	0.02
5/16/2005 11:54	EQUIPMENT BLK	Nutrients-Liquid	Kjeldahl Nitrogen	0.06	mg N/L	U	0.06	0.2
5/16/2005 11:54	EQUIPMENT BLK	Nutrients-Liquid	NO2NO3-N	0.004	mg N/L	U	0.004	0.01
5/16/2005 11:54	EQUIPMENT BLK	Nutrients-Liquid	O-Phosphate-P	0.004	mg P/L	U	0.004	0.01
5/16/2005 11:54	EQUIPMENT BLK	Nutrients-Liquid	Total-P	0.02	mg P/L	U	0.02	0.06
5/16/2005 11:00	FINAL EFFLUENT	Nutrients-Liquid	Ammonia-N	0.37	mg N/L	A	0.05	0.1
5/16/2005 11:00	FINAL EFFLUENT	Nutrients-Liquid	Kjeldahl Nitrogen	0.7	mg N/L		0.06	0.2
5/16/2005 11:00	FINAL EFFLUENT	Nutrients-Liquid	NO2NO3-N	0.75	mg N/L		0.04	0.1
5/16/2005 11:00	FINAL EFFLUENT	Nutrients-Liquid	O-Phosphate-P	0.004	mg P/L	U	0.004	0.01
5/16/2005 11:00	FINAL EFFLUENT	Nutrients-Liquid	Total-P	0.02	mg P/L	U	0.02	0.06

The Bioassay of Mead Westvaco Corporation- Lake City effluent sampled on May 16, 2005, NPDES #FL0038300.

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 8 3 0 0 11	12 0 5 0 5 1 6	18 B	19 S	20 2

Remarks

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The Priority Pollutants Analysis of Mead Westvaco Corporation- Lake City effluent sampled on May 16, 2005, NPDES #FL0038300.

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 8 3 0 0 11	12 0 5 0 5 1 6	18 X	19 S	20 2

Remarks

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Biological Analyses of Mead Westvaco Corporation- Lake City effluent sampled on May 16, 2005, NPDES #FL0038300.

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 8 3 0 0 11	12 0 5 0 5 1 6	18 S	19 S	20 2

Remarks

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