

Bioassays of

City of Clearwater Marshall Street AWWTP

Pinellas County

NPDES #FL0021857

Sampled October 25, 2004

January 2005

Biology Section
Bureau of Laboratories
Division of Resource Assessment and Management

Quality Manual No. 870346G
NELAC Certification No. E31780

City of Clearwater Marshall Street AWWTP, 1605 Harbor Drive, Clearwater, Pinellas County, Florida, NPDES #FL0021857. Effluent samples for this facility were collected on October 25, 2004.

Introduction

The City of Clearwater Marshall Street Advanced Wastewater Treatment Plant (AWWTP) is a domestic wastewater treatment facility with a design flow of 10 million gallons per day (MGD) and a mean flow from July 2003 to July 2004 of 4.72 MGD. The wastewater treatment process includes influent screening, grit removal, primary clarification, a five-stage Bardenpho biological treatment train (includes fermentation basins, anoxic reactors, aeration/nitrification reactors, secondary anoxic basins, re-aeration basins), final clarification, and sand filtration. Chlorine gas is used for disinfection, and sulfur dioxide is used for dechlorination. A portion of the treated effluent is routed through Reuse System R001 and used for irrigation on public-access areas under the City of Clearwater Master Reuse System (FL186261). The remaining effluent is discharged via Outfall D-001 to Stevenson's Creek, thence to the Class III Marine Waters of Clearwater Harbor, an Outstanding Florida Water. The point of discharge in Stevenson's Creek, 20 feet from shore at a depth of 4 feet, is at approximately latitude 27° 58' 58"N, and longitude 82° 47' 15"W. The facility has circular 5 m mixing zones around the D-001 outfall for dichlorobromomethane and chlorodibromomethane (facility information provided by Lori Pillsbury and Michelle Duggan of FDEP Southwest District).

Methods

Samples were collected from the D-001 NPDES sampling point by Lori Pillsbury and Chris Person (FDEP Central 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 48-hr 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. While the 48-hour acute screening toxicity test does not reflect the permit required conditions, the Department uses it to provide reasonable assurance that the facility does not adversely affect waters of the state.

Prior to test initiation, bioassay samples were aerated for 15 minutes at approximately 100 bubbles per minute, to decrease the dissolved oxygen concentration from 9.7mg/L to 7.8 mg/L.

Toxicity Test Results

Tests were performed October 26-28, 2004.

Ceriodaphnia dubia 48-hr acute screening bioassay –	LC_{50} > 100%, 10% 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

Bioassay samples did not show toxicity to the test organisms.

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 89.4 mg dry wt/L of the unicellular green alga, *Pseudokirchneriella subcapitata*, formerly known as *Selenastrum capricornutum*. Raschke and Shultz (1987) found that AGP values above 5.0 mg dry weight/L represent a “problem” threshold for fresh receiving waters, implying nutrient enrichment. The analytical chemistry suggests that the effluent is phosphorus-limited. The predicted AGP values based on inorganic phosphorus concentrations was 51.6 (±20%) mg dry wt/L, respectively (Table 1; Miller et al. 1978). A saltwater AGP test was not performed; however, the freshwater AGP results suggest that nutrient enrichment may be an issue for marine receiving waters.

See Table 1 for AGP results.

Chemistry Results

Total residual chlorine (TRC) was not detected in the field (Table 2). Neither TRC nor total ammonia was detected in the bioassay sample in the laboratory. The total ammonia concentrations in the samples collected and preserved for chemical analysis were 0.048 and 0.048 mg/L, for the grab and composite samples, respectively. Based on the pH, salinity and temperature of the effluent as collected, the calculated unionized ammonia concentrations were < 0.02 mg/L for both samples.

Bromodichloromethane, bromoform, chloroform, dibromochloromethane, aluminum, iron, and lead were detected in the effluent grab samples at levels that comply with Class III fresh water quality criteria. Aluminum, iron, and zinc were detected in the effluent composite samples at levels that comply with Class III fresh water quality criteria. Nickel and zinc were detected in grab samples between the laboratory minimum detection limits (MDL) and practical quantitation limits (PQL). Copper, lead, nickel, and silver were detected in composite samples between the MDL and the PQL.

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 samples collected from D-001 for this facility on October 25, 2004, did not show acute toxicity to either test species during the 48-hour 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) for ortho phosphate (OP)/ total phosphorus limitation of* Pseudokirchneriella subcapitata *for the sample of effluent collected from the City of Clearwater Marshall Street AWWTP on October 25, 2004.*

Location	AGP (measured; mg dry wt/L)	Predicted AGP (OP; mg dry wt/L) ± 20%	Predicted AGP (TP) ± 20%	Inorganic N:P ratio	Total N:P ratio
Effluent Samples	89.4	51.6 ± 10.32	111.8 ± 22.36	18.71	11.58

Table 2. Effluent limits, Class III Marine Criteria, and chemical data for samples collected from the City of Clearwater Marshall Street AWWTP on October 25, 2004.

City of Clearwater Marshall Street AWWTP	Class III Marine Standards	Effluent Grab Limits	Effluent Composite Limits	Effluent Grab Samples	Effluent Composite Samples
Organic Constituents (µg/L)					
Bromodichloromethane	≤ 22	≤ 22 a *	-	20	-
Bromoform	≤ 360	-	-	7.6	-
Chloroform	≤ 470.8	-	-	13	-
Dibromochloromethane	≤ 34	≤ 34 a *	-	28	-
Metals (µg/L unless otherwise noted)					
Aluminum	≤ 1500	-	-	75	91 A
Arsenic	≤ 50	-	-	6 U	6 U
Cadmium	≤ 9.3	-	-	0.075 U	0.075 U
Calcium (mg/L)	-	-	-	73.7	75.8 A
Chromium-III	-	-	-	2 U	2 U
Copper	≤ 3.7	-	≤ 2.9	2.2 U	3.1 I
Iron	≤ 300	-	≤ 300	48	50 A
Lead	≤ 8.5	-	≤ 5.6	0.42	0.1 I
Magnesium (mg/L)	-	-	-	14.7	14.5 A
Nickel	≤ 8.3	-	-	2.7 I	3.2 I
Selenium	≤ 71	-	-	0.5 U	0.5 U
Silver	≤ 2.3	-	≤ 2.3	0.02 U	0.087 I
Zinc	≤ 86	-	≤ 86	11 I	14 A
Nutrients (mg/L)					
Organic Carbon	-	-	-	7.2	-
Ortho-phosphate	-	-	-	0.12	-
Total Phosphorus	-	-	2.0 s, 1.0 a	0.26	0.2
Ammonia	-	-	-	0.045	0.048
Unionized Ammonia	-	-	-	< 0.02 c	< 0.02 c
Nitrate+Nitrite	-	-	-	2.2	1.8
Total Kjeldahl Nitrogen	-	-	-	0.81	0.9
Organic Nitrogen	-	-	-	0.765 c	0.852 c
Total Nitrogen	-	-	6.0 s, 3.0 a	3.01 c	2.7 c
General Physical and Chemical Parameters					
Dissolved Oxygen (mg/L)	≥ 4 s	≥ 7.5 s	-	8.5	-
pH (S.U.)	6.5 - 8.5	6.5 - 8.5	-	7.6	-
Conductivity (umhos/cm)	-	-	-	1298	-
Temperature (C)	-	-	-	28.4	-
CBOD (mg/L)	-	-	10.0 s	No result[#]	No result[#]
TSS (mg/L)	-	-	10.0 s	4 U	4 U
Color (PCU)	-	-	-	10	-
Turbidity (NTU)	≤ 29 t	-	-	0.6	-
Oil and Grease (mg/L)	≤ 5	-	-	0.9 I	-
Total Residual Chlorine (mg/L)	≤ 0.01	≤ 0.01	-	0	-
Hardness (mg/L)	-	-	-	244.6 c	249 c

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

* The facility has mixing zones for these analytes.

[#] Analyses reported as "No result" due to control failure

a - Annual average

c - calculated value

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 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: City of Clearwater Marshall St. AWWTP
Address: 1605 Harbor Drive
City: Clearwater County: Pinellas
Contact/District: Lori Pillsbury / Southwest
NPDES Permit #: FL 0021857
LIMS Job #: TLH-10-26-05 LIMS Sample #: 790897

Sample Collection: Date: 10-25-04 Time: 0600
Hold Time Start: Date: 10-25-04 Time: 0600

Comments: Sample aerated for 15 minutes to reduce DO from 9.7 mg/L. MF 10-27-04

Lims Data Entry: 10-29-04 MF
Data Entry Verification: 10/29/04 DN
Instructions (for below): Circle appropriate wording. If yes is circled complete blanks.
SOP# TA07.01.02
Test Type: (Screen)
(Static) / Static Renewal / Flow-through
Test Duration: (48) 96 Hours.
Light Intensity : 50 - 100 ft. candles.
Photoperiod : 16 hours light 8 hours dark.
Initial sample handling:

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

Test 2 validation:
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: 9.7 mg/L Final DO: 7.8 mg/L Duration: 15 minutes Rate: ~100 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 24.6 - 25.2 °C
Room B246: 23.8 °C - 25.0 °C
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
Lori Nichols
Sarah Pingleton
Marshall Faircloth
Jesse Smith
Robert Wharton
Nicole Wellendorf
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	0.00	—	L. Pillsbury	MF
Lab Total Residual Cl2 (mg/L):	<0.03	<0.03				<0.03	HACH	SP	DN
Alkalinity (mg/L as $CaCO_3$):	77	145				146	HACH	SP	MF
Hardness (mg/L as $CaCO_3$):	88	136				239	HACH	SP	MF
Total Ammonia (mg/L as N):	<0.017	<0.017				<0.017	DENVER	DN	MF
Salinity (ppth):	<1	<1				<1	YSI (Mettler)	MF	DN

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FDEP Biology Section - - Bioassay Bench Sheet
Survival

LIMS Sample #: 790897 Test #: 1 Test Started: Date 10-26-04 Time: 1400
Organism: C. dubia Test Ended: Date 10-28-04 Time: 1400
Organism Batch: 40 Diluent/ Batch: 20% DMW / 38
Organism Age: <24 hr Food: (YCT) (P. subcapitata) Artemia
Chamber Size 30 mL Batch: 5 #37/38
Test Volume 20 mL Feeding: (Prior to test) - Prior to renewal - Daily

Concentration	Replicate	Chamber #	0 hr	24 hr	48 hr BR	48 hr AR	72 hr	96 hr
CTRL	A	A	5	4 1D	4			
	B	B	5	5	4 1D			
	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	3 2D			
Organisms loaded by: MF		Checked by: (initials)	JO	MF	MF			

Loading Verified by: (initials)

Comments:

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

Test Results:

% mortality in 100% sample 10

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

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

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

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FDEP Biology Section - - Bioassay Bench Sheet

Survival

LIMS Sample #: 790 897 **Test #:** 2 **Test Started: Date** 10/26/04 **Time:** 1440

Organism: C. leedsi **Test Ended: Date** 10/28/04 **Time:** 1400

Organism Batch: 26 **Diluent/ Batch:** Well H_2O, NA

Organism Age: 1 days **Food:** YCT *P. subcapitata* *Artemia*

Chamber Size 1000 **mL** **Batch:** 5 #37/38 041254256

Test Volume 500 **mL** **Feeding:** Prior to test - Prior to renewal - Daily

Concentration	Replicate	Chamber #	Test Hour 0 hr	24 hr	48 hr BR	48 hr AR	72 hr	96 hr
CTRL	A	A1	(A) ~~7~~ 5	5	5			
	B	A2	5	5	5			
	C	A3	5	5	5			
	D	A4	5	5	5			
100%	A	A5	5	5	5			
	B	A6	5	5	5			
	C	A7	5	5	5			
	D	A8	5	5	5			
Organisms loaded by: JD		Checked by: (initials)	JD	MF	MF			

Loading Verified by: CP

Comments: (A) initial # recorded

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).

V.1 2/23/04

Bioassay Parameters

LIMS Sample # : 790897 **Test # :** 1 **of** 2

TEST SOP: TA07_ 01 **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			
pH (S.U.)	8.4		8.2			
Temperature °C	24.9		24.5			
Dissolved Oxygen mg/L (A)	7.7 ~~6.9~~		7.5			
Conductivity (µmhos) mmhos	190		211			
(initials) Measured by:	JO/DN		DN			
(initials) Recorded by:	JO/DN		DN			

Comments: (A) D.O. = 7.7 mg/L, The First measurement was made without adjusting for Salinity. DN 10/26/04

Concentration 100%	0 Hr.	24 Hr.	48 Hr. before renewal	48 Hr. after renewal	72 Hr.	96 Hr.
Replicate	A		B			
pH (S.U.)	8.3		8.4			
Temperature °C	24.9		24.0			
Dissolved Oxygen mg/L (B)	7.8 ~~6.9~~		7.4			
Conductivity (µmhos) mmhos	1400		1672			
(initials) Measured by:	JO/DN		DN			
(initials) Recorded by:	JO/DN		DN			

Comments: (B) D.O. = 7.8 mg/L, First measurement made with out adjusting Salinity Knob. DN, 10/26/04

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:

V.1 2/24/04

Bioassay Parameters

LIMS Sample # : 790897 Test # : 2 of 2

TEST SOP: TA07_02 Test Species: *Ceriodaphnia dubia* *Cyprinella leedsi* *Pimephales promelas* *Americamysis bahia* *Menidia beryllina* Other:

V.1 2/24/04

Concentration CTRL	0 Hr.	24 Hr.	48 Hr. before renewal	48 Hr. after renewal	72 Hr.	96 Hr.
Replicate	A	B	C	NOT READ DN		
pH (S.U.)	8.2	8.12	8.1			
Temperature °C	24.9	24.2	24.0			
Dissolved Oxygen mg/L	8.1	7.4	7.3			
Conductivity µmhos mmhos	275	270	292			
(initials) Measured by:	DN	DN	DN/DN			
(initials) Recorded by:	DN	DN	DN/DN			

Comments:

Concentration 100%	0 Hr.	24 Hr.	48 Hr. before renewal	48 Hr. after renewal	72 Hr.	96 Hr.
Replicate	A	B	C	NOT READ MC		
pH (S.U.)	8.3	8.11	8.2			
Temperature °C	25.2	24.2	24.1			
Dissolved Oxygen mg/L	7.8	7.4	7.3			
Conductivity µmhos mmhos	1385	1306	1463			
(initials) Measured by:	DN	DN	DN/DN			
(initials) Recorded by:	DN	DN	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:

V.1 2/24/04

Appendix 2. Chemical Analyses performed on the effluent from the City of Clearwater Marshall Street AWWTP Outfall D-001, sampled on October 25, 2004.

Date Sampled	Field ID	Analysis Group	Component	Result	Units	Remark	MDL	PQL
10/25/2004 10:00	31139	Bio-AGP/LimNut	Algal Growth Potential	89.4	mg DryWt/L		0.3	0.9
10/25/2004 10:00	31139	Bio-BOD	Biochemical Oxygen Demand-5 Day,N-Inhib	No Result			mg/L	
10/25/2004 6:00	31141	Bio-BOD	Biochemical Oxygen Demand-5 Day,N-Inhib	No Result			mg/L	
10/25/2004 10:00	31139	Bio-Chl-a	Chlorophyll-A, Monochromatic, Water	0.85	ug/L	U	0.85	2.6
10/25/2004 10:00	31139	Bio-Chl-a	Phaeophytin-A, Monochromatic, Water	0.85	ug/L	U	0.85	2.6
10/25/2004 6:00	31140	Bio-Toxicology	Bioassay-Acute-Screen-FW-C.dubia, LC50	100	LC50	L		
10/25/2004 6:00	31140	Bio-Toxicology	Bioassay-Acute-Screen-FW-Fish, LC50	100	LC50	L		
10/25/2004 10:00	31139	BNA-Water	1,2,4-Trichlorobenzene	1	ug/L	U	1	4.1
10/25/2004 10:00	31139	BNA-Water	1,2-Dichlorobenzene	1	ug/L	U	1	4.1
10/25/2004 10:00	31139	BNA-Water	1,3-Dichlorobenzene	1	ug/L	U	1	4.1
10/25/2004 10:00	31139	BNA-Water	1,4-Dichlorobenzene	1	ug/L	U	1	4.1
10/25/2004 10:00	31139	BNA-Water	2,4,6-Trichlorophenol	1	ug/L	U	1	4.1
10/25/2004 10:00	31139	BNA-Water	2,4-Dichlorophenol	1	ug/L	U	1	4.1
10/25/2004 10:00	31139	BNA-Water	2,4-Dimethylphenol	51	ug/L	U	51	200
10/25/2004 10:00	31139	BNA-Water	2,4-Dinitrophenol	15	ug/L	U	15	61
10/25/2004 10:00	31139	BNA-Water	2,4-Dinitrotoluene	1	ug/L	U	1	4.1
10/25/2004 10:00	31139	BNA-Water	2,6-Dinitrotoluene	1	ug/L	U	1	4.1
10/25/2004 10:00	31139	BNA-Water	2-Chloronaphthalene	1	ug/L	U	1	4.1
10/25/2004 10:00	31139	BNA-Water	2-Chlorophenol	1	ug/L	U	1	4.1
10/25/2004 10:00	31139	BNA-Water	2-Methyl-4,6-dinitrophenol	3.1	ug/L	U	3.1	12
10/25/2004 10:00	31139	BNA-Water	2-Nitrophenol	1	ug/L	U	1	4.1
10/25/2004 10:00	31139	BNA-Water	3,3'-Dichlorobenzidine	41	ug/L	U	41	160
10/25/2004 10:00	31139	BNA-Water	4,4'-DDD	1.5	ug/L	U	1.5	6.1
10/25/2004 10:00	31139	BNA-Water	4,4'-DDE	1.5	ug/L	U	1.5	6.1
10/25/2004 10:00	31139	BNA-Water	4,4'-DDT	1.5	ug/L	U	1.5	6.1
10/25/2004 10:00	31139	BNA-Water	4-Bromophenyl phenyl ether	1	ug/L	U	1	4.1
10/25/2004 10:00	31139	BNA-Water	4-Chloro-3-methylphenol	1	ug/L	U	1	4.1
10/25/2004 10:00	31139	BNA-Water	4-Chlorophenyl phenyl ether	2	ug/L	U	2	8.2
10/25/2004 10:00	31139	BNA-Water	4-Nitrophenol	15	ug/L	U	15	61
10/25/2004 10:00	31139	BNA-Water	Acenaphthene	1	ug/L	U	1	4.1
10/25/2004 10:00	31139	BNA-Water	Acenaphthylene	1	ug/L	U	1	4.1
10/25/2004 10:00	31139	BNA-Water	Aldrin	1.5	ug/L	U	1.5	6.1
10/25/2004 10:00	31139	BNA-Water	Anthracene	1	ug/L	U	1	4.1
10/25/2004 10:00	31139	BNA-Water	Benzidine	100	ug/L	U	100	410
10/25/2004 10:00	31139	BNA-Water	Benzo(a)anthracene	1	ug/L	U	1	4.1
10/25/2004 10:00	31139	BNA-Water	Benzo(a)pyrene	1	ug/L	U	1	4.1
10/25/2004 10:00	31139	BNA-Water	Benzo(b)fluoranthene	1	ug/L	U	1	4.1
10/25/2004 10:00	31139	BNA-Water	Benzo(g,h,i)perylene	1	ug/L	U	1	4.1
10/25/2004 10:00	31139	BNA-Water	Benzo(k)fluoranthene	1	ug/L	U	1	4.1
10/25/2004 10:00	31139	BNA-Water	Bis(2-chloroethoxy)methane	1	ug/L	U	1	4.1
10/25/2004 10:00	31139	BNA-Water	Bis(2-chloroethyl)ether	1	ug/L	U	1	4.1
10/25/2004 10:00	31139	BNA-Water	Bis(2-chloroisopropyl)ether	3.1	ug/L	U	3.1	12
10/25/2004 10:00	31139	BNA-Water	Bis(2-ethylhexyl)phthalate	15	ug/L	U	15	61
10/25/2004 10:00	31139	BNA-Water	Butyl benzyl phthalate	5.1	ug/L	U	5.1	20
10/25/2004 10:00	31139	BNA-Water	Chrysene	1	ug/L	U	1	4.1
10/25/2004 10:00	31139	BNA-Water	Di-n-butyl phthalate	5.1	ug/L	U	5.1	20
10/25/2004 10:00	31139	BNA-Water	Di-n-octyl phthalate	1	ug/L	U	1	4.1
10/25/2004 10:00	31139	BNA-Water	Dibenzo(a,h)anthracene	1	ug/L	U	1	4.1
10/25/2004 10:00	31139	BNA-Water	Dieldrin	1.5	ug/L	U	1.5	6.1
10/25/2004 10:00	31139	BNA-Water	Diethyl phthalate	1	ug/L	U	1	4.1
10/25/2004 10:00	31139	BNA-Water	Dimethyl phthalate	51	ug/L	U	51	200
10/25/2004 10:00	31139	BNA-Water	Endosulfan I	4.1	ug/L	U	4.1	16
10/25/2004 10:00	31139	BNA-Water	Endosulfan II	4.1	ug/L	U	4.1	16
10/25/2004 10:00	31139	BNA-Water	Endosulfan sulfate	1.5	ug/L	U	1.5	6.1
10/25/2004 10:00	31139	BNA-Water	Endrin	1.5	ug/L	UJ	1.5	6.1
10/25/2004 10:00	31139	BNA-Water	Endrin aldehyde	4.1	ug/L	U	4.1	16
10/25/2004 10:00	31139	BNA-Water	Fluoranthene	1	ug/L	U	1	4.1
10/25/2004 10:00	31139	BNA-Water	Fluorene	1	ug/L	U	1	4.1

10/25/2004 10:00	31139	BNA-Water	Heptachlor	1.5	ug/L	U	1.5	6.1
10/25/2004 10:00	31139	BNA-Water	Heptachlor epoxide	1.5	ug/L	U	1.5	6.1
10/25/2004 10:00	31139	BNA-Water	Hexachlorobenzene	1	ug/L	U	1	4.1
10/25/2004 10:00	31139	BNA-Water	Hexachlorobutadiene	3.1	ug/L	U	3.1	12
10/25/2004 10:00	31139	BNA-Water	Hexachlorocyclopentadiene	3.1	ug/L	U	3.1	12
10/25/2004 10:00	31139	BNA-Water	Hexachloroethane	3.1	ug/L	U	3.1	12
10/25/2004 10:00	31139	BNA-Water	Indeno(1,2,3-cd)pyrene	1	ug/L	U	1	4.1
10/25/2004 10:00	31139	BNA-Water	Isophorone	1	ug/L	U	1	4.1
10/25/2004 10:00	31139	BNA-Water	N-Nitrosodi-n-propylamine	2	ug/L	U	2	8.2
10/25/2004 10:00	31139	BNA-Water	N-Nitrosodimethylamine	2	ug/L	U	2	8.2
10/25/2004 10:00	31139	BNA-Water	N-Nitrosodiphenylamine	3.1	ug/L	U	3.1	12
10/25/2004 10:00	31139	BNA-Water	Naphthalene	1	ug/L	U	1	4.1
10/25/2004 10:00	31139	BNA-Water	Nitrobenzene	2	ug/L	U	2	8.2
10/25/2004 10:00	31139	BNA-Water	Pentachlorophenol	3.1	ug/L	U	3.1	12
10/25/2004 10:00	31139	BNA-Water	Phenanthrene	1	ug/L	U	1	4.1
10/25/2004 10:00	31139	BNA-Water	Phenol	1	ug/L	U	1	4.1
10/25/2004 10:00	31139	BNA-Water	Pyrene	1	ug/L	U	1	4.1
10/25/2004 10:00	31139	BNA-Water	alpha-BHC	1.5	ug/L	U	1.5	6.1
10/25/2004 10:00	31139	BNA-Water	beta-BHC	1.5	ug/L	U	1.5	6.1
10/25/2004 10:00	31139	BNA-Water	delta-BHC	1.5	ug/L	U	1.5	6.1
10/25/2004 10:00	31139	BNA-Water	gamma-BHC	1.5	ug/L	U	1.5	6.1
10/25/2004 10:15	31142	BNA-Water	1,2,4-Trichlorobenzene	0.96	ug/L	U	0.96	3.8
10/25/2004 10:15	31142	BNA-Water	1,2-Dichlorobenzene	0.96	ug/L	U	0.96	3.8
10/25/2004 10:15	31142	BNA-Water	1,3-Dichlorobenzene	0.96	ug/L	U	0.96	3.8
10/25/2004 10:15	31142	BNA-Water	1,4-Dichlorobenzene	0.96	ug/L	U	0.96	3.8
10/25/2004 10:15	31142	BNA-Water	2,4,6-Trichlorophenol	0.96	ug/L	U	0.96	3.8
10/25/2004 10:15	31142	BNA-Water	2,4-Dichlorophenol	0.96	ug/L	U	0.96	3.8
10/25/2004 10:15	31142	BNA-Water	2,4-Dimethylphenol	48	ug/L	U	48	190
10/25/2004 10:15	31142	BNA-Water	2,4-Dinitrophenol	14	ug/L	U	14	58
10/25/2004 10:15	31142	BNA-Water	2,4-Dinitrotoluene	0.96	ug/L	U	0.96	3.8
10/25/2004 10:15	31142	BNA-Water	2,6-Dinitrotoluene	0.96	ug/L	U	0.96	3.8
10/25/2004 10:15	31142	BNA-Water	2-Chloronaphthalene	0.96	ug/L	U	0.96	3.8
10/25/2004 10:15	31142	BNA-Water	2-Chlorophenol	0.96	ug/L	U	0.96	3.8
10/25/2004 10:15	31142	BNA-Water	2-Methyl-4,6-dinitrophenol	2.9	ug/L	U	2.9	12
10/25/2004 10:15	31142	BNA-Water	2-Nitrophenol	0.96	ug/L	U	0.96	3.8
10/25/2004 10:15	31142	BNA-Water	3,3'-Dichlorobenzidine	38	ug/L	U	38	150
10/25/2004 10:15	31142	BNA-Water	4,4'-DDD	1.4	ug/L	U	1.4	5.8
10/25/2004 10:15	31142	BNA-Water	4,4'-DDE	1.4	ug/L	U	1.4	5.8
10/25/2004 10:15	31142	BNA-Water	4,4'-DDT	1.4	ug/L	U	1.4	5.8
10/25/2004 10:15	31142	BNA-Water	4-Bromophenyl phenyl ether	0.96	ug/L	U	0.96	3.8
10/25/2004 10:15	31142	BNA-Water	4-Chloro-3-methylphenol	0.96	ug/L	U	0.96	3.8
10/25/2004 10:15	31142	BNA-Water	4-Chlorophenyl phenyl ether	1.9	ug/L	U	1.9	7.7
10/25/2004 10:15	31142	BNA-Water	4-Nitrophenol	14	ug/L	U	14	58
10/25/2004 10:15	31142	BNA-Water	Acenaphthene	0.96	ug/L	U	0.96	3.8
10/25/2004 10:15	31142	BNA-Water	Acenaphthylene	0.96	ug/L	U	0.96	3.8
10/25/2004 10:15	31142	BNA-Water	Aldrin	1.4	ug/L	U	1.4	5.8
10/25/2004 10:15	31142	BNA-Water	Anthracene	0.96	ug/L	U	0.96	3.8
10/25/2004 10:15	31142	BNA-Water	Benzidine	96	ug/L	U	96	380
10/25/2004 10:15	31142	BNA-Water	Benzo(a)anthracene	0.96	ug/L	U	0.96	3.8
10/25/2004 10:15	31142	BNA-Water	Benzo(a)pyrene	0.96	ug/L	U	0.96	3.8
10/25/2004 10:15	31142	BNA-Water	Benzo(b)fluoranthene	0.96	ug/L	U	0.96	3.8
10/25/2004 10:15	31142	BNA-Water	Benzo(g,h,i)perylene	0.96	ug/L	U	0.96	3.8
10/25/2004 10:15	31142	BNA-Water	Benzo(k)fluoranthene	0.96	ug/L	U	0.96	3.8
10/25/2004 10:15	31142	BNA-Water	Bis(2-chloroethoxy)methane	0.96	ug/L	U	0.96	3.8
10/25/2004 10:15	31142	BNA-Water	Bis(2-chloroethyl)ether	0.96	ug/L	U	0.96	3.8
10/25/2004 10:15	31142	BNA-Water	Bis(2-chloroisopropyl)ether	2.9	ug/L	U	2.9	12
10/25/2004 10:15	31142	BNA-Water	Bis(2-ethylhexyl)phthalate	14	ug/L	U	14	58
10/25/2004 10:15	31142	BNA-Water	Butyl benzyl phthalate	4.8	ug/L	U	4.8	19
10/25/2004 10:15	31142	BNA-Water	Chrysene	0.96	ug/L	U	0.96	3.8
10/25/2004 10:15	31142	BNA-Water	Di-n-butyl phthalate	4.8	ug/L	U	4.8	19
10/25/2004 10:15	31142	BNA-Water	Di-n-octyl phthalate	0.96	ug/L	U	0.96	3.8
10/25/2004 10:15	31142	BNA-Water	Dibenzo(a,h)anthracene	0.96	ug/L	U	0.96	3.8

10/25/2004 10:15	31142	BNA-Water	Dieldrin	1.4	ug/L	U	1.4	5.8
10/25/2004 10:15	31142	BNA-Water	Diethyl phthalate	0.96	ug/L	U	0.96	3.8
10/25/2004 10:15	31142	BNA-Water	Dimethyl phthalate	48	ug/L	U	48	190
10/25/2004 10:15	31142	BNA-Water	Endosulfan I	3.8	ug/L	U	3.8	15
10/25/2004 10:15	31142	BNA-Water	Endosulfan II	3.8	ug/L	U	3.8	15
10/25/2004 10:15	31142	BNA-Water	Endosulfan sulfate	1.4	ug/L	U	1.4	5.8
10/25/2004 10:15	31142	BNA-Water	Endrin	1.4	ug/L	UJ	1.4	5.8
10/25/2004 10:15	31142	BNA-Water	Endrin aldehyde	3.8	ug/L	U	3.8	15
10/25/2004 10:15	31142	BNA-Water	Fluoranthene	0.96	ug/L	U	0.96	3.8
10/25/2004 10:15	31142	BNA-Water	Fluorene	0.96	ug/L	U	0.96	3.8
10/25/2004 10:15	31142	BNA-Water	Heptachlor	1.4	ug/L	U	1.4	5.8
10/25/2004 10:15	31142	BNA-Water	Heptachlor epoxide	1.4	ug/L	U	1.4	5.8
10/25/2004 10:15	31142	BNA-Water	Hexachlorobenzene	0.96	ug/L	U	0.96	3.8
10/25/2004 10:15	31142	BNA-Water	Hexachlorobutadiene	2.9	ug/L	U	2.9	12
10/25/2004 10:15	31142	BNA-Water	Hexachlorocyclopentadiene	2.9	ug/L	U	2.9	12
10/25/2004 10:15	31142	BNA-Water	Hexachloroethane	2.9	ug/L	U	2.9	12
10/25/2004 10:15	31142	BNA-Water	Indeno(1,2,3-cd)pyrene	0.96	ug/L	U	0.96	3.8
10/25/2004 10:15	31142	BNA-Water	Isophorone	0.96	ug/L	U	0.96	3.8
10/25/2004 10:15	31142	BNA-Water	N-Nitrosodi-n-propylamine	1.9	ug/L	U	1.9	7.7
10/25/2004 10:15	31142	BNA-Water	N-Nitrosodimethylamine	1.9	ug/L	U	1.9	7.7
10/25/2004 10:15	31142	BNA-Water	N-Nitrosodiphenylamine	2.9	ug/L	U	2.9	12
10/25/2004 10:15	31142	BNA-Water	Naphthalene	0.96	ug/L	U	0.96	3.8
10/25/2004 10:15	31142	BNA-Water	Nitrobenzene	1.9	ug/L	U	1.9	7.7
10/25/2004 10:15	31142	BNA-Water	Pentachlorophenol	2.9	ug/L	U	2.9	12
10/25/2004 10:15	31142	BNA-Water	Phenanthrene	0.96	ug/L	U	0.96	3.8
10/25/2004 10:15	31142	BNA-Water	Phenol	0.96	ug/L	U	0.96	3.8
10/25/2004 10:15	31142	BNA-Water	Pyrene	0.96	ug/L	U	0.96	3.8
10/25/2004 10:15	31142	BNA-Water	alpha-BHC	1.4	ug/L	U	1.4	5.8
10/25/2004 10:15	31142	BNA-Water	beta-BHC	1.4	ug/L	U	1.4	5.8
10/25/2004 10:15	31142	BNA-Water	delta-BHC	1.4	ug/L	U	1.4	5.8
10/25/2004 10:15	31142	BNA-Water	gamma-BHC	1.4	ug/L	U	1.4	5.8
10/25/2004 10:00	31139	GC-Water	Alachlor	0.6	ug/L	U	0.6	2.4
10/25/2004 10:00	31139	GC-Water	Ametryn	0.05	ug/L	U	0.05	0.2
10/25/2004 10:00	31139	GC-Water	Atrazine	0.05	ug/L	U	0.05	0.2
10/25/2004 10:00	31139	GC-Water	Azinphos Methyl	0.05	ug/L	U	0.05	0.2
10/25/2004 10:00	31139	GC-Water	Bromacil	0.2	ug/L	U	0.2	0.8
10/25/2004 10:00	31139	GC-Water	Butylate	0.2	ug/L	U	0.2	0.8
10/25/2004 10:00	31139	GC-Water	Chlorpyrifos Ethyl	0.05	ug/L	U	0.05	0.2
10/25/2004 10:00	31139	GC-Water	Chlorpyrifos Methyl	0.1	ug/L	U	0.1	0.4
10/25/2004 10:00	31139	GC-Water	Diazinon	0.05	ug/L	U	0.05	0.2
10/25/2004 10:00	31139	GC-Water	Ethion	0.05	ug/L	U	0.05	0.2
10/25/2004 10:00	31139	GC-Water	Ethoprop	0.1	ug/L	U	0.1	0.4
10/25/2004 10:00	31139	GC-Water	Fenamiphos	0.2	ug/L	U	0.2	0.8
10/25/2004 10:00	31139	GC-Water	Fonofos	0.1	ug/L	UJ	0.1	0.4
10/25/2004 10:00	31139	GC-Water	Hexazinone	0.1	ug/L	U	0.1	0.4
10/25/2004 10:00	31139	GC-Water	Malathion	0.15	ug/L	U	0.15	0.6
10/25/2004 10:00	31139	GC-Water	Metalaxyl	0.25	ug/L	U	0.25	1
10/25/2004 10:00	31139	GC-Water	Metolachlor	0.5	ug/L	U	0.5	2
10/25/2004 10:00	31139	GC-Water	Metribuzin	0.1	ug/L	U	0.1	0.4
10/25/2004 10:00	31139	GC-Water	Mevinphos	0.2	ug/L	U	0.2	0.8
10/25/2004 10:00	31139	GC-Water	Naled	0.8	ug/L	UJ	0.8	3.2
10/25/2004 10:00	31139	GC-Water	Norflurazon	0.1	ug/L	U	0.1	0.4
10/25/2004 10:00	31139	GC-Water	Parathion Ethyl	0.15	ug/L	UJ	0.15	0.6
10/25/2004 10:00	31139	GC-Water	Parathion Methyl	0.1	ug/L	U	0.1	0.4
10/25/2004 10:00	31139	GC-Water	Phorate	0.05	ug/L	U	0.05	0.2
10/25/2004 10:00	31139	GC-Water	Prometryn	0.15	ug/L	U	0.15	0.6
10/25/2004 10:00	31139	GC-Water	Simazine	0.05	ug/L	U	0.05	0.2
10/25/2004 10:15	31142	GC-Water	Alachlor	0.59	ug/L	U	0.59	2.4
10/25/2004 10:15	31142	GC-Water	Ametryn	0.049	ug/L	U	0.049	0.2
10/25/2004 10:15	31142	GC-Water	Atrazine	0.049	ug/L	U	0.049	0.2
10/25/2004 10:15	31142	GC-Water	Azinphos Methyl	0.049	ug/L	U	0.049	0.2
10/25/2004 10:15	31142	GC-Water	Bromacil	0.2	ug/L	U	0.2	0.8

10/25/2004 10:15	31142	GC-Water	Butylate	0.2	ug/L	U	0.2	0.8
10/25/2004 10:15	31142	GC-Water	Chlorpyrifos Ethyl	0.049	ug/L	U	0.049	0.2
10/25/2004 10:15	31142	GC-Water	Chlorpyrifos Methyl	0.098	ug/L	U	0.098	0.39
10/25/2004 10:15	31142	GC-Water	Diazinon	0.049	ug/L	U	0.049	0.2
10/25/2004 10:15	31142	GC-Water	Ethion	0.049	ug/L	U	0.049	0.2
10/25/2004 10:15	31142	GC-Water	Ethoprop	0.098	ug/L	U	0.098	0.39
10/25/2004 10:15	31142	GC-Water	Fenamiphos	0.2	ug/L	U	0.2	0.8
10/25/2004 10:15	31142	GC-Water	Fonofos	0.098	ug/L	UJ	0.098	0.39
10/25/2004 10:15	31142	GC-Water	Hexazinone	0.098	ug/L	U	0.098	0.39
10/25/2004 10:15	31142	GC-Water	Malathion	0.15	ug/L	U	0.15	0.6
10/25/2004 10:15	31142	GC-Water	Metalaxyl	0.25	ug/L	U	0.25	1
10/25/2004 10:15	31142	GC-Water	Metolachlor	0.49	ug/L	U	0.49	2
10/25/2004 10:15	31142	GC-Water	Metribuzin	0.098	ug/L	U	0.098	0.39
10/25/2004 10:15	31142	GC-Water	Mevinphos	0.2	ug/L	U	0.2	0.8
10/25/2004 10:15	31142	GC-Water	Naled	0.78	ug/L	UJ	0.78	3.1
10/25/2004 10:15	31142	GC-Water	Norflurazon	0.098	ug/L	U	0.098	0.39
10/25/2004 10:15	31142	GC-Water	Parathion Ethyl	0.15	ug/L	UJ	0.15	0.6
10/25/2004 10:15	31142	GC-Water	Parathion Methyl	0.098	ug/L	U	0.098	0.39
10/25/2004 10:15	31142	GC-Water	Phorate	0.049	ug/L	U	0.049	0.2
10/25/2004 10:15	31142	GC-Water	Prometryn	0.15	ug/L	U	0.15	0.6
10/25/2004 10:15	31142	GC-Water	Simazine	0.049	ug/L	U	0.049	0.2
10/25/2004 10:00	31139	Metals-Water	Aluminum	75	ug/L		5	20
10/25/2004 10:00	31139	Metals-Water	Arsenic	6	ug/L	U	6	24
10/25/2004 10:00	31139	Metals-Water	Cadmium	0.075	ug/L	U	0.075	0.3
10/25/2004 10:00	31139	Metals-Water	Calcium	73.7	mg/L		0.05	0.2
10/25/2004 10:00	31139	Metals-Water	Chromium	2	ug/L	U	2	8
10/25/2004 10:00	31139	Metals-Water	Copper	2.2	ug/L	U	2.2	8.8
10/25/2004 10:00	31139	Metals-Water	Iron	48	ug/L		10	40
10/25/2004 10:00	31139	Metals-Water	Lead	0.42	ug/L		0.075	0.3
10/25/2004 10:00	31139	Metals-Water	Magnesium	14.7	mg/L		0.02	0.08
10/25/2004 10:00	31139	Metals-Water	Nickel	2.7	ug/L	I	2	8
10/25/2004 10:00	31139	Metals-Water	Selenium	0.5	ug/L	U	0.5	2
10/25/2004 10:00	31139	Metals-Water	Silver	0.02	ug/L	U	0.02	0.08
10/25/2004 10:00	31139	Metals-Water	Zinc	11	ug/L	I	3	12
10/25/2004 6:00	31141	Metals-Water	Aluminum	91	ug/L	A	5	20
10/25/2004 6:00	31141	Metals-Water	Arsenic	6	ug/L	U	6	24
10/25/2004 6:00	31141	Metals-Water	Cadmium	0.075	ug/L	U	0.075	0.3
10/25/2004 6:00	31141	Metals-Water	Calcium	75.8	mg/L	A	0.05	0.2
10/25/2004 6:00	31141	Metals-Water	Chromium	2	ug/L	U	2	8
10/25/2004 6:00	31141	Metals-Water	Copper	3.1	ug/L	I	2.2	8.8
10/25/2004 6:00	31141	Metals-Water	Iron	50	ug/L	A	10	40
10/25/2004 6:00	31141	Metals-Water	Lead	0.1	ug/L	I	0.075	0.3
10/25/2004 6:00	31141	Metals-Water	Magnesium	14.5	mg/L	A	0.02	0.08
10/25/2004 6:00	31141	Metals-Water	Nickel	3.2	ug/L	I	2	8
10/25/2004 6:00	31141	Metals-Water	Selenium	0.5	ug/L	U	0.5	2
10/25/2004 6:00	31141	Metals-Water	Silver	0.087	ug/L	I	0.044	0.18
10/25/2004 6:00	31141	Metals-Water	Zinc	14	ug/L	A	3	12
10/25/2004 10:15	31142	Metals-Water	Aluminum	5	ug/L	U	5	20
10/25/2004 10:15	31142	Metals-Water	Arsenic	6	ug/L	U	6	24
10/25/2004 10:15	31142	Metals-Water	Cadmium	0.075	ug/L	U	0.075	0.3
10/25/2004 10:15	31142	Metals-Water	Calcium	0.05	mg/L	U	0.05	0.2
10/25/2004 10:15	31142	Metals-Water	Chromium	2	ug/L	U	2	8
10/25/2004 10:15	31142	Metals-Water	Copper	0.75	ug/L	U	0.75	3
10/25/2004 10:15	31142	Metals-Water	Iron	10	ug/L	U	10	40
10/25/2004 10:15	31142	Metals-Water	Lead	0.075	ug/L	U	0.075	0.3
10/25/2004 10:15	31142	Metals-Water	Magnesium	0.02	mg/L	U	0.02	0.08
10/25/2004 10:15	31142	Metals-Water	Nickel	2	ug/L	U	2	8
10/25/2004 10:15	31142	Metals-Water	Selenium	0.5	ug/L	U	0.5	2
10/25/2004 10:15	31142	Metals-Water	Silver	0.02	ug/L	U	0.02	0.08
10/25/2004 10:15	31142	Metals-Water	Zinc	3	ug/L	U	3	12
10/25/2004 10:00	31139	Nutrients-Liquid	Ammonia-N	0.045	mg N/L		0.01	0.02
10/25/2004 10:00	31139	Nutrients-Liquid	Color	10	PCU		5	5

10/25/2004 10:00	31139	Nutrients-Liquid	Kjeldahl Nitrogen	0.81	mg N/L		0.06	0.2
10/25/2004 10:00	31139	Nutrients-Liquid	NO2NO3-N	2.2	mg N/L		0.02	0.05
10/25/2004 10:00	31139	Nutrients-Liquid	O-Phosphate-P	0.12	mg P/L		0.012	0.03
10/25/2004 10:00	31139	Nutrients-Liquid	Organic Carbon	7.2	mg C/L		1	5
10/25/2004 10:00	31139	Nutrients-Liquid	TSS	4	mg/L	U	4	16
10/25/2004 10:00	31139	Nutrients-Liquid	Total-P	0.26	mg P/L		0.02	0.06
10/25/2004 10:00	31139	Nutrients-Liquid	Turbidity	0.6	NTU		0.05	0.05
10/25/2004 6:00	31141	Nutrients-Liquid	Ammonia-N	0.048	mg N/L		0.01	0.02
10/25/2004 6:00	31141	Nutrients-Liquid	Kjeldahl Nitrogen	0.9	mg N/L		0.12	0.4
10/25/2004 6:00	31141	Nutrients-Liquid	NO2NO3-N	1.8	mg N/L		0.02	0.05
10/25/2004 6:00	31141	Nutrients-Liquid	TSS	4	mg/L	U	4	16
10/25/2004 6:00	31141	Nutrients-Liquid	Total-P	0.2	mg P/L		0.02	0.06
10/25/2004 10:15	31142	Nutrients-Liquid	Ammonia-N	0.01	mg N/L	U	0.01	0.02
10/25/2004 10:15	31142	Nutrients-Liquid	Kjeldahl Nitrogen	0.06	mg N/L	U	0.06	0.2
10/25/2004 10:15	31142	Nutrients-Liquid	NO2NO3-N	0.004	mg N/L	U	0.004	0.01
10/25/2004 10:15	31142	Nutrients-Liquid	O-Phosphate-P	0.004	mg P/L	U	0.004	0.01
10/25/2004 10:15	31142	Nutrients-Liquid	Organic Carbon	1	mg C/L	U	1	5
10/25/2004 10:15	31142	Nutrients-Liquid	Total-P	0.02	mg P/L	U	0.02	0.06
10/25/2004 10:00	31139	Overflow	Oil and Grease	0.9	mg/L	I		
10/25/2004 10:15	31142	Overflow	Oil and Grease	1.4	mg/L	I		
10/25/2004 10:00	31139	VOC-Water	Bromodichloromethane	20	ug/L		0.2	1
10/25/2004 10:00	31139	VOC-Water	Bromoform	7.6	ug/L		0.5	2
10/25/2004 10:00	31139	VOC-Water	Chloroform	13	ug/L		0.2	1
10/25/2004 10:00	31139	VOC-Water	Dibromochloromethane	28	ug/L		0.2	1
10/25/2004 10:15	31142	VOC-Water	Bromodichloromethane	0.2	ug/L	U	0.2	1
10/25/2004 10:15	31142	VOC-Water	Bromoform	0.5	ug/L	U	0.5	2
10/25/2004 10:15	31142	VOC-Water	Chloroform	0.2	ug/L	U	0.2	1
10/25/2004 10:15	31142	VOC-Water	Dibromochloromethane	0.2	ug/L	U	0.2	1

The Bioassay of City of Clearwater Marshall Street Advanced Wastewater Treatment Plant effluent sampled on October 25, 2004, NPDES #FL0021857.

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 2 1 8 5 7 11	12 0 4 1 0 2 5	18 **B**	19 **S**	20 1

Remarks

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The Priority Pollutants Analysis for Bioassay of City of Clearwater Marshall Street Advanced Wastewater Treatment Plant effluent sampled on October 25, 2004, NPDES #FL0021857.

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 2 1 8 5 7 11	12 0 4 1 0 2 5	18 **X**	19 **S**	20 1

Remarks

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