

Bioassays of

JEA Buckman Wastewater Treatment Facility

Duval County

NPDES #FL0026000

Sampled June 14, 2004

September 2004

Biology Section
Bureau of Laboratories
Division of Resource Assessment and Management

Quality Manual No. 870346G
NELAC Certification No. E31780

JEA Buckman Wastewater Treatment Facility, 2221 Buckman Street, Jacksonville, Duval County, Florida, NPDES #FL002600. Effluent samples for this facility were collected on June 14, 2004.

Introduction

The JEA Buckman Wastewater Treatment Facility has a design flow of 52.5 million gallons per day (MGD) and an average flow of 31.22 MGD (flow data from April 2003 – March 2004). The plant is permitted to operate in either a plug flow or complete mix mod of operation. The treatment process includes a dual-channel mechanical screening, influent wet well/dry well pump station with four pumps, a 0.151 million gallons (mg) aerated grit chamber, a 0.976 mg pre-aeration tank, eight primary clarifiers with a total volume of 2.912 mg, four aeration tanks with a total volume of 7.652 mg, four square secondary clarifiers with a total volume of 5.170 mg, two circular secondary clarifiers with a total volume of 3.041 mg, an ultraviolet disinfection system, two gravity sludge thickeners with a total volume of 0.728 mg, two sludge holding tanks with a total volume of 5.438 mg, and a groundwater dewatering system with discharge into the aeration tanks. A mixing zone was established for nickel, lead, and copper for this discharge. The area is semi-circular shaped, originating at the bulkhead at the point of discharge. Treated effluent is discharged at a depth of approximately 30.5 feet, located approximately at latitude 30° 21' 00" North, longitude 81° 37' 16" West, at location D-001 to the St. John's River, a Class III Marine Waters (facility information provided by Kathleen Gerard, FDEP Northeast District, Jacksonville).

Methods

Samples were collected from the NPDES sampling location EFD1, which is located between the ultraviolet disinfection unit and the Parshall flume, by Patrick O'Connor (FDEP Northeast District, Jacksonville) 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 screen toxicity tests and algal growth potential tests were performed following internal DEP SOP's TA07_03,TA07_04, and TA08_01 through TA08_06. All internal DEP SOP's are available on the web at: http://www.floridadep.org/labs/cgi-bin/sop/biosop.asp. While this test does not reflect the permit-required conditions, the Department uses the 48-hour acute screen test to provide reasonable assurance that the facility does not adversely affect waters of the state.

Prior to test initiation, the bioassay sample for both tests was salinity adjusted from an apparent salinity of <1 parts per thousand (ppth) to ~20 ppth using 40 Fathoms artificial sea salts per Northeast District request. The salt control used for this test was well water salted to ~20 ppth with 40 Fathoms artificial sea salts. The purpose for the salt control was to confirm that there was no effect of adding artificial sea salts to the sample.

Toxicity Test Results

Tests were performed June 15 - 17, 2004.

Americamysis bahia 48-hr acute screening bioassay – LC_{50} > 100%, 5%* mortality in 100% sample at 48 hours

Menidia beryllina 48-hr acute screening bioassay – LC_{50} > 100%, 5%* mortality in 100% sample at 48 hours

See Appendix 1 for bioassay bench sheets.

*NOTE: In a 48-hr acute screen 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 AGP was 296 mg dry wt/L of the unicellular green alga, *Pseudokirchneriella subcapitata*, formerly known as *Selenastrum capricornutum*. Raschke and Shultz (1987) found that Algal Growth Potential (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 nitrogen concentrations was 573 ± 20% (Table 1). Differences between actual and predicted AGP values greater than an order of magnitude are considered sufficient evidence to warrant follow up testing with the algal growth inhibition bioassay.

Due to both to the apparent salinity (<1 ppth) of the sample and miscommunication between toxicity lab staff and AGP lab staff, an AGP test with the saltwater species, *Dunaliella tertiolecta*, was not performed. However, an inference can be made that the saltwater problem threshold of 10 mg dry wt/L (personal communication with Ron Raschke, USEPA Region 4, 1987) would have also been exceeded.

See Table 1 for AGP results.

Chemistry Results

Total residual chlorine and total ammonia were both detected in the bioassay sample in the laboratory at concentrations of 0.04 mg/L and 0.036 mg/L, respectively. The total residual chlorine was likely an artifact of the test procedure rather than actual TRC within the sample. A chlorine solution is used to clean the clarifier weirs and to control filamentous bacteria in the sludge return system; however, Buckman Street personnel stated that chlorine was not used immediately prior to nor during the sampling event. Total ammonia was detected in the sample preserved for chemical analyses at a concentration of 0.087 mg/L. Based on the pH, salinity and temperature of the effluent as collected, the calculated unionized ammonia of the effluent was ≤ 0.02 mg/L.

Cadmium, copper, and silver were detected in the effluent sample at levels between the laboratory method detection limit and the laboratory practical quantitation limit (Table 2).

The iron (407 mg/L) concentration of the effluent sample collected on June 14, 2004, exceeded the Class III Marine Water Quality Criterion of ≤ 300 mg/L (62-302.530[39], F.A.C.; Table 2).

The concentration of nickel (10.9 mg/L) detected in the effluent exceeded the Class III Marine Water Quality Criteria (≤ 8.3 mg/L; 62-302.530[45], F.A.C.), but did not exceed the effluent limit of ≤ 89.3. The facility has mixing zones for nickel, lead, and copper.

See Table 2 for results of analytes detected in the effluent.

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

Conclusion

The effluent samples collected from EFD1 for this facility on June 14, 2004, did not show acute toxicity to either test species during the 48-hour bioassay tests. The effluent AGP result exceeded the "problem” threshold for fresh receiving waters and by inference the "problem" threshold for marine waters.

The effluent iron concentration exceeded the Class III Marine Water Quality Criterion. The effluent nickel concentration exceeded the Class III Marine Water Quality Criterion, but not the effluent limit.

Literature Cited

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 total soluble inorganic nitrogen (TSIN) limitation for the sample of effluent collected from the JEA Buckman Wastewater Treatment Facility on June 14, 2004.*

Location	AGP (measured)	Predicted AGP (TSIN) ± 20%	Inorganic N:P ratio
Effluent Samples	296	573.31 ± 114.662	1.26

Table 2. *Effluent limits, Class III Criteria and chemical data from samples collected from the JEA Buckman Wastewater Treatment Facility sampled on June 14, 2004.*

JEA Buckman WWTF	Class III Marine Stds	Effluent Limits	Effluent Samples
Organic Constituents (µg/L)			
Atrazine	-	-	0.46
Metals (µg/L unless otherwise noted)			
Aluminum	≤ 1500	-	20
Arsenic	≤ 50	-	5 U
Cadmium	≤ 9.3	-	0.16 I
Calcium (mg/L)	-	-	73
Chromium-III	-	-	2 UJ
Copper	≤ 3.7	≤ 29.4	2.2 I
Iron	≤ 300	-	407
Lead	≤ 8.5	≤ 16.7	3.8
Magnesium (mg/L)	-	-	28.2
Nickel	≤ 8.3	≤ 89.3	10.9
Selenium	≤ 71	-	1 U
Silver	-	-	0.03 I
Zinc	≤ 86	-	77.6
Nutrients (mg/L)			
Ortho-phosphate	-	Report	12
Total Phosphorus	-	Report	12 A
Ammonia	-	Report	0.087
Unionized Ammonia	≤ 0.02	≤ 0.02	≤ 0.02
Nitrate+Nitrite	-	Report	15
Total Kjeldahl Nitrogen	-	Report	2.3 A
Organic Nitrogen	-	Report	2.21 c
Total Nitrogen	-	Report	17.3 c
General Physical and Chemical Parameters			
Dissolved Oxygen (mg/L)	≥ 4	≥ 4.0	6.8
pH (S.U.)	6.5 - 8.5	6.5 - 8.5	7.0
Conductivity (umhos/cm)	-	-	1448
Temperature (C)	-	-	31.5
Hardness (mg/L)	-	-	298.4 c
AGP (mg DryWt/L)	-	-	296 A
Total Residual Chlorine (mg/L) lab	≤ 0.01	≤ 0.01	0.04

Value exceeds the Class III Marine Water Quality Criteria

c - Calculated value

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

I - Value reported is < the minimum quantitation limit, and ≥ the minimum detection limit

J - Estimated value

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

FDEP Biology Section - Acute
Bioassay Bench Sheets

Facility: JEA Buckman

Address: 2221 Buckman Street

City: Jacksonville County: Duval

Contact/District: P. O'Connor / Northeast

NPDES Permit #: FL 0026000

LIMS Job #: TLH 2004-06-15-21-01 LIMS Sample #: 760176

Sample Collection: Date: 6/14/04 Time: 11:15

Hold time Start: Date: 6/14/04 Time: 11:15

Comments: Sample salinity adjusted from <1ppth to 20ppth, with 40-fathoms artificial seasalts. Salt per permit. Control was well water salted to 20ppth with 40-fathoms artificial seasalts, MF 6-18-04
NE District
Alkalinity of Salted Buckman sample was 340mg/L as $CaCO_3$. MF 6-18-04

Lims Data Entry: 6-24-04 MF

Data Entry Verification: 6-24-04 CAP

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:
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: mg/L Final DO: mg/L Duration: minutes Rate: ~ bubbles/min

Salinity adjusted (Test 1) (yes) no Initial Salinity: <1 Final Salinity: 20 (Salts) Hypersaline brine

Salinity adjusted (Test 2) (yes) no Initial Salinity: <1 Final Salinity: 20 (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)

Temperature Range °C
Incubator # 3 Range 23-24.5°C
Room B246: 24.5-25.5°C
Waterbath: N/A

Investigators' Signatures

Deena Nicholson
Josh Richard
Mike Genini
Marshall Faircloth
James Davis

REVIEWER

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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	—	—	CAP
Lab Total Residual Cl2 (mg/L):			<0.03	<0.03		0.04	HACH	SP	CAP
Alkalinity (mg/L as $CaCO_3$):			263	263		231	HACH	MF	MF
Hardness (mg/L as $CaCO_3$):			—	—		105	HACH	JD	MF
Total Ammonia (mg/L as N):			<0.034	<0.034		0.036	DENVER	MF	CAP
Salinity (ppt):			20	20		<1	YSI	MF	CAP

FDEP Biology Section - - Bioassay Bench Sheet

Survival

LIMS Sample #: 760176 Test #: 1

Test Started: Date 06/15/04 Time: 2:40

Organism: A. bahia

Test Ended: Date ~~6/15/04~~ TNF 6/17/04 Time: 1330

Organism Batch: J61 Diluent/ Batch: ASW 1 28

Organism Age: 4days Food: YCT P. subcapitata (Artemia)

Chamber Size 1000 mL Batch: ___ ___ 0194042SG

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	C1	5	5	5			
	B	C2	5	5	5			
	C	C3	5	5	5			
	D	C4	5	5	5			
Salt CTRL	A	C9	5	5	5			
	B	C10	5	5	5			
	C	C11	5	5	5			
	D	C12	5	5	5			
100%	A	C5	5	5	5			
	B	C6	5	5	5			
	C	C7	5	4 ~~1M~~ 1D MF	4 ~~1D~~ 5D			
	D	C8	5	5	5			

Organisms loaded by: JD

Loading Verified by: SP

Checked by: (initials) MF | MF | JD

Comments:

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

Test Results:

% mortality in 100% sample 5

LC_{50}: >100% If Calculated: 95% CI ________ Method: ________

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

Substitute 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 #: 760176 Test #: 2 Test Started: Date 6/15/04 Time: 1330

Organism: M. beryllina Test Ended: Date 6/17/04 Time: 1330

Organism Batch: 1920 Diluent/ Batch: ASW / 28

Organism Age: 10 d 4 h Food: YCT *P. subcapitata* Artemia 0499042SG

Chamber Size 1000 mL Batch: ___ ___

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	C13	5	5	5			
	B	C14	5	5	5			
	C	C15	5	5	5			
	D	C16	5	5	5			
Salt CTRL	A	C17	5	5	5			
	B	C18	5	5	5			
	C	C19	5	5	5			
	D	C20	5	5	5			
100%	A	C21	5	5	5			
	B	C22	5	5	5			
	C	C23	5	5	5			
	D	C24	5	4 ID	4			
Organisms loaded by: SD		Checked by: (initials)	MF	MF	SD			
Loading Verified by: [illegible]								

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

Comments:

Test Results:

% mortality in 100% sample 5

LC_{50}: >100% If Calculated: 95% CI ___ Method: ___

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

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

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Bioassay Parameters

LIMS Sample # : 760176 **Test # :** 1 **of** 2

TEST SOP: TA07_ 03 **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	A			
pH (S.U.)	8.5	8.4	8.3			
Temperature °C	24.9	24.6	25.5			
Dissolved Oxygen mg/L	6.9	5.9	6.3			
Conductivity µmhos (mmhos)	32.8	31.4	33.4			
(initials) Measured by:	CAP	DN	DN			
(initials) Recorded by:	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	A			
pH (S.U.)	7.8	8.1	8.3			
Temperature °C	25.9	24.6	24.9			
Dissolved Oxygen mg/L	7.0	5.4	6.2			
Conductivity µmhos (mmhos)	31.6	31.3	32.7			
(initials) Measured by:	DN	DN	DN			
(initials) Recorded by:	CAP	DN	DN			

Comments:

Concentration Salt CTRL	0 Hr.	24 Hr.	48 Hr. before renewal	48 Hr. after renewal	72 Hr.	96 Hr.
Replicate	A	B	A			
pH (S.U.)	8.3	8.2	8.3			
Temperature °C	25.3	24.6	24.9			
Dissolved Oxygen mg/L	7.0	5.5	6.3			
Conductivity µmhos (mmhos)	31.7	32.5	33.6			
(initials) Measured by:	DN	DN	DN			
(initials) Recorded by:	CAP	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:

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Bioassay Parameters

LIMS Sample # : 760176 Test # : 2 of 2

TEST SOP: TA07_ 04 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	A			
pH (S.U.)	8.4	8.4	8.3			
Temperature °C	24.9	25.6	25.5			
Dissolved Oxygen mg/L	7.0	6.0	6.2			
Conductivity µmhos (mmhos)	32.2	33.1	34.0			
(initials) Measured by:	DN	DN	DN			
(initials) Recorded by:	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	A			
pH (S.U.)	7.8	8.1	~~8.2~~ 8.3 DN			
Temperature °C	25.9	25.0	24.9			
Dissolved Oxygen mg/L	6.2	5.8	6.1			
Conductivity µmhos (mmhos)	31.7	31.1	32.2			
(initials) Measured by:	DN	DN	DN			
(initials) Recorded by:	CAH	DN	DN			

Comments:

Concentration Salt CTRL	0 Hr.	24 Hr.	48 Hr. before renewal	48 Hr. after renewal	72 Hr.	96 Hr.
Replicate	A	B	A			
pH (S.U.)	8.3	8.3	8.3			
Temperature °C	25.3	24.4	24.9			
Dissolved Oxygen mg/L	7.1	5.9	6.2			
Conductivity µmhos (mmhos)	31.8	31.5	32.4			
(initials) Measured by:	DN	DN	DN			
(initials) Recorded by:	CAH	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:

V.1 2/24/04

Appendix 2. Chemical Analyses performed on the effluent from the JEA Buckman Wastewater Treatment Facility sampled on June 14, 2004.

DATE SAMPLED	FIELD ID	ANALYSIS GROUP	COMPONENT	RESULT	UNITS	REMARK	MDL	PQL
6/14/2004 9:00	EQUIPMENT BLK	BNA-Water	1,2,4-Trichlorobenzene	0.99	ug/L	UQ	0.99	4
6/14/2004 9:00	EQUIPMENT BLK	BNA-Water	1,2-Dichlorobenzene	0.99	ug/L	UQ	0.99	4
6/14/2004 9:00	EQUIPMENT BLK	BNA-Water	1,3-Dichlorobenzene	0.99	ug/L	UQ	0.99	4
6/14/2004 9:00	EQUIPMENT BLK	BNA-Water	1,4-Dichlorobenzene	0.99	ug/L	UQ	0.99	4
6/14/2004 9:00	EQUIPMENT BLK	BNA-Water	2,4,6-Trichlorophenol	0.99	ug/L	UQ	0.99	4
6/14/2004 9:00	EQUIPMENT BLK	BNA-Water	2,4-Dichlorophenol	0.99	ug/L	UQ	0.99	4
6/14/2004 9:00	EQUIPMENT BLK	BNA-Water	2,4-Dimethylphenol	50	ug/L	UQ	50	200
6/14/2004 9:00	EQUIPMENT BLK	BNA-Water	2,4-Dinitrophenol	15	ug/L	UQ	15	59
6/14/2004 9:00	EQUIPMENT BLK	BNA-Water	2,4-Dinitrotoluene	0.99	ug/L	UQ	0.99	4
6/14/2004 9:00	EQUIPMENT BLK	BNA-Water	2,6-Dinitrotoluene	0.99	ug/L	UQ	0.99	4
6/14/2004 9:00	EQUIPMENT BLK	BNA-Water	2-Chloronaphthalene	0.99	ug/L	UQ	0.99	4
6/14/2004 9:00	EQUIPMENT BLK	BNA-Water	2-Chlorophenol	0.99	ug/L	UQ	0.99	4
6/14/2004 9:00	EQUIPMENT BLK	BNA-Water	2-Methyl-4,6-dinitrophenol	3	ug/L	UQ	3	12
6/14/2004 9:00	EQUIPMENT BLK	BNA-Water	2-Nitrophenol	0.99	ug/L	UQ	0.99	4
6/14/2004 9:00	EQUIPMENT BLK	BNA-Water	3,3'-Dichlorobenzidine	40	ug/L	UQ	40	160
6/14/2004 9:00	EQUIPMENT BLK	BNA-Water	4,4'-DDD	1.5	ug/L	UQ	1.5	5.9
6/14/2004 9:00	EQUIPMENT BLK	BNA-Water	4,4'-DDE	1.5	ug/L	UQ	1.5	5.9
6/14/2004 9:00	EQUIPMENT BLK	BNA-Water	4,4'-DDT	1.5	ug/L	UQ	1.5	5.9
6/14/2004 9:00	EQUIPMENT BLK	BNA-Water	4-Bromophenyl phenyl ether	0.99	ug/L	UQ	0.99	4
6/14/2004 9:00	EQUIPMENT BLK	BNA-Water	4-Chloro-3-methylphenol	0.99	ug/L	UQ	0.99	4
6/14/2004 9:00	EQUIPMENT BLK	BNA-Water	4-Chlorophenyl phenyl ether	2	ug/L	UQ	2	7.9
6/14/2004 9:00	EQUIPMENT BLK	BNA-Water	4-Nitrophenol	15	ug/L	UQ	15	59
6/14/2004 9:00	EQUIPMENT BLK	BNA-Water	Acenaphthene	0.99	ug/L	UQ	0.99	4
6/14/2004 9:00	EQUIPMENT BLK	BNA-Water	Acenaphthylene	0.99	ug/L	UQ	0.99	4
6/14/2004 9:00	EQUIPMENT BLK	BNA-Water	Aldrin	1.5	ug/L	UQ	1.5	5.9
6/14/2004 9:00	EQUIPMENT BLK	BNA-Water	Anthracene	0.99	ug/L	UQ	0.99	4
6/14/2004 9:00	EQUIPMENT BLK	BNA-Water	Benzidine	99	ug/L	UQ	99	400
6/14/2004 9:00	EQUIPMENT BLK	BNA-Water	Benzo(a)anthracene	0.99	ug/L	UQ	0.99	4
6/14/2004 9:00	EQUIPMENT BLK	BNA-Water	Benzo(a)pyrene	0.99	ug/L	UQ	0.99	4
6/14/2004 9:00	EQUIPMENT BLK	BNA-Water	Benzo(b)fluoranthene	0.99	ug/L	UQ	0.99	4
6/14/2004 9:00	EQUIPMENT BLK	BNA-Water	Benzo(g,h,i)perylene	0.99	ug/L	UQ	0.99	4
6/14/2004 9:00	EQUIPMENT BLK	BNA-Water	Benzo(k)fluoranthene	0.99	ug/L	UQ	0.99	4
6/14/2004 9:00	EQUIPMENT BLK	BNA-Water	Bis(2-chloroethoxy)methane	0.99	ug/L	UQ	0.99	4
6/14/2004 9:00	EQUIPMENT BLK	BNA-Water	Bis(2-chloroethyl)ether	0.99	ug/L	UQ	0.99	4
6/14/2004 9:00	EQUIPMENT BLK	BNA-Water	Bis(2-chloroisopropyl)ether	3	ug/L	UQ	3	12
6/14/2004 9:00	EQUIPMENT BLK	BNA-Water	Bis(2-ethylhexyl)phthalate	15	ug/L	UQ	15	59
6/14/2004 9:00	EQUIPMENT BLK	BNA-Water	Butyl benzyl phthalate	5	ug/L	UQ	5	20
6/14/2004 9:00	EQUIPMENT BLK	BNA-Water	Chrysene	0.99	ug/L	UQ	0.99	4
6/14/2004 9:00	EQUIPMENT BLK	BNA-Water	Di-n-butyl phthalate	5	ug/L	UQ	5	20
6/14/2004 9:00	EQUIPMENT BLK	BNA-Water	Di-n-octyl phthalate	0.99	ug/L	UQ	0.99	4
6/14/2004 9:00	EQUIPMENT BLK	BNA-Water	Dibenzo(a,h)anthracene	0.99	ug/L	UQ	0.99	4
6/14/2004 9:00	EQUIPMENT BLK	BNA-Water	Dieldrin	1.5	ug/L	UQ	1.5	5.9
6/14/2004 9:00	EQUIPMENT BLK	BNA-Water	Diethyl phthalate	0.99	ug/L	UQ	0.99	4
6/14/2004 9:00	EQUIPMENT BLK	BNA-Water	Dimethyl phthalate	50	ug/L	UQ	50	200
6/14/2004 9:00	EQUIPMENT BLK	BNA-Water	Endosulfan I	4	ug/L	UQ	4	16
6/14/2004 9:00	EQUIPMENT BLK	BNA-Water	Endosulfan II	4	ug/L	UQ	4	16
6/14/2004 9:00	EQUIPMENT BLK	BNA-Water	Endosulfan sulfate	1.5	ug/L	UQ	1.5	5.9
6/14/2004 9:00	EQUIPMENT BLK	BNA-Water	Endrin	1.5	ug/L	UQ	1.5	5.9
6/14/2004 9:00	EQUIPMENT BLK	BNA-Water	Endrin aldehyde	4	ug/L	UQJ	4	16
6/14/2004 9:00	EQUIPMENT BLK	BNA-Water	Fluoranthene	0.99	ug/L	UQ	0.99	4
6/14/2004 9:00	EQUIPMENT BLK	BNA-Water	Fluorene	0.99	ug/L	UQ	0.99	4
6/14/2004 9:00	EQUIPMENT BLK	BNA-Water	Heptachlor	1.5	ug/L	UQ	1.5	5.9
6/14/2004 9:00	EQUIPMENT BLK	BNA-Water	Heptachlor epoxide	1.5	ug/L	UQ	1.5	5.9
6/14/2004 9:00	EQUIPMENT BLK	BNA-Water	Hexachlorobenzene	0.99	ug/L	UQ	0.99	4
6/14/2004 9:00	EQUIPMENT BLK	BNA-Water	Hexachlorobutadiene	3	ug/L	UQ	3	12
6/14/2004 9:00	EQUIPMENT BLK	BNA-Water	Hexachlorocyclopentadiene	3	ug/L	UQ	3	12
6/14/2004 9:00	EQUIPMENT BLK	BNA-Water	Hexachloroethane	3	ug/L	UQ	3	12
6/14/2004 9:00	EQUIPMENT BLK	BNA-Water	Indeno(1,2,3-cd)pyrene	0.99	ug/L	UQ	0.99	4
6/14/2004 9:00	EQUIPMENT BLK	BNA-Water	Isophorone	0.99	ug/L	UQ	0.99	4
6/14/2004 9:00	EQUIPMENT BLK	BNA-Water	N-Nitrosodi-n-propylamine	2	ug/L	UQ	2	7.9
6/14/2004 9:00	EQUIPMENT BLK	BNA-Water	N-Nitrosodimethylamine	2	ug/L	UQ	2	7.9
6/14/2004 9:00	EQUIPMENT BLK	BNA-Water	N-Nitrosodiphenylamine	3	ug/L	UQ	3	12

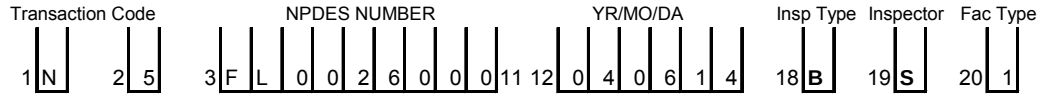
6/14/2004 9:00	EQUIPMENT BLK	BNA-Water	Naphthalene	0.99	ug/L	UQ	0.99	4
6/14/2004 9:00	EQUIPMENT BLK	BNA-Water	Nitrobenzene	2	ug/L	UQ	2	7.9
6/14/2004 9:00	EQUIPMENT BLK	BNA-Water	Pentachlorophenol	3	ug/L	UQ	3	12
6/14/2004 9:00	EQUIPMENT BLK	BNA-Water	Phenanthrene	0.99	ug/L	UQ	0.99	4
6/14/2004 9:00	EQUIPMENT BLK	BNA-Water	Phenol	0.99	ug/L	UQ	0.99	4
6/14/2004 9:00	EQUIPMENT BLK	BNA-Water	Pyrene	0.99	ug/L	UQ	0.99	4
6/14/2004 9:00	EQUIPMENT BLK	BNA-Water	alpha-BHC	1.5	ug/L	UQ	1.5	5.9
6/14/2004 9:00	EQUIPMENT BLK	BNA-Water	beta-BHC	1.5	ug/L	UQ	1.5	5.9
6/14/2004 9:00	EQUIPMENT BLK	BNA-Water	delta-BHC	1.5	ug/L	UQ	1.5	5.9
6/14/2004 9:00	EQUIPMENT BLK	BNA-Water	gamma-BHC	1.5	ug/L	UQ	1.5	5.9
6/14/2004 9:00	EQUIPMENT BLK	GC-Water	Alachlor	0.57	ug/L	U	0.57143	2.29
6/14/2004 9:00	EQUIPMENT BLK	GC-Water	Ametryn	0.048	ug/L	U	0.047619	0.19
6/14/2004 9:00	EQUIPMENT BLK	GC-Water	Atrazine	0.048	ug/L	U	0.047619	0.19
6/14/2004 9:00	EQUIPMENT BLK	GC-Water	Azinphos Methyl	0.048	ug/L	U	0.047619	0.19
6/14/2004 9:00	EQUIPMENT BLK	GC-Water	Bromacil	0.19	ug/L	U	0.19048	0.762
6/14/2004 9:00	EQUIPMENT BLK	GC-Water	Butylate	0.19	ug/L	U	0.19048	0.762
6/14/2004 9:00	EQUIPMENT BLK	GC-Water	Chlorpyrifos Ethyl	0.048	ug/L	U	0.047619	0.19
6/14/2004 9:00	EQUIPMENT BLK	GC-Water	Chlorpyrifos Methyl	0.095	ug/L	U	0.095238	0.381
6/14/2004 9:00	EQUIPMENT BLK	GC-Water	Diazinon	0.048	ug/L	U	0.047619	0.19
6/14/2004 9:00	EQUIPMENT BLK	GC-Water	Ethion	0.048	ug/L	U	0.047619	0.19
6/14/2004 9:00	EQUIPMENT BLK	GC-Water	Ethoprop	0.095	ug/L	U	0.095238	0.381
6/14/2004 9:00	EQUIPMENT BLK	GC-Water	Fenamiphos	0.19	ug/L	U	0.19048	0.762
6/14/2004 9:00	EQUIPMENT BLK	GC-Water	Fonofos	0.095	ug/L	U	0.095238	0.381
6/14/2004 9:00	EQUIPMENT BLK	GC-Water	Hexazinone	0.095	ug/L	U	0.095238	0.381
6/14/2004 9:00	EQUIPMENT BLK	GC-Water	Malathion	0.14	ug/L	U	0.14286	0.571
6/14/2004 9:00	EQUIPMENT BLK	GC-Water	Metalaxyl	0.24	ug/L	U	0.2381	0.952
6/14/2004 9:00	EQUIPMENT BLK	GC-Water	Metolachlor	0.48	ug/L	U	0.47619	1.9
6/14/2004 9:00	EQUIPMENT BLK	GC-Water	Metribuzin	0.095	ug/L	U	0.095238	0.381
6/14/2004 9:00	EQUIPMENT BLK	GC-Water	Mevinphos	0.19	ug/L	U	0.19048	0.762
6/14/2004 9:00	EQUIPMENT BLK	GC-Water	Naled	0.76	ug/L	UJ	0.7619	3.05
6/14/2004 9:00	EQUIPMENT BLK	GC-Water	Norflurazon	0.095	ug/L	U	0.095238	0.381
6/14/2004 9:00	EQUIPMENT BLK	GC-Water	Parathion Ethyl	0.14	ug/L	U	0.14286	0.571
6/14/2004 9:00	EQUIPMENT BLK	GC-Water	Parathion Methyl	0.095	ug/L	U	0.095238	0.381
6/14/2004 9:00	EQUIPMENT BLK	GC-Water	Phorate	0.048	ug/L	U	0.047619	0.19
6/14/2004 9:00	EQUIPMENT BLK	GC-Water	Prometryn	0.14	ug/L	U	0.14286	0.571
6/14/2004 9:00	EQUIPMENT BLK	GC-Water	Simazine	0.048	ug/L	U	0.047619	0.19
6/14/2004 9:00	EQUIPMENT BLK	Metals-Water	Aluminum	5	ug/L	U	5	20
6/14/2004 9:00	EQUIPMENT BLK	Metals-Water	Arsenic	5	ug/L	U	5	20
6/14/2004 9:00	EQUIPMENT BLK	Metals-Water	Cadmium	0.025	ug/L	U	0.025	0.1
6/14/2004 9:00	EQUIPMENT BLK	Metals-Water	Calcium	0.05	mg/L	U	0.05	0.2
6/14/2004 9:00	EQUIPMENT BLK	Metals-Water	Chromium	2	ug/L	UJ	2	8
6/14/2004 9:00	EQUIPMENT BLK	Metals-Water	Copper	0.75	ug/L	U	0.75	3
6/14/2004 9:00	EQUIPMENT BLK	Metals-Water	Iron	5	ug/L	U	5	20
6/14/2004 9:00	EQUIPMENT BLK	Metals-Water	Lead	0.05	ug/L	U	0.05	0.2
6/14/2004 9:00	EQUIPMENT BLK	Metals-Water	Magnesium	0.02	mg/L	U	0.02	0.08
6/14/2004 9:00	EQUIPMENT BLK	Metals-Water	Nickel	2	ug/L	U	2	8
6/14/2004 9:00	EQUIPMENT BLK	Metals-Water	Selenium	1	ug/L	U	1	4
6/14/2004 9:00	EQUIPMENT BLK	Metals-Water	Silver	0.02	ug/L	U	0.02	0.08
6/14/2004 9:00	EQUIPMENT BLK	Metals-Water	Zinc	2	ug/L	U	2	8
6/14/2004 9:00	EQUIPMENT BLK	Nutrients-Liquid	Ammonia-N	0.01	mg N/L	U	0.01	0.02
6/14/2004 9:00	EQUIPMENT BLK	Nutrients-Liquid	NO2NO3-N	0.004	mg N/L	U	0.004	0.01
6/14/2004 9:00	EQUIPMENT BLK	Nutrients-Liquid	N_KJEL_TOT	0.06	mg N/L	U	0.06	0.2
6/14/2004 9:00	EQUIPMENT BLK	Nutrients-Liquid	O-Phosphate-P	0.004	mg P/L	U	0.004	0.01
6/14/2004 9:00	EQUIPMENT BLK	Nutrients-Liquid	Total-P	0.02	mg P/L	U	0.02	0.06
6/14/2004 11:15	FINAL EFFLUENT	Bio-AGP/LimNut	Algal Growth Potential	296	mg DryWt/L	A	0.1	0.3
6/14/2004 11:15	FINAL EFFLUENT	Bio-Chl-a	Chlorophyll-A, Monochromatic, Water	0.95	ug/L	U	0.95	2.8
6/14/2004 11:15	FINAL EFFLUENT	Bio-Chl-a	Phaeophytin-A, Monochromatic, Water	0.95	ug/L	U	0.95	2.8
6/14/2004 11:15	FINAL EFFLUENT	Bio-Toxicology	Bioassay-Acute-Screen-SW-Fish, LC50	100	LC50	L		
6/14/2004 11:15	FINAL EFFLUENT	Bio-Toxicology	Bioassay-Acute-Screen-SW-Mysid, LC50	100	LC50	L		
6/14/2004 11:15	FINAL EFFLUENT	BNA-Water	1,2,4-Trichlorobenzene	0.99	ug/L	U	0.99	4
6/14/2004 11:15	FINAL EFFLUENT	BNA-Water	1,2-Dichlorobenzene	0.99	ug/L	U	0.99	4
6/14/2004 11:15	FINAL EFFLUENT	BNA-Water	1,3-Dichlorobenzene	0.99	ug/L	U	0.99	4
6/14/2004 11:15	FINAL EFFLUENT	BNA-Water	1,4-Dichlorobenzene	0.99	ug/L	U	0.99	4
6/14/2004 11:15	FINAL EFFLUENT	BNA-Water	2,4,6-Trichlorophenol	0.99	ug/L	U	0.99	4
6/14/2004 11:15	FINAL EFFLUENT	BNA-Water	2,4-Dichlorophenol	0.99	ug/L	U	0.99	4
6/14/2004 11:15	FINAL EFFLUENT	BNA-Water	2,4-Dimethylphenol	50	ug/L	U	50	200

6/14/2004 11:15	FINAL EFFLUENT	BNA-Water	2,4-Dinitrophenol	15	ug/L	U	15	59
6/14/2004 11:15	FINAL EFFLUENT	BNA-Water	2,4-Dinitrotoluene	0.99	ug/L	U	0.99	4
6/14/2004 11:15	FINAL EFFLUENT	BNA-Water	2,6-Dinitrotoluene	0.99	ug/L	U	0.99	4
6/14/2004 11:15	FINAL EFFLUENT	BNA-Water	2-Chloronaphthalene	0.99	ug/L	U	0.99	4
6/14/2004 11:15	FINAL EFFLUENT	BNA-Water	2-Chlorophenol	0.99	ug/L	U	0.99	4
6/14/2004 11:15	FINAL EFFLUENT	BNA-Water	2-Methyl-4,6-dinitrophenol	3	ug/L	U	3	12
6/14/2004 11:15	FINAL EFFLUENT	BNA-Water	2-Nitrophenol	0.99	ug/L	U	0.99	4
6/14/2004 11:15	FINAL EFFLUENT	BNA-Water	3,3'-Dichlorobenzidine	40	ug/L	U	40	160
6/14/2004 11:15	FINAL EFFLUENT	BNA-Water	4,4'-DDD	1.5	ug/L	U	1.5	5.9
6/14/2004 11:15	FINAL EFFLUENT	BNA-Water	4,4'-DDE	1.5	ug/L	U	1.5	5.9
6/14/2004 11:15	FINAL EFFLUENT	BNA-Water	4,4'-DDT	1.5	ug/L	U	1.5	5.9
6/14/2004 11:15	FINAL EFFLUENT	BNA-Water	4-Bromophenyl phenyl ether	0.99	ug/L	U	0.99	4
6/14/2004 11:15	FINAL EFFLUENT	BNA-Water	4-Chloro-3-methylphenol	0.99	ug/L	U	0.99	4
6/14/2004 11:15	FINAL EFFLUENT	BNA-Water	4-Chlorophenyl phenyl ether	2	ug/L	U	2	7.9
6/14/2004 11:15	FINAL EFFLUENT	BNA-Water	4-Nitrophenol	15	ug/L	U	15	59
6/14/2004 11:15	FINAL EFFLUENT	BNA-Water	Acenaphthene	0.99	ug/L	U	0.99	4
6/14/2004 11:15	FINAL EFFLUENT	BNA-Water	Acenaphthylene	0.99	ug/L	U	0.99	4
6/14/2004 11:15	FINAL EFFLUENT	BNA-Water	Aldrin	1.5	ug/L	U	1.5	5.9
6/14/2004 11:15	FINAL EFFLUENT	BNA-Water	Anthracene	0.99	ug/L	U	0.99	4
6/14/2004 11:15	FINAL EFFLUENT	BNA-Water	Benzidine	99	ug/L	U	99	400
6/14/2004 11:15	FINAL EFFLUENT	BNA-Water	Benzo(a)anthracene	0.99	ug/L	U	0.99	4
6/14/2004 11:15	FINAL EFFLUENT	BNA-Water	Benzo(a)pyrene	0.99	ug/L	U	0.99	4
6/14/2004 11:15	FINAL EFFLUENT	BNA-Water	Benzo(b)fluoranthene	0.99	ug/L	U	0.99	4
6/14/2004 11:15	FINAL EFFLUENT	BNA-Water	Benzo(g,h,i)perylene	0.99	ug/L	U	0.99	4
6/14/2004 11:15	FINAL EFFLUENT	BNA-Water	Benzo(k)fluoranthene	0.99	ug/L	U	0.99	4
6/14/2004 11:15	FINAL EFFLUENT	BNA-Water	Bis(2-chloroethoxy)methane	0.99	ug/L	U	0.99	4
6/14/2004 11:15	FINAL EFFLUENT	BNA-Water	Bis(2-chloroethyl)ether	0.99	ug/L	U	0.99	4
6/14/2004 11:15	FINAL EFFLUENT	BNA-Water	Bis(2-chloroisopropyl)ether	3	ug/L	U	3	12
6/14/2004 11:15	FINAL EFFLUENT	BNA-Water	Bis(2-ethylhexyl)phthalate	15	ug/L	U	15	59
6/14/2004 11:15	FINAL EFFLUENT	BNA-Water	Butyl benzyl phthalate	5	ug/L	U	5	20
6/14/2004 11:15	FINAL EFFLUENT	BNA-Water	Chrysene	0.99	ug/L	U	0.99	4
6/14/2004 11:15	FINAL EFFLUENT	BNA-Water	Di-n-butyl phthalate	5	ug/L	U	5	20
6/14/2004 11:15	FINAL EFFLUENT	BNA-Water	Di-n-octyl phthalate	0.99	ug/L	U	0.99	4
6/14/2004 11:15	FINAL EFFLUENT	BNA-Water	Dibenzo(a,h)anthracene	0.99	ug/L	U	0.99	4
6/14/2004 11:15	FINAL EFFLUENT	BNA-Water	Dieldrin	1.5	ug/L	U	1.5	5.9
6/14/2004 11:15	FINAL EFFLUENT	BNA-Water	Diethyl phthalate	0.99	ug/L	U	0.99	4
6/14/2004 11:15	FINAL EFFLUENT	BNA-Water	Dimethyl phthalate	50	ug/L	U	50	200
6/14/2004 11:15	FINAL EFFLUENT	BNA-Water	Endosulfan I	4	ug/L	U	4	16
6/14/2004 11:15	FINAL EFFLUENT	BNA-Water	Endosulfan II	4	ug/L	U	4	16
6/14/2004 11:15	FINAL EFFLUENT	BNA-Water	Endosulfan sulfate	1.5	ug/L	U	1.5	5.9
6/14/2004 11:15	FINAL EFFLUENT	BNA-Water	Endrin	1.5	ug/L	U	1.5	5.9
6/14/2004 11:15	FINAL EFFLUENT	BNA-Water	Endrin aldehyde	4	ug/L	UJ	4	16
6/14/2004 11:15	FINAL EFFLUENT	BNA-Water	Fluoranthene	0.99	ug/L	U	0.99	4
6/14/2004 11:15	FINAL EFFLUENT	BNA-Water	Fluorene	0.99	ug/L	U	0.99	4
6/14/2004 11:15	FINAL EFFLUENT	BNA-Water	Heptachlor	1.5	ug/L	U	1.5	5.9
6/14/2004 11:15	FINAL EFFLUENT	BNA-Water	Heptachlor epoxide	1.5	ug/L	U	1.5	5.9
6/14/2004 11:15	FINAL EFFLUENT	BNA-Water	Hexachlorobenzene	0.99	ug/L	U	0.99	4
6/14/2004 11:15	FINAL EFFLUENT	BNA-Water	Hexachlorobutadiene	3	ug/L	U	3	12
6/14/2004 11:15	FINAL EFFLUENT	BNA-Water	Hexachlorocyclopentadiene	3	ug/L	U	3	12
6/14/2004 11:15	FINAL EFFLUENT	BNA-Water	Hexachloroethane	3	ug/L	U	3	12
6/14/2004 11:15	FINAL EFFLUENT	BNA-Water	Indeno(1,2,3-cd)pyrene	0.99	ug/L	U	0.99	4
6/14/2004 11:15	FINAL EFFLUENT	BNA-Water	Isophorone	0.99	ug/L	U	0.99	4
6/14/2004 11:15	FINAL EFFLUENT	BNA-Water	N-Nitrosodi-n-propylamine	2	ug/L	U	2	7.9
6/14/2004 11:15	FINAL EFFLUENT	BNA-Water	N-Nitrosodimethylamine	2	ug/L	U	2	7.9
6/14/2004 11:15	FINAL EFFLUENT	BNA-Water	N-Nitrosodiphenylamine	3	ug/L	U	3	12
6/14/2004 11:15	FINAL EFFLUENT	BNA-Water	Naphthalene	0.99	ug/L	U	0.99	4
6/14/2004 11:15	FINAL EFFLUENT	BNA-Water	Nitrobenzene	2	ug/L	U	2	7.9
6/14/2004 11:15	FINAL EFFLUENT	BNA-Water	Pentachlorophenol	3	ug/L	U	3	12
6/14/2004 11:15	FINAL EFFLUENT	BNA-Water	Phenanthrene	0.99	ug/L	U	0.99	4
6/14/2004 11:15	FINAL EFFLUENT	BNA-Water	Phenol	0.99	ug/L	U	0.99	4
6/14/2004 11:15	FINAL EFFLUENT	BNA-Water	Pyrene	0.99	ug/L	U	0.99	4
6/14/2004 11:15	FINAL EFFLUENT	BNA-Water	alpha-BHC	1.5	ug/L	U	1.5	5.9
6/14/2004 11:15	FINAL EFFLUENT	BNA-Water	beta-BHC	1.5	ug/L	U	1.5	5.9
6/14/2004 11:15	FINAL EFFLUENT	BNA-Water	delta-BHC	1.5	ug/L	U	1.5	5.9
6/14/2004 11:15	FINAL EFFLUENT	BNA-Water	gamma-BHC	1.5	ug/L	U	1.5	5.9
6/14/2004 11:15	FINAL EFFLUENT	GC-Water	Alachlor	0.6	ug/L	U	0.6	2.4

6/14/2004 11:15	FINAL EFFLUENT	GC-Water	Ametryn	0.05	ug/L	U	0.05	0.2
6/14/2004 11:15	FINAL EFFLUENT	GC-Water	Atrazine	0.46	ug/L		0.05	0.2
6/14/2004 11:15	FINAL EFFLUENT	GC-Water	Azinphos Methyl	0.05	ug/L	U	0.05	0.2
6/14/2004 11:15	FINAL EFFLUENT	GC-Water	Bromacil	0.2	ug/L	U	0.2	0.8
6/14/2004 11:15	FINAL EFFLUENT	GC-Water	Butylate	0.2	ug/L	U	0.2	0.8
6/14/2004 11:15	FINAL EFFLUENT	GC-Water	Chlorpyrifos Ethyl	0.05	ug/L	U	0.05	0.2
6/14/2004 11:15	FINAL EFFLUENT	GC-Water	Chlorpyrifos Methyl	0.1	ug/L	U	0.1	0.4
6/14/2004 11:15	FINAL EFFLUENT	GC-Water	Diazinon	0.05	ug/L	U	0.05	0.2
6/14/2004 11:15	FINAL EFFLUENT	GC-Water	Ethion	0.05	ug/L	U	0.05	0.2
6/14/2004 11:15	FINAL EFFLUENT	GC-Water	Ethoprop	0.1	ug/L	U	0.1	0.4
6/14/2004 11:15	FINAL EFFLUENT	GC-Water	Fenamiphos	0.2	ug/L	U	0.2	0.8
6/14/2004 11:15	FINAL EFFLUENT	GC-Water	Fonofos	0.1	ug/L	U	0.1	0.4
6/14/2004 11:15	FINAL EFFLUENT	GC-Water	Hexazinone	0.1	ug/L	U	0.1	0.4
6/14/2004 11:15	FINAL EFFLUENT	GC-Water	Malathion	0.15	ug/L	U	0.15	0.6
6/14/2004 11:15	FINAL EFFLUENT	GC-Water	Metalaxyl	0.25	ug/L	U	0.25	1
6/14/2004 11:15	FINAL EFFLUENT	GC-Water	Metolachlor	0.5	ug/L	U	0.5	2
6/14/2004 11:15	FINAL EFFLUENT	GC-Water	Metribuzin	0.1	ug/L	U	0.1	0.4
6/14/2004 11:15	FINAL EFFLUENT	GC-Water	Mevinphos	0.2	ug/L	U	0.2	0.8
6/14/2004 11:15	FINAL EFFLUENT	GC-Water	Naled	0.8	ug/L	UJ	0.8	3.2
6/14/2004 11:15	FINAL EFFLUENT	GC-Water	Norflurazon	0.1	ug/L	U	0.1	0.4
6/14/2004 11:15	FINAL EFFLUENT	GC-Water	Parathion Ethyl	0.15	ug/L	U	0.15	0.6
6/14/2004 11:15	FINAL EFFLUENT	GC-Water	Parathion Methyl	0.1	ug/L	U	0.1	0.4
6/14/2004 11:15	FINAL EFFLUENT	GC-Water	Phorate	0.05	ug/L	U	0.05	0.2
6/14/2004 11:15	FINAL EFFLUENT	GC-Water	Prometryn	0.15	ug/L	U	0.15	0.6
6/14/2004 11:15	FINAL EFFLUENT	GC-Water	Simazine	0.05	ug/L	U	0.05	0.2
6/14/2004 11:15	FINAL EFFLUENT	Metals-Water	Aluminum	20	ug/L		5	20
6/14/2004 11:15	FINAL EFFLUENT	Metals-Water	Arsenic	5	ug/L	U	5	20
6/14/2004 11:15	FINAL EFFLUENT	Metals-Water	Cadmium	0.16	ug/L	I	0.025	0.16
6/14/2004 11:15	FINAL EFFLUENT	Metals-Water	Calcium	73	mg/L		0.05	0.2
6/14/2004 11:15	FINAL EFFLUENT	Metals-Water	Chromium	2	ug/L	UJ	2	8
6/14/2004 11:15	FINAL EFFLUENT	Metals-Water	Copper	2.2	ug/L	I	0.75	3
6/14/2004 11:15	FINAL EFFLUENT	Metals-Water	Iron	407	ug/L		5	20
6/14/2004 11:15	FINAL EFFLUENT	Metals-Water	Lead	3.8	ug/L		0.05	0.2
6/14/2004 11:15	FINAL EFFLUENT	Metals-Water	Magnesium	28.2	mg/L		0.02	0.08
6/14/2004 11:15	FINAL EFFLUENT	Metals-Water	Nickel	10.9	ug/L		2	8
6/14/2004 11:15	FINAL EFFLUENT	Metals-Water	Selenium	1	ug/L	U	1	4
6/14/2004 11:15	FINAL EFFLUENT	Metals-Water	Silver	0.03	ug/L	I	0.02	0.08
6/14/2004 11:15	FINAL EFFLUENT	Metals-Water	Zinc	77.6	ug/L		2	8
6/14/2004 11:15	FINAL EFFLUENT	Nutrients-Liquid	Ammonia-N	0.087	mg N/L		0.01	0.02
6/14/2004 11:15	FINAL EFFLUENT	Nutrients-Liquid	NO2NO3-N	15	mg N/L		0.4	1
6/14/2004 11:15	FINAL EFFLUENT	Nutrients-Liquid	N_KJEL_TOT	2.3	mg N/L	A	0.06	0.2
6/14/2004 11:15	FINAL EFFLUENT	Nutrients-Liquid	O-Phosphate-P	12	mg P/L		0.4	1
6/14/2004 11:15	FINAL EFFLUENT	Nutrients-Liquid	Total-P	12	mg P/L	A	0.4	1.2

The Bioassay of the JEA Buckman Wastewater Treatment Facility effluent sampled on 14 June 2004, NPDES #FL0026000.

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



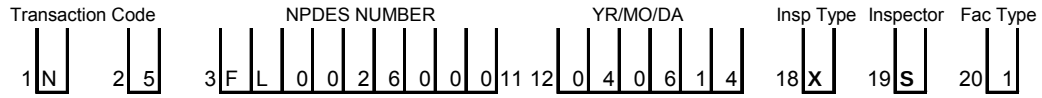
Remarks



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The Priority Pollutants Analysis for Bioassay of the JEA Buckman Wastewater Treatment Facility effluent sampled on 14 June 2004, NPDES #FL0026000.

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Remarks



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