

Bioassays of

Bethune Point Wastewater Treatment Facility

Daytona Beach, Volusia County, Florida

NPDES #FL0025984

Sampled 3/3, 5 & 7/03

May 2003

Biology Section

Division of Resource Assessment & Management

Comprehensive Quality Assurance Plan #870346G

Bioassays of

Bethune Point Wastewater Treatment Facility

Daytona Beach, Volusia County, Florida

NPDES #FL0025984

Biology Section
Bureau of Laboratories
May 2003

Bethune Point Wastewater Treatment Facility, 1 Shady Place, Daytona Beach, Volusia County, Florida, NPDES #FL0025984, tests performed on 4 to 11 March 2003.

Introduction

This WWTF has a design flow of 13.0 MGD and an average daily flow of 4.7 MGD (November, 2002). This Bardenpho™ process facility consists of influent screening, grit removal, anaerobic basins, anoxic basins, aeration chambers, chemical feed, clarification, filtration, and ultraviolet disinfection. Both the Bethune Point WWTF and the Westside Regional WWTF direct reclaimed water to a joint reuse system. Excess treated wastewater is combined with effluent from the Daytona Beach Westside Regional WWTF before being discharged into the Class III marine waters of the Halifax River (facility information provided by Phil Kane, FDEP, Orlando).

Methods

Samples were collected by Phil Kane and Steve Kent 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 7-day chronic screening toxicity tests discussed in this report were performed following internal DEP SOP's TA07_05 and TA07_09. All internal DEP SOP's are available on the web at: http://www.floridadep.org/labs/cgi-bin/sop/biosop.asp.

The *Pimephales promelas* bioassay test was aerated at Day 6 to keep the dissolved oxygen concentration above 4.0 mg/L.

Toxicity Test Results

Ceriodaphnia dubia chronic screen – The No Observed Effect Concentration for survival and fecundity was 100%.

Pimephales promelas chronic screen – The No Observed Effect Concentration for survival was 100%. Biomass (growth) was significantly decreased in the 100% effluent concentration, producing a no observed effect concentration of less than 100% effluent.

See Table 1 for bioassay bench sheets.
See Appendix A for Statistics.

Chemistry Results

Total residual chlorine was not detected in the bioassay samples in the laboratory.

Total ammonia and unionized ammonia were detected in the bioassay samples collected on March 5 and March 7 at concentrations of 0.122 mg/L total, 0.010 mg/L unionized and 0.278 mg/L total, 0.015 mg/L unionized, respectively.

See Table 2 for chemicals detected in the analytical chemistry samples.
See Table 3 for a complete list of chemical analyses performed.

Conclusion

The samples of effluent collected from this facility on March 3, 5, and 7, 2003, did not show chronic toxicity to *C. dubia* during the 7-day chronic bioassay tests. The 100% effluent significantly decreased the biomass of *P. promelas,* producing a no observed effect concentration of less than 100% effluent, indicating chronic toxicity; however, the cause of this chronic toxicity affect is undetermined.

Table 1. Data recorded during the chronic screening bioassays of a sample of effluent from Bethune Point Wastewater Treatment Facility, 1 Shady Place, Daytona Beach, Volusia County, Florida, NPDES# FL0025984, performed from 4 to 10 March 2003.

Facility:	**Bethune Point WWTF**		**NPDES #:**	**FL0025984**	Facility Type:	**WWTF**	**Analysts:** Marshall Faircloth
Location:	1 Shady Place, Daytona Beach		Contact/District:	Kane/CEN			Joshua Ayres
County:	Volusia		Test type:	chronic renewal screen			Daisys Tamayo
Sample #1 Collection Date:	3/3/2003	Time: 0940	# tests:	2	Receiving Water:	Halifax River	Jacquelyn Brynda
Sample #2 Collection Date:	3/5/2003	Time: 0940	Chlorination Type:	dechlorinated		Class III Marine	
Sample #3 Collection Date:	3/7/2003	Time: 0830					
Test Beginning Date:	3/4/2003	Time: 1430				**Page 1 of 3**	
Test Ending Date:	3/10/2003	Time: 1530	FDEP SOP#:	TA07_05			**Reviewer:** Rob Buda

Organism: ***Ceriodaphnia dubia*** Life stage: <24 hrs [A]Feeding: YCT/Algae
Chamber size: 30mL Food Batch #: 5 / 11

	Sample/Diluent	# Young							
Concentrations	Volume(mL)	0 hr	24 hr	48 hr	72 hr	96 hr	120 hr	144 hr[B]	**Total**
Control A	0/20	0	0	0	4	0	6	13	23
Control B	0/20	0	0	0	5	0	5	11	21
Control C	0/20	0	0	0	3	0	7	12	22
Control D	0/20	0	0	0	2	0	7	11	20
Control E	0/20	0	0	0	0	6	10	12	28
Control F	0/20	0	0	0	0	0	5	10	15
Control G	0/20	0	0	0	0	3	4	12	19
Control H	0/20	0	0	0	4	0	4	13	21
Control I	0/20	0	0	0	4	0	9	10	23
Control J	0/20	0	0	0	3	2	0	9	14
100% A	20/0	0	0	0	5	4	0	9	18
100% B	20/0	0	0	0	0	0	0	0	0
100% C	20/0	0	0	0	3	0	9	11	23
100% D	20/0	0	0	0	6	0	7	13	26
100% E	20/0	0	0	0	4	0	6	13	23
100% F	20/0	0	0	0	1	0	7	12	20
100% G	20/0	0	0	0	5	0	6	13	24
100% H	20/0	0	0	0	3	0	4	12	19
100% I	20/0	0	0	0[C]	-	-	-	-	-
100% J	20/0	0	0	0	5	4	8	1	18

Total Young	Young	Young per Adult
Control	206	20.6
100%	171	19

[A] Organisms were fed daily.
[B] Test ended due to sufficent amount of control births.
[C] Adult *C. dubia* deceased.
[D] Temperatures of room and test incubator were continuously recorded on a
Room Temperature range for the test period was 25.0-27.0°C.
Incubator #3 temperature range for the test period was 23.0-26.0°C.
Light Intensity during the test was 50-100 foot candles.
Photoperiod during the test was 16 hours of light : 8 hours of dark.

Ceriodaphnia dubia			After Renewal			Conductivity Uncorrected	Before Renewal	
Concentrations	Replicate	Hour	pH	Temperature[D]	Dissolved Oxygen	umhos/cm	pH	Dissolved Oxygen
Control	A	0	8.3	25.1	8.2	180	-	-
100%			7.8	24.8	8.5	725	-	-
Control	B	24	8.4	25.0	7.6	165	8.0	7.4
100%			7.9	24.4	8.1	735	8.3	7.2
Control	C	48	8.4	25.8	8.6	170	8.1	8.2
100%			8.1	25.4	8.6	745	8.4	8.2
Control	D	72	8.1	25.0	7.3	175	8.1	7.6
100%			7.7	24.9	8.6	720	8.4	7.4
Control	E	96	8.0	24.9	7.6	180	8.0	8.0
100%			7.9	25.5	7.9	730	8.4	7.8
Control	F	120	8.3	24.9	8.2	180	8.0	7.5
100%			7.8	24.8	7.4	695	8.4	7.4
Control	G	144	8.0	25.1	7.3	222	-	-
100%			8.3	25.8	7.2	701	-	-

Continued

LIMS	
Job number 1:	TLH-2003-03-04-06
sample number 1:	657045
Job number 2:	TLH-2003-03-06-10
sample number 2:	657594
Job number 3:	TLH-2003-03-10-01
sample number 3:	658100

Data Transcription Verification	
date:	4/11/2003
by:	Christa Pierini
	James Daniels

Total Residual CL2	mg/L	Method
Field:	0.00	-
Lab Sample 1:	<0.03	Hach
Lab Sample 2:	<0.03	Hach
Lab Sample 3:	<0.03	Hach

Ammonia	Total (mg/L)	Unionized (mg/L)
Control water :	<0.017	<0.017
100% Sample 1:	<0.017	<0.017
100% Sample 2:	0.122	0.010
100% Sample 3:	0.278	0.015

Alk & Hardness	Alkalinity (mg/L)	Hardness (mg/L)
Control water:	79	75
100% Sample 1:	171	195
100% Sample 2:	183	200
100% Sample 3:	175	198

Table 1. Data recorded during the chronic screening bioassays of a sample of effluent from Bethune Point Wastewater Treatment Facility, 1 Shady Place, Daytona Beach, Volusia County, Florida, NPDES# FL0025984, performed from 4 to 11 March 2003.

Facility:	**Bethune Point WWTF**		**NPDES #:**	**FL0025984**	Facility Type: **WWTF**	**Analysts:**	Marshall Faircloth
Location:	1 Shady Place, Daytona Beach		Contact/District:	Kane/CEN			Joshua Ayres
County:	Volusia		Test type:	chronic renewal screen			James Daniels
Sample #1 Collection Date:	3/3/2003	Time: 0940	# tests:	2	Receiving Water: Halifax River		Jacquelyn Brynda
Sample #2 Collection Date:	3/5/2003	Time: 0940	Chlorination Type:	dechlorinated	Class III Marine		Christa Pierini
Sample #3 Collection Date:	3/7/2003	Time: 0830					Daisys Tamayo
Test Beginning Date:	3/4/2003	Time: 1430			**Page 2 of 3**		
Test Ending Date:	########	Time: 1500	FDEP SOP#:	TA07_09		**Reviewer:**	Rob Buda

Organism: ***Pimephales promelas*** Life stage: 24 hrs [A]Feeding: Artemia
Chamber size: 1L Food Batch #: 01940425G

	Sample/Diluent			Survival # Alive					
Concentrations	Volume(mL)	0 hr	24 hr	48 hr	72 hr	96 hr	120 hr	144 hr	168 hr
Control A	0/500	10	10	10	10	10	10	10	10
Control B	0/500	10	10	10	10	10	10	10	10
Control C	0/500	10	10	10	10	10	10	10	10
Control D	0/500	10	10	9	9	9	9	9	9
100% A	500/0	10	10	10	9	9	9	9	9
100% B	500/0	10	10	10	9	8	8	8	8
100% C	500/0	10	10	10	10	10	10	10	10
100% D	500/0	10	10	10	10	10	10	10	10

Light Intensity during the test was 50-100 foot candles.
Photoperiod during the test was 16 hours of light : 8 hours of dark.

[A] Organisms were fed daily.
[B] Temperatures of room and test incubator were continuously recorded on a
Room Temperature range for the test period was 25.0-27.0°C.
Incubator #3 temperature range for the test period was 23.0-26.0°C.

LIMS	
Job number 1:	TLH-2003-03-04-06
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Data Transcription Verification	
date:	4/11/2003
by:	James Daniels
	Christa Pierini

			Before Renewal			Conductivity Uncorrected	**After Renewal**			Conductivity Uncorrected
Concentrations	Replicate	Hour	pH	Temperature[B]	Dissolved Oxygen	umhos/cm	pH	Temperature	Dissolved Oxygen	umhos/cm
Control	A	0	8.1	24.1	8.6	300	-	-	-	-
100%			7.7	24.6	9.0	720	-	-	-	-
Control	B	24	7.9	24.1	7.9	365	7.9	25.1	7.7	325
100%			8.2	24.4	7.2	760	7.9	25.1	7.9	750
Control	C	48	7.8	24.4	7.7	320	8.0	25.1	7.7	304
100%			8.1	24.3	7.1	760	8.1	25.0	7.9	676
Control	D	72	7.6	24.3	6.6	320	7.9	25.6	7.3	320
100%			8.0	24.3	6.2	710	7.7	25.6	7.5	745
Control	A	96	7.6	24.1	6.5	320	7.7	25.0	7.8	320
100%			7.7	24.6	6.3	740	7.6	26.0	7.7	755
Control	B	120	7.7	24.3	5.5	315	7.8	25.0	7.1	315
100%			7.7	25.0	3.3	725	7.7	24.7	7.2	745
Control	C	144[C]	7.4	24.6	5.5	320	7.9	25.4	7.1	347
100%			7.6	24.5	2.8	640	7.5	24.9	7.2	754
Control	D	168	7.8	27.6	6.6	366	-	-	-	-
100%			8.1	27.7	5.0	830	-	-	-	-

[C] Sample was aerated to keep dissolved oxygen above 4.0 mg/L.

Total Residual CL2	mg/L	Method
Field:	0.00	-
Lab Sample 1:	<0.03	Hach
Lab Sample 2:	<0.03	Hach
Lab Sample 3:	<0.03	Hach

Ammonia	Total (mg/L)	Unionized (mg/L)
Control water :	<0.017	<0.017
100% Sample 1:	<0.017	<0.017
100% Sample 2:	0.122	0.010
100% Sample 3:	0.278	0.015

Alk & Hardness	Alkalinity (mg/L)	Hardness (mg/L)
Control water:	76	85
100% Sample 1:	171	195
100% Sample 2:	183	200
100% Sample 3:	175	198

Continued

Table 1. Concluded

Data recorded during the chronic screening bioassays of a sample of effluent from Bethune Point Wastewater Treatment Facility, 1 Shady Place, Daytona Beach, Volusia County, Florida, NPDES# FL0025984, performed from 4 to 11 March 2003.

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Sample #3 Collection Date:	3/7/2003	Time: 0830					Daisys Tamayo
Test Beginning Date:	3/4/2003	Time: 1430				**Page 3 of 3**	
Test Ending Date:	3/11/2003	Time: 1500	FDEP SOP#:	TA07_09			**Reviewer:** Rob Buda
Tare weighing Date:	#######						
Final weighing Date:	#######						

		A	B	B-A	C	$(B-A)/10^{A}$
Concentration	Rep #	Wgt.of Pan (g)	Dry Wgt. of Pan and larve	Wgt. of larve (g)	Number of surviving larve	Mean Dry Wgt. Of 10 larve/rep. (mg)
Control A	E1	0.01500	0.02188	0.00688	10	0.668
Control B	E2	0.01482	0.02140	0.00658	10	0.658
Control C	E3	0.01390	0.02012	0.00622	10	0.622
Control D	E4	0.01355	0.01865	0.00510	9	0.510
100% A	E5	0.01575	0.02021	0.00446	9	0.446
100% B	E6	0.01516	0.01825	0.00309	8	0.309
100% C	E7	0.01403	0.01828	0.00425	10	0.425
100% D	E8	0.01365	0.01710	0.00345	10	0.345

[A] Mean dry weight is determined by dividing the total dry weight per replicate

[C] Sample was aerated to keep dissolved oxygen above 4.0 mg/L.

Table 2. Results of chemical analyses on the effluent from Bethune Point Wastewater Treatment Facility sampled on March 3, 2003.

Metals			
Aluminum	14	ug/L	I
Calcium	68.2	mg/L	A
Iron	37	ug/L	I
Lead	0.21	ug/L	I
Magnesium	7	mg/L	A
Zinc	15	ug/L	I
Pesticides and Herbicides			
Atrazine	0.16	ug/L	I
Nutrients			
Ammonia	0.023	mg N/L	A
Nitrates and Nitrites	1.1	mg N/L	
Total Kjeldahl Nitrogen	0.78	mg N/L	A
Ortho-Phosphate	0.098	mg P/L	
Total Phosphorous	0.14	mg P/L	A
Base, Neutral, & Acid Extractable Organics			
None detected			

[A] The reported value is an average of two or more values.
[I] The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.

Table 3. Chemical Analyses performed on the effluent from Bethune Point Wastewater Treatment Facility, sampled on March 3, 2003.

Date Sampled	Field ID	Analysis Group	Component	Result	Units	Remark	MDL	PQL	
3/3/2003 9:40	DB1	BNA-Water	1,2,4,5-Tetrachlorobenzene	1	ug/L	U		1	4
3/3/2003 9:40	DB1	BNA-Water	1,2,4-Trichlorobenzene	1	ug/L	U		1	4
3/3/2003 9:40	DB1	BNA-Water	1,2-Dichlorobenzene	1	ug/L	U		1	4
3/3/2003 9:40	DB1	BNA-Water	1,3,5-Trinitrobenzene	4	ug/L	U		4	16
3/3/2003 9:40	DB1	BNA-Water	1,3-Dichlorobenzene	1	ug/L	U		1	4
3/3/2003 9:40	DB1	BNA-Water	1,3-Dinitrobenzene	2	ug/L	U		2	8
3/3/2003 9:40	DB1	BNA-Water	1,4-Dichlorobenzene	1	ug/L	U		1	4
3/3/2003 9:40	DB1	BNA-Water	1,4-Naphthoquinone	20	ug/L	UJ		20	80
3/3/2003 9:40	DB1	BNA-Water	1-Naphthylamine	10	ug/L	U		10	40
3/3/2003 9:40	DB1	BNA-Water	2,3,4,6-Tetrachlorophenol	2	ug/L	U		2	8
3/3/2003 9:40	DB1	BNA-Water	2,4,5-Trichlorophenol	1	ug/L	U		1	4
3/3/2003 9:40	DB1	BNA-Water	2,4,6-Trichlorophenol	1	ug/L	U		1	4
3/3/2003 9:40	DB1	BNA-Water	2,4-Dichlorophenol	1	ug/L	U		1	4
3/3/2003 9:40	DB1	BNA-Water	2,4-Dimethylphenol	50	ug/L	U		50	200
3/3/2003 9:40	DB1	BNA-Water	2,4-Dinitrophenol	15	ug/L	U		15	60
3/3/2003 9:40	DB1	BNA-Water	2,4-Dinitrotoluene	1	ug/L	U		1	4
3/3/2003 9:40	DB1	BNA-Water	2,6-Dichlorophenol	1	ug/L	U		1	4
3/3/2003 9:40	DB1	BNA-Water	2,6-Dinitrotoluene	1	ug/L	U		1	4
3/3/2003 9:40	DB1	BNA-Water	2-Acetylaminofluorene	1	ug/L	U		1	4
3/3/2003 9:40	DB1	BNA-Water	2-Chloronaphthalene	1	ug/L	U		1	4
3/3/2003 9:40	DB1	BNA-Water	2-Chlorophenol	1	ug/L	U		1	4
3/3/2003 9:40	DB1	BNA-Water	2-Methyl-4,6-dinitrophenol	3	ug/L	U		3	12
3/3/2003 9:40	DB1	BNA-Water	2-Methylnaphthalene	1	ug/L	U		1	4
3/3/2003 9:40	DB1	BNA-Water	2-Naphthylamine	10	ug/L	U		10	40
3/3/2003 9:40	DB1	BNA-Water	2-Nitroaniline	1	ug/L	U		1	4
3/3/2003 9:40	DB1	BNA-Water	2-Nitrophenol	1	ug/L	U		1	4
3/3/2003 9:40	DB1	BNA-Water	2-Picoline	1	ug/L	U		1	4
3/3/2003 9:40	DB1	BNA-Water	3,3'-Dichlorobenzidine	40	ug/L	U		40	160
3/3/2003 9:40	DB1	BNA-Water	3,3'-Dimethylbenzidine	20	ug/L	UJ		20	80
3/3/2003 9:40	DB1	BNA-Water	3-Methylcholanthrene	1	ug/L	U		1	4
3/3/2003 9:40	DB1	BNA-Water	3-Nitroaniline	1	ug/L	U		1	4
3/3/2003 9:40	DB1	BNA-Water	4,4'-DDD	1.5	ug/L	U		1.5	6
3/3/2003 9:40	DB1	BNA-Water	4,4'-DDE	1.5	ug/L	U		1.5	6

3/3/2003 9:40	DB1	BNA-Water	4,4'-DDT	1.5	ug/L	U	1.5	6
3/3/2003 9:40	DB1	BNA-Water	4-Aminobiphenyl	4	ug/L	U	4	16
3/3/2003 9:40	DB1	BNA-Water	4-Bromophenyl phenyl ether	1	ug/L	U	1	4
3/3/2003 9:40	DB1	BNA-Water	4-Chloro-3-methylphenol	1	ug/L	U	1	4
3/3/2003 9:40	DB1	BNA-Water	4-Chloroaniline	1	ug/L	U	1	4
3/3/2003 9:40	DB1	BNA-Water	4-Chlorophenyl phenyl ether	2	ug/L	U	2	8
3/3/2003 9:40	DB1	BNA-Water	4-Nitroaniline	1	ug/L	U	1	4
3/3/2003 9:40	DB1	BNA-Water	4-Nitrophenol	15	ug/L	U	15	60
3/3/2003 9:40	DB1	BNA-Water	5-Nitro-o-toluidine	1	ug/L	U	1	4
3/3/2003 9:40	DB1	BNA-Water	7,12-Dimethylbenz(a)anthracene	1	ug/L	U	1	4
3/3/2003 9:40	DB1	BNA-Water	Acenaphthene	1	ug/L	U	1	4
3/3/2003 9:40	DB1	BNA-Water	Acenaphthylene	1	ug/L	U	1	4
3/3/2003 9:40	DB1	BNA-Water	Acetophenone	1	ug/L	U	1	4
3/3/2003 9:40	DB1	BNA-Water	Aldrin	1.5	ug/L	U	1.5	6
3/3/2003 9:40	DB1	BNA-Water	Aniline	1	ug/L	U	1	4
3/3/2003 9:40	DB1	BNA-Water	Anthracene	1	ug/L	U	1	4
3/3/2003 9:40	DB1	BNA-Water	Azobenzene/1,2-Diphenylhydrazine	1	ug/L	U	1	4
3/3/2003 9:40	DB1	BNA-Water	Benzidine	100	ug/L	U	100	400
3/3/2003 9:40	DB1	BNA-Water	Benzo(a)anthracene	1	ug/L	U	1	4
3/3/2003 9:40	DB1	BNA-Water	Benzo(a)pyrene	1	ug/L	U	1	4
3/3/2003 9:40	DB1	BNA-Water	Benzo(b)fluoranthene	1	ug/L	U	1	4
3/3/2003 9:40	DB1	BNA-Water	Benzo(g,h,i)perylene	1	ug/L	U	1	4
3/3/2003 9:40	DB1	BNA-Water	Benzo(k)fluoranthene	1	ug/L	U	1	4
3/3/2003 9:40	DB1	BNA-Water	Benzyl alcohol	1	ug/L	U	1	4
3/3/2003 9:40	DB1	BNA-Water	Bis(2-chloroethoxy)methane	1	ug/L	U	1	4
3/3/2003 9:40	DB1	BNA-Water	Bis(2-chloroethyl)ether	1	ug/L	U	1	4
3/3/2003 9:40	DB1	BNA-Water	Bis(2-chloroisopropyl)ether	3	ug/L	U	3	12
3/3/2003 9:40	DB1	BNA-Water	Bis(2-ethylhexyl)phthalate	15	ug/L	U	15	60
3/3/2003 9:40	DB1	BNA-Water	Butyl benzyl phthalate	5	ug/L	U	5	20
3/3/2003 9:40	DB1	BNA-Water	Chrysene	1	ug/L	U	1	4
3/3/2003 9:40	DB1	BNA-Water	Di-n-butyl phthalate	5	ug/L	U	5	20
3/3/2003 9:40	DB1	BNA-Water	Di-n-octyl phthalate	1	ug/L	U	1	4
3/3/2003 9:40	DB1	BNA-Water	Dibenzo(a,h)anthracene	1	ug/L	U	1	4
3/3/2003 9:40	DB1	BNA-Water	Dibenzofuran	1	ug/L	U	1	4
3/3/2003 9:40	DB1	BNA-Water	Dieldrin	1.5	ug/L	U	1.5	6
3/3/2003 9:40	DB1	BNA-Water	Diethyl phthalate	1	ug/L	U	1	4
3/3/2003 9:40	DB1	BNA-Water	Dimethyl phthalate	50	ug/L	U	50	200

3/3/2003 9:40	DB1	BNA-Water	Dimethylaminoazobenzene	1	ug/L	U	1	4
3/3/2003 9:40	DB1	BNA-Water	Dinoseb	4	ug/L	U	4	16
3/3/2003 9:40	DB1	BNA-Water	Diphenylamine	3	ug/L	U	3	12
3/3/2003 9:40	DB1	BNA-Water	Endosulfan I	4	ug/L	U	4	16
3/3/2003 9:40	DB1	BNA-Water	Endosulfan II	4	ug/L	U	4	16
3/3/2003 9:40	DB1	BNA-Water	Endosulfan sulfate	1.5	ug/L	U	1.5	6
3/3/2003 9:40	DB1	BNA-Water	Endrin	1.5	ug/L	U	1.5	6
3/3/2003 9:40	DB1	BNA-Water	Endrin aldehyde	4	ug/L	U	4	16
3/3/2003 9:40	DB1	BNA-Water	Ethyl methanesulfonate	1	ug/L	U	1	4
3/3/2003 9:40	DB1	BNA-Water	Fluoranthene	1	ug/L	U	1	4
3/3/2003 9:40	DB1	BNA-Water	Fluorene	1	ug/L	U	1	4
3/3/2003 9:40	DB1	BNA-Water	Heptachlor	1.5	ug/L	U	1.5	6
3/3/2003 9:40	DB1	BNA-Water	Heptachlor epoxide	1.5	ug/L	U	1.5	6
3/3/2003 9:40	DB1	BNA-Water	Hexachlorobenzene	1	ug/L	U	1	4
3/3/2003 9:40	DB1	BNA-Water	Hexachlorobutadiene	3	ug/L	U	3	12
3/3/2003 9:40	DB1	BNA-Water	Hexachlorocyclopentadiene	3	ug/L	U	3	12
3/3/2003 9:40	DB1	BNA-Water	Hexachloroethane	3	ug/L	U	3	12
3/3/2003 9:40	DB1	BNA-Water	Hexachloropropene	2	ug/L	U	2	8
3/3/2003 9:40	DB1	BNA-Water	Indeno(1,2,3-cd)pyrene	1	ug/L	U	1	4
3/3/2003 9:40	DB1	BNA-Water	Isophorone	1	ug/L	UJ	1	4
3/3/2003 9:40	DB1	BNA-Water	Isosafrole	1	ug/L	U	1	4
3/3/2003 9:40	DB1	BNA-Water	Methapyrilene	4	ug/L	UJ	4	16
3/3/2003 9:40	DB1	BNA-Water	Methyl methanesulfonate	1	ug/L	UJ	1	4
3/3/2003 9:40	DB1	BNA-Water	N-Nitrosodi-n-butylamine	1	ug/L	U	1	4
3/3/2003 9:40	DB1	BNA-Water	N-Nitrosodi-n-propylamine	2	ug/L	U	2	8
3/3/2003 9:40	DB1	BNA-Water	N-Nitrosodiethylamine	1	ug/L	U	1	4
3/3/2003 9:40	DB1	BNA-Water	N-Nitrosodimethylamine	2	ug/L	U	2	8
3/3/2003 9:40	DB1	BNA-Water	N-Nitrosodiphenylamine	3	ug/L	U	3	12
3/3/2003 9:40	DB1	BNA-Water	N-Nitrosomethylethylamine	2	ug/L	U	2	8
3/3/2003 9:40	DB1	BNA-Water	N-Nitrosomorpholine	1	ug/L	U	1	4
3/3/2003 9:40	DB1	BNA-Water	N-Nitrosopiperidine	1	ug/L	U	1	4
3/3/2003 9:40	DB1	BNA-Water	N-Nitrosopyrrolidine	2	ug/L	U	2	8
3/3/2003 9:40	DB1	BNA-Water	Naphthalene	1	ug/L	U	1	4
3/3/2003 9:40	DB1	BNA-Water	Nitrobenzene	2	ug/L	U	2	8
3/3/2003 9:40	DB1	BNA-Water	Nitroquinoline-1-oxide	20	ug/L	U	20	80
3/3/2003 9:40	DB1	BNA-Water	Pentachlorobenzene	1	ug/L	U	1	4
3/3/2003 9:40	DB1	BNA-Water	Pentachloroethane	50	ug/L	U	50	200

3/3/2003 9:40	DB1	BNA-Water	Pentachloronitrobenzene	1	ug/L	U	1	4
3/3/2003 9:40	DB1	BNA-Water	Pentachlorophenol	3	ug/L	U	3	12
3/3/2003 9:40	DB1	BNA-Water	Phenacetin	4	ug/L	U	4	12
3/3/2003 9:40	DB1	BNA-Water	Phenanthrene	1	ug/L	U	1	4
3/3/2003 9:40	DB1	BNA-Water	Phenol	1	ug/L	U	1	4
3/3/2003 9:40	DB1	BNA-Water	Pyrene	1	ug/L	U	1	4
3/3/2003 9:40	DB1	BNA-Water	Pyridine	4	ug/L	U	4	16
3/3/2003 9:40	DB1	BNA-Water	Safrole	1	ug/L	U	1	4
3/3/2003 9:40	DB1	BNA-Water	alpha-BHC	1.5	ug/L	U	1.5	6
3/3/2003 9:40	DB1	BNA-Water	beta-BHC	1.5	ug/L	U	1.5	6
3/3/2003 9:40	DB1	BNA-Water	delta-BHC	1.5	ug/L	U	1.5	6
3/3/2003 9:40	DB1	BNA-Water	gamma-BHC	1.5	ug/L	U	1.5	6
3/3/2003 9:40	DB1	BNA-Water	m,p-Cresols	2	ug/L	U	2	8
3/3/2003 9:40	DB1	BNA-Water	o-Cresol	2	ug/L	U	2	8
3/3/2003 9:40	DB1	BNA-Water	o-Toluidine	1	ug/L	U	1	4
3/3/2003 9:40	DB1	Bio-AGP/LimNut	Algal Growth Potential	35.4	mg DryWt/L		0.1	0.3
3/3/2003 9:40	DB1	Bio-Chl-a	Chlorophyll-A, Monochromatic, Water	0.85	ug/L	U	0.85	2.6
3/3/2003 9:40	DB1	Bio-Chl-a	Phaeophytin-A, Monochromatic, Water	0.85	ug/L	U	0.85	2.6
3/3/2003 9:40	DB1	Bio-Toxicology	Bioassay-Chronic-Scrn-FW-C.dubia, NOEC	100	NOEC			
3/3/2003 9:40	DB1	Bio-Toxicology	Bioassay-Chronic-Scrn-FW-Fish, NOEC	100	NOEC	K		
3/3/2003 9:40	DB1	GC-Water	Alachlor	0.57	ug/L	U	0.57	2.28
3/3/2003 9:40	DB1	GC-Water	Ametryn	0.048	ug/L	U	0.048	0.192
3/3/2003 9:40	DB1	GC-Water	Atrazine	0.16	ug/L	I	0.048	0.192
3/3/2003 9:40	DB1	GC-Water	Azinphos Methyl	0.048	ug/L	U	0.048	0.192
3/3/2003 9:40	DB1	GC-Water	Bromacil	0.19	ug/L	U	0.19	0.76
3/3/2003 9:40	DB1	GC-Water	Butylate	0.19	ug/L	U	0.19	0.76
3/3/2003 9:40	DB1	GC-Water	Chlorpyrifos Ethyl	0.048	ug/L	U	0.048	0.192
3/3/2003 9:40	DB1	GC-Water	Chlorpyrifos Methyl	0.095	ug/L	U	0.095	0.38
3/3/2003 9:40	DB1	GC-Water	Diazinon	0.048	ug/L	UJ	0.048	0.192
3/3/2003 9:40	DB1	GC-Water	Ethion	0.048	ug/L	U	0.048	0.192
3/3/2003 9:40	DB1	GC-Water	Ethoprop	0.095	ug/L	U	0.095	0.38
3/3/2003 9:40	DB1	GC-Water	Fenamiphos	0.19	ug/L	U	0.19	0.76
3/3/2003 9:40	DB1	GC-Water	Fonofos	0.095	ug/L	U	0.095	0.38
3/3/2003 9:40	DB1	GC-Water	Hexazinone	0.095	ug/L	U	0.095	0.38
3/3/2003 9:40	DB1	GC-Water	Malathion	0.14	ug/L	U	0.14	0.56
3/3/2003 9:40	DB1	GC-Water	Metalaxyl	0.24	ug/L	U	0.24	0.96
3/3/2003 9:40	DB1	GC-Water	Metolachlor	0.48	ug/L	U	0.48	1.92

3/3/2003 9:40	DB1	GC-Water	Metribuzin	0.095	ug/L	U	0.095	0.38
3/3/2003 9:40	DB1	GC-Water	Mevinphos	0.19	ug/L	U	0.19	0.76
3/3/2003 9:40	DB1	GC-Water	Naled	0.76	ug/L	U	0.76	3.04
3/3/2003 9:40	DB1	GC-Water	Norflurazon	0.095	ug/L	U	0.095	0.38
3/3/2003 9:40	DB1	GC-Water	Parathion Ethyl	0.14	ug/L	U	0.14	0.56
3/3/2003 9:40	DB1	GC-Water	Parathion Methyl	0.095	ug/L	U	0.095	0.38
3/3/2003 9:40	DB1	GC-Water	Phorate	0.048	ug/L	U	0.048	0.192
3/3/2003 9:40	DB1	GC-Water	Prometryn	0.14	ug/L	U	0.14	0.56
3/3/2003 9:40	DB1	GC-Water	Simazine	0.048	ug/L	U	0.048	0.192
3/3/2003 9:40	DB1	Metals-Water	Aluminum	14	ug/L	I	10	40
3/3/2003 9:40	DB1	Metals-Water	Arsenic	3	ug/L	U	3	12
3/3/2003 9:40	DB1	Metals-Water	Cadmium	0.025	ug/L	U	0.025	0.1
3/3/2003 9:40	DB1	Metals-Water	Calcium	68.2	mg/L	A	0.05	0.2
3/3/2003 9:40	DB1	Metals-Water	Chromium	2	ug/L	U	2	8
3/3/2003 9:40	DB1	Metals-Water	Copper	2.2	ug/L	U	0.75	3
3/3/2003 9:40	DB1	Metals-Water	Iron	37	ug/L	I	7	28
3/3/2003 9:40	DB1	Metals-Water	Lead	0.21	ug/L	I	0.1	0.4
3/3/2003 9:40	DB1	Metals-Water	Magnesium	7	mg/L	A	0.01	0.04
3/3/2003 9:40	DB1	Metals-Water	Nickel	4	ug/L	U	2	8
3/3/2003 9:40	DB1	Metals-Water	Selenium	1	ug/L	U	1	4
3/3/2003 9:40	DB1	Metals-Water	Silver	0.02	ug/L	U	0.02	0.08
3/3/2003 9:40	DB1	Metals-Water	Zinc	15	ug/L	I	4	16
3/3/2003 9:40	DB1	Nutrients-Liquid	Ammonia-N	0.023	mg N/L	A	0.01	0.02
3/3/2003 9:40	DB1	Nutrients-Liquid	NO2NO3-N	1.1	mg N/L		0.2	0.5
3/3/2003 9:40	DB1	Nutrients-Liquid	N_KJEL_TOT	0.78	mg N/L	A	0.06	0.2
3/3/2003 9:40	DB1	Nutrients-Liquid	O-Phosphate-P	0.098	mg P/L		0.008	0.02
3/3/2003 9:40	DB1	Nutrients-Liquid	Total-P	0.14	mg P/L	A	0.015	0.04
3/3/2003 9:40	EQUIPMEN	BNA-Water	1,2,4,5-Tetrachlorobenzene	1	ug/L	U	1	4
3/3/2003 9:40	EQUIPMEN	BNA-Water	1,2,4-Trichlorobenzene	1	ug/L	U	1	4
3/3/2003 9:40	EQUIPMEN	BNA-Water	1,2-Dichlorobenzene	1	ug/L	U	1	4
3/3/2003 9:40	EQUIPMEN	BNA-Water	1,3,5-Trinitrobenzene	4	ug/L	U	4	16
3/3/2003 9:40	EQUIPMEN	BNA-Water	1,3-Dichlorobenzene	1	ug/L	U	1	4
3/3/2003 9:40	EQUIPMEN	BNA-Water	1,3-Dinitrobenzene	2	ug/L	U	2	8
3/3/2003 9:40	EQUIPMEN	BNA-Water	1,4-Dichlorobenzene	1	ug/L	U	1	4
3/3/2003 9:40	EQUIPMEN	BNA-Water	1,4-Naphthoquinone	20	ug/L	UJ	20	80
3/3/2003 9:40	EQUIPMEN	BNA-Water	1-Naphthylamine	10	ug/L	U	10	40
3/3/2003 9:40	EQUIPMEN	BNA-Water	2,3,4,6-Tetrachlorophenol	2	ug/L	U	2	8

3/3/2003 9:40	EQUIPMEN	BNA-Water	2,4,5-Trichlorophenol	1	ug/L	U	1	4
3/3/2003 9:40	EQUIPMEN	BNA-Water	2,4,6-Trichlorophenol	1	ug/L	U	1	4
3/3/2003 9:40	EQUIPMEN	BNA-Water	2,4-Dichlorophenol	1	ug/L	U	1	4
3/3/2003 9:40	EQUIPMEN	BNA-Water	2,4-Dimethylphenol	50	ug/L	U	50	200
3/3/2003 9:40	EQUIPMEN	BNA-Water	2,4-Dinitrophenol	15	ug/L	U	15	60
3/3/2003 9:40	EQUIPMEN	BNA-Water	2,4-Dinitrotoluene	1	ug/L	U	1	4
3/3/2003 9:40	EQUIPMEN	BNA-Water	2,6-Dichlorophenol	1	ug/L	U	1	4
3/3/2003 9:40	EQUIPMEN	BNA-Water	2,6-Dinitrotoluene	1	ug/L	U	1	4
3/3/2003 9:40	EQUIPMEN	BNA-Water	2-Acetylaminofluorene	1	ug/L	U	1	4
3/3/2003 9:40	EQUIPMEN	BNA-Water	2-Chloronaphthalene	1	ug/L	U	1	4
3/3/2003 9:40	EQUIPMEN	BNA-Water	2-Chlorophenol	1	ug/L	U	1	4
3/3/2003 9:40	EQUIPMEN	BNA-Water	2-Methyl-4,6-dinitrophenol	3	ug/L	U	3	12
3/3/2003 9:40	EQUIPMEN	BNA-Water	2-Methylnaphthalene	1	ug/L	U	1	4
3/3/2003 9:40	EQUIPMEN	BNA-Water	2-Naphthylamine	10	ug/L	U	10	40
3/3/2003 9:40	EQUIPMEN	BNA-Water	2-Nitroaniline	1	ug/L	U	1	4
3/3/2003 9:40	EQUIPMEN	BNA-Water	2-Nitrophenol	1	ug/L	U	1	4
3/3/2003 9:40	EQUIPMEN	BNA-Water	2-Picoline	1	ug/L	U	1	4
3/3/2003 9:40	EQUIPMEN	BNA-Water	3,3'-Dichlorobenzidine	40	ug/L	U	40	160
3/3/2003 9:40	EQUIPMEN	BNA-Water	3,3'-Dimethylbenzidine	20	ug/L	UJ	20	80
3/3/2003 9:40	EQUIPMEN	BNA-Water	3-Methylcholanthrene	1	ug/L	U	1	4
3/3/2003 9:40	EQUIPMEN	BNA-Water	3-Nitroaniline	1	ug/L	U	1	4
3/3/2003 9:40	EQUIPMEN	BNA-Water	4,4'-DDD	1.5	ug/L	U	1.5	6
3/3/2003 9:40	EQUIPMEN	BNA-Water	4,4'-DDE	1.5	ug/L	U	1.5	6
3/3/2003 9:40	EQUIPMEN	BNA-Water	4,4'-DDT	1.5	ug/L	U	1.5	6
3/3/2003 9:40	EQUIPMEN	BNA-Water	4-Aminobiphenyl	4	ug/L	U	4	16
3/3/2003 9:40	EQUIPMEN	BNA-Water	4-Bromophenyl phenyl ether	1	ug/L	U	1	4
3/3/2003 9:40	EQUIPMEN	BNA-Water	4-Chloro-3-methylphenol	1	ug/L	U	1	4
3/3/2003 9:40	EQUIPMEN	BNA-Water	4-Chloroaniline	1	ug/L	U	1	4
3/3/2003 9:40	EQUIPMEN	BNA-Water	4-Chlorophenyl phenyl ether	2	ug/L	U	2	8
3/3/2003 9:40	EQUIPMEN	BNA-Water	4-Nitroaniline	1	ug/L	U	1	4
3/3/2003 9:40	EQUIPMEN	BNA-Water	4-Nitrophenol	15	ug/L	U	15	60
3/3/2003 9:40	EQUIPMEN	BNA-Water	5-Nitro-o-toluidine	1	ug/L	U	1	4
3/3/2003 9:40	EQUIPMEN	BNA-Water	7,12-Dimethylbenz(a)anthracene	1	ug/L	U	1	4
3/3/2003 9:40	EQUIPMEN	BNA-Water	Acenaphthene	1	ug/L	U	1	4
3/3/2003 9:40	EQUIPMEN	BNA-Water	Acenaphthylene	1	ug/L	U	1	4
3/3/2003 9:40	EQUIPMEN	BNA-Water	Acetophenone	1	ug/L	U	1	4
3/3/2003 9:40	EQUIPMEN	BNA-Water	Aldrin	1.5	ug/L	U	1.5	6

3/3/2003 9:40	EQUIPMEN	BNA-Water	Aniline	1	ug/L	U	1	4
3/3/2003 9:40	EQUIPMEN	BNA-Water	Anthracene	1	ug/L	U	1	4
3/3/2003 9:40	EQUIPMEN	BNA-Water	Azobenzene/1,2-Diphenylhydrazine	1	ug/L	U	1	4
3/3/2003 9:40	EQUIPMEN	BNA-Water	Benzidine	100	ug/L	U	100	400
3/3/2003 9:40	EQUIPMEN	BNA-Water	Benzo(a)anthracene	1	ug/L	U	1	4
3/3/2003 9:40	EQUIPMEN	BNA-Water	Benzo(a)pyrene	1	ug/L	U	1	4
3/3/2003 9:40	EQUIPMEN	BNA-Water	Benzo(b)fluoranthene	1	ug/L	U	1	4
3/3/2003 9:40	EQUIPMEN	BNA-Water	Benzo(g,h,i)perylene	1	ug/L	U	1	4
3/3/2003 9:40	EQUIPMEN	BNA-Water	Benzo(k)fluoranthene	1	ug/L	U	1	4
3/3/2003 9:40	EQUIPMEN	BNA-Water	Benzyl alcohol	1	ug/L	U	1	4
3/3/2003 9:40	EQUIPMEN	BNA-Water	Bis(2-chloroethoxy)methane	1	ug/L	U	1	4
3/3/2003 9:40	EQUIPMEN	BNA-Water	Bis(2-chloroethyl)ether	1	ug/L	U	1	4
3/3/2003 9:40	EQUIPMEN	BNA-Water	Bis(2-chloroisopropyl)ether	3	ug/L	U	3	12
3/3/2003 9:40	EQUIPMEN	BNA-Water	Bis(2-ethylhexyl)phthalate	15	ug/L	U	15	60
3/3/2003 9:40	EQUIPMEN	BNA-Water	Butyl benzyl phthalate	5	ug/L	U	5	20
3/3/2003 9:40	EQUIPMEN	BNA-Water	Chrysene	1	ug/L	U	1	4
3/3/2003 9:40	EQUIPMEN	BNA-Water	Di-n-butyl phthalate	5	ug/L	U	5	20
3/3/2003 9:40	EQUIPMEN	BNA-Water	Di-n-octyl phthalate	1	ug/L	U	1	4
3/3/2003 9:40	EQUIPMEN	BNA-Water	Dibenzo(a,h)anthracene	1	ug/L	U	1	4
3/3/2003 9:40	EQUIPMEN	BNA-Water	Dibenzofuran	1	ug/L	U	1	4
3/3/2003 9:40	EQUIPMEN	BNA-Water	Dieldrin	1.5	ug/L	U	1.5	6
3/3/2003 9:40	EQUIPMEN	BNA-Water	Diethyl phthalate	1	ug/L	U	1	4
3/3/2003 9:40	EQUIPMEN	BNA-Water	Dimethyl phthalate	50	ug/L	U	50	200
3/3/2003 9:40	EQUIPMEN	BNA-Water	Dimethylaminoazobenzene	1	ug/L	U	1	4
3/3/2003 9:40	EQUIPMEN	BNA-Water	Dinoseb	4	ug/L	U	4	16
3/3/2003 9:40	EQUIPMEN	BNA-Water	Diphenylamine	3	ug/L	U	3	12
3/3/2003 9:40	EQUIPMEN	BNA-Water	Endosulfan I	4	ug/L	U	4	16
3/3/2003 9:40	EQUIPMEN	BNA-Water	Endosulfan II	4	ug/L	U	4	16
3/3/2003 9:40	EQUIPMEN	BNA-Water	Endosulfan sulfate	1.5	ug/L	U	1.5	6
3/3/2003 9:40	EQUIPMEN	BNA-Water	Endrin	1.5	ug/L	U	1.5	6
3/3/2003 9:40	EQUIPMEN	BNA-Water	Endrin aldehyde	4	ug/L	U	4	16
3/3/2003 9:40	EQUIPMEN	BNA-Water	Ethyl methanesulfonate	1	ug/L	U	1	4
3/3/2003 9:40	EQUIPMEN	BNA-Water	Fluoranthene	1	ug/L	U	1	4
3/3/2003 9:40	EQUIPMEN	BNA-Water	Fluorene	1	ug/L	U	1	4
3/3/2003 9:40	EQUIPMEN	BNA-Water	Heptachlor	1.5	ug/L	U	1.5	6
3/3/2003 9:40	EQUIPMEN	BNA-Water	Heptachlor epoxide	1.5	ug/L	U	1.5	6
3/3/2003 9:40	EQUIPMEN	BNA-Water	Hexachlorobenzene	1	ug/L	U	1	4

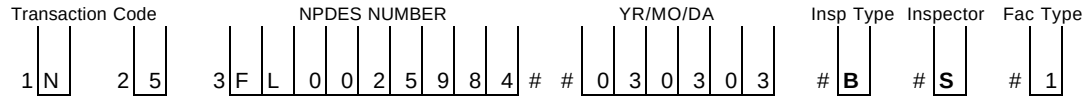
3/3/2003 9:40	EQUIPMEN	BNA-Water	Hexachlorobutadiene	3	ug/L	U	3	12
3/3/2003 9:40	EQUIPMEN	BNA-Water	Hexachlorocyclopentadiene	3	ug/L	U	3	12
3/3/2003 9:40	EQUIPMEN	BNA-Water	Hexachloroethane	3	ug/L	U	3	12
3/3/2003 9:40	EQUIPMEN	BNA-Water	Hexachloropropene	2	ug/L	U	2	8
3/3/2003 9:40	EQUIPMEN	BNA-Water	Indeno(1,2,3-cd)pyrene	1	ug/L	U	1	4
3/3/2003 9:40	EQUIPMEN	BNA-Water	Isophorone	1	ug/L	UJ	1	4
3/3/2003 9:40	EQUIPMEN	BNA-Water	Isosafrole	1	ug/L	U	1	4
3/3/2003 9:40	EQUIPMEN	BNA-Water	Methapyrilene	4	ug/L	UJ	4	16
3/3/2003 9:40	EQUIPMEN	BNA-Water	Methyl methanesulfonate	1	ug/L	UJ	1	4
3/3/2003 9:40	EQUIPMEN	BNA-Water	N-Nitrosodi-n-butylamine	1	ug/L	U	1	4
3/3/2003 9:40	EQUIPMEN	BNA-Water	N-Nitrosodi-n-propylamine	2	ug/L	U	2	8
3/3/2003 9:40	EQUIPMEN	BNA-Water	N-Nitrosodiethylamine	1	ug/L	U	1	4
3/3/2003 9:40	EQUIPMEN	BNA-Water	N-Nitrosodimethylamine	2	ug/L	U	2	8
3/3/2003 9:40	EQUIPMEN	BNA-Water	N-Nitrosodiphenylamine	3	ug/L	U	3	12
3/3/2003 9:40	EQUIPMEN	BNA-Water	N-Nitrosomethylethylamine	2	ug/L	U	2	8
3/3/2003 9:40	EQUIPMEN	BNA-Water	N-Nitrosomorpholine	1	ug/L	U	1	4
3/3/2003 9:40	EQUIPMEN	BNA-Water	N-Nitrosopiperidine	1	ug/L	U	1	4
3/3/2003 9:40	EQUIPMEN	BNA-Water	N-Nitrosopyrrolidine	2	ug/L	U	2	8
3/3/2003 9:40	EQUIPMEN	BNA-Water	Naphthalene	1	ug/L	U	1	4
3/3/2003 9:40	EQUIPMEN	BNA-Water	Nitrobenzene	2	ug/L	U	2	8
3/3/2003 9:40	EQUIPMEN	BNA-Water	Nitroquinoline-1-oxide	20	ug/L	U	20	80
3/3/2003 9:40	EQUIPMEN	BNA-Water	Pentachlorobenzene	1	ug/L	U	1	4
3/3/2003 9:40	EQUIPMEN	BNA-Water	Pentachloroethane	50	ug/L	U	50	200
3/3/2003 9:40	EQUIPMEN	BNA-Water	Pentachloronitrobenzene	1	ug/L	U	1	4
3/3/2003 9:40	EQUIPMEN	BNA-Water	Pentachlorophenol	3	ug/L	U	3	12
3/3/2003 9:40	EQUIPMEN	BNA-Water	Phenacetin	4	ug/L	U	4	12
3/3/2003 9:40	EQUIPMEN	BNA-Water	Phenanthrene	1	ug/L	U	1	4
3/3/2003 9:40	EQUIPMEN	BNA-Water	Phenol	1	ug/L	U	1	4
3/3/2003 9:40	EQUIPMEN	BNA-Water	Pyrene	1	ug/L	U	1	4
3/3/2003 9:40	EQUIPMEN	BNA-Water	Pyridine	4	ug/L	U	4	16
3/3/2003 9:40	EQUIPMEN	BNA-Water	Safrole	1	ug/L	U	1	4
3/3/2003 9:40	EQUIPMEN	BNA-Water	alpha-BHC	1.5	ug/L	U	1.5	6
3/3/2003 9:40	EQUIPMEN	BNA-Water	beta-BHC	1.5	ug/L	U	1.5	6
3/3/2003 9:40	EQUIPMEN	BNA-Water	delta-BHC	1.5	ug/L	U	1.5	6
3/3/2003 9:40	EQUIPMEN	BNA-Water	gamma-BHC	1.5	ug/L	U	1.5	6
3/3/2003 9:40	EQUIPMEN	BNA-Water	m,p-Cresols	2	ug/L	U	2	8
3/3/2003 9:40	EQUIPMEN	BNA-Water	o-Cresol	2	ug/L	U	2	8

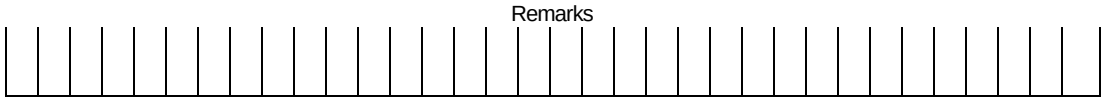
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3/3/2003 9:40	EQUIPMEN'	GC-Water	Alachlor	0.57	ug/L	U	0.57	2.28
3/3/2003 9:40	EQUIPMEN'	GC-Water	Ametryn	0.048	ug/L	U	0.048	0.192
3/3/2003 9:40	EQUIPMEN'	GC-Water	Atrazine	0.048	ug/L	U	0.048	0.192
3/3/2003 9:40	EQUIPMEN'	GC-Water	Azinphos Methyl	0.048	ug/L	U	0.048	0.192
3/3/2003 9:40	EQUIPMEN'	GC-Water	Bromacil	0.19	ug/L	U	0.19	0.76
3/3/2003 9:40	EQUIPMEN'	GC-Water	Butylate	0.19	ug/L	U	0.19	0.76
3/3/2003 9:40	EQUIPMEN'	GC-Water	Chlorpyrifos Ethyl	0.048	ug/L	U	0.048	0.192
3/3/2003 9:40	EQUIPMEN'	GC-Water	Chlorpyrifos Methyl	0.095	ug/L	U	0.095	0.38
3/3/2003 9:40	EQUIPMEN'	GC-Water	Diazinon	0.048	ug/L	UJ	0.048	0.192
3/3/2003 9:40	EQUIPMEN'	GC-Water	Ethion	0.048	ug/L	U	0.048	0.192
3/3/2003 9:40	EQUIPMEN'	GC-Water	Ethoprop	0.095	ug/L	U	0.095	0.38
3/3/2003 9:40	EQUIPMEN'	GC-Water	Fenamiphos	0.19	ug/L	U	0.19	0.76
3/3/2003 9:40	EQUIPMEN'	GC-Water	Fonofos	0.095	ug/L	U	0.095	0.38
3/3/2003 9:40	EQUIPMEN'	GC-Water	Hexazinone	0.095	ug/L	U	0.095	0.38
3/3/2003 9:40	EQUIPMEN'	GC-Water	Malathion	0.14	ug/L	U	0.14	0.56
3/3/2003 9:40	EQUIPMEN'	GC-Water	Metalaxyl	0.24	ug/L	U	0.24	0.96
3/3/2003 9:40	EQUIPMEN'	GC-Water	Metolachlor	0.48	ug/L	U	0.48	1.92
3/3/2003 9:40	EQUIPMEN'	GC-Water	Metribuzin	0.095	ug/L	U	0.095	0.38
3/3/2003 9:40	EQUIPMEN'	GC-Water	Mevinphos	0.19	ug/L	U	0.19	0.76
3/3/2003 9:40	EQUIPMEN'	GC-Water	Naled	0.76	ug/L	U	0.76	3.04
3/3/2003 9:40	EQUIPMEN'	GC-Water	Norflurazon	0.095	ug/L	U	0.095	0.38
3/3/2003 9:40	EQUIPMEN'	GC-Water	Parathion Ethyl	0.14	ug/L	U	0.14	0.56
3/3/2003 9:40	EQUIPMEN'	GC-Water	Parathion Methyl	0.095	ug/L	U	0.095	0.38
3/3/2003 9:40	EQUIPMEN'	GC-Water	Phorate	0.048	ug/L	U	0.048	0.192
3/3/2003 9:40	EQUIPMEN'	GC-Water	Prometryn	0.14	ug/L	U	0.14	0.56
3/3/2003 9:40	EQUIPMEN'	GC-Water	Simazine	0.048	ug/L	U	0.048	0.192
3/3/2003 9:40	EQUIPMEN'	Metals-Water	Aluminum	10	ug/L	U	10	40
3/3/2003 9:40	EQUIPMEN'	Metals-Water	Arsenic	3	ug/L	U	3	12
3/3/2003 9:40	EQUIPMEN'	Metals-Water	Cadmium	0.025	ug/L	U	0.025	0.1
3/3/2003 9:40	EQUIPMEN'	Metals-Water	Calcium	0.18	mg/L	I	0.05	0.2
3/3/2003 9:40	EQUIPMEN'	Metals-Water	Chromium	2	ug/L	U	2	8
3/3/2003 9:40	EQUIPMEN'	Metals-Water	Copper	2.2	ug/L	U	0.75	3
3/3/2003 9:40	EQUIPMEN'	Metals-Water	Iron	7	ug/L	U	7	28
3/3/2003 9:40	EQUIPMEN'	Metals-Water	Lead	0.1	ug/L	U	0.1	0.4
3/3/2003 9:40	EQUIPMEN'	Metals-Water	Magnesium	0.01	mg/L	U	0.01	0.04
3/3/2003 9:40	EQUIPMEN'	Metals-Water	Nickel	4	ug/L	U	2	8

3/3/2003 9:40	EQUIPMEN	Metals-Water	Selenium	1	ug/L	U	1	4
3/3/2003 9:40	EQUIPMEN	Metals-Water	Silver	0.02	ug/L	U	0.02	0.08
3/3/2003 9:40	EQUIPMEN	Metals-Water	Zinc	4	ug/L	U	4	16
3/3/2003 9:40	EQUIPMEN	Nutrients-Liquid	Ammonia-N	0.01	mg N/L	U	0.01	0.02
3/3/2003 9:40	EQUIPMEN	Nutrients-Liquid	NO2NO3-N	0.004	mg N/L	U	0.004	0.01
3/3/2003 9:40	EQUIPMEN	Nutrients-Liquid	N_KJEL_TOT	0.06	mg N/L	U	0.06	0.2
3/3/2003 9:40	EQUIPMEN	Nutrients-Liquid	O-Phosphate-P	0.13	mg P/L		0.004	0.01
3/3/2003 9:40	EQUIPMEN	Nutrients-Liquid	Total-P	0.13	mg P/L		0.015	0.04

The Bioassay of Bethune Point Wastewater Treatment Facility effluent sampled on March 3, 2003, NPDES #FL0025984.

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

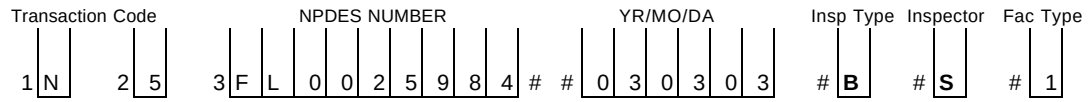


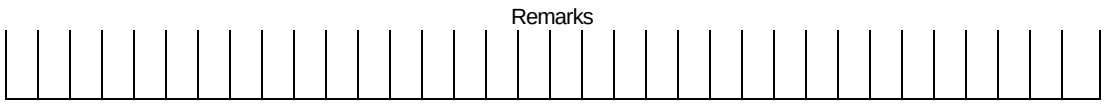


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The Priority Pollutants Analysis for Bioassay of Bethune Point Wastewater Treatment Facility effluent sampled on March 3, 2003, NPDES #FL0025984.

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





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Appendix A. T-test for comparison of *Pimephales promelas* growth in the Bethune Point WWTP 100% effluent and the chronic bioassay control water.

Sample:	Bethune Pt. WWTP	Date tested:	3/4/2003
Species:	Pimephales promelas	Test Type:	static renewal

Leave rep value blank if few reps used

	Teatment A	Treatment B
Replicate #	Control	100% Effluent
1	0.688	0.446
2	0.658	0.309
3	0.622	0.425
4	0.510	0.345
5		
6		
7		
8		
9		
10		
Average	0.61950	0.38125
	t-value=	4.70181
	df=	6

#of Reps./sample 4.00000

df	p=0.05 Table t-value
1	6.31400
2	2.92000
3	2.35300
4	2.13200
5	2.01500
6	1.94300
7	1.89500
8	1.86000
9	1.83300
10	1.81200
18	1.734

Treat. A Sum (X squared)=	1.55329		Sum x(ctl)sq	Treat. B sum X squared=	0.59405	Sum x(100%)sq
Treat. A (sum X) squared/n=	1.53512		0.473344	Treat. B (sum X) squared/n=	0.58141	0.198916
			0.432964			0.095481
n=	4.00000		0.386884	n=	4.00000	0.180625
Sum x squared=	0.01817		0.2601	Sum x squared=	0.01264	0.119025
				pooled s squared=	0.00514	
pooled S squared=	0.00514					
s=	0.05067					