

Bioassays of

City of Arcadia William Tyson Wastewater Treatment Plant

Desoto County

NPDES #FL0027511

Sampled February 2, 2004

June 2004

Biology Section
Bureau of Laboratories
Division of Resource Assessment and Management

Quality Manual No. 870346G
NELAC Certification No. E31780

The City of Arcadia William Tyson Wastewater Treatment Plant, 223 South Parker Avenue, Arcadia, Desoto County, Florida, NPDES #FL0027511. Effluent samples for this facility were collected on February 2, 2004.

Introduction

The City of Arcadia William Tyson Wastewater Treatment Plant (WWTP) has a design flow of 2.0 million gallons per day (MGD) and an average flow of 1.38 MGD (flow data from monthly averages for January 2003 through December 2003). Wastewater treatment consists of a trickle filter with a recirculation Biological Nutrient Removal (BNR) process. The BNR system consists of: an on-site influent pumping station below ground level with five submersible lifting pumps, a headworks with one mechanically cleaned fine-bar screen, one manually cleaned coarse-bar screen, a mechanical screenings conveyor, a Pista vortex grit removal system, and a grit classifier; two 65-foot diameter trickle filter basins, each with an artificial media surface area of 1,590,000 ft^2; an in-plant pumping station with three recirculation pumps and five clarifier feed pumps; three secondary clarifier basins(two of 101,500 gallons volume and 1,134 ft^2 surface area each and one of 217,700 gallons volume and 2,376 ft^2 surface area); five dual module Parkson Dynasand upflow sand filters; a dual channel chlorine basin of 75,000 gallons, using gaseous chlorine for disinfection, providing 22 minutes of contact time at peak flow; two aspirating aerators for reaeration, currently in serviceable storage for backup aeration; and an effluent pumping station with four vertical turbine pumps which transfer effluent to the reuse pumping station, percolation pond, and Outfall (D001). The reuse pumping station, percolation pond, and Outfall D001 are located approximately two miles north of the WWTP. Outfall D001 has a 9-step re-aeration cascade that provides a fall of 10.5 feet and discharges at the stream bank into the Class III freshwaters of an unnamed tributary of the Peace River. This facility has no mixing zones (facility information provided by Lori Pillsbury, FDEP Southwest District, Tampa).

Methods

Samples were collected from the NPDES sampling point by Lori Pillsbury (FDEP Southwest District, Tampa) 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 toxicity and algal growth potential tests discussed in this report were performed following internal DEP SOP's TA07_01,TA07_02, 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.

Toxicity Test Results

Tests were performed February 3 - 5, 2004.

Ceriodaphnia dubia 48-hr acute screening bioassay – Not Toxic; LC_{50} > 100%, 0% mortality in 100% sample at 48 hours

Pimephales promelas 48-hr acute screening bioassay – Not Toxic; LC_{50} > 100%, 0% mortality in 100% sample at 48 hours

See Table 1 for bioassay bench sheets.

Algal Growth Potential

The effluent Algal Growth Potential (AGP) was 106 mg dry wt/L of *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 effluent sample value was approximately 21 times greater than the "problem" threshold. The nutrient data suggests the effluent is phosphorus-

limited. The effluent result is higher than the predicted value, so there is no evidence of potential growth inhibition (Table 2).

See Table 2 for AGP results.

Chemistry Results

Total residual chlorine was not detected in the bioassay sample in the laboratory. Total ammonia was detected in the bioassay sample in the laboratory at a concentration of 2.65 mg/L. The total ammonia in the sample preserved for chemical analysis was 2.7 mg/L. The calculated unionized ammonia concentration of the effluent, based on the temperature and pH of the effluent when collected, was 0.008 mg/L.

Aluminum, iron, zinc, and chloroform were detected in the effluent sample at levels that complied with Class III Freshwater Quality Criteria (62-302 F.A.C.).

Cadmium, lead, silver, diazinon and 2,4,6-trichlorophenol, were also detected in the effluent sample at levels above the method detection limits, but below the practical quantitation limits.

See Table 3 for results of analytes detected in the effluent.
See Appendix 1 for a complete list of chemical analyses performed.

Conclusion

The effluent samples collected from this facility on February 2, 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.

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. Data recorded during the 48-hour acute screening bioassays of a sample of effluent from the City of Arcadia William Tyson Wastewater Treatment Plant, 223 South Parker Avenue, Arcadia, Desoto County, Florida, NPDES# FL0027511, performed from 3 to 5 February 2004.

Facility:	**City of Arcadia William Tyson WWTP**		**NPDES #:**	**FL0027511**	Facility Type:	**Wastewater**	**Analysts:**	Marshall Faircloth	
Location:	223 South Parker Avenue, Arcadia		Contact/District:	N. Cornwell/Southwest		**Treatment Plant**		Sarah Prichard	Joshua Ayres
County:	Desoto		Test type:	static acute screen				Scott Andree	James Daniels
Sample Collection Date:	2/2/2004	Time: 1030	# tests:	2	Receiving Water:	Class III fresh			Christa Pierini
Test Beginning Date:	2/3/2004	Time: 1230	Chlorination Type:	chlorinated		unnamed tributary of the Peace River			
Test Ending Date:	2/5/2004	Time: 1330	FDEP SOP#:	TA07_01 / 02		**Page 1 of 1**	**Reviewer:**	Julie Espy	

Organism: ***Ceriodaphnia dubia*** (water flea) Life stage: <24 hours Chamber size: 30 mL [A] Feeding: YCT/Algae Food Batch #: #4/#23

	Sample/Diluent	SURVIVAL # Alive			pH			[B] Temperature (C)			Diss. Oxygen (mg/L)			[C] Conductivity	
Concentrations	Volume(mL)	0 hr	24 hr	48 hr	0 hour	24 hour	48 hour	0 hour	24 hour	48 hour	0 hour	24 hour	48 hour	0 hour	48 hour
Control A	0/20	5	5	5	7.5	-	8.3	24.0	-	24.0	8.0	-	7.9	170	250
Control B	0/20	5	5	5	-	-	8.3	-	-	24.1	-	-	7.9	-	210
Control C	0/20	5	5	5	-	-	8.3	-	-	24.3	-	-	7.9	-	190
Control D	0/20	5	5	5	-	-	8.3	-	-	24.0	-	-	7.9	-	195
100% A	20/0	5	5	5	7.1	-	8.2	24.1	-	24.1	7.8	-	8.1	652	730
100% B	20/0	5	5	5	-	-	8.2	-	-	24.0	-	-	8.0	-	815
100% C	20/0	5	5	5	-	-	8.2	-	-	24.0	-	-	7.9	-	805
100% D	20/0	5	5	5	-	-	8.2	-	-	24.3	-	-	8.0	-	760

[A] Organisms fed prior to testing.
[B] Temperatures of room and test incubator were continuously recorded on a strip chart recorder.
[C] Conductivity value is uncorrected µmhos/cm.
Room Temperature range for the test period was 23.5 - 24.5°C.
Incubator #3 temperature range for the test period was 23.0 - 25.0°C.
Light Intensity during the test was 50-100 foot candles.
Photoperiod during the test was 16 hours of light : 8 hours of dark.

Organism: ***Pimephales promelas*** (fish) Life stage: 13 days Chamber size: 1000 mL [C] Feeding: *Artemia* Food Batch #: 0194025G

	Sample/Diluent	SURVIVAL # Alive			pH			[B] Temperature (C)			Diss. Oxygen (mg/L)			[C] Conductivity	
Concentrations	Volume(mL)	0 hr	24 hr	48 hr	0 hour	24 hour	48 hour	0 hour	24 hour	48 hour	0 hour	24 hour	48 hour	0 hour	48 hour
Control A	0/500	5	5	5	8.0	8.1	8.1	24.3	24.0	24.0	7.4	7.9	8.3	308	330
Control B	0/500	5	5	5	8.0	8.1	8.1	24.3	24.1	24.2	7.4	7.9	8.2	312	340
Control C	0/500	5	5	5	8.0	8.1	8.1	24.3	24.1	24.7	7.5	7.8	8.1	317	350
Control D	0/500	5	5	5	8.1	8.1	8.1	24.3	24.0	24.5	7.7	7.8	7.8	312	340
100% A	500/0	5	5	5	7.1	7.7	7.8	24.4	24.2	24.0	7.8	7.5	7.6	687	740
100% B	500/0	5	5	5	7.1	7.7	7.8	24.3	24.0	24.0	7.0	7.2	7.6	680	730
100 % C	500/0	5	5	5	7.1	7.7	7.8	24.3	24.0	24.1	6.8	7.0	7.1	718	740
100% D	500/0	5	5	5	7.1	7.7	7.8	24.3	24.0	24.0	6.8	6.9	7.1	690	730

[A] Organisms fed prior to testing.
[B] Temperatures of room and test incubator were continuously recorded on a strip chart recorder.
[C] Conductivity value is uncorrected µmhos/cm.
Room Temperature range for the test period was 23.5 - 24.5°C.
Incubator #3 temperature range for the test period was 23.0 - 25.0°C.
Light Intensity during the test was 50-100 foot candles.
Photoperiod during the test was 16 hours of light : 8 hours of dark.

LIMS	
Job number:	TLH-2004-02-03-05
sample number:	731553

Data Transcription Verification
date: 2/20/04
by: Josh Ayres/Scott Andree

Total Residual CL2	mg/L	Method
Control water (water flea):	<0.03	Hach
Control water (fish):	<0.03	Hach
Field 100% sample:	<0.03	field meter
Lab 100% sample:	<0.03	Hach

Alk & Hardness	Alkalinity (mg/L)	Hardness (mg/L)
Control water (water flea):	77	81
Control water (fish)	76	93
100% Sample:	95	158

Mortality	Percent
Control water (water flea):	0%
100% (water flea):	0%
Control water (fish):	0%
100 % (fish):	0%

Table 2. *Measured and predicted algal growth potential (AGP) for ortho phosphate (OP) and total phosphorus (TP) limitation*

Location	AGP (measured)	Predicted AGP (OP) ± 20%	Predicted AGP (TP) ± 20%	Inorganic N:P ratio	Total N:P ratio
Effluent	106	51.6 ± 10.32	86 ± 17.2	104.17	74.5

Table 3. *Effluent limits, Class III Criteria and chemical data from samples collected from the William Tyson WWTP on February 2, 2004*

City of Arcadia William Tyson WWTP	Class III Freshwater Stds	Effluent Limits	Effluent
Organic Constituents (µg/L)			
Diazinon	-	-	0.081 I
2,4,6-Trichlorophenol	≤ 6.5	-	1.1 I
Bromodichloromethane	≤ 22	-	0.48 I
Chloroform	≤ 470.8	-	3.4
Metals (µg/L unless otherwise noted)			
Aluminum	-	-	291
Arsenic	≤ 50	-	6 U
Cadmium	≤ 1.6 b	-	0.042 I
Calcium (mg/L)	-	-	31.8
Chromium-III	≤ 125.4 b	-	3 U
Copper	≤ 13.8 b	-	7.9
Iron	≤ 1000	-	66
Lead	≤ 5.7 b	-	0.53 I
Magnesium (mg/L)	-	-	19.1
Nickel	≤ 76.8 b	-	3 U
Selenium	≤ 5	-	1 U
Silver	≤ 0.07	-	0.051 I
Zinc	≤ 176.6 b	-	22
Nutrients (mg/L)			
Organic Carbon	-	-	13
Ortho-phosphate	-	-	0.12
Total Phosphorus	-	-	0.2
Ammonia	-	-	2.7
Unionized Ammonia	≤ 0.02	≤ 0.02	0.008 c
Nitrate+Nitrite	-	-	9.8
Total Kjeldahl Nitrogen	-	10.3	5.1
Organic Nitrogen	-	-	2.4 c
Total Nitrogen	-	-	14.9 c
Cyanide	≤ 5.2	-	0.005 UQ
General Physical and Chemical Parameters			
Dissolved Oxygen (mg/L)	≥ 5	≥ 6	8.4
pH (S.U.)	6.0 - 8.5	6.0 - 8.5	6.7
Conductivity (umhos/cm)	≤ 1275	-	717
Temperature (C)	-	-	21.9
Oil and Grease (mg/l)	≤ 5	-	0.55 U
Hardness (mg/L)	-	-	158.1 c
Total Residual Chlorine (lab)	-	0.01	<0.03 U
Total Residual Chlorine (field)	0.00 *	0.01	<0.03 U

b - Value is calculated based on hardness.

c - calculated value.

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

Q - Sample held beyond normal holding time.

U - Material was analyzed for but not detected. The value reported is the minimum detection limit.

* Reported Field Value - Field meter, method unknown.

Appendix 1. Chemical Analyses performed on the effluent from the City of Arcadia William Tyson Wastewater Treatment Plant sampled on February 2, 2004.

DATE SAMPLED	FIELD ID	ANALYSIS GROUP	COMPONENT	RESULT	UNITS	REMARK	MDL	PQL
2/2/2004 10:30	29785	Bio-AGP/LimNut	Algal Growth Potential	106	mg DryWt/L		0.1	0.3
2/2/2004 10:30	29785	Bio-Chl-a	Chlorophyll-A, Monochromatic, Water	0.85	ug/L	U	0.85	2.6
2/2/2004 10:30	29785	Bio-Chl-a	Phaeophytin-A, Monochromatic, Water	0.85	ug/L	U	0.85	2.6
2/2/2004 10:30	29785	Bio-Toxicology	Bioassay-Acute-Screen-FW-C.dubia, LC50	100	LC50	L		
2/2/2004 10:30	29785	Bio-Toxicology	Bioassay-Acute-Screen-FW-Fish, LC50	100	LC50	L		
2/2/2004 10:30	29785	BNA-Water	1,2,4,5-Tetrachlorobenzene	0.98	ug/L	U	0.98	3.9
2/2/2004 10:30	29785	BNA-Water	1,2,4-Trichlorobenzene	0.98	ug/L	U	0.98	3.9
2/2/2004 10:30	29785	BNA-Water	1,2-Dichlorobenzene	0.98	ug/L	U	0.98	3.9
2/2/2004 10:30	29785	BNA-Water	1,3,5-Trinitrobenzene	3.9	ug/L	U	3.9	16
2/2/2004 10:30	29785	BNA-Water	1,3-Dichlorobenzene	0.98	ug/L	U	0.98	3.9
2/2/2004 10:30	29785	BNA-Water	1,3-Dinitrobenzene	2	ug/L	U	2	7.8
2/2/2004 10:30	29785	BNA-Water	1,4-Dichlorobenzene	0.98	ug/L	U	0.98	3.9
2/2/2004 10:30	29785	BNA-Water	1,4-Naphthoquinone	20	ug/L	U	20	78
2/2/2004 10:30	29785	BNA-Water	1-Naphthylamine	9.8	ug/L	UJ	9.8	39
2/2/2004 10:30	29785	BNA-Water	2,3,4,6-Tetrachlorophenol	2	ug/L	U	2	7.8
2/2/2004 10:30	29785	BNA-Water	2,4,5-Trichlorophenol	0.98	ug/L	U	0.98	3.9
2/2/2004 10:30	29785	BNA-Water	2,4,6-Trichlorophenol	1.1	ug/L	I	0.98	3.9
2/2/2004 10:30	29785	BNA-Water	2,4-Dichlorophenol	0.98	ug/L	U	0.98	3.9
2/2/2004 10:30	29785	BNA-Water	2,4-Dimethylphenol	49	ug/L	U	49	200
2/2/2004 10:30	29785	BNA-Water	2,4-Dinitrophenol	15	ug/L	U	15	59
2/2/2004 10:30	29785	BNA-Water	2,4-Dinitrotoluene	0.98	ug/L	U	0.98	3.9
2/2/2004 10:30	29785	BNA-Water	2,6-Dichlorophenol	0.98	ug/L	U	0.98	3.9
2/2/2004 10:30	29785	BNA-Water	2,6-Dinitrotoluene	0.98	ug/L	U	0.98	3.9
2/2/2004 10:30	29785	BNA-Water	2-Acetylaminofluorene	0.98	ug/L	U	0.98	3.9
2/2/2004 10:30	29785	BNA-Water	2-Chloronaphthalene	0.98	ug/L	U	0.98	3.9
2/2/2004 10:30	29785	BNA-Water	2-Chlorophenol	0.98	ug/L	U	0.98	3.9
2/2/2004 10:30	29785	BNA-Water	2-Methyl-4,6-dinitrophenol	2.9	ug/L	U	2.9	12
2/2/2004 10:30	29785	BNA-Water	2-Methylnaphthalene	0.98	ug/L	U	0.98	3.9
2/2/2004 10:30	29785	BNA-Water	2-Naphthylamine	9.8	ug/L	U	9.8	39
2/2/2004 10:30	29785	BNA-Water	2-Nitroaniline	0.98	ug/L	U	0.98	3.9
2/2/2004 10:30	29785	BNA-Water	2-Nitrophenol	0.98	ug/L	U	0.98	3.9
2/2/2004 10:30	29785	BNA-Water	2-Picoline	0.98	ug/L	U	0.98	3.9
2/2/2004 10:30	29785	BNA-Water	3,3'-Dichlorobenzidine	39	ug/L	U	39	160
2/2/2004 10:30	29785	BNA-Water	3,3'-Dimethylbenzidine	20	ug/L	UJ	20	78
2/2/2004 10:30	29785	BNA-Water	3-Methylcholanthrene	0.98	ug/L	U	0.98	3.9
2/2/2004 10:30	29785	BNA-Water	3-Nitroaniline	0.98	ug/L	U	0.98	3.9
2/2/2004 10:30	29785	BNA-Water	4,4'-DDD	1.5	ug/L	U	1.5	5.9
2/2/2004 10:30	29785	BNA-Water	4,4'-DDE	1.5	ug/L	U	1.5	5.9
2/2/2004 10:30	29785	BNA-Water	4,4'-DDT	1.5	ug/L	U	1.5	5.9
2/2/2004 10:30	29785	BNA-Water	4-Aminobiphenyl	3.9	ug/L	U	3.9	16
2/2/2004 10:30	29785	BNA-Water	4-Bromophenyl phenyl ether	0.98	ug/L	U	0.98	3.9
2/2/2004 10:30	29785	BNA-Water	4-Chloro-3-methylphenol	0.98	ug/L	U	0.98	3.9
2/2/2004 10:30	29785	BNA-Water	4-Chloroaniline	0.98	ug/L	U	0.98	3.9
2/2/2004 10:30	29785	BNA-Water	4-Chlorophenyl phenyl ether	2	ug/L	U	2	7.8
2/2/2004 10:30	29785	BNA-Water	4-Nitroaniline	0.98	ug/L	U	0.98	3.9
2/2/2004 10:30	29785	BNA-Water	4-Nitrophenol	15	ug/L	U	15	59
2/2/2004 10:30	29785	BNA-Water	5-Nitro-o-toluidine	0.98	ug/L	U	0.98	3.9
2/2/2004 10:30	29785	BNA-Water	7,12-Dimethylbenz(a)anthracene	0.98	ug/L	U	0.98	3.9
2/2/2004 10:30	29785	BNA-Water	Acenaphthene	0.98	ug/L	U	0.98	3.9
2/2/2004 10:30	29785	BNA-Water	Acenaphthylene	0.98	ug/L	U	0.98	3.9
2/2/2004 10:30	29785	BNA-Water	Acetophenone	0.98	ug/L	U	0.98	3.9
2/2/2004 10:30	29785	BNA-Water	Aldrin	1.5	ug/L	U	1.5	5.9
2/2/2004 10:30	29785	BNA-Water	Aniline	0.98	ug/L	U	0.98	3.9
2/2/2004 10:30	29785	BNA-Water	Anthracene	0.98	ug/L	U	0.98	3.9
2/2/2004 10:30	29785	BNA-Water	Azobenzene/1,2-Diphenylhydrazine	0.98	ug/L	U	0.98	3.9
2/2/2004 10:30	29785	BNA-Water	Benzidine	98	ug/L	U	98	390
2/2/2004 10:30	29785	BNA-Water	Benzo(a)anthracene	0.98	ug/L	U	0.98	3.9
2/2/2004 10:30	29785	BNA-Water	Benzo(a)pyrene	0.98	ug/L	U	0.98	3.9

2/2/2004 10:30	29785	BNA-Water	Benzo(b)fluoranthene	0.98	ug/L	U	0.98	3.9
2/2/2004 10:30	29785	BNA-Water	Benzo(g,h,i)perylene	0.98	ug/L	U	0.98	3.9
2/2/2004 10:30	29785	BNA-Water	Benzo(k)fluoranthene	0.98	ug/L	U	0.98	3.9
2/2/2004 10:30	29785	BNA-Water	Benzyl alcohol	0.98	ug/L	U	0.98	3.9
2/2/2004 10:30	29785	BNA-Water	Bis(2-chloroethoxy)methane	0.98	ug/L	U	0.98	3.9
2/2/2004 10:30	29785	BNA-Water	Bis(2-chloroethyl)ether	0.98	ug/L	U	0.98	3.9
2/2/2004 10:30	29785	BNA-Water	Bis(2-chloroisopropyl)ether	2.9	ug/L	U	2.9	12
2/2/2004 10:30	29785	BNA-Water	Bis(2-ethylhexyl)phthalate	15	ug/L	U	15	59
2/2/2004 10:30	29785	BNA-Water	Butyl benzyl phthalate	4.9	ug/L	U	4.9	20
2/2/2004 10:30	29785	BNA-Water	Chrysene	0.98	ug/L	U	0.98	3.9
2/2/2004 10:30	29785	BNA-Water	Di-n-butyl phthalate	4.9	ug/L	U	4.9	20
2/2/2004 10:30	29785	BNA-Water	Di-n-octyl phthalate	0.98	ug/L	U	0.98	3.9
2/2/2004 10:30	29785	BNA-Water	Dibenzo(a,h)anthracene	0.98	ug/L	U	0.98	3.9
2/2/2004 10:30	29785	BNA-Water	Dibenzofuran	0.98	ug/L	U	0.98	3.9
2/2/2004 10:30	29785	BNA-Water	Dieldrin	1.5	ug/L	U	1.5	5.9
2/2/2004 10:30	29785	BNA-Water	Diethyl phthalate	0.98	ug/L	U	0.98	3.9
2/2/2004 10:30	29785	BNA-Water	Dimethyl phthalate	49	ug/L	U	49	200
2/2/2004 10:30	29785	BNA-Water	Dimethylaminoazobenzene	0.98	ug/L	U	0.98	3.9
2/2/2004 10:30	29785	BNA-Water	Dinoseb	3.9	ug/L	U	3.9	16
2/2/2004 10:30	29785	BNA-Water	Diphenylamine	2.9	ug/L	U	2.9	12
2/2/2004 10:30	29785	BNA-Water	Endosulfan I	3.9	ug/L	U	3.9	16
2/2/2004 10:30	29785	BNA-Water	Endosulfan II	3.9	ug/L	U	3.9	16
2/2/2004 10:30	29785	BNA-Water	Endosulfan sulfate	1.5	ug/L	U	1.5	5.9
2/2/2004 10:30	29785	BNA-Water	Endrin	1.5	ug/L	U	1.5	5.9
2/2/2004 10:30	29785	BNA-Water	Endrin aldehyde	3.9	ug/L	UJ	3.9	16
2/2/2004 10:30	29785	BNA-Water	Ethyl methanesulfonate	0.98	ug/L	U	0.98	3.9
2/2/2004 10:30	29785	BNA-Water	Fluoranthene	0.98	ug/L	U	0.98	3.9
2/2/2004 10:30	29785	BNA-Water	Fluorene	0.98	ug/L	U	0.98	3.9
2/2/2004 10:30	29785	BNA-Water	Heptachlor	1.5	ug/L	U	1.5	5.9
2/2/2004 10:30	29785	BNA-Water	Heptachlor epoxide	1.5	ug/L	U	1.5	5.9
2/2/2004 10:30	29785	BNA-Water	Hexachlorobenzene	0.98	ug/L	U	0.98	3.9
2/2/2004 10:30	29785	BNA-Water	Hexachlorobutadiene	2.9	ug/L	U	2.9	12
2/2/2004 10:30	29785	BNA-Water	Hexachlorocyclopentadiene	2.9	ug/L	U	2.9	12
2/2/2004 10:30	29785	BNA-Water	Hexachloroethane	2.9	ug/L	U	2.9	12
2/2/2004 10:30	29785	BNA-Water	Hexachloropropene	2	ug/L	U	2	7.8
2/2/2004 10:30	29785	BNA-Water	Indeno(1,2,3-cd)pyrene	0.98	ug/L	U	0.98	3.9
2/2/2004 10:30	29785	BNA-Water	Isophorone	0.98	ug/L	U	0.98	3.9
2/2/2004 10:30	29785	BNA-Water	Isosafrole	0.98	ug/L	U	0.98	3.9
2/2/2004 10:30	29785	BNA-Water	Methapyrilene	3.9	ug/L	UJ	3.9	16
2/2/2004 10:30	29785	BNA-Water	Methyl methanesulfonate	0.98	ug/L	UJ	0.98	3.9
2/2/2004 10:30	29785	BNA-Water	N-Nitrosodi-n-butylamine	0.98	ug/L	U	0.98	3.9
2/2/2004 10:30	29785	BNA-Water	N-Nitrosodi-n-propylamine	2	ug/L	U	2	7.8
2/2/2004 10:30	29785	BNA-Water	N-Nitrosodiethylamine	0.98	ug/L	U	0.98	3.9
2/2/2004 10:30	29785	BNA-Water	N-Nitrosodimethylamine	2	ug/L	U	2	7.8
2/2/2004 10:30	29785	BNA-Water	N-Nitrosodiphenylamine	2.9	ug/L	UJ	2.9	12
2/2/2004 10:30	29785	BNA-Water	N-Nitrosomethylethylamine	2	ug/L	U	2	7.8
2/2/2004 10:30	29785	BNA-Water	N-Nitrosomorpholine	0.98	ug/L	U	0.98	3.9
2/2/2004 10:30	29785	BNA-Water	N-Nitrosopiperidine	0.98	ug/L	U	0.98	3.9
2/2/2004 10:30	29785	BNA-Water	N-Nitrosopyrrolidine	2	ug/L	U	2	7.8
2/2/2004 10:30	29785	BNA-Water	Naphthalene	0.98	ug/L	U	0.98	3.9
2/2/2004 10:30	29785	BNA-Water	Nitrobenzene	2	ug/L	U	2	7.8
2/2/2004 10:30	29785	BNA-Water	Nitroquinoline-1-oxide	20	ug/L	U	20	78
2/2/2004 10:30	29785	BNA-Water	Pentachlorobenzene	0.98	ug/L	U	0.98	3.9
2/2/2004 10:30	29785	BNA-Water	Pentachloroethane	49	ug/L	U	49	200
2/2/2004 10:30	29785	BNA-Water	Pentachloronitrobenzene	0.98	ug/L	U	0.98	3.9
2/2/2004 10:30	29785	BNA-Water	Pentachlorophenol	2.9	ug/L	U	2.9	12
2/2/2004 10:30	29785	BNA-Water	Phenacetin	3.9	ug/L	U	3.9	12
2/2/2004 10:30	29785	BNA-Water	Phenanthrene	0.98	ug/L	U	0.98	3.9
2/2/2004 10:30	29785	BNA-Water	Phenol	0.98	ug/L	U	0.98	3.9
2/2/2004 10:30	29785	BNA-Water	Pyrene	0.98	ug/L	U	0.98	3.9
2/2/2004 10:30	29785	BNA-Water	Pyridine	3.9	ug/L	UJ	3.9	16
2/2/2004 10:30	29785	BNA-Water	Safrole	0.98	ug/L	U	0.98	3.9

2/2/2004 10:30	29785	BNA-Water	alpha-BHC	1.5	ug/L	U	1.5	5.9
2/2/2004 10:30	29785	BNA-Water	beta-BHC	1.5	ug/L	U	1.5	5.9
2/2/2004 10:30	29785	BNA-Water	delta-BHC	1.5	ug/L	U	1.5	5.9
2/2/2004 10:30	29785	BNA-Water	gamma-BHC	1.5	ug/L	U	1.5	5.9
2/2/2004 10:30	29785	BNA-Water	m,p-Cresols	2	ug/L	U	2	7.8
2/2/2004 10:30	29785	BNA-Water	o-Cresol	2	ug/L	U	2	7.8
2/2/2004 10:30	29785	BNA-Water	o-Toluidine	0.98	ug/L	U	0.98	3.9
2/2/2004 10:30	29785	GC-Water	Alachlor	0.59	ug/L	U	0.59	2.36
2/2/2004 10:30	29785	GC-Water	Ametryn	0.05	ug/L	U	0.05	0.2
2/2/2004 10:30	29785	GC-Water	Atrazine	0.05	ug/L	U	0.05	0.2
2/2/2004 10:30	29785	GC-Water	Azinphos Methyl	0.05	ug/L	U	0.05	0.2
2/2/2004 10:30	29785	GC-Water	Bromacil	0.2	ug/L	U	0.2	0.8
2/2/2004 10:30	29785	GC-Water	Butylate	0.2	ug/L	U	0.2	0.8
2/2/2004 10:30	29785	GC-Water	Chlorpyrifos Ethyl	0.05	ug/L	U	0.05	0.2
2/2/2004 10:30	29785	GC-Water	Chlorpyrifos Methyl	0.099	ug/L	U	0.099	0.396
2/2/2004 10:30	29785	GC-Water	Diazinon	0.081	ug/L	I	0.05	0.2
2/2/2004 10:30	29785	GC-Water	Ethion	0.05	ug/L	U	0.05	0.2
2/2/2004 10:30	29785	GC-Water	Ethoprop	0.099	ug/L	U	0.099	0.396
2/2/2004 10:30	29785	GC-Water	Fenamiphos	0.2	ug/L	U	0.2	0.8
2/2/2004 10:30	29785	GC-Water	Fonofos	0.099	ug/L	U	0.099	0.396
2/2/2004 10:30	29785	GC-Water	Hexazinone	0.099	ug/L	U	0.099	0.396
2/2/2004 10:30	29785	GC-Water	Malathion	0.15	ug/L	U	0.15	0.6
2/2/2004 10:30	29785	GC-Water	Metalaxyl	0.25	ug/L	U	0.25	1
2/2/2004 10:30	29785	GC-Water	Metolachlor	0.5	ug/L	U	0.5	2
2/2/2004 10:30	29785	GC-Water	Metribuzin	0.099	ug/L	U	0.099	0.396
2/2/2004 10:30	29785	GC-Water	Mevinphos	0.2	ug/L	U	0.2	0.8
2/2/2004 10:30	29785	GC-Water	Naled	0.79	ug/L	U	0.79	3.16
2/2/2004 10:30	29785	GC-Water	Norflurazon	0.099	ug/L	U	0.099	0.396
2/2/2004 10:30	29785	GC-Water	Parathion Ethyl	0.15	ug/L	UJ	0.15	0.6
2/2/2004 10:30	29785	GC-Water	Parathion Methyl	0.099	ug/L	U	0.099	0.396
2/2/2004 10:30	29785	GC-Water	Phorate	0.05	ug/L	U	0.05	0.2
2/2/2004 10:30	29785	GC-Water	Prometryn	0.15	ug/L	U	0.15	0.6
2/2/2004 10:30	29785	GC-Water	Simazine	0.082	ug/L	U	0.05	0.2
2/2/2004 10:30	29785	Metals-Water	Aluminum	291	ug/L		7	28
2/2/2004 10:30	29785	Metals-Water	Arsenic	6	ug/L	U	6	24
2/2/2004 10:30	29785	Metals-Water	Cadmium	0.042	ug/L	I	0.025	0.1
2/2/2004 10:30	29785	Metals-Water	Calcium	31.8	mg/L		0.05	0.2
2/2/2004 10:30	29785	Metals-Water	Chromium	3	ug/L	U	3	12
2/2/2004 10:30	29785	Metals-Water	Copper	7.9	ug/L		1	4
2/2/2004 10:30	29785	Metals-Water	Iron	66	ug/L		15	60
2/2/2004 10:30	29785	Metals-Water	Lead	0.53	ug/L	I	0.05	0.2
2/2/2004 10:30	29785	Metals-Water	Magnesium	19.1	mg/L		0.02	0.08
2/2/2004 10:30	29785	Metals-Water	Nickel	3	ug/L	U	3	12
2/2/2004 10:30	29785	Metals-Water	Selenium	1	ug/L	U	1	4
2/2/2004 10:30	29785	Metals-Water	Silver	0.051	ug/L	I	0.02	0.08
2/2/2004 10:30	29785	Metals-Water	Zinc	22	ug/L		4	16
2/2/2004 10:30	29785	Nutrients-Liquid	Ammonia-N	2.7	mg N/L		0.5	1
2/2/2004 10:30	29785	Nutrients-Liquid	Color		PCU			
2/2/2004 10:30	29785	Nutrients-Liquid	Cyanide	0.005	mg CN/L	UQ	0.005	0.02
2/2/2004 10:30	29785	Nutrients-Liquid	NO2NO3-N	9.8	mg N/L		0.08	0.2
2/2/2004 10:30	29785	Nutrients-Liquid	N_KJEL_TOT	5.1	mg N/L		0.18	0.6
2/2/2004 10:30	29785	Nutrients-Liquid	O-Phosphate-P	0.12	mg P/L		0.008	0.02
2/2/2004 10:30	29785	Nutrients-Liquid	Organic Carbon	13	mg C/L		1	5
2/2/2004 10:30	29785	Nutrients-Liquid	TSS		mg/L			
2/2/2004 10:30	29785	Nutrients-Liquid	Total-P	0.2	mg P/L		0.02	0.06
2/2/2004 10:30	29785	Nutrients-Liquid	Turbidity		NTU			
2/2/2004 10:30	29785	Overflow	Oil and Grease	0.55	mg/l	U		
2/2/2004 10:30	29785	VOC-Water	Bromodichloromethane	0.48	ug/L	I	0.2	1
2/2/2004 10:30	29785	VOC-Water	Bromoform	0.2	ug/L	U	0.2	1
2/2/2004 10:30	29785	VOC-Water	Chloroform	3.4	ug/L		0.2	1
2/2/2004 10:30	29785	VOC-Water	Dibromochloromethane	0.2	ug/L	U	0.2	1
2/2/2004 9:55	29786	BNA-Water	1,2,4,5-Tetrachlorobenzene	1.1	ug/L	U	1.1	4.5

2/2/2004 9:55	29786	BNA-Water	1,2,4-Trichlorobenzene	1.1	ug/L	U	1.1	4.5
2/2/2004 9:55	29786	BNA-Water	1,2-Dichlorobenzene	1.1	ug/L	U	1.1	4.5
2/2/2004 9:55	29786	BNA-Water	1,3,5-Trinitrobenzene	4.5	ug/L	U	4.5	18
2/2/2004 9:55	29786	BNA-Water	1,3-Dichlorobenzene	1.1	ug/L	U	1.1	4.5
2/2/2004 9:55	29786	BNA-Water	1,3-Dinitrobenzene	2.3	ug/L	U	2.3	9.1
2/2/2004 9:55	29786	BNA-Water	1,4-Dichlorobenzene	1.1	ug/L	U	1.1	4.5
2/2/2004 9:55	29786	BNA-Water	1,4-Naphthoquinone	23	ug/L	U	23	91
2/2/2004 9:55	29786	BNA-Water	1-Naphthylamine	11	ug/L	UJ	11	45
2/2/2004 9:55	29786	BNA-Water	2,3,4,6-Tetrachlorophenol	2.3	ug/L	U	2.3	9.1
2/2/2004 9:55	29786	BNA-Water	2,4,5-Trichlorophenol	1.1	ug/L	U	1.1	4.5
2/2/2004 9:55	29786	BNA-Water	2,4,6-Trichlorophenol	1.1	ug/L	U	1.1	4.5
2/2/2004 9:55	29786	BNA-Water	2,4-Dichlorophenol	1.1	ug/L	U	1.1	4.5
2/2/2004 9:55	29786	BNA-Water	2,4-Dimethylphenol	57	ug/L	U	57	230
2/2/2004 9:55	29786	BNA-Water	2,4-Dinitrophenol	17	ug/L	U	17	68
2/2/2004 9:55	29786	BNA-Water	2,4-Dinitrotoluene	1.1	ug/L	U	1.1	4.5
2/2/2004 9:55	29786	BNA-Water	2,6-Dichlorophenol	1.1	ug/L	U	1.1	4.5
2/2/2004 9:55	29786	BNA-Water	2,6-Dinitrotoluene	1.1	ug/L	U	1.1	4.5
2/2/2004 9:55	29786	BNA-Water	2-Acetylaminofluorene	1.1	ug/L	U	1.1	4.5
2/2/2004 9:55	29786	BNA-Water	2-Chloronaphthalene	1.1	ug/L	U	1.1	4.5
2/2/2004 9:55	29786	BNA-Water	2-Chlorophenol	1.1	ug/L	U	1.1	4.5
2/2/2004 9:55	29786	BNA-Water	2-Methyl-4,6-dinitrophenol	3.4	ug/L	U	3.4	14
2/2/2004 9:55	29786	BNA-Water	2-Methylnaphthalene	1.1	ug/L	U	1.1	4.5
2/2/2004 9:55	29786	BNA-Water	2-Naphthylamine	11	ug/L	U	11	45
2/2/2004 9:55	29786	BNA-Water	2-Nitroaniline	1.1	ug/L	U	1.1	4.5
2/2/2004 9:55	29786	BNA-Water	2-Nitrophenol	1.1	ug/L	U	1.1	4.5
2/2/2004 9:55	29786	BNA-Water	2-Picoline	1.1	ug/L	U	1.1	4.5
2/2/2004 9:55	29786	BNA-Water	3,3'-Dichlorobenzidine	45	ug/L	U	45	180
2/2/2004 9:55	29786	BNA-Water	3,3'-Dimethylbenzidine	23	ug/L	UJ	23	91
2/2/2004 9:55	29786	BNA-Water	3-Methylcholanthrene	1.1	ug/L	U	1.1	4.5
2/2/2004 9:55	29786	BNA-Water	3-Nitroaniline	1.1	ug/L	U	1.1	4.5
2/2/2004 9:55	29786	BNA-Water	4,4'-DDD	1.7	ug/L	U	1.7	6.8
2/2/2004 9:55	29786	BNA-Water	4,4'-DDE	1.7	ug/L	U	1.7	6.8
2/2/2004 9:55	29786	BNA-Water	4,4'-DDT	1.7	ug/L	U	1.7	6.8
2/2/2004 9:55	29786	BNA-Water	4-Aminobiphenyl	4.5	ug/L	U	4.5	18
2/2/2004 9:55	29786	BNA-Water	4-Bromophenyl phenyl ether	1.1	ug/L	U	1.1	4.5
2/2/2004 9:55	29786	BNA-Water	4-Chloro-3-methylphenol	1.1	ug/L	U	1.1	4.5
2/2/2004 9:55	29786	BNA-Water	4-Chloroaniline	1.1	ug/L	U	1.1	4.5
2/2/2004 9:55	29786	BNA-Water	4-Chlorophenyl phenyl ether	2.3	ug/L	U	2.3	9.1
2/2/2004 9:55	29786	BNA-Water	4-Nitroaniline	1.1	ug/L	U	1.1	4.5
2/2/2004 9:55	29786	BNA-Water	4-Nitrophenol	17	ug/L	U	17	68
2/2/2004 9:55	29786	BNA-Water	5-Nitro-o-toluidine	1.1	ug/L	U	1.1	4.5
2/2/2004 9:55	29786	BNA-Water	7,12-Dimethylbenz(a)anthracene	1.1	ug/L	U	1.1	4.5
2/2/2004 9:55	29786	BNA-Water	Acenaphthene	1.1	ug/L	U	1.1	4.5
2/2/2004 9:55	29786	BNA-Water	Acenaphthylene	1.1	ug/L	U	1.1	4.5
2/2/2004 9:55	29786	BNA-Water	Acetophenone	1.1	ug/L	U	1.1	4.5
2/2/2004 9:55	29786	BNA-Water	Aldrin	1.7	ug/L	U	1.7	6.8
2/2/2004 9:55	29786	BNA-Water	Aniline	1.1	ug/L	U	1.1	4.5
2/2/2004 9:55	29786	BNA-Water	Anthracene	1.1	ug/L	U	1.1	4.5
2/2/2004 9:55	29786	BNA-Water	Azobenzene/1,2-Diphenylhydrazine	1.1	ug/L	U	1.1	4.5
2/2/2004 9:55	29786	BNA-Water	Benzidine	110	ug/L	U	110	450
2/2/2004 9:55	29786	BNA-Water	Benzo(a)anthracene	1.1	ug/L	U	1.1	4.5
2/2/2004 9:55	29786	BNA-Water	Benzo(a)pyrene	1.1	ug/L	U	1.1	4.5
2/2/2004 9:55	29786	BNA-Water	Benzo(b)fluoranthene	1.1	ug/L	U	1.1	4.5
2/2/2004 9:55	29786	BNA-Water	Benzo(g,h,i)perylene	1.1	ug/L	U	1.1	4.5
2/2/2004 9:55	29786	BNA-Water	Benzo(k)fluoranthene	1.1	ug/L	U	1.1	4.5
2/2/2004 9:55	29786	BNA-Water	Benzyl alcohol	1.1	ug/L	U	1.1	4.5
2/2/2004 9:55	29786	BNA-Water	Bis(2-chloroethoxy)methane	1.1	ug/L	U	1.1	4.5
2/2/2004 9:55	29786	BNA-Water	Bis(2-chloroethyl)ether	1.1	ug/L	U	1.1	4.5
2/2/2004 9:55	29786	BNA-Water	Bis(2-chloroisopropyl)ether	3.4	ug/L	U	3.4	14
2/2/2004 9:55	29786	BNA-Water	Bis(2-ethylhexyl)phthalate	17	ug/L	U	17	68
2/2/2004 9:55	29786	BNA-Water	Butyl benzyl phthalate	5.7	ug/L	U	5.7	23
2/2/2004 9:55	29786	BNA-Water	Chrysene	1.1	ug/L	U	1.1	4.5

2/2/2004 9:55	29786	BNA-Water	Di-n-butyl phthalate	5.7	ug/L	U	5.7	23
2/2/2004 9:55	29786	BNA-Water	Di-n-octyl phthalate	1.1	ug/L	U	1.1	4.5
2/2/2004 9:55	29786	BNA-Water	Dibenzo(a,h)anthracene	1.1	ug/L	U	1.1	4.5
2/2/2004 9:55	29786	BNA-Water	Dibenzofuran	1.1	ug/L	U	1.1	4.5
2/2/2004 9:55	29786	BNA-Water	Dieldrin	1.7	ug/L	U	1.7	6.8
2/2/2004 9:55	29786	BNA-Water	Diethyl phthalate	1.1	ug/L	U	1.1	4.5
2/2/2004 9:55	29786	BNA-Water	Dimethyl phthalate	57	ug/L	U	57	230
2/2/2004 9:55	29786	BNA-Water	Dimethylaminoazobenzene	1.1	ug/L	U	1.1	4.5
2/2/2004 9:55	29786	BNA-Water	Dinoseb	4.5	ug/L	U	4.5	18
2/2/2004 9:55	29786	BNA-Water	Diphenylamine	3.4	ug/L	U	3.4	14
2/2/2004 9:55	29786	BNA-Water	Endosulfan I	4.5	ug/L	U	4.5	18
2/2/2004 9:55	29786	BNA-Water	Endosulfan II	4.5	ug/L	U	4.5	18
2/2/2004 9:55	29786	BNA-Water	Endosulfan sulfate	1.7	ug/L	U	1.7	6.8
2/2/2004 9:55	29786	BNA-Water	Endrin	1.7	ug/L	U	1.7	6.8
2/2/2004 9:55	29786	BNA-Water	Endrin aldehyde	4.5	ug/L	UJ	4.5	18
2/2/2004 9:55	29786	BNA-Water	Ethyl methanesulfonate	1.1	ug/L	U	1.1	4.5
2/2/2004 9:55	29786	BNA-Water	Fluoranthene	1.1	ug/L	U	1.1	4.5
2/2/2004 9:55	29786	BNA-Water	Fluorene	1.1	ug/L	U	1.1	4.5
2/2/2004 9:55	29786	BNA-Water	Heptachlor	1.7	ug/L	U	1.7	6.8
2/2/2004 9:55	29786	BNA-Water	Heptachlor epoxide	1.7	ug/L	U	1.7	6.8
2/2/2004 9:55	29786	BNA-Water	Hexachlorobenzene	1.1	ug/L	U	1.1	4.5
2/2/2004 9:55	29786	BNA-Water	Hexachlorobutadiene	3.4	ug/L	U	3.4	14
2/2/2004 9:55	29786	BNA-Water	Hexachlorocyclopentadiene	3.4	ug/L	U	3.4	14
2/2/2004 9:55	29786	BNA-Water	Hexachloroethane	3.4	ug/L	U	3.4	14
2/2/2004 9:55	29786	BNA-Water	Hexachloropropene	2.3	ug/L	U	2.3	9.1
2/2/2004 9:55	29786	BNA-Water	Indeno(1,2,3-cd)pyrene	1.1	ug/L	U	1.1	4.5
2/2/2004 9:55	29786	BNA-Water	Isophorone	1.1	ug/L	U	1.1	4.5
2/2/2004 9:55	29786	BNA-Water	Isosafrole	1.1	ug/L	U	1.1	4.5
2/2/2004 9:55	29786	BNA-Water	Methapyrilene	4.5	ug/L	UJ	4.5	18
2/2/2004 9:55	29786	BNA-Water	Methyl methanesulfonate	1.1	ug/L	UJ	1.1	4.5
2/2/2004 9:55	29786	BNA-Water	N-Nitrosodi-n-butylamine	1.1	ug/L	U	1.1	4.5
2/2/2004 9:55	29786	BNA-Water	N-Nitrosodi-n-propylamine	2.3	ug/L	U	2.3	9.1
2/2/2004 9:55	29786	BNA-Water	N-Nitrosodiethylamine	1.1	ug/L	U	1.1	4.5
2/2/2004 9:55	29786	BNA-Water	N-Nitrosodimethylamine	2.3	ug/L	U	2.3	9.1
2/2/2004 9:55	29786	BNA-Water	N-Nitrosodiphenylamine	3.4	ug/L	UJ	3.4	14
2/2/2004 9:55	29786	BNA-Water	N-Nitrosomethylethylamine	2.3	ug/L	U	2.3	9.1
2/2/2004 9:55	29786	BNA-Water	N-Nitrosomorpholine	1.1	ug/L	U	1.1	4.5
2/2/2004 9:55	29786	BNA-Water	N-Nitrosopiperidine	1.1	ug/L	U	1.1	4.5
2/2/2004 9:55	29786	BNA-Water	N-Nitrosopyrrolidine	2.3	ug/L	U	2.3	9.1
2/2/2004 9:55	29786	BNA-Water	Naphthalene	1.1	ug/L	U	1.1	4.5
2/2/2004 9:55	29786	BNA-Water	Nitrobenzene	2.3	ug/L	U	2.3	9.1
2/2/2004 9:55	29786	BNA-Water	Nitroquinoline-1-oxide	23	ug/L	U	23	91
2/2/2004 9:55	29786	BNA-Water	Pentachlorobenzene	1.1	ug/L	U	1.1	4.5
2/2/2004 9:55	29786	BNA-Water	Pentachloroethane	57	ug/L	U	57	230
2/2/2004 9:55	29786	BNA-Water	Pentachloronitrobenzene	1.1	ug/L	U	1.1	4.5
2/2/2004 9:55	29786	BNA-Water	Pentachlorophenol	3.4	ug/L	U	3.4	14
2/2/2004 9:55	29786	BNA-Water	Phenacetin	4.5	ug/L	U	4.5	14
2/2/2004 9:55	29786	BNA-Water	Phenanthrene	1.1	ug/L	U	1.1	4.5
2/2/2004 9:55	29786	BNA-Water	Phenol	1.1	ug/L	U	1.1	4.5
2/2/2004 9:55	29786	BNA-Water	Pyrene	1.1	ug/L	U	1.1	4.5
2/2/2004 9:55	29786	BNA-Water	Pyridine	4.5	ug/L	UJ	4.5	18
2/2/2004 9:55	29786	BNA-Water	Safrole	1.1	ug/L	U	1.1	4.5
2/2/2004 9:55	29786	BNA-Water	alpha-BHC	1.7	ug/L	U	1.7	6.8
2/2/2004 9:55	29786	BNA-Water	beta-BHC	1.7	ug/L	U	1.7	6.8
2/2/2004 9:55	29786	BNA-Water	delta-BHC	1.7	ug/L	U	1.7	6.8
2/2/2004 9:55	29786	BNA-Water	gamma-BHC	1.7	ug/L	U	1.7	6.8
2/2/2004 9:55	29786	BNA-Water	m,p-Cresols	2.3	ug/L	U	2.3	9.1
2/2/2004 9:55	29786	BNA-Water	o-Cresol	2.3	ug/L	U	2.3	9.1
2/2/2004 9:55	29786	BNA-Water	o-Toluidine	1.1	ug/L	U	1.1	4.5
2/2/2004 9:55	29786	GC-Water	Alachlor	0.64	ug/L	U	0.64	2.56
2/2/2004 9:55	29786	GC-Water	Ametryn	0.054	ug/L	U	0.054	0.216
2/2/2004 9:55	29786	GC-Water	Atrazine	0.054	ug/L	U	0.054	0.216
2/2/2004 9:55	29786	GC-Water	Azinphos Methyl	0.054	ug/L	U	0.054	0.216
2/2/2004 9:55	29786	GC-Water	Bromacil	0.22	ug/L	U	0.22	0.88
2/2/2004 9:55	29786	GC-Water	Butylate	0.22	ug/L	U	0.22	0.88
2/2/2004 9:55	29786	GC-Water	Chlorpyrifos Ethyl	0.054	ug/L	U	0.054	0.216
2/2/2004 9:55	29786	GC-Water	Chlorpyrifos Methyl	0.11	ug/L	U	0.11	0.44

2/2/2004 9:55	29786	GC-Water	Diazinon	0.054	ug/L	UJ	0.054	0.216
2/2/2004 9:55	29786	GC-Water	Ethion	0.054	ug/L	U	0.054	0.216
2/2/2004 9:55	29786	GC-Water	Ethoprop	0.11	ug/L	U	0.11	0.44
2/2/2004 9:55	29786	GC-Water	Fenamiphos	0.22	ug/L	U	0.22	0.88
2/2/2004 9:55	29786	GC-Water	Fonofos	0.11	ug/L	U	0.11	0.44
2/2/2004 9:55	29786	GC-Water	Hexazinone	0.11	ug/L	U	0.11	0.44
2/2/2004 9:55	29786	GC-Water	Malathion	0.16	ug/L	U	0.16	0.64
2/2/2004 9:55	29786	GC-Water	Metalaxyl	0.27	ug/L	U	0.27	1.08
2/2/2004 9:55	29786	GC-Water	Metolachlor	0.54	ug/L	U	0.54	2.16
2/2/2004 9:55	29786	GC-Water	Metribuzin	0.11	ug/L	U	0.11	0.44
2/2/2004 9:55	29786	GC-Water	Mevinphos	0.22	ug/L	U	0.22	0.88
2/2/2004 9:55	29786	GC-Water	Naled	0.86	ug/L	U	0.86	3.44
2/2/2004 9:55	29786	GC-Water	Norflurazon	0.11	ug/L	U	0.11	0.44
2/2/2004 9:55	29786	GC-Water	Parathion Ethyl	0.16	ug/L	UJ	0.16	0.64
2/2/2004 9:55	29786	GC-Water	Parathion Methyl	0.11	ug/L	U	0.11	0.44
2/2/2004 9:55	29786	GC-Water	Phorate	0.054	ug/L	U	0.054	0.216
2/2/2004 9:55	29786	GC-Water	Prometryn	0.16	ug/L	U	0.16	0.64
2/2/2004 9:55	29786	GC-Water	Simazine	0.054	ug/L	U	0.054	0.216
2/2/2004 9:55	29786	Metals-Water	Aluminum	7	ug/L	U	7	28
2/2/2004 9:55	29786	Metals-Water	Arsenic	6	ug/L	U	6	24
2/2/2004 9:55	29786	Metals-Water	Cadmium	0.025	ug/L	U	0.025	0.1
2/2/2004 9:55	29786	Metals-Water	Calcium	0.05	mg/L	U	0.05	0.2
2/2/2004 9:55	29786	Metals-Water	Chromium	3	ug/L	U	3	12
2/2/2004 9:55	29786	Metals-Water	Copper	1	ug/L	U	1	4
2/2/2004 9:55	29786	Metals-Water	Iron	15	ug/L	U	15	60
2/2/2004 9:55	29786	Metals-Water	Lead	0.15	ug/L	U	0.15	0.6
2/2/2004 9:55	29786	Metals-Water	Magnesium	0.02	mg/L	U	0.02	0.08
2/2/2004 9:55	29786	Metals-Water	Nickel	3	ug/L	U	3	12
2/2/2004 9:55	29786	Metals-Water	Selenium	1	ug/L	U	1	4
2/2/2004 9:55	29786	Metals-Water	Silver	0.02	ug/L	U	0.02	0.08
2/2/2004 9:55	29786	Metals-Water	Zinc	4	ug/L	U	4	16
2/2/2004 9:55	29786	Nutrients-Liquid	Ammonia-N	0.01	mg N/L	U	0.01	0.02
2/2/2004 9:55	29786	Nutrients-Liquid	Cyanide	0.005	mg CN/L	UQ	0.005	0.005
2/2/2004 9:55	29786	Nutrients-Liquid	NO2NO3-N	0.004	mg N/L	U	0.004	0.01
2/2/2004 9:55	29786	Nutrients-Liquid	N_KJEL_TOT	0.06	mg N/L	U	0.06	0.2
2/2/2004 9:55	29786	Nutrients-Liquid	O-Phosphate-P	0.004	mg P/L	U	0.004	0.01
2/2/2004 9:55	29786	Nutrients-Liquid	Total-P	0.02	mg P/L	U	0.02	0.06
2/2/2004 9:55	29786	Overflow	Oil and Grease	0.55	mg/l	U		
2/2/2004 9:55	29786	VOC-Water	Bromodichloromethane	0.2	ug/L	U	0.2	1
2/2/2004 9:55	29786	VOC-Water	Bromoform	0.2	ug/L	U	0.2	1
2/2/2004 9:55	29786	VOC-Water	Chloroform	0.32	ug/L	I	0.2	1
2/2/2004 9:55	29786	VOC-Water	Dibromochloromethane	0.2	ug/L	U	0.2	1
2/2/2004 10:30	TRIP BLANK	VOC-Water	Bromodichloromethane	0.2	ug/L	U	0.2	1
2/2/2004 10:30	TRIP BLANK	VOC-Water	Bromoform	0.2	ug/L	U	0.2	1
2/2/2004 10:30	TRIP BLANK	VOC-Water	Chloroform	0.2	ug/L	U	0.2	1
2/2/2004 10:30	TRIP BLANK	VOC-Water	Dibromochloromethane	0.2	ug/L	U	0.2	1

Appendix 2. The City of Arcadia William Tyson WWTP
Second Amendment to Consent Order
Data Review January 2002-June 2003
(Values in Italics are above Final Limits/Values in **BOLD** are above interim (I) and final (F) Limits)

The values below in bold were subject to a penalty. Silver, Cyanide and Unionized Ammonia were assessed as stipulated penalties under the Amendment to Consent Order at $100.00 for each excursion or for each analysis not conducted when required ("ANC"). The Total Suspended

	Silver (µg/L) Max :0.07 F Max: 0.5 I	Cyanide (mg/L) Max: 0.0052 F Max: 0.015 I	Unionized Ammonia (mg/L) Max: 0.02 F Max: 0.04 I	TSS (mg/L) Max: 5.0 Max value (mg/L)/ Total # of excursions	Toxicity (%) 100 % Min. C. dubia (CD) P. Promelas (PP)
Mo/Yr					
Jan /02	0.0001(0.1 u[1])	0.005 u	**0.068**		**Routine fail, CD** 1st additional pass
Feb	0.1 u	0.005	0.005 u		**2nd additional fail Routine fail, CD**
Mar	*0.3* [2]	0.005	0.005 u	**17 / 17 excursions**	**1st additional fail** 2nd additional pass
April	0.07 u	**0.027**	0.005 u	**15 / 13 excursions**	**Routine fail, CD 1st additional fail**
May	0.07 u	**(0.033[3]), 0.025**	0.005 u	**9.1 / 15 excursions**	2nd additional pass
June	0.07 u	**0.03**	0.07 u	**8.0 / 5 excursions**	Routine pass
July	**ANC**	**ANC**	0.02		Routine pass
Aug	**0.8**	0.005 u	*0.021*		No test
Sept	*0.48*	0.005 u	0.005 u		Routine pass
Oct	**0.62**	0.005 u	*0.03*		No test
Nov	0.07 u	0.005 u	0.007		No test
Dec	0.07 u	0.005 u	0.008	**6.2 / 1 excursion**	**Routine fail, CD**
Jan /03	0.07 u	5.0 u (0.005 u[4])	*0.031*		1st additional pass 2nd additional pass
Feb	0.07 u	0.0005 u	**0.066,** *0.035, 0.026*		**Routine fail, PP** 1st additional pass
Mar	0.07 u	0.005 **(0.023[5])**	**0.067, 0.065,** *0.026*	**5.8 / 1 excursion**	**2nd additional fail**
April	0.07	0.005	*0.026*		Routine pass
May	No Discharge to Surface Waters this Month				No test
June	0.07	0.005	0.005 u		No test
# subject to Penalty	3	6	4	52	
Assessment	$100 each	$100 each	$100 each	$2000 for the first, then 51 @ $100 each	

Solids exceedances were assessed under Section 403.121(3)(b), Florida Statutes.

[1]Result reported as ug/L, but converted it to mg/L: lab sheet shows value of 0.1 "u" ug/L

[1] Reported as NODI=9 on DMR; values appeared on cover sheet and lab sheet only.

[1] Lab sheet shows a value of **0.033** from sample dated 5/2 – reported correctly on Part B. An additional sample on 5/30 reflects a value of **0.025.**

[1] Lab sheet shows a value of 0.005 u ug/L – operator reported value in ug/l , not mg/l

[1] Lab sheet shows a value of **0.023**

The Bioassay of the City of Arcadia William Tyson Wastewater Treatment Plant effluent sampled on 2 February 2004, NPDES #FL0027511.

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

Remarks

66

The Priority Pollutants Analysis for Bioassay of the City of Arcadia William Tyson Wastewater Treatment Plant effluent sampled on 2 February, 2004, NPDES #FL0027511.

F

Transaction Code		NPDES NUMBER									YR/MO/DA						Insp Type	Inspector	Fac Type
1	N	2	5	3	F	L	0	0	2	7	5	1	1	11 12	0	4	0	2	0	2	18 **X**	19 **S**	20 1

Remarks

66