



ENVIRONMENTAL TESTING & CONSULTING, INC.

2790 Whitten Road Memphis, Tennessee 38133 (901) 213-2400 Fax (901) 213-2440

October 03, 2012

Mr. James Yankee,
Blytheville Sewer Dept.
P.O. Box 1784
Blytheville, AR 72315

Dear Permittee,

The results of this WET (Whole Effluent Toxicity) test are acceptable according to test review criteria. There were no significant deficiencies found in sample handling, test performance, or reporting. The test results are within the limits established by your NPDES permit and were entered into the permittee's records in the database.

Results: CV > 100% Permit Limit: 100%

Report #: 12-256-0191 BLYSEWE - AR0022560 West Plant

All statistical interpretations generated by CETIS - Comprehensive Environmental Toxicity Information System (v.1.8.6.1). CETIS created by Tidepool Scientific Software

Respectfully,

Connie Cook, Lab Supervisor

Enclosure(s)

CETIS Summary Report

Report Date: 03 Oct-12 15:59 (p 1 of 2)
 Test Code: CD 12-256-0191 | 15-4653-9413

Ceriodaphnia 7-d Survival and Reproduction Test Environmental Testing and Consulting, Inc.

Batch ID: 11-7243-7352	Test Type: Reproduction-Survival (7d)	Analyst: Ava Davis
Start Date: 12 Sep-12 15:15	Protocol: EPA/821/R-02-013 (2002)	Diluent: Perrier Water
Ending Date: 18 Sep-12 14:05	Species: Ceriodaphnia dubia	Brine:
Duration: 5d 23h	Source: In-House Culture	Age: < 24

Sample ID: 06-9591-7619	Code: 12-256-0191	Client: Blytheville Sewer Dept.
Sample Date: 11 Sep-12 09:30	Material: POTW Effluent	Project: WET Quarterly Compliance Test (3Q)
Receive Date: 12 Sep-12 14:15	Source: BLYSEWE - AR0022560 West Plant (ARO)	
Sample Age: 30h	Station:	

Renewal	Sample Code	Sample Date	Receive Date	Renewal Date	Temp °C
1	12-256-0191	12 Sep-12 09:30	12 Sep-12 14:15	12 Sep-12 00:00	1
2	12-256-0191	14 Sep-12 09:30	14 Sep-12 12:45	14 Sep-12 00:00	1

Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
13-0709-3893	6d Survival Rate	100	>100	NA	NA	1	Fisher Exact/Bonferroni-Holm Test
17-8225-9602	Reproduction	100	>100	NA	21.4%	1	Dunnnett Multiple Comparison Test

Analysis ID	Endpoint	Attribute	Test Stat	TAC Limits	Overlap	Decision
17-8225-9602	Reproduction	Control Resp	15.4	15 - NL	Yes	Passes Acceptability Criteria
17-8225-9602	Reproduction	PMSD	0.2138	0.13 - 0.47	Yes	Passes Acceptability Criteria

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Lab Water	10	1	1	1	1	1	0	0	0.0%	0.0%
32		10	1	1	1	1	1	0	0	0.0%	0.0%
42		10	1	1	1	1	1	0	0	0.0%	0.0%
56		10	1	1	1	1	1	0	0	0.0%	0.0%
75		10	1	1	1	1	1	0	0	0.0%	0.0%
100		10	1	1	1	1	1	0	0	0.0%	0.0%

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Lab Water	10	15.4	13.01	17.79	10	20	1.056	3.34	21.69%	0.0%
32		10	17.4	14.81	19.99	11	22	1.147	3.627	20.85%	-12.99%
42		10	16.2	14.66	17.74	13	19	0.6799	2.15	13.27%	-5.2%
56		10	16.3	14.25	18.35	12	19	0.9074	2.869	17.6%	-5.84%
75		10	15.7	12.55	18.85	9	24	1.391	4.398	28.01%	-1.95%
100		10	15	13.31	16.69	11	18	0.7454	2.357	15.71%	2.6%

CETIS Measurement Report

Report Date: 03 Oct-12 15:59 (p 1 of 8)
Test Code: CD 12-256-0191 | 15-4653-9413

Ceriodaphnia 7-d Survival and Reproduction Test

Environmental Testing and Consulting, Inc.

Sample ID: 06-9591-7619	Code: 12-256-0191	Client: Blytheville Sewer Dept.
Sample Date: 11 Sep-12 09:30	Material: POTW Effluent	Project: WET Quarterly Compliance Test (3Q)
Receive Date: 12 Sep-12 14:15	Source: BLYSEWE - AR0022560 West Plant (AR0	
Sample Age: 30h	Station:	

CETIS Measurement Report

Report Date: 03 Oct-12 15:59 (p 2 of 8)
 Test Code: CD 12-256-0191 | 15-4653-9413

Ceriodaphnia 7-d Survival and Reproduction Test							Environmental Testing and Consulting, Inc.
Alkalinity (CaCO3)-mg/L							
C-%	Control Type	Reading Time	Measure	QA	Diff-%	Inst ID	Analyst Notes
0	Lab Water	1	59				
0	Lab Water	2	61				
0	Lab Water	3	60				
0	Lab Water	4	59				
0	Lab Water	5	62				
0	Lab Water	6	60				
0	Lab Water	7	62				
Total Residual Chlorine-mg/L							
C-%	Control Type	Reading Time	Measure	QA	Diff-%	Inst ID	Analyst Notes
0	Lab Water	1	0				
100			0				
0	Lab Water	2	0				
100			0				
0	Lab Water	3	0				
100			0				
0	Lab Water	4	0				
100			0				
0	Lab Water	5	0				
100			0				
0	Lab Water	6	0				
100			0				
0	Lab Water	7	0				
100			0				
Conductivity-µS/cm							
C-%	Control Type	Reading Time	Measure	QA	Diff-%	Inst ID	Analyst Notes
0	Lab Water	1	181				
100			384				
0	Lab Water	2	180				
100			383				
0	Lab Water	3	181				
100			400				
0	Lab Water	4	183				
100			392				
0	Lab Water	5	182				
100			403				
0	Lab Water	6	182				
100			421				
0	Lab Water	7	174				
100			419				

CETIS Measurement Report

Report Date: 03 Oct-12 15:59 (p 3 of 8)

Test Code: CD 12-256-0191 | 15-4653-9413

Ceriodaphnia 7-d Survival and Reproduction Test						Environmental Testing and Consulting, Inc.	
Final Dissolved Oxygen-mg/L							
C-%	Control Type	Reading Time	Measure	QA	Diff-%	Inst ID	Analyst Notes
0	Lab Water	1	8				
32			8.3				
42			8.3				
56			8.3				
75			8.2				
100			8.2				
0	Lab Water	2	8.3				
32			8.2				
42			8.2				
56			8.2				
75			8.1				
100			8.2				
0	Lab Water	3	8.2				
32			8.2				
42			8.2				
56			8.1				
75			8.1				
100			8.1				
0	Lab Water	4	8				
32			8				
42			8				
56			8				
75			8.1				
100			8.1				
0	Lab Water	5	8.1				
32			8.1				
42			8.1				
56			8.1				
75			8				
100			8				
0	Lab Water	6	8				
32			8				
42			8				
56			8.2				
75			8.1				
100			8.1				

CETIS Measurement Report

Report Date: 03 Oct-12 15:59 (p 4 of 8)

Test Code: CD 12-256-0191 | 15-4653-9413

Ceriodaphnia 7-d Survival and Reproduction Test Environmental Testing and Consulting, Inc.

Initial Dissolved Oxygen-mg/L

C-%	Control Type	Reading Time	Measure	QA	Diff-%	Inst ID	Analyst	Notes
0	Lab Water	1	9.2					
32			9.5					
42			9.6					
56			9.7					
75			9.9					
100			10					
0	Lab Water	2	9.5					
32			10					
42			10.4					
56			10.4					
75			10					
100			10.3					
0	Lab Water	3	9.6					
32			10					
42			10					
56			10					
75			10					
100			10					
0	Lab Water	4	8.9					
32			9.3					
42			9.3					
56			9.3					
75			9.2					
100			9.3					
0	Lab Water	5	8.6					
32			9.5					
42			9.5					
56			9.7					
75			9.6					
100			9.6					
0	Lab Water	6	9.2					
32			9.6					
42			9.9					
56			9.9					
75			9.9					
100			7.9					
0	Lab Water	7	9					
32			9.1					
42			9.1					
56			9.2					
75			9.2					
100			9.3					

Hardness (CaCO3)-mg/L

C-%	Control Type	Reading Time	Measure	QA	Diff-%	Inst ID	Analyst	Notes
0	Lab Water	1	92					
0	Lab Water	2	93					
0	Lab Water	3	91					
0	Lab Water	4	89					
0	Lab Water	5	88					
0	Lab Water	6	91					
0	Lab Water	7	93					

CETIS Measurement Report

Report Date: 03 Oct-12 15:59 (p 5 of 8)
 Test Code: CD 12-256-0191 | 15-4653-9413

Ceriodaphnia 7-d Survival and Reproduction Test						Environmental Testing and Consulting, Inc.
Final pH-Units						
C-%	Control Type	Reading Time	Measure	QA	Diff-%	Inst ID Analyst Notes
0	Lab Water	1	8			
32			7.9			
42			7.9			
56			7.8			
75			7.9			
100			7.8			
0	Lab Water	2	8			
32			8			
42			8			
56			8			
75			8			
100			8			
0	Lab Water	3	7.7			
32			7.7			
42			7.7			
56			7.8			
75			7.8			
100			7.8			
0	Lab Water	4	7.9			
32			7.9			
42			7.8			
56			7.9			
75			7.9			
100			7.9			
0	Lab Water	5	7.9			
32			7.8			
42			7.8			
56			7.8			
75			7.9			
100			7.9			
0	Lab Water	6	7.8			
32			7.9			
42			7.9			
56			7.8			
75			7.9			
100			7.9			

CETIS Measurement Report

Report Date: 03 Oct-12 15:59 (p 6 of 8)
 Test Code: CD 12-256-0191 | 15-4653-9413

Ceriodaphnia 7-d Survival and Reproduction Test Environmental Testing and Consulting, Inc.

Initial pH-Units								
C-%	Control Type	Reading Time	Measure	QA	Diff-%	Inst ID	Analyst	Notes
0	Lab Water	1	8.3					
32			8.2					
42			8.2					
56			8.2					
75			8.1					
100			8.1					
0	Lab Water	2	8.1					
32			8.1					
42			8					
56			8					
75			8					
100			7.9					
0	Lab Water	3	8.2					
32			8.1					
42			8.1					
56			8.1					
75			8					
100			7.9					
0	Lab Water	4	8.1					
32			8					
42			8					
56			8					
75			8					
100			8					
0	Lab Water	5	8					
32			8.1					
42			8.1					
56			8.1					
75			8.1					
100			8.2					
0	Lab Water	6	8.1					
32			8.2					
42			8					
56			8					
75			7.9					
100			7.9					
0	Lab Water	7	8.2					
32			8					
42			8					
56			7.9					
75			7.9					
100			7.7					

CETIS Measurement Report

Report Date: 03 Oct-12 15:59 (p 8 of 8)

Test Code: CD 12-256-0191 | 15-4653-9413

Ceriodaphnia 7-d Survival and Reproduction Test				Environmental Testing and Consulting, Inc.				
Initial Temperature-°C								
C-%	Control Type	Reading Time	Measure	QA	Diff-%	Inst ID	Analyst	Notes
0	Lab Water	1	23					
32			23					
42			23					
56			23					
75			23					
100			23					
0	Lab Water	2	23					
32			23					
42			23					
56			23					
75			23					
100			23					
0	Lab Water	3	23					
32			23					
42			23					
56			23					
75			23					
100			23					
0	Lab Water	4	23					
32			23					
42			23					
56			23					
75			23					
100			23					
0	Lab Water	5	23					
32			23					
42			23					
56			23					
75			23					
100			23					
0	Lab Water	6	23					
32			23					
42			23					
56			23					
75			23					
100			23					
0	Lab Water	7	23					
32			23					
42			23					
56			23					
75			23					
100			23					

CETIS Summary Report

Report Date: 03 Oct-12 16:00 (p 1 of 2)
 Test Code: FH 12-256-0191 | 16-2307-6248

Fathead Minnow 7-d Larval Survival and Growth Test Environmental Testing and Consulting, Inc.

Batch ID: 15-8883-8751	Test Type: Growth-Survival (7d)	Analyst: Ava Davis
Start Date: 12 Sep-12 15:30	Protocol: EPA/821/R-02-013 (2002)	Diluent: Perrier Water
Ending Date: 19 Sep-12 15:20	Species: Pimephales promelas	Brine:
Duration: 7d	Source: Aquatox, AR	Age: < 24

Sample ID: 06-9591-7619	Code: 12-256-0191	Client: Blytheville Sewer Dept.
Sample Date: 11 Sep-12 09:30	Material: POTW Effluent	Project: WET Quarterly Compliance Test (3Q)
Receive Date: 12 Sep-12 14:15	Source: BLYSEWE - AR0022560 West Plant (ARO)	
Sample Age: 30h	Station:	

Sample Renewals					
Renewal	Sample Code	Sample Date	Receive Date	Renewal Date	Temp °C
1	12-256-0191	12 Sep-12 09:30	12 Sep-12 14:15	12 Sep-12 00:00	1
2	12-256-0191	14 Sep-12 09:30	14 Sep-12 12:45	14 Sep-12 00:00	1

Comparison Summary							
Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
11-0051-4640	7d Survival Rate	100	>100	NA	11.5%	1	Steel Many-One Rank Sum Test
05-0122-7593	Mean Dry Weight-mg	100	>100	NA	29.3%	1	Dunnett Multiple Comparison Test

Test Acceptability						
Analysis ID	Endpoint	Attribute	Test Stat	TAC Limits	Overlap	Decision
11-0051-4640	7d Survival Rate	Control Resp	0.975	0.8 - NL	Yes	Passes Acceptability Criteria

7d Survival Rate Summary											
C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Lab Water	5	0.975	0.9056	1	0.875	1	0.025	0.0559	5.73%	0.0%
32		5	1	1	1	1	1	0	0	0.0%	-2.56%
42		5	0.95	0.865	1	0.875	1	0.03062	0.06847	7.21%	2.56%
56		5	0.925	0.7862	1	0.75	1	0.05	0.1118	12.09%	5.13%
75		5	0.95	0.865	1	0.875	1	0.03062	0.06847	7.21%	2.56%
100		5	0.9	0.7701	1	0.75	1	0.04677	0.1046	11.62%	7.69%

Mean Dry Weight-mg Summary											
C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Lab Water	5	0.365	0.3045	0.4255	0.3125	0.4375	0.02179	0.04873	13.35%	0.0%
32		5	0.3275	0.2328	0.4222	0.2375	0.4375	0.03409	0.07624	23.28%	10.27%
42		5	0.3475	0.2198	0.4752	0.25	0.5125	0.046	0.1028	29.6%	4.8%
56		5	0.37	0.2904	0.4496	0.2875	0.4375	0.02867	0.0641	17.33%	-1.37%
75		5	0.4125	0.3261	0.4989	0.35	0.525	0.03112	0.0696	16.87%	-13.01%
100		5	0.3575	0.2884	0.4266	0.275	0.425	0.02487	0.05562	15.56%	2.06%

CETIS Summary Report

Report Date: 03 Oct-12 16:00 (p 2 of 2)

Test Code: FH 12-256-0191 | 16-2307-6248

Fathead Minnow 7-d Larval Survival and Growth Test						Environmental Testing and Consulting, Inc.
7d Survival Rate Detail						
C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	Lab Water	1	1	1	1	0.875
32		1	1	1	1	1
42		1	0.875	0.875	1	1
56		1	1	1	0.875	0.75
75		0.875	1	0.875	1	1
100		0.875	1	1	0.75	0.875
Mean Dry Weight-mg Detail						
C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	Lab Water	0.3125	0.3375	0.3875	0.35	0.4375
32		0.2375	0.3125	0.2875	0.3625	0.4375
42		0.3375	0.275	0.25	0.3625	0.5125
56		0.4375	0.325	0.425	0.375	0.2875
75		0.35	0.525	0.4	0.425	0.3625
100		0.3375	0.425	0.375	0.375	0.275

CETIS Measurement Report

Report Date: 03 Oct-12 16:00 (p 1 of 8)

Test Code: FH 12-256-0191 | 16-2307-6248

Fathead Minnow 7-d Larval Survival and Growth Test

Environmental Testing and Consulting, Inc.

Sample ID: 06-9591-7619	Code: 12-256-0191	Client: Blytheville Sewer Dept.
Sample Date: 11 Sep-12 09:30	Material: POTW Effluent	Project: WET Quarterly Compliance Test (3Q)
Receive Date: 12 Sep-12 14:15	Source: BLYSEWE - AR0022560 West Plant (ARO)	
Sample Age: 30h	Station:	

CETIS Measurement Report

Report Date: 03 Oct-12 16:00 (p 2 of 8)
 Test Code: FH 12-256-0191 | 16-2307-6248

Fathead Minnow 7-d Larval Survival and Growth Test							Environmental Testing and Consulting, Inc.
Alkalinity (CaCO3)-mg/L							
C-%	Control Type	Reading Time	Measure	QA	Diff-%	Inst ID	Analyst Notes
0	Lab Water	1	59				
0	Lab Water	2	61				
0	Lab Water	3	60				
0	Lab Water	4	59				
0	Lab Water	5	62				
0	Lab Water	6	60				
0	Lab Water	7	62				
Total Residual Chlorine-mg/L							
C-%	Control Type	Reading Time	Measure	QA	Diff-%	Inst ID	Analyst Notes
0	Lab Water	1	0				
100			0				
0	Lab Water	2	0				
100			0				
0	Lab Water	3	0				
100			0				
0	Lab Water	4	0				
100			0				
0	Lab Water	5	0				
100			0				
0	Lab Water	6	0				
100			0				
0	Lab Water	7	0				
100			0				
Conductivity-µS/cm							
C-%	Control Type	Reading Time	Measure	QA	Diff-%	Inst ID	Analyst Notes
0	Lab Water	1	181				
100			384				
0	Lab Water	2	180				
100			383				
0	Lab Water	3	181				
100			400				
0	Lab Water	4	183				
100			392				
0	Lab Water	5	182				
100			403				
0	Lab Water	6	182				
100			421				
0	Lab Water	7	174				
100			419				

CETIS Measurement Report

Report Date: 03 Oct-12 16:00 (p 3 of 8)

Test Code: FH 12-256-0191 | 16-2307-6248

Fathead Minnow 7-d Larval Survival and Growth Test **Environmental Testing and Consulting, Inc.**

Final Dissolved Oxygen-mg/L							
C-%	Control Type	Reading Time	Measure	QA	Diff-%	Inst ID	Analyst Notes
0	Lab Water	1	98				
32			9				
42			8.9				
56			9.1				
75			9.3				
100			9.2				
0	Lab Water	2	9.2				
32			9.5				
42			9.5				
56			9.5				
75			9.5				
100			9.5				
0	Lab Water	3	8.2				
32			8.3				
42			8.3				
56			8.3				
75			8.2				
100			8.2				
0	Lab Water	4	8.2				
32			8.4				
42			8.4				
56			8.4				
75			8.3				
100			8.2				
0	Lab Water	5	9.7				
32			9.7				
42			9.7				
56			9.6				
75			9.6				
100			9.6				
0	Lab Water	6	8.4				
32			8.4				
42			8.3				
56			8.2				
75			8.1				
100			8.1				
0	Lab Water	7	8.3				
32			8.2				
42			8.2				
56			8.2				
75			8.1				
100			8.1				

CETIS Measurement Report

Report Date: 03 Oct-12 16:00 (p 4 of 8)
 Test Code: FH 12-256-0191 | 16-2307-6248

Fathead Minnow 7-d Larval Survival and Growth Test Environmental Testing and Consulting, Inc.

Initial Dissolved Oxygen-mg/L

C-%	Control Type	Reading Time	Measure	QA	Diff-%	Inst ID	Analyst	Notes
0	Lab Water	1	9.2					
32			9.5					
42			9.6					
56			9.7					
75			9.9					
100			10					
0	Lab Water	2	9.5					
32			10					
42			10.4					
56			10.4					
75			10					
100			10.3					
0	Lab Water	3	9.6					
32			10					
42			10					
56			10					
75			10					
100			10					
0	Lab Water	4	8.9					
32			9.3					
42			9.3					
56			9.3					
75			9.2					
100			9.3					
0	Lab Water	5	8.6					
32			9.5					
42			9.5					
56			9.7					
75			9.6					
100			9.6					
0	Lab Water	6	9.2					
32			9.6					
42			9.9					
56			9.9					
75			9.9					
100			7.9					
0	Lab Water	7	9					
32			9.1					
42			9.1					
56			9.2					
75			9.2					
100			9.3					

Hardness (CaCO3)-mg/L

C-%	Control Type	Reading Time	Measure	QA	Diff-%	Inst ID	Analyst	Notes
0	Lab Water	1	92					
0	Lab Water	2	93					
0	Lab Water	3	91					
0	Lab Water	4	89					
0	Lab Water	5	88					
0	Lab Water	6	91					
0	Lab Water	7	93					

CETIS Measurement Report

Report Date: 03 Oct-12 16:00 (p 5 of 8)

Test Code: FH 12-256-0191 | 16-2307-6248

Fathead Minnow 7-d Larval Survival and Growth Test						Environmental Testing and Consulting, Inc.	
Final pH-Units							
C-%	Control Type	Reading Time	Measure	QA	Diff-%	Inst ID	Analyst Notes
0	Lab Water	1	8				
32			7.9				
42			7.9				
56			7.9				
75			7.9				
100			7.9				
0	Lab Water	2	8				
32			8.2				
42			8.1				
56			8				
75			8.1				
100			8				
0	Lab Water	3	8.3				
32			8.2				
42			8.1				
56			8.1				
75			8				
100			8				
0	Lab Water	4	8.1				
32			8.1				
42			8				
56			8				
75			8				
100			8				
0	Lab Water	5	7.8				
32			7.7				
42			7.8				
56			7.7				
75			7.7				
100			7.7				
0	Lab Water	6	7.9				
32			8				
42			8				
56			8				
75			8.1				
100			8.1				
0	Lab Water	7	8				
32			7.9				
42			7.8				
56			7.8				
75			7.9				

CETIS Measurement Report

Report Date: 03 Oct-12 16:00 (p 6 of 8)

Test Code: FH 12-256-0191 | 16-2307-6248

Fathead Minnow 7-d Larval Survival and Growth Test

Environmental Testing and Consulting, Inc.

Initial pH-Units

C-%	Control Type	Reading Time	Measure	QA	Diff-%	Inst ID	Analyst	Notes
0	Lab Water	1	8.3					
32			8.2					
42			8.2					
56			8.2					
75			8.1					
100			8.1					
0	Lab Water	2	8.1					
32			8.1					
42			8					
56			8					
75			8					
100			7.9					
0	Lab Water	3	8.2					
32			8.1					
42			8.1					
56			8.1					
75			8					
100			7.9					
0	Lab Water	4	8.1					
32			8					
42			8					
56			8					
75			8					
100			8					
0	Lab Water	5	8					
32			8.1					
42			8.1					
56			8.1					
75			8.1					
100			8.2					
0	Lab Water	6	8.1					
32			8.2					
42			8					
56			8					
75			7.9					
100			7.9					
0	Lab Water	7	8.2					
32			8					
42			8					
56			7.9					
75			7.9					
100			7.7					

CETIS Measurement Report

Report Date: 03 Oct-12 16:00 (p 7 of 8)
 Test Code: FH 12-256-0191 | 16-2307-6248

Fathead Minnow 7-d Larval Survival and Growth Test				Environmental Testing and Consulting, Inc.				
Final Temperature-°C								
C-%	Control Type	Reading Time	Measure	QA	Diff-%	Inst ID	Analyst	Notes
0	Lab Water	1	23					
32			23					
42			23					
56			23					
75			23					
100			23					
0	Lab Water	2	23					
32			23					
42			23					
56			23					
75			23					
100			23					
0	Lab Water	3	23					
32			23					
42			23					
56			23					
75			23					
100			23					
0	Lab Water	4	23					
32			23					
42			23					
56			23					
75			23					
100			23					
0	Lab Water	5	23					
32			23					
42			23					
56			23					
75			23					
100			23					
0	Lab Water	6	23					
32			23					
42			23					
56			23					
75			23					
100			23					
0	Lab Water	7	23					
32			23					
42			23					
56			23					
75			23					

CETIS Measurement Report

Report Date: 03 Oct-12 16:00 (p 8 of 8)
 Test Code: FH 12-256-0191 | 16-2307-6248

Fathead Minnow 7-d Larval Survival and Growth Test				Environmental Testing and Consulting, Inc.			
Initial Temperature-°C							
C-%	Control Type	Reading Time	Measure	QA	Diff-%	Inst ID	Analyst Notes
0	Lab Water	1	23				
32			23				
42			23				
56			23				
75			23				
100			23				
0	Lab Water	2	23				
32			23				
42			23				
56			23				
75			23				
100			23				
0	Lab Water	3	23				
32			23				
42			23				
56			23				
75			23				
100			23				
0	Lab Water	4	23				
32			23				
42			23				
56			23				
75			23				
100			23				
0	Lab Water	5	23				
32			23				
42			23				
56			23				
75			23				
100			23				
0	Lab Water	6	23				
32			23				
42			23				
56			23				
75			23				
100			23				
0	Lab Water	7	23				
32			23				
42			23				
56			23				
75			23				
100			23				



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"A Laboratory Management Partner"

03316

Blytheville Sewer Department

Mr. James Yankee

P.O. Box 1784

Blytheville, AR 72316

Project Bioassay - West WWTP

Information :

Report Date : 10/3/2012

Report Number : 12-256-0191

REPORT OF ANALYSIS

Received : 9/12/2012

Lab No : 94635

Matrix: Aqueous

Sample ID : West-Outfall 001 9/10-11/12

Sampled: 9/11/2012 9:30

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Alkalinity (as CaCO3)	59	mg/L	1	1	09/17/12 10:05	EWB	2320B
Total Calcium	13.3	mg/L	0.100	1	09/20/12 22:12	BKN	EPA-200.7
Hardness as CaCO3(SM-2340B)	47.0	mg/L	0.100	1	09/20/12 22:12		EPA-200.7
Total Magnesium	3.35	mg/L	0.100	1	09/20/12 22:12	BKN	EPA-200.7

Lab No : 94636

Matrix: Aqueous

Sample ID : West-Outfall 001 9/11-12/12

Sampled: 9/12/2012 9:30

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Alkalinity (as CaCO3)	57	mg/L	1	1	09/17/12 10:05	EWB	2320B
Total Calcium	13.9	mg/L	0.100	1	09/20/12 22:18	BKN	EPA-200.7
Hardness as CaCO3(SM-2340B)	48.9	mg/L	0.100	1	09/20/12 22:18		EPA-200.7
Total Magnesium	3.45	mg/L	0.100	1	09/20/12 22:18	BKN	EPA-200.7

Lab No : 95307

Matrix: Aqueous

Sample ID : West-Outfall 001 9/13-14/12

Sampled: 9/14/2012 9:30

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Alkalinity (as CaCO3)	49	mg/L	1	1	09/17/12 10:05	EWB	2320B
Total Calcium	14.1	mg/L	0.100	1	09/20/12 22:25	BKN	EPA-200.7
Hardness as CaCO3(SM-2340B)	49.5	mg/L	0.100	1	09/20/12 22:25		EPA-200.7
Total Magnesium	3.46	mg/L	0.100	1	09/20/12 22:25	BKN	EPA-200.7

Qualifiers/ Definitions

* Outside QC limit
MQL Method Quantitation Limit

DF Dilution Factor

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Memphis, TN 38133

Additional Toxicity Test Information

1. Methods/Instrumentation used in chemical analysis:
 - Dissolved oxygen: 4500-O G YSI MODEL - 58
 - pH: 4500-H + B JENCO METER 6072
 - Temperature: 2500 B JENCO METER 6072
 - Conductivity: 2510 B CORNING METER 441
 - Alkalinity: 2320 B
 - Hardness: 200.7
 - Total Residual Chlorine: 4500-Cl G - REPORTED VALUE OF "0" INDICATES RESULT BELOW DETECTION LIMIT OF 0.02 mg/L
 - EPA Acute/Chronic Manual Edition and Date: EPA-821-R-02-012
OCT 2002 (Fifth edition)
2. Laboratory
 - Temperature: Average - 25 C Range - 23 - 26
 - Light Cycle: 16 hours light/ 8 hours dark
 - Light intensity: 100 foot-candles, average
 - Control Water: Dilute mineral water made with 20 % Perrier in Nanopure
 - Dilution Water: Laboratory control water
 - Pretreatment: none
3. Method 1002.0
 - Test chambers: 30 mL disposable plastic beakers
 - Volume per chamber: 15 mL
 - Number of organisms per chamber: 1
 - Number of replicates: 10
 - Food: Laboratory culture of Selenastrum algae and YCT solution
4. Method 1000.0
 - Test chambers: 20 oz. Disposable plastic cups
 - Volume per chamber: 200 mL
 - Average number of organisms per chamber: 8
 - Number of replicates per concentration: 5
 - Food: Artemia brine shrimp hatched in laboratory
 - Acclimation of organisms: Organisms are allowed to reach test temperature. Dilution water is added at half-hour intervals until organisms are contained in a culture media that consists of 80% dilution water.
5. Indicate below any other relevant information that may aid in the evaluation of this report. Include any deviations from EPA methodology that were necessary for these tests as well as any sample manipulations which were performed, such as aeration, dechlorination with sodium thiosulfate, etc. and the justification for such manipulations or deviations. Attach additional pages as needed.
 - None



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Blytheville Sewer Department
Bioassav - West WWTP / 9/12/12

12-256-0191
03316
2012-09-12
14:46:44

①

Company Name Blytheville Sewer Department				Customer Number 03316	Telephone (870) 763-4961	RUSH	ICE X
Site Name West Plant			Project Comment 3rd qtr bioassay 2012			FID Number	
Project Blytheville Sewer - Bioassay			Project Number 091112WP	PO Number			
Project Manager / Contact Mr. James Yankee				E-mail jlyankee72315@yahoo.com			
Sample ID	Container Type	Collected Date / Time	# Cont	Preservative	Grab / Comp	Matrix	Analyses
C1 - Outfall 001	Plastic - Pint		1	HNO3 - Nitric Acid	C	Aqueous	hardness
C1-Outfall 001	Plastic - Pint		1	NONE	C	Aqueous	Alkalinity
C1-Outfall 001	Plastic - Gallon		2	NONE	C	Aqueous	chronic CD/FH
C2-Outfall 001	Plastic - Pint	9/10-11/12 9:30am	1	HNO3 - Nitric Acid	C	Aqueous	hardness
C2 - Outfall 001	Plastic - Pint	9/10-11/12 9:30am	1	NONE	C	Aqueous	alkalinity
C2-Outfall 001	Plastic - Gallon	9/10-11/12 9:30am	2	NONE	C	Aqueous	chronic CD/FH
C3-Outfall 001	Plastic - Pint		1	HNO3 - Nitric Acid	C	Aqueous	hardness
C3-Outfall 001	Plastic - Pint		1	NONE	C	Aqueous	alkalinity
C3-Outfall 001	Plastic - Gallon		3	NONE	C	Aqueous	Chronic CD/FH

Sampled By ROGER CROSS	Method of Shipment ETC LABS	Blank / Cooler Temperature 1°C	Remarks
Relinquished By (sign) Roger Cross	Date / Time 9/10/12 9:42	Received By (sign) Telsinger	Date / Time 9/12/12 1045
Relinquished By (sign)	Date / Time	Received By (sign)	Date / Time
Relinquished By (sign) Telsinger	Date / Time 9/12/12 1415	Received by Lab (sign) Telsinger	Date / Time 9/12/12 1415



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Blytheville Sewer Department
Bioassay - West WWTP / 9/12/12

12-256-0191
03316
2012-09-12
14:46:44

Company Name Blytheville Sewer Department				Customer Number 03316	Telephone (870) 763-4961	RUSH	ICE ✓
Site Name West Plant			Project Comment 3rd qtr bioassay 2012			FID Number	
Project Blytheville Sewer - Bioassay			Project Number 091212 WF	PO Number			
Project Manager / Contact Mr. James Yankee				E-mail jlyankee72315@yahoo.com			
Sample ID	Container Type	Collected Date / Time	# Cont	Preservative	Grab / Comp	Matrix	Analyses
C1 - Outfall 001	Plastic - Pint		1	HNO3 - Nitric Acid	C	Aqueous	hardness
C1-Outfall 001	Plastic - Pint		1	NONE	C	Aqueous	Alkalinity
C1-Outfall 001	Plastic - Gallon		2	NONE	C	Aqueous	chronic CD/FH
C2-Outfall 001	Plastic - Pint		1	HNO3 - Nitric Acid	C	Aqueous	hardness
C2 - Outfall 001	Plastic - Pint		1	NONE	C	Aqueous	alkalinity
C2-Outfall 001	Plastic - Gallon		2	NONE	C	Aqueous	chronic CD/FH
C3-Outfall 001	Plastic - Pint	9/11-12-12 9:30am	1	HNO3 - Nitric Acid	C	Aqueous	hardness
C3-Outfall 001	Plastic - Pint	9/11-12/12 9:30am	1	NONE	C	Aqueous	alkalinity
C3-Outfall 001	Plastic - Gallon	9/11-12/12 9:30am	3	NONE	C	Aqueous	Chronic CD/FH

Sampled By ROBERT CROSS	Method of Shipment ETC LAB	Blank / Cooler Temperature 1°C	Remarks
Relinquished By (sign) Robert Cross	Date / Time 9/12/12 9:45	Received By (sign) [Signature]	Date / Time 9/12/12 1045
Relinquished By (sign)	Date / Time	Received By (sign)	Date / Time
Relinquished By (sign) [Signature]	Date / Time 9/12/12 1415	Received by Lab (sign) [Signature]	Date / Time 9/12/12 1415



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3



12-256-0191
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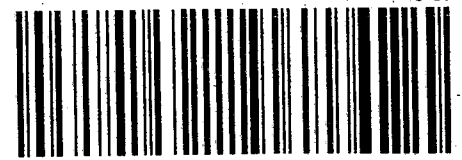
Blytheville Sewer Department
Bioassay - West WWTP / 9/12/12/9/14/12

Company Name Blytheville Sewer Department			Customer Number 03316		Telephone (870) 763-4961		RUSH	ICE X
Site Name West Plant			Project Comment 3rd qtr bioassay 2012				FID Number	
Project Blytheville Sewer - Bioassay			Project Number 091412W		PO Number			
Project Manager / Contact Mr. James Yankee					E-mail jlyankee72315@yahoo.com			
Sample ID	Container Type	Collected Date / Time	# Cont	Preservative	Grab / Comp	Matrix	Analyses	
C1 - Outfall 001	Plastic - Pint	9/13-14/12 9:30 AM	1	HNO3 - Nitric Acid	C	Aqueous	hardness	
C1-Outfall 001	Plastic - Pint	9/13-14/12 9:30 AM	1	NONE	C	Aqueous	Alkalinity	
C1-Outfall 001	Plastic - Gallon	9/13-14/12 9:30 AM	2	NONE	C	Aqueous	chronic CD/FH	
C2-Outfall 001	Plastic - Pint		1	HNO3 - Nitric Acid	C	Aqueous	hardness	
C2 - Outfall 001	Plastic - Pint		1	NONE	C	Aqueous	alkalinity	
C2-Outfall 001	Plastic - Gallon		2	NONE	C	Aqueous	chronic CD/FH	
C3-Outfall 001	Plastic - Pint		1	HNO3 - Nitric Acid	C	Aqueous	hardness	
C3-Outfall 001	Plastic - Pint		1	NONE	C	Aqueous	alkalinity	
C3-Outfall 001	Plastic - Gallon		3	NONE	C	Aqueous	Chronic CD/FH	

Sampled By ROGER CROSS		Method of Shipment ETC LAB		Blank / Cooler Temperature 10C		Remarks	
Relinquished By (sign) [Signature]		Date / Time 9/14/12 9:45		Received By (sign) [Signature]		Date / Time 9/14/12 1115	
Relinquished By (sign)		Date / Time		Received By (sign)		Date / Time	
Relinquished By (sign) [Signature]		Date / Time 9/14/12 1245		Received by Lab (sign) [Signature]		Date / Time 9/14/12 1245	


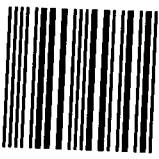
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P.O. Box 1784
Blytheville, AR. 72315

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