



ENVIRONMENTAL TESTING & CONSULTING, INC.

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

July 12, 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 #: 12-172-0191 BLYSEWE - AR0022560 West Plant

All statistical interpretations generated by CETIS - Comprehensive Environmental Toxicity Information System (v.1.025A). CETIS created by Tidepool Scientific Software

Respectfully,

Connie Cook, Manager, Biological Sciences

Enclosure(s)

cc

Report Date: 12 Jul-12 2:49 PM

Link: 05-4104-6813/CD172-0191

CETIS Test Evaluation

Facility: BLYSEWE - AR0022560 West Plant (AR0022560) Sample Site: Sample Code: 12-172-0191 Sample Date: 19 Jun-12 08:30 AM Sample Age: 32 Hours (1 °C) Project: WET Quarterly Compliance Test (2Q)	Test Title: Ceriodaphnia 7-d Survival and Reproduction Test Organism: Ceriodaphnia dubia (Water Flea) Protocol: EPA/821/R-02-013 (2002) Start Date: 20 Jun-12 04:40 PM End Date: 27 Jun-12 02:00 PM Test Duration: 6 Days 21 Hours
Permitee: Blytheville Sewer Dept. Address: P.O. Box 1784 Halfmoon Road Blytheville, AR 72315 Contact: Mr. James Yankee Phone: 870-763-4961, 870-763-8541(fax) Email:	Laboratory: Environmental Testing and Consulting, Inc. Address: 2790 Whitten Road Memphis, TN 38133 Contact: Ms. Connie Cook Phone: 901-213-2454, 901-213-2440(fax) Email: ccook@etcmemphis.com

Comments

Chronic Toxicity Evaluation

Endpoint	Parameter	Conc-%	IWC	Pass/Fail
Reproduction	ChV	100	99.99	Passed
7d Proportion Survived		100	99.99	Passed

Test Acceptability

Endpoint	Attribute	Estimate	Criteria	Pass/Fail
Reproduction	Control CV	0.29280349	N/A - 0.4	Passed
Reproduction	Control Response	18	15 - N/A	Passed
7d Proportion Survived		1	0.799 - N/A	Passed
Reproduction	MSDp	0.35851565	0.13 - 0.47	Passed

7d Proportion Survived Summary

Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Lab Water	10	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%
32		10	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%
42		10	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%
56		10	0.80000	0.00000	1.00000	0.13333	0.42164	52.70%
75		10	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%
100		10	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%

Reproduction Summary

Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Lab Water	10	18.0000	9.00000	24.0000	1.66667	5.27046	29.28%
32		10	16.0000	12.0000	27.0000	1.62617	5.14242	32.14%
42		10	14.7000	7.00000	23.0000	1.95533	6.18331	42.06%
56		10	18.9000	0.00000	28.0000	3.05305	9.65459	51.08%
75		10	15.9000	4.00000	24.0000	1.86458	5.89633	37.08%
100		10	16.5000	7.00000	22.0000	1.36015	4.30116	26.07%

CETIS Test Summary

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

Test No: 04-6812-9060	Test Type: Reproduction-Survival (7d)	Duration: 6 Days 21 Hours
Start Date: 20 Jun-12 04:40 PM	Protocol: EPA/821/R-02-013 (2002)	Species: Ceriodaphnia dubia
Ending Date: 27 Jun-12 02:00 PM	Dil Water: Perrier Water	Source: In-House Culture
Setup Date: 20 Jun-12 04:40 PM	Brine: Not Applicable	

Sample No: 07-5261-6358	Material: POTW Effluent	Client: Blytheville Sewer Dept.
Sample Date: 19 Jun-12 08:30 AM	Code: 12-172-0191	Project: WET Quarterly Compliance Test (2Q)
Receive Date: 20 Jun-12 03:30 PM	Source: BLYSEWE - AR0022560 West Plant	
Sample Age: 32 Hours (1 °C)	Station:	

Comparison Summary

Analysis	Endpoint	NOEL	LOEL	ChV	MSDp	Method
04-5274-5486	7d Proportion Survived	100	>100	N/A	N/A	Fisher's Exact
09-7791-8822	Reproduction	100	>100	N/A	35.85%	Dunnett's Multiple Comparison

Test Acceptability

Analysis	Endpoint	Attribute	Statistic	Acceptable Range	Decision
09-7791-8822	Reproduction	Control CV	0.2928035	N/A - 0.4	Passes acceptability criteria
09-7791-8822	Reproduction	Control Response	18	15 - N/A	Passes acceptability criteria
04-5274-5486	7d Proportion Survived		1	0.799 - N/A	Passes acceptability criteria
09-7791-8822	Reproduction	MSDp	0.3585157	0.13 - 0.47	Passes acceptability criteria

7d Proportion Survived Summary

Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Lab Water	10	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%
32		10	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%
42		10	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%
56		10	0.80000	0.00000	1.00000	0.13333	0.42164	52.70%
75		10	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%
100		10	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%

Reproduction Summary

Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Lab Water	10	18.0000	9.00000	24.0000	1.66667	5.27046	29.28%
32		10	16.0000	12.0000	27.0000	1.62617	5.14242	32.14%
42		10	14.7000	7.00000	23.0000	1.95533	6.18331	42.06%
56		10	18.9000	0.00000	28.0000	3.05305	9.65459	51.08%
75		10	15.9000	4.00000	24.0000	1.86458	5.89633	37.08%
100		10	16.5000	7.00000	22.0000	1.36015	4.30116	26.07%

7d Proportion Survived Detail

Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	Lab Water	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000
32		1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000
42		1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000
56		1.00000	1.00000	0.00000	0.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000
75		1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000
100		1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000

Reproduction Detail

Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	Lab Water	19.00000	22.00000	24.00000	23.00000	18.00000	13.00000	11.00000	19.00000	9.00000	22.00000
32		12.00000	12.00000	12.00000	16.00000	27.00000	15.00000	13.00000	13.00000	23.00000	17.00000
42		7.00000	18.00000	9.00000	12.00000	19.00000	23.00000	10.00000	23.00000	18.00000	8.00000
56		25.00000	23.00000	0.00000	7.00000	26.00000	15.00000	27.00000	28.00000	25.00000	13.00000
75		24.00000	16.00000	15.00000	17.00000	11.00000	18.00000	24.00000	13.00000	17.00000	4.00000
100		16.00000	19.00000	18.00000	7.00000	19.00000	22.00000	18.00000	19.00000	12.00000	15.00000

CETIS Measurement Detail

Ceriodaphnia 7-d Survival and Reproduction Test

Environmental Testing and Consulting, Inc.

CETIS Measurement Detail

Initial Dissolved Oxygen-mg/L								
Conc-%	Control Type	1	2	3	4	5	6	7
0	Lab Water	8.7	8.8	9.3	8.5	8.7	8.8	9
32		8.7	8.7	9	8.8	8.6	9	9.2
42		8.7	8.6	9	8.9	8.6	9.1	9.2
56		8.7	8.6	8.9	8.9	8.9	9.1	9.3
75		8.6	8.5	8.8	9	9	9	9.3
100		8.5	8.1	8.5	9	9	9.3	9.2

Initial pH								
Conc-%	Control Type	1	2	3	4	5	6	7
0	Lab Water	8.1	8.3	8.3	8.2	8.1	7.9	7.9
32		8.1	8.1	8.1	8	8	7.9	7.9
42		8.1	8.1	8	8	8	7.9	7.9
56		8.1	8.1	8	8	7.9	7.9	7.9
75		8.1	8	8	8	7.9	7.9	7.9
100		8	8	8	7.9	7.9	7.9	7.9

Initial Temperature-°C								
Conc-%	Control Type	1	2	3	4	5	6	7
0	Lab Water	23	23	23	23	23	23	23
32		23	23	23	23	23	23	23
42		23	23	23	23	23	23	23
56		23	23	23	23	23	23	23
75		23	23	23	23	23	23	23
100		23	23	23	23	23	23	23

Final Dissolved Oxygen-mg/L								
Conc-%	Control Type	1	2	3	4	5	6	7
0	Lab Water	8.8	8.3	8.3	8	8.7	9.2	9.2
32		8.8	8.4	8.1	8.2	8.7	9.3	9.1
42		8.9	8.4	8	8.2	8.7	9.3	9
56		8.8	8.5	8	8.1	8.7	9.3	9
75		8.8	8.5	8	8.1	8.7	9.1	9.1
100		8.8	8.5	8	8.1	8.6	9.1	9.1

Final pH								
Conc-%	Control Type	1	2	3	4	5	6	7
0	Lab Water	8.1	8	8	8	7.7	7.9	7.9
32		8.1	7.9	8.1	8.1	7.5	7.9	7.9
42		8.1	8	8.1	8	7.9	7.9	7.9
56		8.2	8	8.1	7.9	7.9	7.9	7.9
75		8.2	8.1	8.1	7.9	8	7.9	7.9
100		8.2	8.2	8.1	7.9	8	7.9	7.9

Final Temperature-°C								
Conc-%	Control Type	1	2	3	4	5	6	7
0	Lab Water	23	23	23	23	23	23	23
32		23	23	23	23	23	23	23
42		23	23	23	23	23	23	23
56		23	23	23	23	23	23	23
75		23	23	23	23	23	23	23
100		23	23	23	23	23	23	23

Alkalinity (CaCO3)-mg/L								
Conc-%	Control Type	1	2	3	4	5	6	7
0	Lab Water	60	63	62	60	62	63	63

CETIS Measurement Detail

Total Residual Chlorine-mg/L								
Conc-%	Control Type	1	2	3	4	5	6	7
0	Lab Water	0	0	0	0	0	0	0
100		0	0	0	0	0	0	0
Conductivity-µmhos								
Conc-%	Control Type	1	2	3	4	5	6	7
0	Lab Water	176	177	178	181	179	178	177
100		468	486	478	501	483	464	461
Hardness (CaCO3)-mg/L								
Conc-%	Control Type	1	2	3	4	5	6	7
0	Lab Water	89	91	90	89	92	91	91

CETIS Test Evaluation

Facility: BLYSEWE - AR0022560 West Plant (AR0022560)	Test Title: Fathead Minnow 7-d Larval Survival and Growth Test
Sample Site:	Organism: Pimephales promelas (Fathead Minnow)
Sample Code: 12-172-0191	Protocol: EPA/821/R-02-013 (2002)
Sample Date: 19 Jun-12 08:30 AM	Start Date: 20 Jun-12 05:00 PM
Sample Age: 33 Hours (1 °C)	End Date: 27 Jun-12 03:30 PM
Project: WET Quarterly Compliance Test (2Q)	Test Duration: 6 Days 22 Hours

Permittee: Blytheville Sewer Dept.	Laboratory: Environmental Testing and Consulting, Inc.
Address: P.O. Box 1784 Halfmoon Road Blytheville, AR 72315	Address: 2790 Whitten Road Memphis, TN 38133
Contact: Mr. James Yankee	Contact: Ms. Connie Cook
Phone: 870-763-4961, 870-763-8541(fax)	Phone: 901-213-2454, 901-213-2440(fax)
Email:	Email: ccook@etcmemphis.com

Comments

Chronic Toxicity Evaluation

Endpoint	Parameter	Conc-%	IWC	Pass/Fail
Mean Dry Weight-mg	ChV	100	99.99	Passed
7d Proportion Survived		100	99.99	Passed

Test Acceptability

Endpoint	Attribute	Estimate	Criteria	Pass/Fail
Mean Dry Weight-mg	Control CV	0.13921384	N/A - 0.4	Passed
Mean Dry Weight-mg	Control Response	0.49749928	0.25 - N/A	Passed
7d Proportion Survived		0.9	0.799 - N/A	Passed

7d Proportion Survived Summary

Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Lab Water	5	0.90000	0.87500	1.00000	0.02500	0.05590	6.21%
32		5	0.92500	0.75000	1.00000	0.05000	0.11180	12.09%
42		5	0.92500	0.75000	1.00000	0.05000	0.11180	12.09%
56		5	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%
75		5	0.92500	0.75000	1.00000	0.05000	0.11180	12.09%
100		5	0.97500	0.87500	1.00000	0.02500	0.05590	5.73%

Mean Dry Weight-mg Summary

Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Lab Water	5	0.49750	0.42500	0.57500	0.03097	0.06926	13.92%
32		5	0.48500	0.22500	0.60000	0.06863	0.15345	31.64%
42		5	0.42750	0.31250	0.52500	0.04497	0.10055	23.52%
56		5	0.53000	0.48750	0.60000	0.02114	0.04727	8.92%
75		5	0.44500	0.38750	0.48750	0.01794	0.04012	9.01%
100		5	0.47250	0.33750	0.57500	0.04228	0.09454	20.01%

Report Date: 12 Jul-12 2:51 PM

Link: 06-3017-9314/FH172-0191

CETIS Test Summary

Fathead Minnow 7-d Larval Survival and Growth Test						Environmental Testing and Consulting, Inc.		
Test No:	12-5165-8115	Test Type:	Growth-Survival (7d)	Duration:	6 Days 22 Hours			
Start Date:	20 Jun-12 05:00 PM	Protocol:	EPA/821/R-02-013 (2002)	Species:	Pimephales promelas			
Ending Date:	27 Jun-12 03:30 PM	Dil Water:	Perrier Water	Source:	Aquatic Biosystems, CO			
Setup Date:	20 Jun-12 05:00 PM	Brine:	Not Applicable					
Sample No:	07-5261-6358	Material:	POTW Effluent	Client:	Blytheville Sewer Dept.			
Sample Date:	19 Jun-12 08:30 AM	Code:	12-172-0191	Project:	WET Quarterly Compliance Test (2Q)			
Receive Date:	20 Jun-12 03:30 PM	Source:	BLYSEWE - AR0022560 West Plant					
Sample Age:	33 Hours (1 °C)	Station:						
Comparison Summary								
Analysis	Endpoint	NOEL	LOEL	ChV	MSDp	Method		
13-3951-3926	7d Proportion Survived	100	>100	N/A	14.78%	Steel's Many-One Rank		
06-4230-2443	Mean Dry Weight-mg	100	>100	N/A	27.72%	Dunnett's Multiple Comparison		
Test Acceptability								
Analysis	Endpoint	Attribute	Statistic	Acceptable Range	Decision			
06-4230-2443	Mean Dry Weight-mg	Control CV	0.1392138	N/A - 0.4	Passes acceptability criteria			
06-4230-2443	Mean Dry Weight-mg	Control Response	0.4974993	0.25 - N/A	Passes acceptability criteria			
13-3951-3926	7d Proportion Survived		0.9	0.799 - N/A	Passes acceptability criteria			
7d Proportion Survived Summary								
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Lab Water	5	0.90000	0.87500	1.00000	0.02500	0.05590	6.21%
32		5	0.92500	0.75000	1.00000	0.05000	0.11180	12.09%
42		5	0.92500	0.75000	1.00000	0.05000	0.11180	12.09%
56		5	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%
75		5	0.92500	0.75000	1.00000	0.05000	0.11180	12.09%
100		5	0.97500	0.87500	1.00000	0.02500	0.05590	5.73%
Mean Dry Weight-mg Summary								
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Lab Water	5	0.49750	0.42500	0.57500	0.03097	0.06926	13.92%
32		5	0.48500	0.22500	0.60000	0.06863	0.15345	31.64%
42		5	0.42750	0.31250	0.52500	0.04497	0.10055	23.52%
56		5	0.53000	0.48750	0.60000	0.02114	0.04727	8.92%
75		5	0.44500	0.38750	0.48750	0.01794	0.04012	9.01%
100		5	0.47250	0.33750	0.57500	0.04228	0.09454	20.01%
7d Proportion Survived Detail								
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5		
0	Lab Water	0.87500	1.00000	0.87500	0.87500	0.87500		
32		0.75000	1.00000	1.00000	1.00000	0.87500		
42		0.75000	1.00000	1.00000	1.00000	0.87500		
56		1.00000	1.00000	1.00000	1.00000	1.00000		
75		1.00000	0.75000	0.87500	1.00000	1.00000		
100		1.00000	1.00000	0.87500	1.00000	1.00000		
Mean Dry Weight-mg Detail								
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5		
0	Lab Water	0.43750	0.56250	0.48750	0.57500	0.42500		
32		0.22500	0.60000	0.58750	0.53750	0.47501		
42		0.31250	0.52500	0.33750	0.43750	0.52500		
56		0.48750	0.48750	0.55000	0.60000	0.52500		
75		0.45000	0.42500	0.38750	0.47500	0.48750		
100		0.45000	0.33750	0.45000	0.57500	0.55000		

CETIS Measurement Detail

Fathead Minnow 7-d Larval Survival and Growth Test

Environmental Testing and Consulting, Inc.

CETIS Measurement Detail

Initial Dissolved Oxygen-mg/L								
Conc-%	Control Type	1	2	3	4	5	6	7
0	Lab Water	8.7	8.8	9.3	8.5	8.7	8.8	9
32		8.7	8.7	9	8.8	8.6	9	9.2
42		8.7	8.6	9	8.9	8.6	9.1	9.2
56		8.7	8.6	8.9	8.9	8.9	9.1	9.3
75		8.6	8.5	8.8	9	9	9	9.3
100		8.5	8.1	8.5	9	9	9.3	9.2

Initial pH								
Conc-%	Control Type	1	2	3	4	5	6	7
0	Lab Water	8.1	8.3	8.3	8.2	8.1	7.9	7.9
32		8.1	8.1	8.1	8	8	7.9	7.9
42		8.1	8.1	8	8	8	7.9	7.9
56		8.1	8.1	8	8	7.9	7.9	7.9
75		8.1	8	8	8	7.9	7.9	7.9
100		8	8	8	7.9	7.9	7.9	7.9

Initial Temperature-°C								
Conc-%	Control Type	1	2	3	4	5	6	7
0	Lab Water	23	23	23	23	23	23	23
32		23	23	23	23	23	23	23
42		23	23	23	23	23	23	23
56		23	23	23	23	23	23	23
75		23	23	23	23	23	23	23
100		23	23	23	23	23	23	23

Final Dissolved Oxygen-mg/L								
Conc-%	Control Type	1	2	3	4	5	6	7
0	Lab Water	9	8.6	8.3	8.2	8.7	8.9	8.6
32		9.1	8.6	8.3	8.2	8.6	8.9	8.6
42		8.9	8.6	8.4	8.4	8.5	8.8	8.2
56		8.9	8.5	8.4	8.4	8.4	8.6	8.2
75		8.9	8.5	8.3	8.3	8.4	8.6	8.1
100		8.8	8.5	8.3	8.3	8.4	8.6	8.1

Final pH								
Conc-%	Control Type	1	2	3	4	5	6	7
0	Lab Water	7.9	7.9	7.8	7.9	7.7	7.6	7.4
32		7.9	7.9	7.8	7.8	7.7	7.5	7.4
42		9	7.9	7.6	7.9	7.7	7.5	7.7
56		8	7.9	7.9	7.8	7.7	7.8	7.9
75		8	7.9	7.9	7.6	7.7	7.8	7.6
100		8.1	7.9	7.8	7.7	7.8	7.5	7.9

Final Temperature-°C								
Conc-%	Control Type	1	2	3	4	5	6	7
0	Lab Water	23	23	23	23	23	23	23
32		23	23	23	23	23	23	23
42		23	23	23	23	23	23	23
56		23	23	23	23	23	23	23
75		23	23	23	23	23	23	23
100		23	23	23	23	23	23	23

Alkalinity (CaCO3)-mg/L								
Conc-%	Control Type	1	2	3	4	5	6	7
0	Lab Water	60	63	62	60	62	63	63

CETIS Measurement Detail

Total Residual Chlorine-mg/L								
Conc-%	Control Type	1	2	3	4	5	6	7
0	Lab Water	0	0	0	0	0	0	0
100		0	0	0	0	0	0	0

Conductivity-µmhos								
Conc-%	Control Type	1	2	3	4	5	6	7
0	Lab Water	176	177	178	181	179	178	177
100		468	486	478	501	483	464	461

Hardness (CaCO3)-mg/L								
Conc-%	Control Type	1	2	3	4	5	6	7
0	Lab Water	89	91	90	89	92	91	91



ENVIRONMENTAL TESTING & CONSULTING, INC.

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"A Laboratory Management Partner"

03316

Blytheville Sewer Department

Mr. James Yankee

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Blytheville, AR 72316

Project Bioassay - West WWTP

Information : Project #061912WP/062012WP/062112WP

Report Date : 7/12/2012

Report Number : 12-172-0191

REPORT OF ANALYSIS

Received : 6/20/2012

Lab No : 89610

Sample ID : Outfall 001

Matrix: Aqueous

Sampled: 6/19/2012 8:30

Test	Results	Units	ML	DF	Date / Time Analyzed	By	Analytical Method
Alkalinity (as CaCO3)	121	mg/L	1	1	06/26/12 09:10	EWB	2320B
Total Calcium	17.5	mg/L	0.100	1	06/27/12 01:03	BKN	EPA-200.7
Hardness as CaCO3(SM-2340B)	61.1	mg/L	0.100	1	06/27/12 01:03		EPA-200.7
Total Magnesium	4.23	mg/L	0.100	1	06/27/12 01:03	BKN	EPA-200.7

Lab No : 89611

Sample ID : Outfall 001

Matrix: Aqueous

Sampled: 6/20/2012 7:30

Test	Results	Units	ML	DF	Date / Time Analyzed	By	Analytical Method
Alkalinity (as CaCO3)	120	mg/L	1	1	06/26/12 09:10	EWB	2320B
Total Calcium	17.4	mg/L	0.100	1	06/27/12 01:10	BKN	EPA-200.7
Hardness as CaCO3(SM-2340B)	60.7	mg/L	0.100	1	06/27/12 01:10		EPA-200.7
Total Magnesium	4.18	mg/L	0.100	1	06/27/12 01:10	BKN	EPA-200.7

Lab No : 89967

Sample ID : Outfall 001

Matrix: Aqueous

Sampled: 6/22/2012 7:30

Test	Results	Units	ML	DF	Date / Time Analyzed	By	Analytical Method
Alkalinity (as CaCO3)	112	mg/L	1	1	06/26/12 09:10	EWB	2320B
Total Calcium	16.9	mg/L	0.100	1	06/27/12 01:30	BKN	EPA-200.7
Hardness as CaCO3(SM-2340B)	59.6	mg/L	0.100	1	06/27/12 01:30		EPA-200.7
Total Magnesium	4.22	mg/L	0.100	1	06/27/12 01:30	BKN	EPA-200.7

Qualifiers/ Definitions

* Outside QC limit
MQL Method Quantitation Limit

DF Dilution Factor

Environmental Testing and Consulting, Inc.
2790 Whitten Road
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
Bioassay - West WWTP

12-172-0191
03316
2012-06-20
16:32:16

Company Name Blytheville Sewer Department	Customer Number 03316	Telephone (870) 763-4961	RUSH	ICE <i>[initials]</i>
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Site Name West Plant	Project Comment 2nd qtr bioassay 2012	FID Number
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Project Blytheville Sewer - Bioassay	Project Number <i>061912 WP</i>	PO Number
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Project Manager / Contact Mr. James Yankee	E-mail jlyankee72315@yahoo.com
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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	<i>6/19/12 8:30 AM</i>	1	HNO3 - Nitric Acid	C	Aqueous	hardness
C2 - Outfall 001	Plastic - Pint	<i>6/19/12 8:30</i>	1	NONE	C	Aqueous	alkalinity
C2-Outfall 001	Plastic - Gallon	<i>6/19/12 8:30 AM</i>	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 <i>ROBERT CROSS</i>	Method of Shipment <i>ETC Lab</i>	Blank / Cooler Temperature <i>10°C</i>	Remarks
Relinquished By (sign) <i>[Signature]</i>	Date / Time <i>6/19/12 9:38 AM</i>	Received By (sign) <i>[Signature]</i>	Date / Time <i>6/20/12 1130</i>
Relinquished By (sign)	Date / Time	Received By (sign)	Date / Time
Relinquished By (sign) <i>[Signature]</i>	Date / Time <i>6/20/12 1530</i>	Received By Lab (sign) <i>[Signature]</i>	Date / Time <i>6/20/12 1530</i>



ENVIRONMENTAL TESTING & CONSULTING, INC.

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

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Blytheville Sewer Department
Bioassav - West WWTP

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03316
2012-06-20
16:32:16

Company Name Blytheville Sewer Department		Customer Number 03316	Telephone (870) 763-4961	RUSH	ICE <input checked="" type="checkbox"/>
Site Name West Plant		Project Comment 2nd qtr bioassay 2012			FID Number
Project Blytheville Sewer - Bioassay		Project Number 062012 WP	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	6/20/12 7:30	1	HNO3 - Nitric Acid	C	Aqueous	hardness
C3-Outfall 001	Plastic - Pint	6/20/12 7:30	1	NONE	C	Aqueous	alkalinity
C3-Outfall 001	Plastic - Gallon	6/20/12 7:30	3	NONE	C	Aqueous	Chronic CD/FH

Sampled By ROGER CROSS	Method of Shipment ETC Lab	Blank / Cooler Temperature 10°C	Remarks
Relinquished By (sign) [Signature]	Date / Time 6/20/12 9:38 AM	Received By (sign) [Signature]	Date / Time 6/20/12 11:30
Relinquished By (sign)	Date / Time	Received By (sign)	Date / Time
Relinquished By (sign) [Signature]	Date / Time 6/20/12 1530	Received by Lab (sign) [Signature]	Date / Time 6/20/12 1530



ENVIRONMENTAL TESTING & CONSULTING, INC.

www.etc-memphis.com

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

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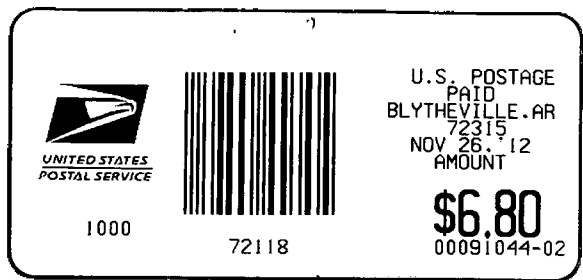
12-172-0191
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2012-06-20
16:32:16

Blytheville Sewer Department
Bioassav - West WWTP / 6/20/12

Company Name Blytheville Sewer Department				Customer Number 03316		Telephone (870) 763-4961		RUSH	ICE J
Site Name West Plant			Project Comment 2nd qtr bioassay 2012					FID Number	
Project Blytheville Sewer - Bioassay			Project Number 062112 W-P		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	6/22/12 7:30 AM	1	HNO3 - Nitric Acid	C	Aqueous	hardness		
C1-Outfall 001	Plastic - Pint	6/22/12 7:30 AM	1	NONE	C	Aqueous	Alkalinity		
C1-Outfall 001	Plastic - Gallon	6/22/12 7:30 AM	2	NONE	C	Aqueous	chronic CD/FH		
C2-Outfall 001	Plastic - Pint	6/22/12 7:30 AM	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 LABS		Blank / Cooler Temperature		Remarks	
Relinquished By (sign) Roger Cross		Date / Time 6/22/12 9:31		Received By (sign) F. Langner		Date / Time 6/22/12 10:15	
Relinquished By (sign)		Date / Time		Received By (sign)		Date / Time	
Relinquished By (sign) F. Langner		Date / Time 6/22/12 11:30		Received by Lab (sign) F. Langner		Date / Time 6/22/12 11:30	

Blytheville Wastewater Dept.
P.O. Box 1784
Blytheville, AR 72316



**RETURN RECEIPT
REQUESTED**

ADEQ
WATER DIVISION / ENFORCEMENT
5301 Northshore Drive
N. Little Rock, AR 72118-5317

