

Marion Water Department

MAYOR
FRANK A FOGLEMAN

WATER UTILITIES MANAGER
JIM SHERPERT

31 MILITARY ROAD
P.O. BOX 814
MARION, ARKANSAS 72364
PHONE: 870-739-3073
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WATER & SEWER COMMITTEE

JIM SPENCE, CHAIRMAN
KELLY O'NEAL
CLIFF WOOD

July 17, 2013

Arkansas Department of Environmental Quality
NPDES Enforcement Section
Little Rock, Arkansas 72118-5317

June, 2013 Non-Compliance Letter:

We are out of compliance with Ammonia Nitrogen again this month. Our numbers have improved this month just missing our parameter limits. We continue to work to meet our permitted limits with TSS making our permit.

Jim Shempert

Water Utilities Manager



ENVIRONMENTAL TESTING & CONSULTING, INC.

www.etcmemphis.com

2790 Whitten Road

Memphis, Tennessee 38133

(901) 213-2400

Fax (901) 213-2440

"A Laboratory Management Partner"

02608

City of Marion Water Department
 Mr. Jim Shempert
 PO Box 814
 Marion, AR 72364

Project ID : Weekly
 Project Weekly
 Information :

Report Date : 4/9/2013

Report Number : 13-093-0255

REPORT OF ANALYSIS

Received : 4/3/2013

Lab No : 89980
 Sample ID : Effluent Grab

Matrix: Aqueous
 Sampled: 4/3/2013 9:30

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Nitrate (NO3-N)	2.04	mg/L	0.100	1	04/03/13 13:37	ACS	EPA-300.0
Nitrite (NO2-N)	0.253	mg/L	0.100	1	04/03/13 13:37	ACS	EPA-300.0
Nitrate+Nitrite-N	2.29	mg/L	0.100	1	04/03/13 13:37		EPA-300.0
Total Phosphorus	2.93	mg/L	0.250	1	04/09/13 08:35	TKM	4500-PE
Fecal Coliform	120	cfu/100mL	10	1	04/03/13 14:40	LSK	9222-D

Lab No : 89981
 Sample ID : Effluent Composite

Matrix: Aqueous
 Sampled: 4/3/2013 8:40

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Ammonia Nitrogen	7.33	mg/L	0.666	1	04/08/13 12:57	EWB	4500-NH3D
Carbonaceous BOD - 5 day	15	mg/L	5	1	04/03/13 12:30	TKM	5210-CBOD
Total Suspended Solids	40	mg/L	2	1	04/04/13 15:10	KAT	2540D

Qualifiers/
 Definitions

*

Outside QC limit

DF

Dilution Factor



ENVIRONMENTAL TESTING & CONSULTING, INC.

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

July 08, 2013

Mr. Jim Shempert,
City of Marion Water Department
P.O. Box 814
Marion, AR 72364

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/NOEL = 88% Permit Limit: 88%

Report #: 13-162-0191 MARION AR0021971

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

Respectfully,

A handwritten signature in cursive script, appearing to read 'Connie Cook', is written above a horizontal line.

Connie Cook, Lab Supervisor

Enclosure(s)

CETIS Test Evaluation Report

Report Date: 08 Jul-13 10:32 (2 of 2)
 Test Code: CD 13-162-0191 | 05-2264-7484

6d Survival Rate Summary											
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%
28		10	1	1	1	1	1	0	0	0.0%	0.0%
37		10	1	1	1	1	1	0	0	0.0%	0.0%
50		10	1	1	1	1	1	0	0	0.0%	0.0%
66		10	1	1	1	1	1	0	0	0.0%	0.0%
88		10	1	1	1	1	1	0	0	0.0%	0.0%

Reproduction Summary											
C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Lab Water	10	17.6	16.34	18.86	12	22	1.067	3.373	19.17%	0.0%
28		10	17.5	16.44	18.56	11	21	0.8975	2.838	16.22%	0.57%
37		10	16.1	14.6	17.6	9	21	1.269	4.012	24.92%	8.52%
50		10	17.5	16.4	18.6	13	23	0.9339	2.953	16.88%	0.57%
66		10	17.2	15.98	18.42	9	21	1.031	3.259	18.95%	2.27%
88		10	15.9	14.54	17.26	9	20	1.149	3.635	22.86%	9.66%

CETIS Summary Report

Report Date: 08 Jul-13 10:32 (p 1 of 2)
 Test Code: CD 13-162-0191 | 05-2264-7484

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

Batch ID: 00-2185-8674	Test Type: Reproduction-Survival (7d)	Analyst: Ava Davis
Start Date: 11 Jun-13 14:35	Protocol: EPA/821/R-02-013 (2002)	Diluent: Perrier Water
Ending Date: 17 Jun-13 14:10	Species: Ceriodaphnia dubia	Brine: Not Applicable
Duration: 6d	Source: In-House Culture	Age: < 24

Sample ID: 17-1217-1632	Code: 13-162-0191	Client: City of Marion Water Department
Sample Date: 11 Jun-13 07:30	Material: POTW Effluent	Project: WET Quarterly Compliance Test (2Q)
Receive Date: 11 Jun-13 12:45	Source: MARION (AR0021971)	
Sample Age: 7h (1 °C)	Station:	

Sample Renewals					
Renewal	Sample Code	Sample Date	Receive Date	Renewal Date	Temp °C
1	13-162-0191	12 Jun-13 08:20	12 Jun-13 12:00	13 Jun-13 00:00	1
2	13-162-0191	14 Jun-13 09:00	14 Jun-13 13:00	15 Jun-13 00:00	1

Comparison Summary							
Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
12-6619-7477	6d Survival Rate	88	>88	NA	NA	1.136	Fisher Exact/Bonferroni-Holm Test
10-9126-2986	Reproduction	88	>88	NA	19.6%	1.136	Steel Many-One Rank Sum Test

Test Acceptability						
Analysis ID	Endpoint	Attribute	Test Stat	TAC Limits	Overlap	Decision
12-6619-7477	6d Survival Rate	Control CV	0	NL - 0.4	Yes	Passes Acceptability Criteria
10-9126-2986	Reproduction	Control CV	0.1917	NL - 0.4	Yes	Passes Acceptability Criteria
12-6619-7477	6d Survival Rate	Control Resp	1	0.8 - NL	Yes	Passes Acceptability Criteria
10-9126-2986	Reproduction	Control Resp	17.6	15 - NL	Yes	Passes Acceptability Criteria
10-9126-2986	Reproduction	PMSD	0.196	0.13 - 0.47	Yes	Passes Acceptability Criteria

6d Survival Rate Summary											
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%
28		10	1	1	1	1	1	0	0	0.0%	0.0%
37		10	1	1	1	1	1	0	0	0.0%	0.0%
50		10	1	1	1	1	1	0	0	0.0%	0.0%
66		10	1	1	1	1	1	0	0	0.0%	0.0%
88		10	1	1	1	1	1	0	0	0.0%	0.0%

Reproduction Summary											
C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Lab Water	10	17.6	15.19	20.01	12	22	1.067	3.373	19.17%	0.0%
28		10	17.5	15.47	19.53	11	21	0.8975	2.838	16.22%	0.57%
37		10	16.1	13.23	18.97	9	21	1.269	4.012	24.92%	8.52%
50		10	17.5	15.39	19.61	13	23	0.9339	2.953	16.88%	0.57%
66		10	17.2	14.87	19.53	9	21	1.031	3.259	18.95%	2.27%
88		10	15.9	13.3	18.5	9	20	1.149	3.635	22.86%	9.66%

CETIS Measurement Report

Report Date: 08 Jul-13 10:32 (p 1 of 8)
Test Code: CD 13-162-0191 | 05-2264-7484

Ceriodaphnia 7-d Survival and Reproduction Test

Environmental Testing and Consulting, Inc.

Sample ID: 17-1217-1632	Code: 13-162-0191	Client: City of Marion Water Department
Sample Date: 11 Jun-13 07:30	Material: POTW Effluent	Project: WET Quarterly Compliance Test (2Q)
Receive Date: 11 Jun-13 12:45	Source: MARION (AR0021971)	
Sample Age: 7h (1 °C)	Station:	

CETIS Measurement Report

Report Date: 08 Jul-13 10:32 (p 2 of 8)
 Test Code: CD 13-162-0191 | 05-2264-7484

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	63				
0	Lab Water	2	63				
0	Lab Water	3	61				
0	Lab Water	4	59				
0	Lab Water	5	62				
0	Lab Water	6	63				
0	Lab Water	7	61				

Total Residual Chlorine-mg/L							
C-%	Control Type	Reading Time	Measure	QA	Diff-%	Inst ID	Analyst Notes
0	Lab Water	1	0				
88			0				
0	Lab Water	2	0				
88			0				
0	Lab Water	3	0				
88			0				
0	Lab Water	4	0				
88			0				
0	Lab Water	5	0				
88			0				
0	Lab Water	6	0				
88			0				
0	Lab Water	7	0				
88			0				

Conductivity-µS/cm							
C-%	Control Type	Reading Time	Measure	QA	Diff-%	Inst ID	Analyst Notes
0	Lab Water	1	178				
88			321				
0	Lab Water	2	177				
88			333				
0	Lab Water	3	181				
88			344				
0	Lab Water	4	178				
88			340				
0	Lab Water	5	174				
88			359				
0	Lab Water	6	178				
88			372				
0	Lab Water	7	174				
88			352				

CETIS Measurement Report

Report Date: 08 Jul-13 10:32 (p 3 of 8)
 Test Code: CD 13-162-0191 | 05-2264-7484

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	8.3				
28			8.4				
37			8.4				
50			8.4				
66			8.3				
88			8.2				
0			Lab Water	2	8.1		
28	8.1						
37	8						
50	8.3						
66	8.2						
88	8.2						
0	Lab Water	3			8.2		
28			8.2				
37			8.1				
50			8.2				
66			8.1				
88			8				
0			Lab Water	4	8.3		
28	8.3						
37	8.3						
50	8.1						
66	8.4						
88	8.1						
0	Lab Water	5			8.1		
28			8.1				
37			8.1				
50			8.3				
66			8.1				
88			8.1				
0			Lab Water	6	8		
28	8						
37	8						
50	8						
66	8						
88	8						

CETIS Measurement Report

Report Date: 08 Jul-13 10:32 (p 4 of 8)
 Test Code: CD 13-162-0191 | 05-2264-7484

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	8.9				
28			9.1				
37			9.1				
50			9.2				
66			9.1				
88			9.1				
0	Lab Water	2	9.2				
28			9				
37			9				
50			9				
66			9.1				
88			9.1				
0	Lab Water	3	9.2				
28			9.2				
37			9.2				
50			9.1				
66			9				
88			9				
0	Lab Water	4	9.4				
28			9.2				
37			9.2				
50			9.2				
66			9				
88			9				
0	Lab Water	5	9.5				
28			9.2				
37			9.2				
50			9.2				
66			9				
88			9				
0	Lab Water	6	9.3				
28			9.1				
37			9.1				
50			9.1				
66			9				
88			9				
0	Lab Water	7	9.6				
28			9.6				
37			9.7				
50			9.7				
66			9.6				
88			9.6				
Hardness (CaCO3)-mg/L							
C-%	Control Type	Reading Time	Measure	QA	Diff-%	Inst ID	Analyst Notes
0	Lab Water	1	93				
0	Lab Water	2	93				
0	Lab Water	3	91				
0	Lab Water	4	93				
0	Lab Water	5	89				
0	Lab Water	6	91				
0	Lab Water	7	90				

CETIS Measurement Report

Report Date: 08 Jul-13 10:32 (p 5 of 8)
 Test Code: CD 13-162-0191 | 05-2264-7484

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	7.8				
28			7.9				
37			7.8				
50			7.6				
66			7.9				
88			7.8				
0			Lab Water	2	7.5		
28	7.5						
37	7.9						
50	7.9						
66	7.8						
88	7.9						
0	Lab Water	3			7.6		
28			7.9				
37			7.8				
50			7.6				
66			7.6				
88			7.9				
0			Lab Water	4	7.5		
28	7.5						
37	7.6						
50	7.6						
66	7.9						
88	7.9						
0	Lab Water	5			7.5		
28			7.7				
37			7.7				
50			7.9				
66			7.7				
88			7.6				
0			Lab Water	6	7.6		
28	7.6						
37	7.5						
50	7.9						
66	7.9						
88	7.8						

CETIS Measurement Report

Report Date: 08 Jul-13 10:32 (p 6 of 8)
 Test Code: CD 13-162-0191 | 05-2264-7484

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	8.2				
28			7.9				
37			7.9				
50			7.8				
66			7.8				
88			7.8				
0			Lab Water	2	7.4		
28	7.4						
37	7.4						
50	7.5						
66	7.5						
88	7.6						
0	Lab Water	3			8.1		
28			8				
37			7.9				
50			7.9				
66			7.9				
88			7.9				
0			Lab Water	4	7.3		
28	7.3						
37	7.4						
50	7.4						
66	7.5						
88	7.5						
0	Lab Water	5			7.4		
28			7.2				
37			7.4				
50			7.4				
66			7.5				
88			7.6				
0			Lab Water	6	8.5		
28	8.4						
37	8.4						
50	8.3						
66	8.3						
88	8.1						
0	Lab Water	7			9.3		
28			9.3				
37			9.3				
50			9.3				
66			9.3				
88			9.3				

CETIS Measurement Report

Report Date: 08 Jul-13 10:32 (p 7 of 8)
 Test Code: CD 13-162-0191 | 05-2264-7484

Ceriodaphnia 7-d Survival and Reproduction 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				
28			23				
37			23				
50			23				
66			23				
88			23				
0			Lab Water	2	23		
28	23						
37	23						
50	23						
66	23						
88	23						
0	Lab Water	3			23		
28			23				
37			23				
50			23				
66			23				
88			23				
0			Lab Water	4	23		
28	23						
37	23						
50	23						
66	23						
88	23						
0	Lab Water	5			23		
28			23				
37			23				
50			23				
66			23				
88			23				
0			Lab Water	6	23		
28	23						
37	23						
50	23						
66	23						
88	23						

CETIS Measurement Report

Report Date: 08 Jul-13 10:32 (p 8 of 8)
 Test Code: CD 13-162-0191 | 05-2264-7484

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				
28			23				
37			23				
50			23				
66			23				
88			23				
0			Lab Water	2	23		
28	23						
37	23						
50	23						
66	23						
88	23						
0	Lab Water	3			23		
28			23				
37			23				
50			23				
66			23				
88			23				
0			Lab Water	4	23		
28	23						
37	23						
50	23						
66	23						
88	23						
0	Lab Water	5			23		
28			23				
37			23				
50			23				
66			23				
88			23				
0			Lab Water	6	23		
28	23						
37	23						
50	23						
66	23						
88	23						
0	Lab Water	7			23		
28			23				
37			23				
50			23				
66			23				
88			23				

CETIS Test Evaluation Report

Report Date: 08 Jul-13 10:33 (1 of 2)
 Test Code: FH 13-162-0191 | 20-4165-5110

Facility: MARION Sample Site: Sample Code: 13-162-0191 Sample Date: 11 Jun-13 07:30 Sample Age: 7h (1 °C) Project: WET Quarterly Compliance Test (2Q)	Test Name: Fathead Minnow 7-d Larval Survival and Growth Test Organism: Pimephales promelas (Fathead Minnow) Protocol: EPA/821/R-02-013 (2002) Start Date: 11 Jun-13 14:15 End Date: 18 Jun-13 16:00 Duration: 7d 2h Organism Age: < 24
Permittee: City of Marion Water Department Address: P.O. Box 814 Marion, AR 72364 Contact: Mr. Jim Shempert Phone: 870-739-5413 Email:	Laboratory: Environmental Testing and Consulting, Inc. Address: 2790 Whitten Road Memphis, TN 38133 Contact: Connie Cook, Lab Supervisor Phone: 901-213-2454 Email: ccook@etcmemphis.com

Chronic Toxicity Evaluation					
Endpoint	Parameter	C-%	IWC	Pass/Fail	Method
7d Survival Rate	NOEL/LOEL	88/>88	87.99	Pass	Dunnett Multiple Comparison Test
Mean Dry Weight-mg	NOEL/LOEL	88/>88	87.99	Pass	Dunnett Multiple Comparison Test

Test Acceptability Criteria				
Endpoint	Attribute	Test Stat	Limits	Pass/Fail
7d Survival Rate	Control CV	0.175	N/A - 0.4	Pass
7d Survival Rate	Control Resp	0.875	0.8 - N/A	Pass
Mean Dry Weight-mg	Control CV	0.1391	N/A - 0.4	Pass
Mean Dry Weight-mg	Control Resp	0.2725	0.25 - N/A	Pass

CETIS Test Evaluation Report

Report Date: 08 Jul-13 10:33 (2 of 2)
 Test Code: FH 13-162-0191 | 20-4165-5110

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	0.875	0.8178	0.9322	0.625	1	0.06847	0.1531	17.5%	0.0%
28		5	0.925	0.8994	0.9506	0.875	1	0.03062	0.06847	7.4%	-5.71%
37		5	0.925	0.8994	0.9506	0.875	1	0.03062	0.06847	7.4%	-5.71%
50		5	0.925	0.8994	0.9506	0.875	1	0.03062	0.06847	7.4%	-5.71%
66		5	0.95	0.9244	0.9756	0.875	1	0.03062	0.06847	7.21%	-8.57%
88		5	0.875	0.842	0.908	0.75	1	0.03953	0.08839	10.1%	0.0%

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	0.2725	0.2583	0.2867	0.2125	0.3125	0.01696	0.03791	13.91%	0.0%
28		5	0.3075	0.2833	0.3317	0.225	0.4	0.02894	0.06471	21.04%	-12.84%
37		5	0.3125	0.2906	0.3344	0.225	0.375	0.02622	0.05863	18.76%	-14.68%
50		5	0.28	0.2598	0.3002	0.225	0.35	0.02424	0.0542	19.36%	-2.75%
66		5	0.26	0.2424	0.2776	0.2125	0.3375	0.02107	0.0471	18.12%	4.59%
88		5	0.265	0.2425	0.2875	0.2	0.35	0.02693	0.06021	22.72%	2.75%

CETIS Summary Report

Report Date: 08 Jul-13 10:33 (p 1 of 2)
 Test Code: FH 13-162-0191 | 20-4165-5110

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

Batch ID: 17-3291-1012	Test Type: Growth-Survival (7d)	Analyst: Ava Davis
Start Date: 11 Jun-13 14:15	Protocol: EPA/821/R-02-013 (2002)	Diluent: Perrier Water
Ending Date: 18 Jun-13 16:00	Species: Pimephales promelas	Brine: Not Applicable
Duration: 7d 2h	Source: Aquatox, AR	Age: < 24

Sample ID: 17-1217-1632	Code: 13-162-0191	Client: City of Marion Water Department
Sample Date: 11 Jun-13 07:30	Material: POTW Effluent	Project: WET Quarterly Compliance Test (2Q)
Receive Date: 11 Jun-13 12:45	Source: MARION (AR0021971)	
Sample Age: 7h (1 °C)	Station:	

Sample Renewals					
Renewal	Sample Code	Sample Date	Receive Date	Renewal Date	Temp °C
1	13-162-0191	12 Jun-13 08:00	12 Jun-13 12:00	13 Jun-13 00:00	1
2	13-162-0191	14 Jun-13 09:00	14 Jun-13 13:00	15 Jun-13 00:00	1

Comparison Summary							
Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
08-0959-3165	7d Survival Rate	88	>88	NA	15.4%	1.136	Dunnett Multiple Comparison Test
21-2988-9860	Mean Dry Weight-mg	88	>88	NA	29.9%	1.136	Dunnett Multiple Comparison Test

Test Acceptability						
Analysis ID	Endpoint	Attribute	Test Stat	TAC Limits	Overlap	Decision
08-0959-3165	7d Survival Rate	Control CV	0.175	NL - 0.4	Yes	Passes Acceptability Criteria
21-2988-9860	Mean Dry Weight-mg	Control CV	0.1391	NL - 0.4	Yes	Passes Acceptability Criteria
08-0959-3165	7d Survival Rate	Control Resp	0.875	0.8 - NL	Yes	Passes Acceptability Criteria
21-2988-9860	Mean Dry Weight-mg	Control Resp	0.2725	0.25 - 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	0.875	0.6849	1	0.625	1	0.06847	0.1531	17.5%	0.0%
28		5	0.925	0.84	1	0.875	1	0.03062	0.06847	7.4%	-5.71%
37		5	0.925	0.84	1	0.875	1	0.03062	0.06847	7.4%	-5.71%
50		5	0.925	0.84	1	0.875	1	0.03062	0.06847	7.4%	-5.71%
66		5	0.95	0.865	1	0.875	1	0.03062	0.06847	7.21%	-8.57%
88		5	0.875	0.7653	0.9847	0.75	1	0.03953	0.08839	10.1%	0.0%

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	0.2725	0.2254	0.3196	0.2125	0.3125	0.01696	0.03791	13.91%	0.0%
28		5	0.3075	0.2272	0.3878	0.225	0.4	0.02894	0.06471	21.04%	-12.84%
37		5	0.3125	0.2397	0.3853	0.225	0.375	0.02622	0.05863	18.76%	-14.68%
50		5	0.28	0.2127	0.3473	0.225	0.35	0.02424	0.0542	19.36%	-2.75%
66		5	0.26	0.2015	0.3185	0.2125	0.3375	0.02107	0.0471	18.12%	4.59%
88		5	0.265	0.1902	0.3398	0.2	0.35	0.02693	0.06021	22.72%	2.75%

CETIS Summary Report

Report Date: 08 Jul-13 10:33 (p 2 of 2)
 Test Code: FH.13-162-0191 | 20-4165-5110

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	0.875	0.625	1	0.875	1
28		0.875	0.875	1	1	0.875
37		1	0.875	0.875	1	0.875
50		0.875	1	0.875	1	0.875
66		0.875	0.875	1	1	1
88		0.875	0.875	0.875	0.75	1
Mean Dry Weight-mg Detail						
C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	Lab Water	0.2625	0.2125	0.2875	0.2875	0.3125
28		0.225	0.325	0.4	0.3125	0.275
37		0.2875	0.225	0.375	0.35	0.325
50		0.25	0.25	0.225	0.325	0.35
66		0.2375	0.2125	0.2625	0.3375	0.25
88		0.35	0.25	0.2	0.225	0.3

CETIS Measurement Report

Report Date: 08 Jul-13 10:33 (p 1 of 8)
Test Code: FH 13-162-0191 | 20-4165-5110

Fathead Minnow 7-d Larval Survival and Growth Test		Environmental Testing and Consulting, Inc.	
Sample ID: 17-1217-1632	Code: 13-162-0191	Client: City of Marion Water Department	
Sample Date: 11 Jun-13 07:30	Material: POTW Effluent	Project: WET Quarterly Compliance Test (2Q)	
Receive Date: 11 Jun-13 12:45	Source: MARION (AR0021971)		
Sample Age: 7h (1 °C)	Station:		

CETIS Measurement Report

Report Date: 08 Jul-13 10:33 (p 2 of 8)
 Test Code: FH 13-162-0191 | 20-4165-5110

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	63				
0	Lab Water	2	63				
0	Lab Water	3	61				
0	Lab Water	4	59				
0	Lab Water	5	62				
0	Lab Water	6	63				
0	Lab Water	7	61				
Total Residual Chlorine-mg/L							
C-%	Control Type	Reading Time	Measure	QA	Diff-%	Inst ID	Analyst Notes
0	Lab Water	1	0				
88			0				
0	Lab Water	2	0				
88			0				
0	Lab Water	3	0				
88			0				
0	Lab Water	4	0				
88			0				
0	Lab Water	5	0				
88			0				
0	Lab Water	6	0				
88			0				
0	Lab Water	7	0				
88			0				
Conductivity-µS/cm							
C-%	Control Type	Reading Time	Measure	QA	Diff-%	Inst ID	Analyst Notes
0	Lab Water	1	178				
88			321				
0	Lab Water	2	177				
88			333				
0	Lab Water	3	181				
88			344				
0	Lab Water	4	178				
88			340				
0	Lab Water	5	174				
88			359				
0	Lab Water	6	178				
88			372				
0	Lab Water	7	174				
88			352				

CETIS Measurement Report

Report Date: 08 Jul-13 10:33 (p 3 of 8)
 Test Code: FH 13-162-0191 | 20-4165-5110

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	9.2				
28			9.2				
37			9.2				
50			9.1				
66			9.1				
88			9.1				
0			Lab Water	2	9.3		
28	9.3						
37	9.3						
50	9.2						
66	9.2						
88	9.2						
0	Lab Water	3			9.7		
28			9.7				
37			9.7				
50			9.8				
66			9.7				
88			9.5				
0			Lab Water	4	9.2		
28	9.3						
37	9.3						
50	9.2						
66	9.1						
88	9.1						
0	Lab Water	5			9.4		
28			9.5				
37			9.5				
50			9.4				
66			9.4				
88			9.3				
0			Lab Water	6	9.6		
28	9.6						
37	9.6						
50	9.8						
66	9.7						
88	9.6						
0	Lab Water	7			7		
28			7				
37			7				
50			7				
66			7				
88			7				

CETIS Measurement Report

Report Date: 08 Jul-13 10:33 (p 4 of 8)
 Test Code: FH 13-162-0191 | 20-4165-5110

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	8.9				
28			9.1				
37			9.1				
50			9.2				
66			9.1				
88			9.1				
0	Lab Water	2	9.2				
28			9				
37			9				
50			9				
66			9.1				
88			9.1				
0	Lab Water	3	9.2				
28			9.2				
37			9.2				
50			9.1				
66			9				
88			9				
0	Lab Water	4	9.4				
28			9.2				
37			9.2				
50			9.2				
66			9				
88			9				
0	Lab Water	5	9.5				
28			9.2				
37			9.2				
50			9.2				
66			9				
88			9				
0	Lab Water	6	9.3				
28			9.1				
37			9.1				
50			9.1				
66			9				
88			9				
0	Lab Water	7	9.6				
28			9.6				
37			9.7				
50			9.7				
66			9.6				
88			9.6				
Hardness (CaCO3)-mg/L							
C-%	Control Type	Reading Time	Measure	QA	Diff-%	Inst ID	Analyst Notes
0	Lab Water	1	93				
0	Lab Water	2	93				
0	Lab Water	3	91				
0	Lab Water	4	93				
0	Lab Water	5	89				
0	Lab Water	6	91				
0	Lab Water	7	90				

CETIS Measurement Report

Report Date: 08 Jul-13 10:33 (p 5 of 8)
 Test Code: FH 13-162-0191 | 20-4165-5110

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	7.7				
28			7.7				
37			7.7				
50			7.7				
66			7.8				
88			7.8				
0	Lab Water	2	7.8				
28			7.8				
37			7.8				
50			7.8				
66			7.7				
88			7.7				
0	Lab Water	3	7.6				
28			7.6				
37			7.6				
50			7.6				
66			7.8				
88			7.8				
0	Lab Water	4	7.8				
28			7.8				
37			7.8				
50			7.8				
66			7.9				
88			7.9				
0	Lab Water	5	8.7				
28			8.4				
37			8.4				
50			8.4				
66			8.4				
88			8.4				
0	Lab Water	6	8.3				
28			9.3				
37			9.3				
50			9.3				
66			9.3				
88			9.3				
0	Lab Water	7	8.6				
28			8.4				
37			8.3				
50			8.3				
66			8.2				
88			8.2				

CETIS Measurement Report

Report Date: 08 Jul-13 10:33 (p 6 of 8)
 Test Code: FH 13-162-0191 | 20-4165-5110

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	8.2				
28			7.9				
37			7.9				
50			7.8				
66			7.8				
88			7.8				
0			Lab Water	2	7.4		
28	7.4						
37	7.4						
50	7.5						
66	7.5						
88	7.6						
0	Lab Water	3			8.1		
28			8				
37			7.9				
50			7.9				
66			7.9				
88			7.9				
0			Lab Water	4	7.3		
28	7.3						
37	7.4						
50	7.4						
66	7.5						
88	7.5						
0	Lab Water	5			7.4		
28			7.2				
37			7.4				
50			7.4				
66			7.5				
88			7.6				
0			Lab Water	6	8.5		
28	8.4						
37	8.4						
50	8.3						
66	8.3						
88	8.1						
0	Lab Water	7			9.3		
28			9.3				
37			9.3				
50			9.3				
66			9.3				
88			9.3				

CETIS Measurement Report

Report Date: 08 Jul-13 10:33 (p 8 of 8)
 Test Code: FH 13-162-0191 | 20-4165-5110

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					
28			23					
37			23					
50			23					
66			23					
88			23					
0			Lab Water	2	23			
28	23							
37	23							
50	23							
66	23							
88	23							
0	Lab Water	3			23			
28			23					
37			23					
50			23					
66			23					
88			23					
0			Lab Water	4	23			
28	23							
37	23							
50	23							
66	23							
88	23							
0	Lab Water	5			23			
28			23					
37			23					
50			23					
66			23					
88			23					
0			Lab Water	6	23			
28	23							
37	23							
50	23							
66	23							
88	23							
0	Lab Water	7			23			
28			23					
37			23					
50			23					
66			23					
88			23					

NAME: Marion Wastewater
 ADDRESS:

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
 DISCHARGE MONITORING REPORT (DMR)

PERMIT NUMBER	DISCHARGE NUMBER

FACILITY:
 LOCATION:
 ATTN:

MONITORING PERIOD						
YEAR	MONTH	DAY	TO	YEAR	MONTH	DAY

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION			NO EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM			
P/F STATRE 7DAY CHR CERIODAPHNIA TGP3B 1 0 0 EFFLUENT GROSS VALUE	SAMPLE MEASUREMENT	*****	*****	*****	*****	0	*****	(9A)		
	PERMIT REQUIREMENT							PASS=0 FAIL=1		
P/F STATRE 7DAY CHR PIMEPHALES PROMELAS TGP6C 1 0 0 EFFLUENT GROSS VALUE	SAMPLE MEASUREMENT	*****	*****	*****	*****	0	*****	(9A)		
	PERMIT REQUIREMENT							PASS=0 FAIL=1		
LF P/F LETH STATRE 7-DAY CHR CERIODAPHNIA TLP3B 1 0 0 EFFLUENT GROSS VALUE	SAMPLE MEASUREMENT	*****	*****	*****	*****	0	*****	(9A)		
	PERMIT REQUIREMENT							PASS=0 FAIL=1		
LF P/F LETH STATRE 7-DAY CHR PIMEPHALES TLP6C 1 0 0 EFFLUENT GROSS VALUE	SAMPLE MEASUREMENT	*****	*****	*****	*****	0	*****	(9A)		
	PERMIT REQUIREMENT							PASS=0 FAIL=1		
NOEL LETHAL STATRE 7-DAY CHR CERIODAPHNIA TOP3B 1 0 0 EFFLUENT GROSS VALUE	SAMPLE MEASUREMENT	*****	*****	*****	*****	88	*****	(23)		
	PERMIT REQUIREMENT							PER-CENT		
NOEL LETHAL STATRE 7-DAY CHR PIMEPHALES TOP6C 1 0 0 EFFLUENT GROSS VALUE	SAMPLE MEASUREMENT	*****	*****	*****	*****	88	*****	(23)		
	PERMIT REQUIREMENT							PER-CENT		

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

NAME: Marion Wastewater
ADDRESS:

PERMIT NUMBER: 0
DISCHARGE NUMBER: 0

MONITORING PERIOD
YEAR: 0 MONTH: 0 DAY: 0
TO: 0 YEAR: 0 MONTH: 0 DAY: 0

FACILITY:
LOCATION:
ATTN:

PARAMETER	SAMPLE MEASUREMENT PERMIT REQUIREMENT	QUANTITY OR LOADING		QUALITY OR CONCENTRATION		NO EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM			
NOEL SUB-LTH STATRE 7DAY CHR CERIODAPHNIA TPP3B 1 0 0 EFFLUENT GROSS VALUE		*****	*****	*****	*****	88	(23)	
NOEL SUB-LTH STATRE 7DAY CHR PIMEPHALES TPP6C 1 0 0 EFFLUENT GROSS VALUE		*****	*****	*****	*****	88	(23)	

COEF OF VAR STATRE 7DAY CHR CERIODAPHNIA TQP3B 1 0 0 EFFLUENT GROSS VALUE		*****	*****	*****	*****	22.9	(23)	
--	--	-------	-------	-------	-------	------	------	--

COEF OF VAR STATRE 7DAY CHR PIMEPHALES TQP6C 1 0 0 EFFLUENT GROSS VALUE		*****	*****	*****	*****	22.72	(23)	
--	--	-------	-------	-------	-------	-------	------	--

WHOLE EFFLUENT TOXICITY 22414 S 0 0		*****	*****	88	*****	*****	(23)	
---	--	-------	-------	----	-------	-------	------	--

WHOLE EFFLUENT TOXICITY 22414 1 0 0 EFFLUENT GROSS VALUE		*****	*****	88	*****	*****	(23)	
---	--	-------	-------	----	-------	-------	------	--



ENVIRONMENTAL TESTING & CONSULTING, INC.

www.etcmemphis.com

2790 Whitten Road

Memphis, Tennessee 38133

(901) 213-2400

Fax (901) 213-2440

"A Laboratory Management Partner"

02608

City of Marion Water Department
Mr. Jim Shempert
PO Box 814
Marion, AR 72364

Project Bioassay
Information :

Report Date : 7/8/2013

Report Number : 13-162-0191

REPORT OF ANALYSIS

Received : 6/11/2013

Lab No : 92395

Matrix: Aqueous

Sample ID : Outfall 001

Sampled: 6/11/2013 7:30

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Alkalinity (as CaCO3)	129	mg/L	1	1	06/24/13 10:25	EWB	2320B
Total Calcium	21.5	mg/L	0.100	1	06/21/13 01:28	BKN	EPA-200.7
Hardness as CaCO3(SM-2340B)	78.6	mg/L	0.100	1	06/21/13 01:28		EPA-200.7
Total Magnesium	6.04	mg/L	0.100	1	06/21/13 01:28	BKN	EPA-200.7

Lab No : 92641

Matrix: Aqueous

Sample ID : Outfall 001

Sampled: 6/12/2013 8:00

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Alkalinity (as CaCO3)	128	mg/L	1	1	06/24/13 10:25	EWB	2320B
Total Calcium	22.1	mg/L	0.100	1	06/21/13 01:35	BKN	EPA-200.7
Hardness as CaCO3(SM-2340B)	81.0	mg/L	0.100	1	06/21/13 01:35		EPA-200.7
Total Magnesium	6.26	mg/L	0.100	1	06/21/13 01:35	BKN	EPA-200.7

Lab No : 93250

Matrix: Aqueous

Sample ID : Outfall 001

Sampled: 6/14/2013 9:00

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Alkalinity (as CaCO3)	135	mg/L	1	1	06/24/13 10:25	EWB	2320B
Total Calcium	22.2	mg/L	0.100	1	06/21/13 01:56	BKN	EPA-200.7
Hardness as CaCO3(SM-2340B)	81.1	mg/L	0.100	1	06/21/13 01:56		EPA-200.7
Total Magnesium	6.23	mg/L	0.100	1	06/21/13 01:56	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: 2550 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



ENVIRONMENTAL TESTING & CONSULTING, INC.

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



13-162-0191
02608
06-11-2013
13:41:41

City of Marion Water Department
Bioassav

①

00002577

Company Name City of Marion Water Department				Customer Number 02608		Telephone (870) 739-5413		RUSH	ICE
Site Name 2nd qtr bio 2013			Project Comment qtrly bioassay					FID Number	
Project Marion - Bioassay			Project Number		PO Number				
Project Manager / Contact Mr. Jim Shempert					E-mail waterdept@marionarkansas.org				
Sample ID	Container Type	Collected Date / Time	# Cont	Preservative	Grab / Comp	Matrix	Analyses		
C1 - Outfall 001	Plastic - Pint	6/12/13 7:30AM	1	HNO3 - Nitric Acid	C	Aqueous	hardness		
C1 - Outfall 001	Plastic - Pint	6/11/13 7:30AM	1	NONE	C	Aqueous	Alkalinity		
C1 - Outfall 001	Plastic - Gallon	6/11/13 7:30AM	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		

Sampled By AP	Method of Shipment	Blank / Cooler Temperature 1°C	Remarks
Relinquished By (sign) Aron Brasey	Date / Time 6-11-13 1148	Received By (sign) L.J. Ruck	Date / Time 6-11-13 1148
Relinquished By (sign)	Date / Time	Received By (sign)	Date / Time
Relinquished By (sign) L.J. Ruck	Date / Time 6-11-13 1245	Received by Lab (sign) L.J. Ruck	Date / Time 6-11-13 1245



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



City of Marion Water Department
Bioassav / 6/11/13/6/12/13

13-162-0191
02608
06-11-2013
13:41:41

2

Company Name City of Marion Water Department				Customer Number 02608		Telephone (870) 739-5413		RUSH	ICE
Site Name 2nd qtr bio 2013			Project Comment qtrly bioassay					FID Number	
Project Marion - Bioassay			Project Number		PO Number				
Project Manager / Contact Mr. Jim Shempert				E-mail waterdept@marionarkansas.org					
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	6/12/13 8:00 AM	1	HNO3 - Nitric Acid	C	Aqueous	hardness		
C2-Outfall 001	Plastic - Pint	6/12/13 8:00 AM	1	NONE	C	Aqueous	alkalinity		
C2-Outfall 001	Plastic - Gallon	6/12/13 8:00 AM	2	NONE	C	Aqueous	chronic CD/FH		
C3-Outfall 001	Plastic - Pint		1	HNO3 - Nitric Acid	C	Aqueous	hardness		

Sampled By <i>AD</i>		Method of Shipment		Blank / Cooler Temperature 1°C		Remarks	
Relinquished By (sign) <i>Dean Shady</i>		Date / Time 6-12-13 1118		Received By (sign) <i>W. Ruck</i>		Date / Time 6-12-13 1118	
Relinquished By (sign)		Date / Time		Received By (sign)		Date / Time	
Relinquished By (sign) <i>W. Ruck</i>		Date / Time 6-12-13 1200		Received by Lab (sign) <i>W. Ruck</i>		Date / Time 6-12-13 1200	



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City of Marion Water Department
Bioassav / 6/11/13/6/12/13/6/14/13

13-162-0191
02608
06-11-2013
13:41:41

Company Name City of Marion Water Department		Customer Number 02608	Telephone (870) 739-5413	RUSH	ICE
Site Name 2nd qtr bio 2013		Project Comment qtrly bioassay			FID Number
Project Marion - Bioassay		Project Number	PO Number		
Project Manager / Contact Mr. Jim Shempert			E-mail waterdept@marionarkansas.org		

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	6/14/13 9:00 AM	1	HNO3 - Nitric Acid	C	Aqueous	hardness

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Sampled By <i>AP</i>	Method of Shipment	Blank / Cooler Temperature	Remarks
Relinquished By (sign) <i>Leon Buesch</i>	Date / Time 6-14-13 1210	Received By (sign) <i>[Signature]</i>	Date / Time 6-14-13 1210
Relinquished By (sign)	Date / Time	Received By (sign)	Date / Time
Relinquished By (sign) <i>[Signature]</i>	Date / Time 6-14-13 1300	Received by Lab (sign) <i>[Signature]</i>	Date / Time 6-14-13 1300



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City of Marion Water Department
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13-162-0191
02608
06-11-2013
13:41:41

(B)

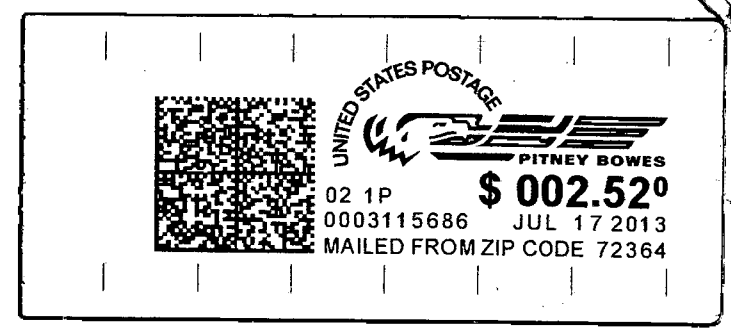
0000025779

Company Name City of Marion Water Department				Customer Number 02608		Telephone (870) 739-5413		RUSH	ICE
Site Name 2nd qtr bio 2013			Project Comment qtrly bioassay					FID Number	
Project Marion - Bioassay			Project Number		PO Number				
Project Manager / Contact Mr. Jim Shempert				E-mail waterdept@marionarkansas.org					
Sample ID	Container Type	Collected Date / Time	# Cont	Preservative	Grab / Comp	Matrix	Analyses		
C3-Outfall 001	Plastic - Pint	6/14/13 9:00AM	1	NONE	C	Aqueous	alkalinity		
C3-Outfall 001	Plastic - Gallon	6/14/13 9:00AM	3	NONE	C	Aqueous	Chronic CD/FH		

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Sampled By <i>AD</i>		Method of Shipment		Blank / Cooler Temperature		Remarks	
Relinquished By (sign) <i>Dean Presley</i>		Date / Time 6-14-13 12:10		Received By (sign) <i>[Signature]</i>		Date / Time 6-14-13 12:10	
Relinquished By (sign)		Date / Time		Received By (sign)		Date / Time	
Relinquished By (sign) <i>[Signature]</i>		Date / Time 6-14-13 13:00		Received by Lab (sign) <i>[Signature]</i>		Date / Time 6-14-13 13:00	

31 MILITARY RD
MARION, AR
72364



ADEQ
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LITTLE ROCK, ARKANSAS
72118-5317

