

# Marion Water Department

MAYOR  
FRANK A. FOGLEMAN

WATER UTILITIES MANAGER  
JIM SHERPERT

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MARION, ARKANSAS 72364  
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WATER & SEWER COMMITTEE

JIM SPENCE, CHAIRMAN  
KELLY O'NEAL  
CLIFF WOOD

July 9<sup>th</sup>, 2014

Arkansas Department of Environmental Quality  
5301 North Shore Drive  
North Little Rock, AR 72118-5317

Re: June 2014 Non-Compliance Letter

Marion has again received excessive rainfall approximately 10" for the month of June or more. The lagoon system is still not processing properly and removing the BOD and TSS due to the excessive water. The City has had Susan Poe with Arkansas Rural Water Association here on July 9<sup>th</sup> to follow up on a previous smoke test with a manhole inspection of the sections of the system that were receiving excess water through the pump stations. Susan worked with my field staff and they located some manhole issues letting excess groundwater into the system creating the problems during the heavy rainfall. We hope to see changes in the weather that will allow the lagoon to process properly.

Jim Shempert

  
Water Utilities Manager

# Sanitary Sewer Overflow Monthly Report

Facility Name: Marion, City of Permit Number: AR0021971 Reporting Period(Month/Year): JUNE 2014

No Sanitary Sewer Overflows This Monitoring Period

Cause(s) of SSO		Summary Report Code Descriptions		
		SSO Impact	Action(s) Taken	Ultimate Discharge Location
CO-Construction	D-Debris	NEAH-No Evidence of Adverse Health or Environmental Impact		CR-Creek/Stream/River (please specify)
E-Equipment Failure	G-Grease			
HC-Hydro Clean	LF-Line Failure/Break	OEHC-Observed or Evidence of Human Contact	EC-Environmental Cleanup	DI-Ditch
R-Rainfall	RG-Roots & Grease	EFK-Evidence of Fish Kill	HC-Hydro Cleaned	DR-Drop Inlet
RO-Roots	V-Vandalism		HR-Hand Rodded	GR-Ground Surface
			EN-Referred to Engineering	PA-Paved Area
			PN-Public Notification	CB-Contained in Building

Location	Manhole #	Start Date of SSO	End Date of SSO	Estimated Volume (in gallons)	Cause of SSO	Environmental Impact	Action (s) Taken to Address SSO	Ultimate Discharge Location
<u>300 W-LAKE</u>		<u>6/29/14</u>	<u>6/29/14</u>	<u>N/A</u>	<u>R-D</u>	<u>NEAH</u>	<u>CLEAN/DEBRIS EC</u>	<u>MISSISSIPPI RIVER</u>

  
 \_\_\_\_\_  
 Signature of Cognizant or Ranking Official

7/9/14  
 \_\_\_\_\_  
 Date

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."



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# ENVIRONMENTAL TESTING & CONSULTING, INC.

2790 Whitten Road

Memphis, Tennessee 38133

(901) 213-2400

Fax (901) 213-2440

"A Laboratory Management Partner"

5/16/2014

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

Ref: Analytical Testing  
ETC Report Number: 14-112-0190  
Client Project Description: Bioassay

Dear Mr. Jim Shempert:

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%

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

# CETIS Test Evaluation Report

Report Date: 16 May-14 11:04 (1 of 2)  
 Test Code: CD 14-112-0190 | 08-9350-7666

<b>Facility:</b> MARION <b>Sample Site:</b> <b>Sample Code:</b> 14-112-0190 <b>Sample Date:</b> 22 Apr-14 07:00 <b>Sample Age:</b> 10h (0.9 °C) <b>Project:</b> WET Biannual Compliance Test (1st)	<b>Test Name:</b> Ceriodaphnia 7-d Survival and Reproduction Test <b>Organism:</b> Ceriodaphnia dubia (Water Flea) <b>Protocol:</b> EPA/821/R-02-013 (2002) <b>Start Date:</b> 22 Apr-14 16:50 <b>End Date:</b> 28 Apr-14 14:30 <b>Duration:</b> 5d 22h <b>Organism Age:</b> < 24
<b>Permittee:</b> City of Marion Water Department <b>Address:</b> P.O. Box 814 Marion, AR 72364  <b>Contact:</b> Mr. Jim Shempert <b>Phone:</b> 870-739-5413 <b>Email:</b>	<b>Laboratory:</b> Environmental Testing and Consulting, Inc. <b>Address:</b> 2790 Whitten Road Memphis, TN 38133  <b>Contact:</b> Connie Cook, Lab Supervisor <b>Phone:</b> 901-213-2454 <b>Email:</b> ccook@etcmemphis.com

## Chronic Toxicity Evaluation

Endpoint	Parameter	C-%	IWC	Pass/Fail	Method
Reproduction	NOEL/LOEL	88/>88	87.99	Pass	Bonferroni Adj t Test

## Test Acceptability Criteria

Endpoint	Attribute	Test Stat	Limits	Pass/Fail
6d Survival Rate	Control CV	0	N/A - 0.4	Pass
6d Survival Rate	Control Resp	1	0.799 - N/A	Pass
Reproduction	Control CV	0.27	N/A - 0.4	Pass
Reproduction	Control Resp	16	15 - N/A	Pass

# CETIS Test Evaluation Report

Report Date: 16 May-14 11:04 (2 of 2)  
 Test Code: CD 14-112-0190 | 08-9350-7666

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		9	0.89	0.76	1	0	1	0.11	0.33	38.0%	11.0%
50		10	0.9	0.78	1	0	1	0.1	0.32	35.0%	10.0%
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	16	14	17	10	23	1.3	4.2	27.0%	0.0%
28		10	15	14	16	9	19	1	3.2	21.0%	5.1%
37		9	12	9.4	14	0	23	2.2	6.6	55.0%	25.0%
50		10	14	12	17	5	23	1.9	5.9	41.0%	8.9%
66		10	14	13	16	9	19	1.3	4.1	28.0%	8.9%
88		10	14	13	16	8	20	1.3	4	29.0%	10.0%

# CETIS Summary Report

Report Date: 16 May-14 11:04 (p 1 of 2)  
 Test Code: CD 14-112-0190 | 08-9350-7666

## Ceriodaphnia 7-d Survival and Reproduction Test

Environmental Testing and Consulting, Inc.

Batch ID: 09-8171-9255	Test Type: Reproduction-Survival (7d)	Analyst: Ava Davis
Start Date: 22 Apr-14 16:50	Protocol: EPA/821/R-02-013 (2002)	Diluent: Perrier Water
Ending Date: 28 Apr-14 14:30	Species: Ceriodaphnia dubia	Brine: Not Applicable
Duration: 5d 22h	Source: In-House Culture	Age: < 24

Sample ID: 05-7848-1676	Code: 14-112-0190	Client: City of Marion Water Department
Sample Date: 22 Apr-14 07:00	Material: POTW Effluent	Project: WET Biannual Compliance Test (1st)
Receive Date: 22 Apr-14 12:33	Source: MARION (AR0021971)	
Sample Age: 10h (0.9 °C)	Station:	

### Sample Renewals

Renewal	Sample Code	Sample Date	Receive Date	Renewal Date	Temp °C
1	14-112-0190	23 Apr-14 08:00	23 Apr-14 13:32	24 Apr-14 00:00	0.5
2	14-112-0190	25 Apr-14 07:00	25 Apr-14 12:35	26 Apr-14 00:00	0.6

### Comparison Summary

Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
06-2032-9219	6d Survival Rate	88	>88	NA	NA	1.136	Fisher Exact/Bonferroni-Holm Test
18-4064-7988	Reproduction	88	>88	NA	32.5%	1.136	Bonferroni Adj t Test

### Test Acceptability

Analysis ID	Endpoint	Attribute	Test Stat	TAC Limits	Overlap	Decision
06-2032-9219	6d Survival Rate	Control CV	0	NL - 0.4	Yes	Passes Acceptability Criteria
18-4064-7988	Reproduction	Control CV	0.27	NL - 0.4	Yes	Passes Acceptability Criteria
06-2032-9219	6d Survival Rate	Control Resp	1	0.799 - NL	Yes	Passes Acceptability Criteria
18-4064-7988	Reproduction	Control Resp	16	15 - NL	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		9	0.89	0.63	1	0	1	0.11	0.33	38.0%	11.0%
50		10	0.9	0.67	1	0	1	0.1	0.32	35.0%	10.0%
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	16	13	19	10	23	1.3	4.2	27.0%	0.0%
28		10	15	13	17	9	19	1	3.2	21.0%	5.1%
37		9	12	6.8	17	0	23	2.2	6.6	55.0%	25.0%
50		10	14	10	19	5	23	1.9	5.9	41.0%	8.9%
66		10	14	11	17	9	19	1.3	4.1	28.0%	8.9%
88		10	14	11	17	8	20	1.3	4	29.0%	10.0%

**CETIS Summary Report**

Report Date: 16 May-14 11:04 (p 2 of 2)  
 Test Code: CD 14-112-0190 | 08-9350-7666

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

<b>6d Survival Rate Detail</b>											
C-%	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	1	1	1	1	1	1	1	1	1
28		1	1	1	1	1	1	1	1	1	1
37		1	1	1	1	1	1	1	1	1	1
50		1	1	0	1	1	1	1	1	0	1
66		1	1	1	1	1	1	1	1	1	1
88		1	1	1	1	1	1	1	1	1	1

<b>Reproduction Detail</b>											
C-%	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	18	10	12	22	12	16	23	15	15	15
28		9	19	18	16	15	12	16	18	12	15
37		12	8	10	18	13	8	23	15	0	15
50		18	16	5	11	17	12	13	23	22	7
66		16	16	9	13	17	9	19	9	19	17
88		15	18	16	17	14	15	11	20	8	8

**CETIS Measurement Report**

Report Date: 16 May-14 11:04 (p 1 of 8)  
Test Code: CD 14-112-0190 | 08-9350-7666

Ceriodaphnia 7-d Survival and Reproduction Test			Environmental Testing and Consulting, Inc.		
Batch ID:	09-8171-9255	Test Type:	Reproduction-Survival (7d)	Analyst:	Ava Davis
Start Date:	22 Apr-14 16:50	Protocol:	EPA/821/R-02-013 (2002)	Diluent:	Perrier Water
Ending Date:	28 Apr-14 14:30	Species:	Ceriodaphnia dubia	Brine:	Not Applicable
Duration:	5d 22h	Source:	In-House Culture	Age:	< 24
Sample ID:	05-7848-1676	Code:	14-112-0190	Client:	City of Marion Water Department
Sample Date:	22 Apr-14 07:00	Material:	POTW Effluent	Project:	WET Biannual Compliance Test (1st)
Receive Date:	22 Apr-14 12:33	Source:	MARION (AR0021971)		
Sample Age:	10h (0.9 °C)	Station:			



**CETIS Measurement Report**

Report Date: 16 May-14 11:04 (p 2 of 8)  
 Test Code: CD 14-112-0190 | 08-9350-7666

**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	61				
0	Lab Water	2	61				
0	Lab Water	3	64				
0	Lab Water	4	62				
0	Lab Water	5	61				
0	Lab Water	6	62				
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	175				
88			451				
0	Lab Water	2	176				
88			453				
0	Lab Water	3	177				
88			463				
0	Lab Water	4	179				
88			451				
0	Lab Water	5	182				
88			462				
0	Lab Water	6	176				
88			476				
0	Lab Water	7	173				
88			453				

# CETIS Measurement Report

Report Date: 16 May-14 11:04 (p 3 of 8)

Test Code: CD 14-112-0190 | 08-9350-7666

**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				
28			8				
37			7.6				
50			7.6				
66			7.5				
88			7.6				
0	Lab Water	2	8.4				
28			8.3				
37			8.2				
50			8.2				
66			8.2				
88			8.2				
0	Lab Water	3	8.4				
28			8.4				
37			8.4				
50			8.3				
66			8.4				
88			8.4				
0	Lab Water	4	8.2				
28			8				
37			8				
50			8				
66			8				
88			8				
0	Lab Water	5	8.2				
28			8.1				
37			8				
50			8				
66			7.9				
88			7.8				
0	Lab Water	6	8				
28			8.5				
37			8.5				
50			8.4				
66			8.4				
88			8.4				

**CETIS Measurement Report**

Report Date: 16 May-14 11:04 (p 4 of 8)  
 Test Code: CD 14-112-0190 | 08-9350-7666

**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	8.3					
28			8.9					
37			8.9					
50			8.9					
66			8.9					
88			8.9					
0	Lab Water	2	8.6					
28			8.5					
37			8.5					
50			8.4					
66			8.3					
88			8					
0	Lab Water	3	8.7					
28			8.7					
37			8.7					
50			8.7					
66			8.8					
88			8.8					
0	Lab Water	4	8.3					
28			8.4					
37			8.4					
50			8.4					
66			8.5					
88			8.4					
0	Lab Water	5	8.4					
28			8.3					
37			8.3					
50			8.3					
66			8.4					
88			8.4					
0	Lab Water	6	8.3					
28			8.5					
37			8.7					
50			8.7					
66			8.8					
88			9.1					
0	Lab Water	7	7.2					
28			7.6					
37			8.6					
50			8.6					
66			8.5					
88			8.7					

**Hardness (CaCO3)-mg/L**

C-%	Control Type	Reading Time	Measure	QA	Diff-%	Inst ID	Analyst	Notes
0	Lab Water	1	90					
0	Lab Water	2	90					
0	Lab Water	3	89					
0	Lab Water	4	91					
0	Lab Water	5	93					
0	Lab Water	6	91					
0	Lab Water	7	93					

# CETIS Measurement Report

Report Date: 16 May-14 11:04 (p 5 of 8)

Test Code: CD 14-112-0190 | 08-9350-7666

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	7.4				
28			7.6				
37			8.1				
50			8.1				
66			8.1				
88			8				
0			Lab Water	2	7.7		
28	8.2						
37	7.8						
50	7.8						
66	7.8						
88	7.8						
0	Lab Water	3			7.8		
28			8.4				
37			7.8				
50			7.9				
66			7.9				
88			7.9				
0			Lab Water	4	7.6		
28	8						
37	7.7						
50	7.9						
66	7.8						
88	7.9						
0	Lab Water	5			8.1		
28			8				
37			7.9				
50			7.9				
66			7.9				
88			7.9				
0			Lab Water	6	8.1		
28	8.5						
37	8						
50	8						
66	8						
88	8						

# CETIS Measurement Report

Report Date: 16 May-14 11:04 (p 6 of 8)

Test Code: CD 14-112-0190 | 08-9350-7666

## 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	8.4					
28			8.9					
37			8.1					
50			8.1					
66			8.1					
88			8					
0			Lab Water	2	7.8			
28	8.5							
37	7.6							
50	7.6							
66	7.5							
88	7.5							
0	Lab Water	3			7.8			
28			8.7					
37			7.6					
50			7.5					
66			7.5					
88			7.4					
0			Lab Water	4	7.9			
28	8.4							
37	7.6							
50	7.6							
66	7.6							
88	7.9							
0	Lab Water	5			7.6			
28			8.3					
37			7.8					
50			7.8					
66			7.9					
88			7.9					
0			Lab Water	6	7.7			
28	8.7							
37	7.4							
50	7.4							
66	7.4							
88	7.3							
0	Lab Water	7			8.2			
28			8.6					
37			7.8					
50			7.7					
66			7.6					
88			7.6					

**CETIS Measurement Report**

Report Date: 16 May-14 11:04 (p 7 of 8)

Test Code: CD 14-112-0190 | 08-9350-7666

**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: 16 May-14 11:04 (p 8 of 8)

Test Code: CD 14-112-0190 | 08-9350-7666

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: 16 May-14 11:05 ( 1 of 2)  
 Test Code: FH 14-112-0190 | 06-8037-5826

<b>Facility:</b> MARION <b>Sample Site:</b> <b>Sample Code:</b> 14-112-0190 <b>Sample Date:</b> 22 Apr-14 07:00 <b>Sample Age:</b> 9h (0.9 °C) <b>Project:</b> WET Biannual Compliance Test (1st)	<b>Test Name:</b> Fathead Minnow 7-d Larval Survival and Growth Test <b>Organism:</b> Pimephales promelas (Fathead Minnow) <b>Protocol:</b> EPA/821/R-02-013 (2002) <b>Start Date:</b> 22 Apr-14 16:00 <b>End Date:</b> 29 Apr-14 14:50 <b>Duration:</b> 6d 23h <b>Organism Age:</b> < 24
<b>Permittee:</b> City of Marion Water Department <b>Address:</b> P.O. Box 814 Marion, AR 72364  <b>Contact:</b> Mr. Jim Shempert <b>Phone:</b> 870-739-5413 <b>Email:</b>	<b>Laboratory:</b> Environmental Testing and Consulting, Inc. <b>Address:</b> 2790 Whitten Road Memphis, TN 38133  <b>Contact:</b> Connie Cook, Lab Supervisor <b>Phone:</b> 901-213-2454 <b>Email:</b> 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	0.19	N/A - 0.4	Pass
7d Survival Rate	Control Resp	0.85	0.8 - N/A	Pass
Mean Dry Weight-mg	Control CV	0.13	N/A - 0.4	Pass
Mean Dry Weight-mg	Control Resp	0.47	0.25 - N/A	Pass



# CETIS Test Evaluation Report

Report Date: 16 May-14 11:05 ( 2 of 2)  
 Test Code: FH 14-112-0190 | 06-8037-5826

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	0.85	0.79	0.91	0.63	1	0.073	0.16	19.0%	0.0%
28		5	0.6	0.55	0.65	0.38	0.75	0.061	0.14	23.0%	29.0%
37		5	0.8	0.75	0.85	0.63	1	0.064	0.14	18.0%	5.9%
50		5	0.73	0.66	0.79	0.5	0.88	0.073	0.16	22.0%	15.0%
66		5	0.73	0.69	0.76	0.63	0.88	0.047	0.1	14.0%	15.0%
88		5	0.75	0.7	0.8	0.63	0.88	0.056	0.13	17.0%	12.0%

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	0.47	0.44	0.49	0.36	0.51	0.027	0.06	13.0%	0.0%
28		5	0.39	0.36	0.42	0.31	0.47	0.036	0.081	21.0%	17.0%
37		5	0.4	0.38	0.43	0.31	0.49	0.031	0.069	17.0%	14.0%
50		5	0.42	0.4	0.44	0.34	0.49	0.028	0.062	15.0%	10.0%
66		5	0.44	0.41	0.47	0.33	0.54	0.036	0.08	18.0%	6.4%
88		5	0.42	0.4	0.45	0.36	0.54	0.035	0.078	18.0%	9.1%

**CETIS Summary Report**

Report Date: 16 May-14 11:05 (p 1 of 2)  
 Test Code: FH 14-112-0190 | 06-8037-5826

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

Batch ID: 02-6135-3844	Test Type: Growth-Survival (7d)	Analyst: Ava Davis
Start Date: 22 Apr-14 16:00	Protocol: EPA/821/R-02-013 (2002)	Diluent: Perrier Water
Ending Date: 29 Apr-14 14:50	Species: Pimephales promelas	Brine: Not Applicable
Duration: 6d 23h	Source: Aquatox, AR	Age: < 24

Sample ID: 05-7848-1676	Code: 14-112-0190	Client: City of Marion Water Department
Sample Date: 22 Apr-14 07:00	Material: POTW Effluent	Project: WET Biannual Compliance Test (1st)
Receive Date: 22 Apr-14 12:33	Source: MARION (AR0021971)	
Sample Age: 9h (0.9 °C)	Station:	

Renewal	Sample Code	Sample Date	Receive Date	Renewal Date	Temp °C
1	14-112-0190	23 Apr-14 08:00	23 Apr-14 13:32	24 Apr-14 00:00	0.5
2	14-112-0190	25 Apr-14 07:00	25 Apr-14 12:35	26 Apr-14 00:00	0.6

Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
05-2428-7405	7d Survival Rate	88	>88	NA	23.4%	1.136	Dunnett Multiple Comparison Test
03-1271-9616	Mean Dry Weight-mg	88	>88	NA	23.1%	1.136	Dunnett Multiple Comparison Test

Analysis ID	Endpoint	Attribute	Test Stat	TAC Limits	Overlap	Decision
05-2428-7405	7d Survival Rate	Control CV	0.19	NL - 0.4	Yes	Passes Acceptability Criteria
03-1271-9616	Mean Dry Weight-mg	Control CV	0.13	NL - 0.4	Yes	Passes Acceptability Criteria
05-2428-7405	7d Survival Rate	Control Resp	0.85	0.8 - NL	Yes	Passes Acceptability Criteria
03-1271-9616	Mean Dry Weight-mg	Control Resp	0.47	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	0.85	0.65	1	0.63	1	0.073	0.16	19.0%	0.0%
28		5	0.6	0.43	0.77	0.38	0.75	0.061	0.14	23.0%	29.0%
37		5	0.8	0.62	0.98	0.63	1	0.064	0.14	18.0%	5.9%
50		5	0.73	0.52	0.93	0.5	0.88	0.073	0.16	22.0%	15.0%
66		5	0.73	0.6	0.85	0.63	0.88	0.047	0.1	14.0%	15.0%
88		5	0.75	0.59	0.91	0.63	0.88	0.056	0.13	17.0%	12.0%

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	0.47	0.39	0.54	0.36	0.51	0.027	0.06	13.0%	0.0%
28		5	0.39	0.29	0.49	0.31	0.47	0.036	0.081	21.0%	17.0%
37		5	0.4	0.32	0.49	0.31	0.49	0.031	0.069	17.0%	14.0%
50		5	0.42	0.34	0.5	0.34	0.49	0.028	0.062	15.0%	10.0%
66		5	0.44	0.34	0.54	0.33	0.54	0.036	0.08	18.0%	6.4%
88		5	0.42	0.33	0.52	0.36	0.54	0.035	0.078	18.0%	9.1%

**CETIS Summary Report**

Report Date: 16 May-14 11:05 (p 2 of 2)

Test Code: FH 14-112-0190 | 06-8037-5826

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	0.88	0.75	1	1	0.63
28		0.63	0.63	0.63	0.75	0.38
37		1	0.63	0.88	0.75	0.75
50		0.88	0.5	0.63	0.88	0.75
66		0.75	0.88	0.63	0.75	0.63
88		0.88	0.75	0.63	0.63	0.88

Mean Dry Weight-mg Detail						
C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	Lab Water	0.36	0.5	0.51	0.47	0.49
28		0.47	0.31	0.35	0.47	0.32
37		0.45	0.31	0.4	0.36	0.49
50		0.46	0.34	0.38	0.44	0.49
66		0.54	0.47	0.45	0.33	0.4
88		0.36	0.39	0.36	0.47	0.54

# CETIS Measurement Report

Report Date: 16 May-14 11:05 (p 1 of 8)  
Test Code: FH 14-112-0190 | 06-8037-5826

Fathead Minnow 7-d Larval Survival and Growth Test		Environmental Testing and Consulting, Inc.	
Batch ID: 02-6135-3844	Test Type: Growth-Survival (7d)	Analyst: Ava Davis	
Start Date: 22 Apr-14 16:00	Protocol: EPA/821/R-02-013 (2002)	Diluent: Perrier Water	
Ending Date: 29 Apr-14 14:50	Species: Pimephales promelas	Brine: Not Applicable	
Duration: 6d 23h	Source: Aquatox, AR	Age: < 24	
Sample ID: 05-7848-1676	Code: 14-112-0190	Client: City of Marion Water Department	
Sample Date: 22 Apr-14 07:00	Material: POTW Effluent	Project: WET Biannual Compliance Test (1st)	
Receive Date: 22 Apr-14 12:33	Source: MARION (AR0021971)		
Sample Age: 9h (0.9 °C)	Station:		

# CETIS Measurement Report

Report Date: 16 May-14 11:05 (p 2 of 8)  
 Test Code: FH 14-112-0190 | 06-8037-5826

Fathead Minnow 7-d Larval Survival and Growth Test							Environmental Testing and Consulting, Inc.
<b>Alkalinity (CaCO3)-mg/L</b>							
C-%	Control Type	Reading Time	Measure	QA	Diff-%	Inst ID	Analyst Notes
0	Lab Water	1	61				
0	Lab Water	2	61				
0	Lab Water	3	64				
0	Lab Water	4	62				
0	Lab Water	5	61				
0	Lab Water	6	62				
0	Lab Water	7	61				
<b>Total Residual Chlorine-mg/L</b>							
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				
<b>Conductivity-µS/cm</b>							
C-%	Control Type	Reading Time	Measure	QA	Diff-%	Inst ID	Analyst Notes
0	Lab Water	1	175				
88			451				
0	Lab Water	2	176				
88			453				
0	Lab Water	3	177				
88			463				
0	Lab Water	4	179				
88			451				
0	Lab Water	5	182				
88			462				
0	Lab Water	6	176				
88			476				
0	Lab Water	7	173				
88			453				

**CETIS Measurement Report**

Report Date: 16 May-14 11:05 (p 3 of 8)  
 Test Code: FH 14-112-0190 | 06-8037-5826

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	8.4				
28			7.7				
37			7.5				
50			7.7				
66			7.8				
88			7.9				
0			Lab Water	2	7.5		
28	7.6						
37	7.4						
50	7.2						
66	7.2						
88	7.3						
0	Lab Water	3			7.7		
28			7.6				
37			7.8				
50			7.6				
66			7.6				
88			7.6				
0			Lab Water	4	7.9		
28	7.8						
37	7.8						
50	7.6						
66	7.5						
88	7.6						
0	Lab Water	5			7.2		
28			7.3				
37			6.9				
50			6.7				
66			6.6				
88			6.5				
0			Lab Water	6	7.2		
28	7.8						
37	7.8						
50	7.1						
66	7.3						
88	6.9						
0	Lab Water	7			7.9		
28			7.8				
37			7.9				
50			7.8				
66			7.6				
88			7.8				

**CETIS Measurement Report**

Report Date: 16 May-14 11:05 (p 4 of 8)  
 Test Code: FH 14-112-0190 | 06-8037-5826

**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	8.3					
28			8.9					
37			8.9					
50			8.9					
66			8.9					
88			8.9					
0			Lab Water	2	8.6			
28	8.5							
37	8.5							
50	8.4							
66	8.3							
88	8							
0	Lab Water	3			8.7			
28			8.7					
37			8.7					
50			8.7					
66			8.8					
88			8.8					
0			Lab Water	4	8.3			
28	8.4							
37	8.4							
50	8.4							
66	8.5							
88	8.4							
0	Lab Water	5			8.4			
28			8.3					
37			8.3					
50			8.3					
66			8.4					
88			8.4					
0			Lab Water	6	8.3			
28	8.5							
37	8.7							
50	8.7							
66	8.8							
88	9.1							
0	Lab Water	7			7.2			
28			7.6					
37			8.6					
50			8.6					
66			8.5					
88			8.7					

**Hardness (CaCO3)-mg/L**

C-%	Control Type	Reading Time	Measure	QA	Diff-%	Inst ID	Analyst	Notes
0	Lab Water	1	90					
0	Lab Water	2	90					
0	Lab Water	3	89					
0	Lab Water	4	91					
0	Lab Water	5	93					
0	Lab Water	6	91					
0	Lab Water	7	93					

**CETIS Measurement Report**

Report Date: 16 May-14 11:05 (p 5 of 8)  
 Test Code: FH 14-112-0190 | 06-8037-5826

**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	7.8				
28			7.6				
37			7.6				
50			7.7				
66			7.7				
88			7.8				
0			Lab Water	2	7.8		
28	7.8						
37	7.6						
50	7.5						
66	7.6						
88	7.6						
0	Lab Water	3			7.5		
28			7.6				
37			7.9				
50			7.9				
66			7.8				
88			7.8				
0			Lab Water	4	7.6		
28	7.7						
37	7.8						
50	7.8						
66	7.6						
88	7.4						
0	Lab Water	5			7.6		
28			7.5				
37			7.5				
50			7.5				
66			7.5				
88			7.4				
0			Lab Water	6	8		
28	7.8						
37	7.8						
50	7.8						
66	7.7						
88	7.6						
0	Lab Water	7			8		
28			7.9				
37			7.8				
50			7.8				
66			7.8				
88			7.9				



# CETIS Measurement Report

Report Date: 16 May-14 11:05 (p 6 of 8)

Test Code: FH 14-112-0190 | 06-8037-5826

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	8.4				
28			8.9				
37			8.1				
50			8.1				
66			8.1				
88			8				
0			Lab Water	2	7.8		
28	8.5						
37	7.6						
50	7.6						
66	7.5						
88	7.5						
0	Lab Water	3			7.8		
28			8.7				
37			7.6				
50			7.5				
66			7.5				
88			7.4				
0			Lab Water	4	7.9		
28	8.4						
37	7.6						
50	7.6						
66	7.6						
88	7.9						
0	Lab Water	5			7.6		
28			8.3				
37			7.8				
50			7.8				
66			7.9				
88			7.9				
0			Lab Water	6	7.7		
28	8.7						
37	7.4						
50	7.4						
66	7.4						
88	7.3						
0	Lab Water	7			8.2		
28			8.6				
37			7.8				
50			7.7				
66			7.6				
88			7.6				

**CETIS Measurement Report**

Report Date: 16 May-14 11:05 (p 7 of 8)

Test Code: FH 14-112-0190 | 06-8037-5826

**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					
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 Measurement Report**

Report Date: 16 May-14 11:05 (p 8 of 8)

Test Code: FH 14-112-0190 | 06-8037-5826

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				

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

NAME:  
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	UNITS			
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			

NAME:  
ADDRESS:

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

PERMIT NUMBER	DISCHARGE NUMBER
0	0

FACILITY:  
LOCATION:  
ATTN:

MONITORING PERIOD

YEAR	MONTH	DAY	TO	YEAR	MONTH	DAY
0	0	0		0	0	0

0  
0

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

NOEL SUB-LTH STATRE 7DAY CHR PIMEPHALES TPP6C 1 0 0 EFFLUENT GROSS VALUE	MEASUREMENT	*****	*****	*****	*****	88	*****	(23)			
	PERMIT REQUIREMENT							PER-CENT			

COEF OF VAR STATRE 7DAY CHR CERIODAPHNIA TQP3B 1 0 0 EFFLUENT GROSS VALUE	MEASUREMENT	*****	*****	*****	*****	29.0	*****	(23)			
	PERMIT REQUIREMENT							PER-CENT			

COEF OF VAR STATRE 7DAY CHR PIMEPHALES TQP6C 1 0 0 EFFLUENT GROSS VALUE	MEASUREMENT	*****	*****	*****	*****	18	*****	(23)			
	PERMIT REQUIREMENT							PER-CENT			

WHOLE EFFLUENT TOXICITY 22414 S 0 0	MEASUREMENT	*****	*****	*****	88	*****	*****	(23)			
	PERMIT REQUIREMENT							PER-CENT			

WHOLE EFFLUENT TOXICITY 22414 1 0 0 EFFLUENT GROSS VALUE	MEASUREMENT	*****	*****	*****	88	*****	*****	(23)			
	PERMIT REQUIREMENT							PER-CENT			



# ENVIRONMENTAL TESTING & CONSULTING, INC.

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

## CHAIN OF CUSTODY



City of Marion Water Department  
Bloassav.

14-112-0190  
02608  
04-22-2014  
13:05:11

①

Company Name City of Marion Water Department		Customer Number 02608	Telephone (870) 739-5413	RUSH	ICE		
Site Name Semi-annual bio		Project Comment		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	4/22/14 7:00 AM	1	HNO3 - Nitric Acid	C	Aqueous	hardness
C1 - Outfall 001	Plastic - Pint	4/22/14 7:00 AM	1	NONE	C	Aqueous	alkalinity
C1 - Outfall 001	Plastic - Gallon	4/22/14 7:00 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

Sampled By <i>AP</i>	Method of Shipment	Blank / Cooler Temperature: 0.4°	Remarks 7#2
Relinquished By (sign) <i>[Signature]</i>	Date / Time	Received By (sign) <i>[Signature]</i>	Date / Time 4/22/14 11:50
Relinquished By (sign)	Date / Time	Received By (sign)	Date / Time
Relinquished By (sign) <i>[Signature]</i>	Date / Time 4/22/14 12:33	Received by Lab (sign) <i>[Signature]</i>	Date / Time 4/22/14 12:33



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# ENVIRONMENTAL TESTING & CONSULTING, INC.

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



City of Marion Water Department  
Bioassay / 4/22/14/4/23/14

14-112-0190  
02608  
04-22-2014  
13:05:11



Company Name City of Marion Water Department				Customer Number 02608	Telephone (870) 739-5413	RUSH	ICE
Site Name Semi-annual bio			Project Comment			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	4/23/14 8:00 AM	1	HNO3 - Nitric Acid	C	Aqueous	hardness
C2 - Outfall 001	Plastic - Pint	4/23/14 8:00 AM	1	NONE	C	Aqueous	alkalinity
C2 - Outfall 001	Plastic - Gallon	4/23/14 8:00 AM	2	NONE	C	Aqueous	chronic CD/FH

Sampled By <i>A.P.</i>	Method of Shipment	Blank/ Cooler Temperature 0.5C	Remarks T#2
Relinquished By (sign) <i>Debra P...ly</i>	Date / Time 4/23/14 1230	Received By (sign) <i>W. Ruck</i>	Date / Time 4/23/14 1230
Relinquished By (sign) <i>W. Ruck</i>	Date / Time 4/23/14 1332	Received By (sign) <i>W. Ruck</i>	Date / Time 4/23/14 1332





# ENVIRONMENTAL TESTING & CONSULTING, INC.

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



City of Marion Water Department  
Bioassay 7 4/22/14/4/23/14

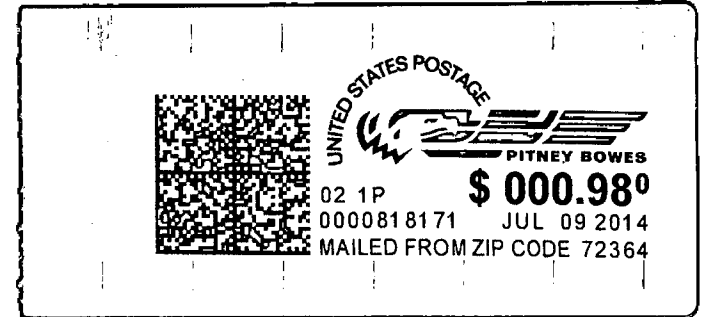
14-112-0190  
02608  
04-22-2014  
13:05:11

3

<b>Company Name</b> City of Marion Water Department		<b>Customer Number</b> 02608		<b>Telephone</b> (870) 739-5413		<b>RUSH</b>	<b>ICE</b>
<b>Site Name</b> Semi-annual bio			<b>Project Comment</b>			<b>FID Number</b>	
<b>Project</b> Marion - Bioassay		<b>Project Number</b>		<b>PO Number</b>			
<b>Project Manager / Contact</b> Mr. Jim Shempert				<b>E-mail</b> waterdept@marionarkansas.org			
Sample ID	Container Type	Collected Date / Time	# Cont	Preservative	Grab / Comp	Matrix	Analyses
C3-Outfall 001	Plastic - Pint	4/25/14 7:00 AM	1	HNO3 - Nitric Acid	C	Aqueous	hardness
C3-Outfall 001	Plastic - Pint	4/25/14 7:00 AM	1	NONE	C	Aqueous	alkalinity
C3-Outfall 001	Plastic - Gallon	4/25/14 7:00 AM	3	NONE	C	Aqueous	Chronic CD/FH

<b>Sampled By</b> A.P.	<b>Method of Shipment</b>	<b>Blank / Cooler</b> Temperature 0.8°C	<b>Remarks</b> T#2
<b>Relinquished By (sign)</b> A.P.	<b>Date / Time</b> 4/25/14 1145	<b>Received By (sign)</b> W. Cook	<b>Date / Time</b> 4/25/14 1145
<b>Relinquished By (sign)</b>	<b>Date / Time</b>	<b>Received By (sign)</b>	<b>Date / Time</b>
<b>Relinquished By (sign)</b> W. Cook	<b>Date / Time</b> 4/25/14 1235	<b>Received by Lab (sign)</b> J. Paul	<b>Date / Time</b> 4/25/14 1235

31 MILITARY RD.  
MARION, AR.  
72364



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5301 NORTHSORE DR.  
NORTH LITTLE ROCK, AR.  
ENFORCEMENT DIVISION 72118-5317

