

MAGNOLIA WASTEWATER SYSTEM

P.O. BOX 666

MAGNOLIA, ARKANSAS 71754-066

(870) 234-2955

mwws@sbcglobal.net

January 9, 2014

Gina Porter
Enforcement Analyst
Water Division, Enforcement Branch

RE: NPDES Permit Number AR0043613, AFIN 14-00059
Missing Discharge Monitoring Report.

Dear Miss Porter:

I am submitting a copy of the missing Chronic Wet Testing report (TX1-Q) for 06/30/2013.

If you have any questions, feel free in contacting my office at 870-234-2955

Sincerely,

A handwritten signature in black ink, appearing to read "Russell W. Thomas", with a long horizontal line extending to the right.

Russell W. Thomas, Supt/Mgr
City of Magnolia - Big Creek WWTP



Bio-Analytical Laboratories

3240 Spurgin Road
Post Office Box 527
Doyline, LA 71023

(318) 746-2772
1-800-259-1246
Fax: (318) 746-2773

REPORT QUALITY ASSURANCE FORM (v. 31612)

Client: Magnolia Waste Water

Project#: X5101

Chain of Custody Documents Checked by: AH 5/16/13 / 6/3/13
Technician/Date ^{EGG}

Raw Data Documents Checked by: AH 5/16/13 / 6/3/13
Technician/Date ^{EGG}

Statistical Analysis Package Checked by: EGG 5/17/13 / 6/6/13
Quality Manager/Date ^{EGG}

Quality Control Data Checked by: EGG 4/18/13
Quality Manager/Date

Report Checked by: EGG 6/18/13
Quality Manager/Date

I certify that this document was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. The information contained in this document, to the best of my knowledge, is true, accurate and complete.

Erin L. Bepp, BS 6/18/13
Quality Manager Date

No part of this work may be altered in any form or by any means without written permission from Bio-Analytical Laboratories.

APPENDIX F
REPORT QUALITY ASSURANCE FORM

Bio-Analytical Laboratories (BAL)
ADEQ Certificate #88-0630
Project X5101

Bio-Analytical Laboratories' Executive Summary

Permittee: Magnolia Wastewater System
P.O. Box 666
Magnolia, AR 71753

Project #: X5101

Outfall: 001 (treated municipal wastewater)

Permit #: AR0043613/ AFIN #14-00059

Contact: Russell Thomas

Dates: May 7 - 14, 2013

Test Type: Chronic Static Renewal Survival and Reproduction Test using *Ceriodaphnia dubia* (EPA Method 1002.0)
Chronic Static Renewal Survival and Growth Test using *Pimephales promelas* (EPA Method 1000.0)

Results:

For *Ceriodaphnia dubia*:

1. If the NOEC for survival is less than the critical dilution (100%), enter a "1"; otherwise, enter a "0" for Parameter TLP3B - 0
2. If the NOEC for reproduction is less than the critical dilution, enter a "1"; otherwise, enter a "0" for Parameter TGP3B - 0
3. Report the NOEC value for survival, Parameter TOP3B - 100%.
4. Report the NOEC value for reproduction, Parameter TPP3B - 100%.
5. Report the largest % coefficient of variation between the control and the critical dilution, Parameter TQP3B - 32.06%.

For *Pimephales promelas*:

1. If the NOEC for survival is less than the critical dilution (100%), enter a "1"; otherwise, enter a "0" for Parameter TLP6C - 0
2. If the NOEC for growth is less than the critical dilution, enter a "1"; otherwise, enter a "0" for Parameter TGP6C - 0
3. Report the NOEC value for survival, Parameter TOP6C - 100%.
4. Report the NOEC value for reproduction, Parameter TPP6C - 100%.
5. Report the largest % coefficient of variation between the control and the critical dilution, Parameter TQP6C - 13.86%.

This report contains a total of 41 pages, including this page. The results contained within pertains only to the samples listed on the chain of custody documents in Appendix A. The information meets the standards set forth by ADEQ. The chemical data in this report is for monitoring purposes only and should not be reported on discharge monitoring reports.



Bio-Analytical Laboratories

3240 Spurgin Road
Post Office Box 527
Doyline, LA 71023

(318) 745-2772
1-800-259-1246
Fax: (318) 745-2773

**THE RESULTS OF TWO CHRONIC
DEFINITIVE TOXICITY TESTS
FOR OUTFALL 001**

AT

**MAGNOLIA WASTEWATER SYSTEM
Magnolia, Arkansas**

**NPDES #AR0043613
AFIN #14-00059**

EPA Methods 1000.0 and 1002.0

Project X5101

Test Dates: May 7 - 14, 2013

Report Date: June 18, 2013

Prepared for:
Russell Thomas
Magnolia Wastewater System
P.O. Box 666
Magnolia, AR 71753

Prepared by:
Ginger Briggs
Bio-Analytical Laboratories
P.O. Box 527
Doyline, LA 71023
ADEQ #88-0630

APPENDIX E
AGENCY FORMS

Ceriodaphnia dubia
Survival and Reproduction (cont)

1. Fisher's Exact Test:

Is the mean survival at the end of the test significantly different ($p=.05$) than the control survival for the % effluent corresponding to (lethality):

- | | | | |
|--|-----|---|----|
| a) LOW FLOW OR CRITICAL DILUTION (100%): | YES | X | NO |
| b) 1/2 LOW FLOW DILUTION (N/A %): | YES | | NO |

2. Dunnett's Procedure or Steel's Many-One Rank Test as appropriate:

Is the mean number of young produced per female significantly different ($p=.05$) than the control's number of young per female for the % effluent corresponding to (significant non-lethal effects):

- | | | | |
|--|-----|---|----|
| a) LOW FLOW OR CRITICAL DILUTION (100%): | YES | X | NO |
| b) 1/2 LOW FLOW DILUTION (N/A %): | YES | | NO |

3. If you answered NO to 1. a) and 2. a) enter (0) otherwise enter (1): 0
4. If you answered NO to 1. b) and 2. b) enter (0) otherwise enter (1): N/A
5. Enter response to item 3 on DMR Form, parameter #TEP3B.
6. Enter response to item 4 on DMR Form, parameter #TFP3B.
7. Enter percent effluent corresponding to each NOEC below and circle lowest number:
 - a) NOEC survival: 100% effluent
 - b) NOEC reproduction: 100% effluent
 - c) LOEC survival: N/A % effluent
 - d) LOEC reproduction: N/A % effluent

FATHEAD MINNOW LARVAE GROWTH AND SURVIVAL (cont)
(Pimephales promelas)

1. Dunnett's Procedure or Steels Many-One Rank Test as appropriate:

Is the mean survival at 7 days significantly different ($p=.05$) than the control survival for the % effluent corresponding to:

- | | | | |
|---|-----|---|----|
| a) LOW FLOW OR CRITICAL DILUTION (100%) | YES | X | NO |
| b) 1/2 LOW FLOW DILUTION (N/A %) | YES | | NO |

2. Dunnett's Procedure (or appropriate test):

Is the mean dry weight (growth) at 7 days significantly different ($p=.05$) than the control's dry weight for the % effluent corresponding to (significant non-lethal effects):

- | | | | |
|---|-----|---|----|
| a) LOW FLOW OR CRITICAL DILUTION (100%) | YES | X | NO |
| b) 1/2 LOW FLOW DILUTION (N/A %) | YES | | NO |

3. If you answered NO to 1. a) and 2. a) enter (0) otherwise enter (1): 0

4. If you answered NO to 1. b) and 2. b) enter (0) otherwise enter (1): N/A

5. Enter response to item 3 on DMR Form, parameter #TEP6C.

6. Enter response to item 4 on DMR Form, parameter #TFP6C.

7. Enter percent effluent corresponding to each NOEC below and circle lowest number:

- | | |
|-------------------|----------------|
| a.) NOEC survival | 100% effluent. |
| b.) NOEC growth | 100% effluent. |
| c.) LOEC survival | N/A% effluent |
| d.) LOEC growth | N/A% effluent |

Bioassaying Form
Chronic Toxicity Summary Form
Coriodaphnia dubia
Chemical Parameters Chart

Permitter: City of Magnolia
NPDES No.: AR0843613/ APIN 14-00059
Contact: Russell Thomas
Analyst: Houghton, Zeagler, Williams

Sample No. 1 Collected: Date: 5/6/13 Time: 0700
Sample No. 2 Collected: Date: 5/8/13 Time: 0700
Sample No. 3 Collected: Date: 5/19/13 Time: 0700
Test Begin: Date: 5/7/13 Time: 1505
Test End: Date: 5/14/13 Time: 1330

Dilution: 0 Day:									Dilution: 56 Day:								
	1	2	3	4	5	6	7	Comments		1	2	3	4	5	6	7	Comments
Temp (C)	24.9	24.7	25.1	24.6	25.1	24.7	25.2		Temp (C)	24.9	24.7	25.1	24.6	25.1	24.7	25.2	
DO Initial	8.1	8.0	8.0	7.9	8.6	8.3	8.4		DO Initial	7.6	7.9	7.9	7.8	8.3	8.2	8.2	
DO Final	8.3	8.2	8.1	7.8	8.8	8.3			DO Final	8.4	8.3	8.2	7.8	8.3	8.3		
pH Initial	7.8	7.6	7.6	7.3	7.7	7.7	7.7		pH Initial	7.5	7.4	7.4	7.8	7.8	7.7	7.6	
pH Final	7.5	7.6	7.6	7.5	7.8	7.6			pH Final	7.5	7.5	7.7	7.8	7.8	7.9		
Alkalinity	40.0								Alkalinity								
Hardness	48.0								Hardness								
Conductivity	187.6	185.8	184.1	182.5	198.6	190.1			Conductivity	229	229	316	298	346	335		
Chlorine	<.01								Chlorine								
Dilution: 32 Day:									Dilution: 80 Day:								
	1	2	3	4	5	6	7	Comments		1	2	3	4	5	6	7	Comments
Temp (C)	24.9	24.7	25.1	24.6	25.1	24.7	25.3		Temp (C)	24.9	24.7	25.1	24.6	25.1	24.7	25.2	
DO Initial	7.8	7.9	8.0	7.9	8.4	8.3	8.4		DO Initial	7.6	7.9	7.9	7.8	8.3	8.1	8.1	
DO Final	8.3	8.3	8.2	7.8	8.7	8.3			DO Final	8.3	8.3	8.3	7.8	8.6	8.4		
pH Initial	7.6	7.4	7.5	7.8	7.7	7.7	7.7		pH Initial	7.6	7.5	7.7	7.9	7.9	7.8	7.7	
pH Final	7.5	7.4	7.8	7.8	7.8	7.9			pH Final	7.6	7.7	7.8	7.8	7.9	7.8		
Alkalinity									Alkalinity								
Hardness									Hardness								
Conductivity	213	210	240	235	284	275			Conductivity	272	303	373	384	414	363		
Chlorine									Chlorine								
Dilution: 42 Day:									Dilution: 100 Day:								
	1	2	3	4	5	6	7	Comments		1	2	3	4	5	6	7	Comments
Temp (C)	24.9	24.7	25.1	24.6	25.1	24.7	25.2		Temp (C)	24.9	24.7	25.1	24.6	25.1	24.7	25.2	
DO Initial	7.7	7.9	7.9	7.9	8.4	8.2	8.3		DO Initial	7.6	7.8	7.8	7.7	8.5	8.0	8.1	
DO Final	8.3	8.3	8.2	7.8	8.3	8.3			DO Final	8.3	8.3	8.4	7.9	8.7	8.5		
pH Initial	7.5	7.4	7.5	7.7	7.8	7.7	7.7		pH Initial	7.6	7.6	7.8	7.8	7.6	7.8	7.7	
pH Final	7.5	7.6	7.7	7.8	7.8	7.9			pH Final	7.8	7.9	7.7	7.3	7.9	7.4		
Alkalinity									Alkalinity	56.0	76.0		48.0				
Hardness									Hardness	48.0	48.0		49.0				
Conductivity	219	227	284	255	308	298			Conductivity	409	421	423	398	465	284		
Chlorine									Chlorine	<.01	<.01		<.01				

**SUMMARY REPORTING FORMS CHRONIC BIOMONITORING
FATHEAD MINNOW LARVAE GROWTH AND SURVIVAL
(Pimephales promelas)**

Permittee: City of Magnolia

NPDES No.: AR0043613/AFIN 14-00059

	Time	Date	To	Time	Date
Composite 1 Collected from:	0700	5/5/13		0700	5/6/13
Composite 2 Collected from:	0700	5/7/13		0700	5/8/13
Composite 3 Collected from:	0700	5/9/13		0700	5/10/13

Test initiated: 1435 am/pm 5/7/13 date
 Test terminated: 0950 am/pm 5/14/13 date
 Dilution water used: Receiving Reconstituted

DATA TABLE FOR SURVIVAL

Effluent Conc. %	Percent Survival in Replicate Chambers					Mean Percent Survival			CV%*
	A	B	C	D	E	24h	48h	7 days	
0	100	100	100	87.5	100	100	100	97.5	6.06
32	100	100	100	87.5	87.5	100	100	95.0	7.62
42	100	100	100	100	100	100	100	100	0.00
56	100	100	87.5	87.5	100	100	100	95.0	7.62
80	100	100	100	87.5	100	100	100	97.5	6.06
100	87.5	100	100	100	100	100	100	97.5	6.06

DATA TABLE FOR GROWTH

Effluent Conc. %	Average Dry Weight in milligrams in replicate chambers					Mean Dry Weight mg	CV*
	A	B	C	D	E		
0	0.638	0.513	0.588	0.750	0.638	0.625	13.86
32	0.638	0.625	0.513	0.650	0.650	0.615	9.47
42	0.875	0.763	0.763	0.663	0.688	0.750	11.06
56	0.588	0.575	0.625	0.600	0.500	0.578	8.16
80	0.663	0.600	0.763	0.638	0.600	0.633	13.45
100	0.613	0.575	0.650	0.638	0.575	0.610	5.69
0-SN	0.638	0.513	0.588	0.857	0.638	0.646	19.87

*coefficient of variation = standard deviation x 100/mean.

PMSD = 19.5%

Biomonitoring Form
Chronic Toxicity Summary Form
Pineholes premises
Chemical Parameters Chart

Permittee: City of Magnolia
NPDES No.: AR0043613/AFIN 14-00059
Contact: Russell Thomas
Analyst: Haughton, Zeagler, Williams

Sample No. 1 Collected: Date: 5/6/13 Time: 0700
Sample No. 2 Collected: Date: 5/8/13 Time: 0700
Sample No. 3 Collected: Date: 5/19/13 Time: 0700
Test Begin: Date: 5/7/13 Time: 1435
Test End: Date: 5/14/13 Time: 0950

Dilution: 0 Day:									Dilution: 56 Day:								
	1	2	3	4	5	6	7	Comments		1	2	3	4	5	6	7	Comments
Temp (C)	25.1	25.1	25.1	25.1	24.4	25.2	25.2		Temp (C)	25.1	25.1	25.1	25.1	24.4	25.2	25.2	
DO Initial	7.4	4.9	5.8	4.4	5.4	4.9	5.6		DO Initial	6.8	4.0	5.6	4.4	5.5	4.9	5.3	
DO Final	8.3	8.3	8.1	7.8	8.8	8.3			DO Final	8.4	8.3	8.2	7.8	8.6	8.3		
pH Initial	7.3	6.8	6.9	6.9	7.1	6.9	7.1		pH Initial	7.1	6.8	7.0	7.0	7.3	7.1	7.3	
pH Final	7.5	7.6	7.6	7.5	7.8	7.6			pH Final	7.5	7.5	7.7	7.8	7.8	7.9		
Alkalinity	40.0								Alkalinity								
Hardness	48.0								Hardness								
Conductivity	187.6	185.8	184.1	162.5	198.6	198.1			Conductivity	229	229	316	290	346	335		
Chlorine	<.01								Chlorine								
Dilution: 32 Day:									Dilution: 80 Day:								
	1	2	3	4	5	6	7	Comments		1	2	3	4	5	6	7	Comments
Temp (C)	25.1	25.1	25.1	25.1	24.4	25.2	25.2		Temp (C)	25.1	25.1	25.1	25.1	24.4	25.2	25.2	
DO Initial	7.0	4.1	5.5	3.9	5.1	4.3	5.4		DO Initial	6.9	4.7	5.3	4.2	4.8	4.2	5.4	
DO Final	8.3	8.3	8.2	7.8	8.7	8.3			DO Final	8.3	8.3	8.3	7.8	8.6	8.4		
pH Initial	7.2	6.8	7.0	6.9	7.1	7.0	7.1		pH Initial	7.2	6.9	7.1	7.1	7.3	7.1	7.2	
pH Final	7.5	7.6	7.8	7.8	7.8	7.9			pH Final	7.6	7.7	7.8	7.8	7.9	7.8		
Alkalinity									Alkalinity								
Hardness									Hardness								
Conductivity	213	280	260	235	284	275			Conductivity	272	303	373	304	414	363		
Chlorine									Chlorine								
Dilution: 42 Day:									Dilution: 100 Day:								
	1	2	3	4	5	6	7	Comments		1	2	3	4	5	6	7	Comments
Temp (C)	25.1	25.1	25.1	25.1	24.4	25.2	25.2		Temp (C)	25.1	25.1	25.1	25.1	24.4	25.2	25.2	
DO Initial	7.0	4.3	5.5	7.0	5.3	4.7	5.6		DO Initial	7.0	4.1	5.1	4.0	5.5	4.3	5.5	
DO Final	8.3	8.3	8.2	7.8	8.6	8.3			DO Final	8.3	8.3	8.4	7.9	8.7	8.5		
pH Initial	7.2	6.8	7.0	7.0	7.2	7.0	7.1		pH Initial	7.3	6.9	7.4	7.2	7.1	7.1	7.1	
pH Final	7.5	7.6	7.7	7.8	7.8	7.9			pH Final	7.8	7.9	7.7	7.3	7.9	7.4		
Alkalinity									Alkalinity	96.0	76.0		48.0				
Hardness									Hardness	48.0	48.0		48.0				
Conductivity	219	217	284	255	309	298			Conductivity	480	421	423	398	465	284		
Chlorine									Chlorine	<.01	<.01		<.01				



Bio-Analytical Laboratories

3240 Spurgin Road
Post Office Box 527
Doyline, LA 71023

(318) 745-2772
1-800-259-1246
Fax: (318) 745-2773

REPORT QUALITY ASSURANCE FORM (v. 31612)

Client: Magnolia Waste Water

Project#: X5101

Chain of Custody Documents Checked by: AH 5/16/13 / 6/3/13
Technician/Date ^{EGB}

Raw Data Documents Checked by: AH 5/16/13 / 6/3/13
Technician/Date ^{EGB}

Statistical Analysis Package Checked by: EGB 5/17/13 / 6/6/13
Quality Manager/Date ^{EGB}

Quality Control Data Checked by: EGB 4/18/13
Quality Manager/Date

Report Checked by: EGB 6/18/13
Quality Manager/Date

I certify that this document was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. The information contained in this document, to the best of my knowledge, is true, accurate and complete.

Curtis L. Bepp, BS
Quality Manager

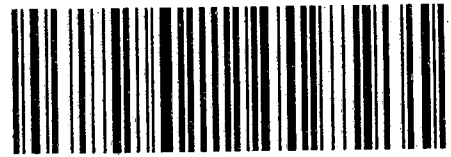
6/18/13
Date

No part of this work may be altered in any form or by any means without written permission from Bio-Analytical Laboratories.

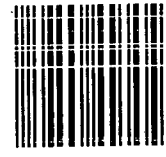
APPENDIX F
REPORT QUALITY ASSURANCE FORM

City of Magnolia Big Creek WWTP
P.O. Box 666
Magnolia, AR 71754-0666
Permit # AR0043613
AFIN # 14-00059

CERTIFIED MAIL™



7010 2780 0001 4217 3944



U.S. POSTAGE
PAID
MAGNOLIA, AR
71753
JAN 09, 14
AMOUNT

\$7.17
00069228-05

1000

72118

NPDES Enforcement Section
Water Division
Arkansas Department of Environmental Quality
5301 N. Shore Dr.
North Little Rock, Arkansas 72118-5317

