

Bio-Analytical Laboratories (BAL)
ADEQ Certificate #88-0630
Project X5264

Bio-Analytical Laboratories' Executive Summary

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

Project #: X5264

Outfall: 001 (treated municipal wastewater)

Permit #: AR0043613/ AFIN #14-00059

Contact: Russell Thomas

Dates: November 12 - 20, 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 -Pass
2. If the NOEC for reproduction is less than the critical dilution, enter a "1"; otherwise, enter a "0" for Parameter TGP3B - 1 - Fail
3. Report the NOEC value for survival, Parameter TOP3B - 100%.
4. Report the NOEC value for reproduction, Parameter TPP3B - 0%.
5. Report the largest % coefficient of variation between the control and the critical dilution, Parameter TQP3B - 17.48%.

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 -Pass
2. If the NOEC for growth is less than the critical dilution, enter a "1"; otherwise, enter a "0" for Parameter TGP6C - 1 -Fail
3. Report the NOEC value for survival, Parameter TOP6C - 100%.
4. Report the NOEC value for reproduction, Parameter TPP6C - 80%.
5. Report the largest % coefficient of variation between the control and the critical dilution, Parameter TQP6C - 52.16%.

This report contains a total of 44 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

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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 X5264

Test Dates: November 12 - 20, 2013

Report Date: December 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

**SUMMARY REPORTING FORMS
CHRONIC BIOMONITORING**

Ceriodaphnia dubia Survival and Reproduction

Permittee: City of Magnolia

NPDES No.: AR0043613/ AFIN 14-00059

| | | | | |
|----------------------------|-------------|-------------|----------------------|-------------|
| | Time | Date | Time | Date |
| Composite 1 Collected From | 0700 | 11/10/13 To | 0700 | 11/11/13 |
| Composite 2 Collected From | 0700 | 11/12/13 To | 0700 | 11/13/13 |
| Composite 3 Collected From | 0700 | 11/14/13 To | 0700 | 11/15/13 |
| Test initiated: | 1500 am/pm | | 11/12/13 | date |
| Test terminated: | 1315 am/pm | | 11/20/13 | date |
| Dilution water used: | Receiving | | Reconstituted | |

PERCENT SURVIVAL

| Time of Reading | Percent Effluent | | | | | |
|-----------------|------------------|-------|-------|-------|------|-------|
| | 0 | 32.0 | 42.0 | 56.0 | 80.0 | 100.0 |
| 24h | 100.0 | 100.0 | 100.0 | 100.0 | 90.0 | 100.0 |
| 48h | 100.0 | 100.0 | 100.0 | 100.0 | 90.0 | 100.0 |
| End of test | 100.0 | 80.0 | 80.0 | 90.0 | 50.0 | 100.0 |

NUMBER OF YOUNG PRODUCED PER FEMALE @ END OF TEST

| Rep | 0 | 32.0 | 42.0 | 56.0 | 80.0 | 100.0 |
|------------|------|-------|-------|-------|-------|-------|
| A | 33 | D2 | 19 | D12 | D5 | 17 |
| B | 32 | 12 | 15 | 22 | 21 | 16 |
| C | 29 | 16 | 17 | 17 | D4 | 14 |
| D | 28 | D | 19 | 20 | 20 | 17 |
| E | 34 | 14 | 13 | 20 | D | 19 |
| F | 26 | 14 | 17 | 21 | 24 | 21 |
| G | 30 | 13 | D5 | 14 | 23 | 14 |
| H | 29 | 18 | 13 | 18 | D3 | 20 |
| I | 32 | 12 | 18 | 14 | D3 | 23 |
| J | 27 | 12 | D4 | 15 | 16 | 22 |
| Surv. Mean | 30.0 | 13.9 | 16.4 | 17.9 | 20.8 | 18.3 |
| Total Mean | 30.0 | 11.3 | 14.0 | 17.3 | 11.9 | 18.3 |
| CV%* | 8.89 | 15.62 | 14.94 | 17.10 | 14.97 | 17.48 |

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

PMSD = 19.0%

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 (100.0%): | 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 (100.0%): | X | YES | 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): 1

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: | 100.0% effluent |
| b) NOEC reproduction: | 0.0% effluent |
| c) LOEC survival: | N/A % effluent |
| d) LOEC reproduction: | 32.0% effluent |

Biomonitoring Form
Chronic Toxicity Summary Form
Ceriodaphnia dubia
Chemical Parameters Chart

Permitter: City of Magnolia
NPDES No.: AR0043613/ APIN 14-00059
Contact: Russell Thomas
Analyst: Haughton, Cotty, Williams

Sample No. 1 Collected: Date: 11/11/13 Time: 0709
Sample No. 2 Collected: Date: 11/13/13 Time: 0700
Sample No. 3 Collected: Date: 11/15/13 Time: 0700
Test Begin: Date: 11/12/13 Time: 1500
Test End: Date: 11/20/13 Time: 1315

| Dilution: 0 Day: | | | | | | | | | Dilution: 55.0 Day: | | | | | | | | |
|---------------------|-------|-------|-------|-------|-------|-------|-------|----------|----------------------|-------|-------|-------|-------|-------|-------|-------|----------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Comments | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Comments |
| Temp (C) | 24.2 | 24.5 | 24.0 | 25.0 | 25.0 | 25.0 | 25.0 | | Temp (C) | 24.2 | 24.8 | 24.0 | 25.0 | 25.0 | 25.0 | 25.0 | |
| DO Initial | 8.5 | 8.3 | 8.6 | 8.6 | 8.6 | 8.5 | 8.5 | | DO Initial | 8.3 | 8.1 | 8.4 | 8.4 | 8.5 | 8.3 | 8.2 | |
| DO Final | 8.3 | 8.3 | 8.3 | 8.0 | 8.0 | 8.2 | 8.4 | | DO Final | 8.1 | 8.2 | 8.2 | 8.1 | 8.1 | 8.3 | 8.4 | |
| pH Initial | 7.3 | 7.3 | 7.4 | 7.4 | 7.4 | 7.3 | 7.4 | | pH Initial | 7.1 | 7.1 | 7.2 | 7.3 | 7.3 | 7.3 | 7.2 | |
| pH Final | 7.4 | 7.2 | 7.5 | 7.4 | 7.4 | 7.4 | 7.2 | | pH Final | 7.3 | 7.2 | 7.2 | 7.3 | 7.4 | 7.3 | 7.2 | |
| Alkalinity | 28.0 | | | | | | | | Alkalinity | | | | | | | | |
| Hardness | 48.0 | | | | | | | | Hardness | | | | | | | | |
| Conductivity | 179.5 | 179.6 | 177.7 | 188.7 | 181.0 | 183.7 | 177.8 | | Conductivity | 258.0 | 276.0 | 260.0 | 259.0 | 256.0 | 262.0 | 260.0 | |
| Chlorine | | | | | | | | | Chlorine | | | | | | | | |
| Dilution: 32.0 Day: | | | | | | | | | Dilution: 80.0 Day: | | | | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Comments | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Comments |
| Temp (C) | 24.2 | 24.8 | 24.0 | 25.0 | 25.0 | 25.0 | 25.0 | | Temp (C) | 24.2 | 24.8 | 24.0 | 25.0 | 25.0 | 25.0 | 25.0 | |
| DO Initial | 8.4 | 8.2 | 8.5 | 8.5 | 8.5 | 8.4 | 8.4 | | DO Initial | 8.3 | 8.1 | 8.4 | 8.4 | 8.3 | 8.3 | 8.3 | |
| DO Final | 8.2 | 8.2 | 8.3 | 8.0 | 8.1 | 8.3 | 8.4 | | DO Final | 8.0 | 8.2 | 8.1 | 8.1 | 8.2 | 8.4 | 8.4 | |
| pH Initial | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | | pH Initial | 7.1 | 7.1 | 7.1 | 7.3 | 7.3 | 7.2 | 7.2 | |
| pH Final | 7.3 | 7.2 | 7.4 | 7.5 | 7.4 | 7.4 | 7.2 | | pH Final | 7.3 | 7.1 | 7.2 | 7.2 | 7.3 | 7.3 | 7.2 | |
| Alkalinity | | | | | | | | | Alkalinity | | | | | | | | |
| Hardness | | | | | | | | | Hardness | | | | | | | | |
| Conductivity | 225.0 | 236.0 | 234.0 | 225.0 | 224.0 | 234.0 | 225.0 | | Conductivity | 292.0 | 310.0 | 288.0 | 293.0 | 289.0 | 289.0 | 294.0 | |
| Chlorine | | | | | | | | | Chlorine | | | | | | | | |
| Dilution: 42.0 Day: | | | | | | | | | Dilution: 100.0 Day: | | | | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Comments | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Comments |
| Temp (C) | 24.2 | 24.8 | 24.0 | 25.0 | 25.0 | 25.0 | 25.0 | | Temp (C) | 24.2 | 24.8 | 24.0 | 25.0 | 25.0 | 25.0 | 25.0 | |
| DO Initial | 8.4 | 8.2 | 8.4 | 8.5 | 8.5 | 8.3 | 8.3 | | DO Initial | 8.2 | 8.0 | 8.3 | 8.4 | 8.3 | 8.2 | 8.1 | |
| DO Final | 8.2 | 8.1 | 8.2 | 8.0 | 8.1 | 8.3 | 8.4 | | DO Final | 7.9 | 8.2 | 8.1 | 8.0 | 8.2 | 8.4 | 8.3 | |
| pH Initial | 7.3 | 7.2 | 7.3 | 7.3 | 7.3 | 7.2 | 7.2 | | pH Initial | 7.1 | 7.1 | 7.1 | 7.2 | 7.2 | 7.1 | 7.2 | |
| pH Final | 7.3 | 7.2 | 7.3 | 7.4 | 7.4 | 7.4 | 7.2 | | pH Final | 7.2 | 7.1 | 7.0 | 7.2 | 7.2 | 7.2 | 7.1 | |
| Alkalinity | | | | | | | | | Alkalinity | 28.0 | 16.0 | | 24.0 | | | | |
| Hardness | | | | | | | | | Hardness | 40.0 | 56.0 | | 52.0 | | | | |
| Conductivity | 238.0 | 252.0 | 250.0 | 239.0 | 237.0 | 242.0 | 248.0 | | Conductivity | 321.0 | 313.0 | 351.0 | 320.0 | 314.0 | 326.0 | 325.0 | |
| 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 | Time | Date |
| Composite 1 Collected from: | 0700 | 11/10/13 To | 0700 | 11/11/13 |
| Composite 2 Collected from: | 0700 | 11/12/13 To | 0700 | 11/13/13 |
| Composite 3 Collected from: | 0700 | 11/14/13 To | 0700 | 11/15/13 |

| | | | | |
|----------------------|-----------|-------|---------------|------|
| Test initiated: | 1515 | am/pm | 11/11/13 | date |
| Test terminated: | 1040 | am/pm | 11/18/13 | 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 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 0.00 |
| 32.0 | 100.0 | 87.5 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 97.5 | 6.06 |
| 42.0 | 100.0 | 87.5 | 75.0 | 100.0 | 100.0 | 100.0 | 100.0 | 95.0 | 11.68 |
| 56.0 | 100.0 | 12.5 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 82.5 | 38.88 |
| 80.0 | 37.5 | 75.0 | 100.0 | 100.0 | 87.5 | 100.0 | 100.0 | 80.0 | 26.78 |
| 100.0 | 37.5 | 87.5 | 100.0 | 25.0 | 100.0 | 100.0 | 100.0 | 70.0 | 40.09 |

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 | 0.513 | 0.450 | 0.438 | 0.388 | 0.375 | 0.433 | 12.70 |
| 32.0 | 0.413 | 0.338 | 0.388 | 0.438 | 0.413 | 0.398 | 9.54 |
| 42.0 | 0.425 | 0.400 | 0.375 | 0.413 | 0.438 | 0.410 | 5.86 |
| 56.0 | 0.388 | 0.063 | 0.438 | 0.475 | 0.388 | 0.350 | 47.11 |
| 80.0 | 0.150 | 0.363 | 0.475 | 0.463 | 0.388 | 0.368 | 35.56 |
| 100.0 | 0.150 | 0.238 | 0.350 | 0.125 | 0.450 | 0.263 | 52.17 |

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

PMSD = 36.8%

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 (100.0%) | 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 (100.0%) | X | YES | 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): 1

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 | 100.0% effluent. |
| b.) NOEC growth | 80.0% effluent. |
| c.) LOEC survival | N/A% effluent |
| d.) LOEC growth | 100.0% effluent |

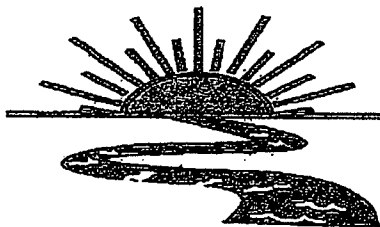
Biomonitoring Form
Chronic Toxicity Summary Form
Phosphates protocols
Chemical Parameters Chart

Permittee: City of Magnolia
NEDES No.: AR0043613/ AFIN 14-00059
Contact: Russell Thomas
Analyst: Hargrove, Cotty

Sample No. 1 Collected: Date: 11/11/13 Time: 0700
Sample No. 2 Collected: Date: 11/13/13 Time: 0700
Sample No. 3 Collected: Date: 11/15/13 Time: 0700
Test Begin: Date: 11/11/13 Time: 1515
Test End: Date: 11/18/13 Time: 1040

| Dilution: 0 Day: | | | | | | | | | Dilution: 56.0 Day: | | | | | | | | |
|---------------------|-------|-------|-------|-------|-------|-------|------|----------|----------------------|-------|-------|-------|-------|-------|-------|------|----------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Comments | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Comments |
| Temp (C) | 24.6 | 24.6 | 25.0 | 25.3 | 24.6 | 25.5 | 24.6 | | Temp (C) | 24.6 | 24.6 | 25.0 | 25.3 | 24.6 | 25.5 | 24.6 | |
| DO Initial | 7.3 | 7.4 | 7.1 | 7.2 | 7.1 | 7.1 | 6.6 | | DO Initial | 7.2 | 7.1 | 6.8 | 6.9 | 7.0 | 6.9 | 6.6 | |
| DO Final | 8.4 | 8.3 | 8.3 | 8.3 | 8.0 | 8.0 | | | DO Final | 8.2 | 8.1 | 8.2 | 8.2 | 8.1 | 8.1 | | |
| pH Initial | 7.1 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 | 7.1 | | pH Initial | 7.0 | 7.0 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | |
| pH Final | 7.4 | 7.4 | 7.2 | 7.3 | 7.4 | 7.4 | | | pH Final | 7.2 | 7.3 | 7.2 | 7.2 | 7.3 | 7.4 | | |
| Alkalinity | 32.0 | 38.0 | | | | | | | Alkalinity | | | | | | | | |
| Hardness | 48.0 | 48.0 | | | | | | | Hardness | | | | | | | | |
| Conductivity | 176.0 | 179.5 | 179.6 | 177.7 | 188.8 | 181.0 | | | Conductivity | 253.0 | 258.0 | 276.0 | 260.0 | 259.0 | 256.0 | | |
| Chlorine | <.01 | <.01 | | | | | | | Chlorine | | | | | | | | |
| Dilution: 32.0 Day: | | | | | | | | | Dilution: 80.0 Day: | | | | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Comments | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Comments |
| Temp (C) | 24.6 | 24.6 | 25.0 | 25.3 | 24.6 | 25.5 | 24.6 | | Temp (C) | 24.6 | 24.6 | 25.0 | 25.3 | 24.6 | 25.5 | 24.6 | |
| DO Initial | 7.3 | 7.3 | 7.0 | 6.8 | 7.1 | 7.0 | 6.7 | | DO Initial | 7.2 | 7.2 | 6.7 | 6.9 | 6.9 | 6.8 | 6.6 | |
| DO Final | 8.3 | 8.2 | 8.2 | 8.3 | 8.0 | 8.1 | | | DO Final | 8.2 | 8.0 | 8.2 | 8.1 | 8.1 | 8.2 | | |
| pH Initial | 7.1 | 7.1 | 7.0 | 7.1 | 7.1 | 7.1 | 7.0 | | pH Initial | 7.0 | 7.0 | 6.8 | 6.8 | 6.9 | 6.9 | 6.8 | |
| pH Final | 7.3 | 7.3 | 7.2 | 7.4 | 7.5 | 7.4 | | | pH Final | 7.2 | 7.3 | 7.1 | 7.2 | 7.2 | 7.3 | | |
| Alkalinity | | | | | | | | | Alkalinity | | | | | | | | |
| Hardness | | | | | | | | | Hardness | | | | | | | | |
| Conductivity | 219.8 | 225.0 | 236.0 | 234.0 | 235.0 | 224.0 | | | Conductivity | 287.0 | 292.0 | 310.0 | 288.0 | 293.0 | 289.0 | | |
| Chlorine | | | | | | | | | Chlorine | | | | | | | | |
| Dilution: 42.0 Day: | | | | | | | | | Dilution: 100.0 Day: | | | | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Comments | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Comments |
| Temp (C) | 24.6 | 24.6 | 25.0 | 25.3 | 24.6 | 25.5 | 24.6 | | Temp (C) | 24.6 | 24.6 | 25.0 | 25.3 | 24.6 | 25.5 | 24.6 | |
| DO Initial | 7.2 | 7.2 | 6.7 | 6.9 | 7.0 | 7.0 | 6.7 | | DO Initial | 7.2 | 7.2 | 6.6 | 6.8 | 6.7 | 6.6 | 6.5 | |
| DO Final | 8.3 | 8.2 | 8.2 | 8.2 | 8.0 | 8.1 | | | DO Final | 8.1 | 7.9 | 8.2 | 8.1 | 8.0 | 8.2 | | |
| pH Initial | 7.1 | 7.1 | 7.0 | 6.9 | 7.0 | 7.0 | 6.9 | | pH Initial | 6.9 | 6.9 | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | |
| pH Final | 7.3 | 7.3 | 7.2 | 7.3 | 7.4 | 7.4 | | | pH Final | 7.1 | 7.2 | 7.1 | 7.0 | 7.2 | 7.2 | | |
| Alkalinity | | | | | | | | | Alkalinity | 28.0 | | 16.0 | | 24.0 | | | |
| Hardness | | | | | | | | | Hardness | 40.0 | | 36.0 | | 53.0 | | | |
| Conductivity | 232.0 | 238.0 | 252.0 | 258.0 | 239.0 | 237.0 | | | Conductivity | 310.0 | 321.0 | 315.0 | 351.0 | 320.0 | 314.0 | | |
| Chlorine | | | | | | | | | Chlorine | <.01 | | <.01 | | <.01 | | | |

APPENDIX F
REPORT QUALITY ASSURANCE FORM



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

Client: Magnolia wastewater

Project#: X5264

Chain of Custody Documents Checked by: AT 12/2/13
Technician/Date

Raw Data Documents Checked by: AT 12/2/13
Technician/Date

Statistical Analysis Package Checked by: EGG 11/27/13
Quality Manager/Date

Quality Control Data Checked by: EGG 12/3/13
Quality Manager/Date

Report Checked by: EGG 12/19/13
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.

Brind L. Bepp, BS
Quality Manager

12/19/13
Date

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

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



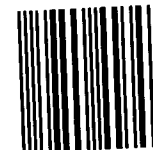
7010 2780 0001 4259 2431

**RETURN RECEIPT
REQUESTED**

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



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