



# CITY OF HOT SPRINGS

## Davidson Wastewater Treatment Plant

320 Davidson Drive  
Hot Springs, Arkansas 71901

Leslie,

The Davidson Wastewater Treatment Plant (Permit Number AR0033880) received its permit on July 1, 2024. Contained in the permit is Section B. 'Permit Compliance Schedule'. This section of the permit lays out compliance with the Final WET Limitations for P.promelas (Fathead Minnow). Davidson WWTP is required to meet compliance within three years after the effective date of the permit.

Attached is the reports addressing progress towards WET Limitations for P.promelas. It is certificates showing compliance within the WET limitation for each quarter. If you have any questions, please let me know.

Thank you,

Harold Mauldin  
Facilities Operations Manager  
City of Hot Springs

# ANALYTICAL REPORT

## PREPARED FOR

Attn: Harold Mauldin  
City of Hot Springs  
320 Davidson Drive  
Hot Springs, Arkansas 71901

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## JOB DESCRIPTION

Quarterly Biomonitoring

## JOB NUMBER

192-13804-1

# Eurofins Arkansas

1

## Job Notes

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The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing South Central, LLC Project Manager.

## Authorization



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Authorized for release by  
John Overbey, Business Unit Manager  
[john.overbey@et.eurofinsus.com](mailto:john.overbey@et.eurofinsus.com)  
(501)224-5060

Re: Chronic 7-Day Renewal *Pimephales promelas* (Fathead minnow) and *Ceriodaphnia dubia*  
 Plant Effluent - City of Hot Springs  
 NPDES Permit No. AR0033880 AFIN#26-00145  
 Control No. 275107-1

This report is the analytical results and supporting information for the samples submitted to Eurofins Arkansas. The following results are applicable only to the sample identified by the control number referenced above. Accurate assessment of the data requires access to the entire document. Each section of the report has been reviewed and approved by the Laboratory Manager or qualified designee.

Testing procedures and Quality Assurance were in accordance with "Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms" EPA-821-R-02-013, Fourth Edition, October 2002. The supporting chemistry data included with this report is intended for accessing the basic water quality of the effluent as required by this test method and is not intended to be utilized for discharge monitoring reports. Test results are summarized below:

Method 1000.0 Chronic *Pimephales promelas* (Fathead minnow) Survival and Growth Test: The permit requirement is NOEC not less than 58%. The following were concluded from the test:

|                  |             |             |                |             |             |             |
|------------------|-------------|-------------|----------------|-------------|-------------|-------------|
| <b>Survival:</b> | <b>NOEC</b> | <b>LOEC</b> | <b>Growth:</b> | <b>NOEC</b> | <b>LOEC</b> | <b>IC25</b> |
|                  | 77          | >77         |                | 77          | >77         | >77         |

**The sample therefore PASSED the Fathead minnow test.**

Method 1002.0 Chronic *Ceriodaphnia dubia* Survival and Reproduction Test: The permit requirement is NOEC not less than 58%. The following were concluded from the test:

|                  |             |             |                      |             |             |             |
|------------------|-------------|-------------|----------------------|-------------|-------------|-------------|
| <b>Survival:</b> | <b>NOEC</b> | <b>LOEC</b> | <b>Reproduction:</b> | <b>NOEC</b> | <b>LOEC</b> | <b>IC25</b> |
|                  | 77          | >77         |                      | 77          | >77         | >77         |

**The sample therefore PASSED the *Ceriodaphnia dubia* test.**

Appendix (Summary): Test 1000.0

SUMMARY REPORTING FORMS

CHRONIC BIOMONITORING

Pimephales promelas (Fathead Minnow)

SURVIVAL AND GROWTH

1. Steel's Many-One Rank Test:

Is the mean survival significantly different ( $p=0.05$ ) than the control survival for the % effluent corresponding to (lethality):

|                                   |                       |                         |
|-----------------------------------|-----------------------|-------------------------|
| a.) LOW FLOW OR CRITICAL DILUTION | <u>          </u> YES | <u>      X      </u> NO |
| b.) 1/2 LOW FLOW DILUTION         | <u>          </u> YES | <u>          </u> NO    |

2. Dunnett's Test:

Is the mean dry weight (growth) significantly different ( $p=0.05$ ) than the control's dry weight (growth) for the % effluent corresponding to (significant non-lethal effects):

|                                   |                       |                         |
|-----------------------------------|-----------------------|-------------------------|
| a.) LOW FLOW OR CRITICAL DILUTION | <u>          </u> YES | <u>      X      </u> NO |
| b.) 1/2 LOW FLOW DILUTION         | <u>          </u> YES | <u>          </u> NO    |

- |                                                              |                                           |
|--------------------------------------------------------------|-------------------------------------------|
| 3. If you answered NO to 1.a) enter [0] otherwise enter [1]: | <u>      0      </u> (TLP6C)              |
| 4. If you answered NO to 2.a) enter [0] otherwise enter [1]: | <u>      0      </u> (TGP6C)              |
| 5. NOEC Pimephales Lethality:                                | <u>      77 %      </u> (TOP6C)           |
| 6. LOEC Pimephales Lethality:                                | <u>      77 %      </u> (TXP6C)           |
| 7. NOEC Pimephales Sublethality:                             | <u>      77 %      </u> (TPP6C)           |
| 8. LOEC Pimephales Sublethality:                             | <u>      77 %      </u> (TYP6C)           |
| 9. Coefficient of variation for Pimephales growth:           | <u>      14.2      </u> (TQP6C)           |
| 10. Sublethality for this test:                              | <u>      77 %      </u> (51714 or 51714S) |

## Appendix (Summary): Test 1002.0

SUMMARY REPORTING FORMS  
CHRONIC BIOMONITORING

Ceriodaphnia dubia  
SURVIVAL AND REPRODUCTION

## 1. Fisher's Exact Test:

Is the mean survival significantly different ( $p=0.05$ ) than the control survival for the % effluent corresponding to (lethality):

|                                   |                       |                         |
|-----------------------------------|-----------------------|-------------------------|
| a.) LOW FLOW OR CRITICAL DILUTION | <u>          </u> YES | <u>      X      </u> NO |
| b.) 1/2 LOW FLOW DILUTION         | <u>          </u> YES | <u>          </u> NO    |

## 2. Steel's Many-One Rank Test:

Is the mean number of young produced per female significantly different ( $p=0.05$ ) than the control's number of young per female for the % effluent corresponding to (significant non-lethal effects):

|                                   |                       |                         |
|-----------------------------------|-----------------------|-------------------------|
| a.) LOW FLOW OR CRITICAL DILUTION | <u>          </u> YES | <u>      X      </u> NO |
| b.) 1/2 LOW FLOW DILUTION         | <u>          </u> YES | <u>          </u> NO    |

- |                                                              |                                           |
|--------------------------------------------------------------|-------------------------------------------|
| 3. If you answered NO to 1.a) enter [0] otherwise enter [1]: | <u>      0      </u> (TLP3B)              |
| 4. If you answered NO to 2.a) enter [0] otherwise enter [1]: | <u>      0      </u> (TGP3B)              |
| 5. NOEC Ceriodaphnia Lethality:                              | <u>      77 %      </u> (TOP3B)           |
| 6. LOEC Ceriodaphnia Lethality:                              | <u>      77 %      </u> (TXP3B)           |
| 7. NOEC Ceriodaphnia Sublethality:                           | <u>      77 %      </u> (TPP3B)           |
| 8. LOEC Ceriodaphnia Sublethality:                           | <u>      77 %      </u> (TYP3B)           |
| 9. Coefficient of variation for Ceriodaphnia Reproduction:   | <u>      10.6      </u> (TQP3B)           |
| 10. Sublethality for this test:                              | <u>      77 %      </u> (51710 or 51710Q) |

# ANALYTICAL REPORT

## PREPARED FOR

Attn: Harold Mauldin  
City of Hot Springs  
320 Davidson Drive  
Hot Springs, Arkansas 71901

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## JOB DESCRIPTION

Quarterly Biomonitoring

## JOB NUMBER

192-15749-1

# Eurofins Arkansas

## Job Notes

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The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing South Central, LLC Project Manager.

## Authorization



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Designee for  
John Overbey, Business Unit Manager  
[john.overbey@et.eurofinsus.com](mailto:john.overbey@et.eurofinsus.com)  
(501)224-5060



Re: Chronic 7-Day Renewal *Pimephales promelas* (Fathead minnow) and *Ceriodaphnia dubia*  
 Outfall 001 - City of Hot Springs  
 NPDES Permit No. AR0033880 AFIN#26-00145  
 Control No. 275272-1

This report is the analytical results and supporting information for the samples submitted to Eurofins Arkansas. The following results are applicable only to the sample identified by the control number referenced above. Accurate assessment of the data requires access to the entire document. Each section of the report has been reviewed and approved by the Laboratory Manager or qualified designee.

Testing procedures and Quality Assurance were in accordance with "Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms" EPA-821-R-02-013, Fourth Edition, October 2002. The supporting chemistry data included with this report is intended for accessing the basic water quality of the effluent as required by this test method and is not intended to be utilized for discharge monitoring reports. Test results are summarized below:

Method 1000.0 Chronic *Pimephales promelas* (Fathead minnow) Survival and Growth Test:

**Due to analyst error, the test was set up 2 minutes outside of the 36hr holding time. The test is therefore invalid and will need to be repeated.**

Method 1002.0 Chronic *Ceriodaphnia dubia* Survival and Reproduction Test: The permit requirement is NOEC not less than 58%. The following were concluded from the test:

|                  |             |             |                      |             |             |             |
|------------------|-------------|-------------|----------------------|-------------|-------------|-------------|
| <b>Survival:</b> | <b>NOEC</b> | <b>LOEC</b> | <b>Reproduction:</b> | <b>NOEC</b> | <b>LOEC</b> | <b>IC25</b> |
|                  | 77          | >77         |                      | 77          | >77         | 75.7        |

**The sample therefore PASSED the *Ceriodaphnia dubia* test.**

Appendix (Summary): Test 1000.0

SUMMARY REPORTING FORMS

CHRONIC BIOMONITORING

*Pimephales promelas* (Fathead Minnow)

SURVIVAL AND GROWTH

1. Steel's Many-One Rank Test:

Is the mean survival significantly different ( $p=0.05$ ) than the control survival for the % effluent corresponding to (lethality):

|                                   |                       |                         |
|-----------------------------------|-----------------------|-------------------------|
| a.) LOW FLOW OR CRITICAL DILUTION | <u>          </u> YES | <u>      X      </u> NO |
| b.) 1/2 LOW FLOW DILUTION         | <u>          </u> YES | <u>          </u> NO    |

2. Dunnett's Test:

Is the mean dry weight (growth) significantly different ( $p=0.05$ ) than the control's dry weight (growth) for the % effluent corresponding to (significant non-lethal effects):

|                                   |                       |                         |
|-----------------------------------|-----------------------|-------------------------|
| a.) LOW FLOW OR CRITICAL DILUTION | <u>          </u> YES | <u>      X      </u> NO |
| b.) 1/2 LOW FLOW DILUTION         | <u>          </u> YES | <u>          </u> NO    |

- |                                                              |                                           |
|--------------------------------------------------------------|-------------------------------------------|
| 3. If you answered NO to 1.a) enter [0] otherwise enter [1]: | <u>      0      </u> (TLP6C)              |
| 4. If you answered NO to 2.a) enter [0] otherwise enter [1]: | <u>      0      </u> (TGP6C)              |
| 5. NOEC Pimephales Lethality:                                | <u>      77 %      </u> (TOP6C)           |
| 6. LOEC Pimephales Lethality:                                | <u>      77 %      </u> (TXP6C)           |
| 7. NOEC Pimephales Sublethality:                             | <u>      77 %      </u> (TPP6C)           |
| 8. LOEC Pimephales Sublethality:                             | <u>      &gt;77 %      </u> (TYP6C)       |
| 9. Coefficient of variation for Pimephales growth:           | <u>      12.3      </u> (TQP6C)           |
| 10. Sublethality for this test:                              | <u>      77 %      </u> (51714 or 51714S) |

Appendix (Summary): Test 1002.0

SUMMARY REPORTING FORMS  
CHRONIC BIOMONITORING

Ceriodaphnia dubia  
SURVIVAL AND REPRODUCTION

1. Fisher's Exact Test:

Is the mean survival significantly different ( $p=0.05$ ) than the control survival for the % effluent corresponding to (lethality):

|                                   |                   |                    |
|-----------------------------------|-------------------|--------------------|
| a.) LOW FLOW OR CRITICAL DILUTION | <u>      </u> YES | <u>      </u> X NO |
| b.) 1/2 LOW FLOW DILUTION         | <u>      </u> YES | <u>      </u> NO   |

2. Steel's Many-One Rank Test:

Is the mean number of young produced per female significantly different ( $p=0.05$ ) than the control's number of young per female for the % effluent corresponding to (significant non-lethal effects):

|                                   |                   |                    |
|-----------------------------------|-------------------|--------------------|
| a.) LOW FLOW OR CRITICAL DILUTION | <u>      </u> YES | <u>      </u> X NO |
| b.) 1/2 LOW FLOW DILUTION         | <u>      </u> YES | <u>      </u> NO   |

3. If you answered NO to 1.a) enter [0] otherwise enter [1]:       0       (TLP3B)

4. If you answered NO to 2.a) enter [0] otherwise enter [1]:       0       (TGP3B)

5. NOEC Ceriodaphnia Lethality:       77 %       (TOP3B)

6. LOEC Ceriodaphnia Lethality:       77 %       (TXP3B)

7. NOEC Ceriodaphnia Sublethality:       77 %       (TPP3B)

8. LOEC Ceriodaphnia Sublethality:       77 %       (TYP3B)

9. Coefficient of variation for Ceriodaphnia Reproduction:       19.2       (TQP3B)

10. Sublethality for this test:       77 %       (51710 or 51710Q)

# ANALYTICAL REPORT

## PREPARED FOR

Attn: Harold Mauldin  
City of Hot Springs  
320 Davidson Drive  
Hot Springs, Arkansas 71901

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## JOB DESCRIPTION

Quarterly Biomonitoring

## JOB NUMBER

192-16264-1

# Eurofins Arkansas

## Job Notes

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## Authorization



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Designee for  
John Overbey, Business Unit Manager  
[john.overbey@et.eurofinsus.com](mailto:john.overbey@et.eurofinsus.com)  
(501)224-5060

Re: Chronic 7-Day Renewal *Pimephales promelas* (Fathead minnow)  
Outfall 001 - City of Hot Springs  
NPDES Permit No. AR0033880 AFIN#26-00145  
Control No. 275311-1

This report is the analytical results and supporting information for the samples submitted to Eurofins Arkansas. The following results are applicable only to the sample identified by the control number referenced above. Accurate assessment of the data requires access to the entire document. Each section of the report has been reviewed and approved by the Laboratory Manager or qualified designee.

Testing procedures and Quality Assurance were in accordance with "Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms" EPA-821-R-02-013, Fourth Edition, October 2002. The supporting chemistry data included with this report is intended for accessing the basic water quality of the effluent as required by this test method and is not intended to be utilized for discharge monitoring reports. Test results are summarized below:

Method 1000.0 Chronic *Pimephales promelas* (Fathead minnow) Survival and Growth Test: The permit requirement is NOEC not less than 58%. The following were concluded from the test:

|                  |             |             |                |             |             |             |
|------------------|-------------|-------------|----------------|-------------|-------------|-------------|
| <b>Survival:</b> | <b>NOEC</b> | <b>LOEC</b> | <b>Growth:</b> | <b>NOEC</b> | <b>LOEC</b> | <b>IC25</b> |
|                  | 77          | >77         |                | 77          | >77         | >77         |

The sample therefore **PASSED** the Fathead minnow test.

Appendix (Summary): Test 1000.0  
SUMMARY REPORTING FORMS  
CHRONIC BIOMONITORING  
*Pimephales promelas* (Fathead Minnow)  
SURVIVAL AND GROWTH

1. Dunnett's Test:

Is the mean survival significantly different ( $p=0.05$ ) than the control survival for the % effluent corresponding to (lethality):

|                                   |           |         |          |
|-----------------------------------|-----------|---------|----------|
| a.) LOW FLOW OR CRITICAL DILUTION | _____ YES | _____ X | _____ NO |
| b.) 1/2 LOW FLOW DILUTION         | _____ YES | _____   | _____ NO |

2. Dunnett's Test:

Is the mean dry weight (growth) significantly different ( $p=0.05$ ) than the control's dry weight (growth) for the % effluent corresponding to (significant non-lethal effects):

|                                   |           |         |          |
|-----------------------------------|-----------|---------|----------|
| a.) LOW FLOW OR CRITICAL DILUTION | _____ YES | _____ X | _____ NO |
| b.) 1/2 LOW FLOW DILUTION         | _____ YES | _____   | _____ NO |

- |                                                              |            |                   |
|--------------------------------------------------------------|------------|-------------------|
| 3. If you answered NO to 1.a) enter [0] otherwise enter [1]: | _____ 0    | (TLP6C)           |
| 4. If you answered NO to 2.a) enter [0] otherwise enter [1]: | _____ 0    | (TGP6C)           |
| 5. NOEC Pimephales Lethality:                                | _____ 77 % | (TOP6C)           |
| 6. LOEC Pimephales Lethality:                                | _____ 77 % | (TXP6C)           |
| 7. NOEC Pimephales Sublethality:                             | _____ 77 % | (TPP6C)           |
| 8. LOEC Pimephales Sublethality:                             | _____ 77 % | (TYP6C)           |
| 9. Coefficient of variation for Pimephales growth:           | _____ 32.9 | (TQP6C)           |
| 10. Sublethality for this test:                              | _____ 77 % | (51714 or 51714S) |

# ANALYTICAL REPORT

## PREPARED FOR

Attn: Harold Mauldin  
City of Hot Springs  
320 Davidson Drive  
Hot Springs, Arkansas 71901

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## JOB DESCRIPTION

Quarterly Biomonitoring

## JOB NUMBER

192-19766-1



# Eurofins Arkansas

1

## Job Notes

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John Overbey, Business Unit Manager  
[john.overbey@et.eurofinsus.com](mailto:john.overbey@et.eurofinsus.com)  
(501)224-5060

Re: Chronic 7 Day Renewal *Ceriodaphnia dubia*  
 Sample ID: Outfall 001  
 Job number: 192-19766-1  
 Permit No.: AR0033880 AFIN#26-00145

This report is the analytical results and supporting information for the samples submitted to Eurofins Arkansas. The following results are applicable only to the sample identified by the control number referenced above. Accurate assessment of the data requires access to the entire document. Each section of the report has been reviewed and approved by the Laboratory Manager or qualified designee.

Testing procedures and Quality Assurance were in accordance with "Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms" EPA-821-R-02-013, Fourth Edition, October 2002. The supporting chemistry data included with this report is intended for accessing the basic water quality of the effluent as required by this test method and is not intended to be utilized for discharge monitoring reports. Test results are summarized below:

Method 1002.0 Chronic *Ceriodaphnia dubia* Survival and Reproduction Test:

The permit requirement is NOEC not less than 58%.

The following were concluded from the test:

|                  |             |             |             |                      |             |             |             |
|------------------|-------------|-------------|-------------|----------------------|-------------|-------------|-------------|
| <b>Survival:</b> | <b>NOEC</b> | <b>LOEC</b> | <b>LC50</b> | <b>Reproduction:</b> | <b>NOEC</b> | <b>LOEC</b> | <b>IC25</b> |
|                  | 77          | >77         | >77         |                      | 77          | >77         | >77         |

The sample therefore PASSED the *Ceriodaphnia dubia* test.

## Appendix (Summary): Test 1002.0

SUMMARY REPORTING FORMS  
CHRONIC BIOMONITORING  
*Ceriodaphnia dubia*  
SURVIVAL AND REPRODUCTION

## 1. Fisher's Exact Test:

Is the mean survival significantly different ( $p=0.05$ ) than the control survival for the % effluent corresponding to (lethality):

- a.) LOW FLOW OR CRITICAL DILUTION  
b.) 1/2 LOW FLOW DILUTION

|       |     |       |   |       |    |
|-------|-----|-------|---|-------|----|
| _____ | YES | _____ | X | _____ | NO |
| _____ | YES | _____ |   | _____ | NO |

## 2. Steel's Many-One Rank Test:

Is the mean number of young produced per female significantly different ( $p=0.05$ ) than the control's number of young per female for the % effluent corresponding to (significant non-lethal effects):

- a.) LOW FLOW OR CRITICAL DILUTION  
b.) 1/2 LOW FLOW DILUTION

|       |     |       |   |       |    |
|-------|-----|-------|---|-------|----|
| _____ | YES | _____ | X | _____ | NO |
| _____ | YES | _____ |   | _____ | NO |

3. If you answered NO to 1.a) enter [0] otherwise enter [1]:  
4. If you answered NO to 2.a) enter [0] otherwise enter [1]:  
5. NOEC *Ceriodaphnia* Lethality:  
6. LOEC *Ceriodaphnia* Lethality:  
7. NOEC *Ceriodaphnia* Sub Lethality:  
8. LOEC *Ceriodaphnia* Sub Lethality:  
9. Coefficient of variation for *Ceriodaphnia* Reproduction:  
10. Sub Lethality for this test:

|       |                      |
|-------|----------------------|
| _____ | 0 (TLP3B)            |
| _____ | 0 (TGP3B)            |
| _____ | 77 (TOP3B)           |
| _____ | >77 (TXP3B)          |
| _____ | 77 (TPP3B)           |
| _____ | >77 (TYP3B)          |
| _____ | 28.62 (TQP3B)        |
| _____ | 77 (51710 or 51710Q) |

# ANALYTICAL REPORT

## PREPARED FOR

Attn: Harold Mauldin  
City of Hot Springs  
320 Davidson Drive  
Hot Springs, Arkansas 71901

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## JOB DESCRIPTION

Quarterly Biomonitoring

## JOB NUMBER

192-18989-1

# Eurofins Arkansas

1

## Job Notes

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The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing South Central, LLC Project Manager.

## Authorization



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Designee for  
John Overbey, Business Unit Manager  
[john.overbey@et.eurofinsus.com](mailto:john.overbey@et.eurofinsus.com)  
(501)224-5060

Re: Chronic *Pimephales promelas* (Fathead minnow) and *Ceriodaphnia dubia*  
Sample ID: Outfall 001  
Job number: 192-18989-1  
Permit No.: AR0033880 AFIN#26-00145

This report is the analytical results and supporting information for the samples submitted to Eurofins Arkansas. The following results are applicable only to the sample identified by the control number referenced above. Accurate assessment of the data requires access to the entire document. Each section of the report has been reviewed and approved by the Laboratory Manager or qualified designee.

Testing procedures and Quality Assurance were in accordance with "Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms" EPA-821-R-02-013, Fourth Edition, October 2002. The supporting chemistry data included with this report is intended for accessing the basic water quality of the effluent as required by this test method and is not intended to be utilized for discharge monitoring reports. Test results are summarized below:

**The statistically significant difference noted for the 33% and 44% effluent concentration for the Fathead minnow Growth test does not follow a dose-response pattern and is considered an anomaly.**

Method 1000.0 Chronic *Pimephales promelas* (Fathead minnow) Survival and Growth Test:  
The permit requirement is NOEC not less than 58%.  
The following were concluded from the test:

|                  |             |             |             |                |             |             |             |
|------------------|-------------|-------------|-------------|----------------|-------------|-------------|-------------|
| <b>Survival:</b> | <b>NOEC</b> | <b>LOEC</b> | <b>LC50</b> | <b>Growth:</b> | <b>NOEC</b> | <b>LOEC</b> | <b>IC25</b> |
|                  | 77          | >77         | >77         |                | 77          | >77         | >77         |

**The sample therefore PASSED the Fathead minnow test.**

Method 1002.0 Chronic *Ceriodaphnia dubia* Survival and Reproduction Test:

**The *Ceriodaphnia dubia* Survival and Reproduction Test failed to meet the test acceptance requirements for the control survival being greater than or equal to 80% in addition to the Percent Minimum Significant Difference (PMSD) being above the upper boundary.**

**The test is therefore invalid and will need to be repeated. The data is included for your review.**

## Appendix (Summary): Test 1000.0

SUMMARY REPORTING FORMS  
CHRONIC BIOMONITORING  
*Pimephales promelas* (Fathead minnow)  
SURVIVAL AND GROWTH

## 1. Steel's Many-One Rank Test:

Is the mean survival significantly different ( $p=0.05$ ) than the control survival for the % effluent corresponding to (lethality):

- a.) LOW FLOW OR CRITICAL DILUTION  
b.) 1/2 LOW FLOW DILUTION

\_\_\_\_ YES      X   NO  
\_\_\_\_ YES    \_\_\_\_\_ NO

## 2. Dunnett's Test:

Is the mean dry weight (growth) significantly different ( $p=0.05$ ) than the control's dry weight (growth) for the % effluent corresponding to (significant non-lethal effects):

- a.) LOW FLOW OR CRITICAL DILUTION  
b.) 1/2 LOW FLOW DILUTION

\_\_\_\_ YES      X   NO  
\_\_\_\_ YES    \_\_\_\_\_ NO

3. If you answered NO to 1.a) enter [0] otherwise enter [1]:  
4. If you answered NO to 2.a) enter [0] otherwise enter [1]:  
5. NOEC Pimephales Lethality:  
6. LOEC Pimephales Lethality:  
7. NOEC Pimephales Sub Lethality:  
8. LOEC Pimephales Sub Lethality:  
9. Coefficient of variation from Pimephales growth:  
10. Sub Lethality for this test:

\_\_\_\_ 0 (TLP6C)  
\_\_\_\_ 0 (TGP6C)  
\_\_\_\_ 77 (TOP6C)  
\_\_\_\_ >77 (TXP6C)  
\_\_\_\_ 77 (TPP6C)  
\_\_\_\_ >77 (TYP6C)  
\_\_\_\_ 11.1 (TQP6C)  
\_\_\_\_ 77 (51714 or 51714S)