

| BLEDSOE COUNTY CORRECTIONAL COMPLEX - BCCX | | | | | |
|--|--------|--------|------|--------|------|
| TN0056626 | | | | | |
| DATE | FLOW | N mg/L | # | P mg/L | # |
| 9/1/2022 | 0.000 | 2.4 | 0.0 | 0.5 | 0.0 |
| 9/6/2022 | 0.000 | 0.9 | 0.0 | 0.5 | 0.0 |
| 9/15/2022 | 0.000 | 2.8 | 0.0 | 0.5 | 0.0 |
| 9/19/2022 | 0.000 | 1.3 | 0.0 | 0.5 | 0.0 |
| | | | | | |
| 10/3/2022 | 0.000 | 1.6 | 0.0 | 0.5 | 0.0 |
| 10/11/2022 | 0.000 | 1.4 | 0.0 | 0.5 | 0.0 |
| 10/17/2022 | 0.000 | 1.2 | 0.0 | 0.5 | 0.0 |
| 10/20/2022 | 0.000 | 4.5 | 0.0 | 0.5 | 0.0 |
| | | | | | |
| 11/1/2022 | 0.000 | 2.1 | 0.0 | 0.5 | 0.0 |
| 11/9/2022 | 0.081 | 1.9 | 1.2 | 0.5 | 0.3 |
| 11/15/2022 | 0.000 | 5.1 | 0.0 | 0.5 | 0.0 |
| 11/23/2022 | 0.018 | 4.8 | 0.7 | 0.5 | 0.1 |
| 11/28/2022 | 0.000 | 1.7 | 0.0 | 0.5 | 0.0 |
| | | | | | |
| | | | | | |
| 12/8/2022 | 0.567 | 5.9 | 27.9 | 0.5 | 2.4 |
| 12/15/2022 | 0.369 | 2.2 | 6.8 | 0.5 | 1.5 |
| 12/21/2022 | 0.290 | 2.8 | 6.8 | 0.5 | 1.2 |
| 12/28/2022 | 0.000 | 2.4 | 0.0 | 0.5 | 0.0 |
| | | | | | |
| | | | | | |
| 1/4/2023 | 0.354 | 0.5 | 1.5 | 0.5 | 1.5 |
| 1/11/2023 | 0.256 | 0.5 | 1.0 | 0.5 | 1.1 |
| 1/20/2023 | 0.011 | 1.3 | 0.1 | 0.5 | 0.0 |
| 1/25/2023 | 0.303 | 2.3 | 5.8 | 0.5 | 1.3 |
| | | | | | |
| | | | | | |
| 2/1/2023 | 0.257 | 0.5 | 1.0 | 0.5 | 1.1 |
| 2/8/2023 | 0.194 | 1.2 | 2.0 | 0.5 | 0.8 |
| 2/15/2023 | 0.163 | 0.9 | 1.2 | 0.5 | 0.7 |
| 2/22/2023 | 0.241 | 0.7 | 1.4 | 0.5 | 1.0 |
| | | | | | |
| | | | | | |
| 3/1/2023 | 0.286 | 1.1 | 2.6 | 0.5 | 1.2 |
| 3/8/2023 | 0.144 | 0.7 | 0.9 | 0.5 | 0.6 |
| 3/16/2023 | 0.162 | 1.4 | 1.9 | 0.5 | 0.7 |
| 3/21/2023 | 0.208 | 1.1 | 1.8 | 0.5 | 0.9 |
| 3/29/2023 | 0.157 | 0.5 | 0.7 | 0.5 | 0.7 |
| | | | | | |
| | | | | | |
| 4/5/2023 | 0.282 | 1.2 | 2.8 | 0.5 | 1.2 |
| 4/10/2023 | 0.171 | 1.1 | 1.5 | 0.5 | 0.7 |
| 4/19/2023 | 0.119 | 0.9 | 0.9 | 0.5 | 0.5 |
| 4/26/2023 | 0.169 | 0.9 | 1.3 | 0.5 | 0.7 |
| | | | | | |
| 5/4/2023 | 0.000 | 1.7 | 0.0 | 0.5 | 0.0 |
| 5/10/2023 | 0.000 | 1.5 | 0.0 | 0.5 | 0.0 |
| 5/17/2023 | 0.000 | 22.1 | 0.0 | 1.0 | 0.0 |
| 5/24/2023 | 0.000 | 11.9 | 0.0 | 1.4 | 0.0 |
| 5/31/2023 | 0.000 | 2.3 | 0.0 | 0.9 | 0.0 |
| | | | | | |
| 6/1/2023 | 0.000 | | 0.0 | | 0.0 |
| 6/7/2023 | 0.000 | | 0.0 | | 0.0 |
| 6/14/2023 | 0.000 | | 0.0 | | 0.0 |
| 6/21/2023 | 0.000 | | 0.0 | | 0.0 |
| 6/28/2023 | 0.000 | | 0.0 | | 0.0 |
| | | | | | |
| 7/5/2023 | 0.000 | | 0.0 | | 0.0 |
| 7/12/2023 | 0.000 | | 0.0 | | 0.0 |
| 7/19/2023 | 0.000 | | 0.0 | | 0.0 |
| 7/26/2023 | 0.000 | | 0.0 | | 0.0 |
| | | | | | |
| 8/2/2023 | 0.000 | | 0.0 | | 0.0 |
| 8/9/2023 | 0.000 | | 0.0 | | 0.0 |
| 8/16/2023 | 0.000 | | 0.0 | | 0.0 |
| 8/23/2023 | 0.000 | | 0.0 | | 0.0 |
| 8/30/2023 | 0.000 | | 0.0 | | 0.0 |
| | | | | | |
| | | | | | |
| COUNT | 52.000 | | 53 | | 53 |
| SUM | 4.8 | | 71.9 | | 20.0 |
| D AVG | 0.092 | | 1.4 | | 0.4 |
| ROL AVG | | N | 495 | P | 138 |
| | | | | | |
| ANNUAL LIMIT | | | 2737 | | 547 |
| DAILY LIMIT | | | 7.5 | | 1.5 |

1.85 mg/l 0.57 mg/l

| | |
|-----------------|---------------------|
| Operator | Phil Webster |
| | <i>Phil Webster</i> |
| Certification # | 15250 |
| DATE | 9-13-23 |



09/12/2023

Alliance Water Resources
Mr. Phil Webster
Waste Water Treatment Plant
1045 Horsehead Rd.
Pikeville, TN 37367

Ref: Analytical Testing
Lab Report Number: 23-234-0392
Client Project Description: Annual Bioassay
TN0056626

Dear Permittee:

The WET (Whole Effluent Toxicity) test results for the species *Ceriodaphnia dubia* cannot be used to make regulatory determinations, and are unacceptable for effluent characterization or compliance monitoring.

The WET test is invalid due to the control performance not meeting criteria. Control performance criteria are used to ensure that test organisms are healthy and responding normally; so that poor test organism health does not affect effluent toxicity.

The results of this WET (Whole Effluent Toxicity) test are acceptable according to test review criteria for the species *Pimephales promelas*.

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: *Ceriodaphnia dubia* IC25 = N/A (Control Failure)
Fathead minnow IC25 > 100 %

IC25 Permit Limit: 100 %

EPA Methods: 1002.0 *Ceriodaphnia dubia* Survival and Reproduction
1000.0 *Pimephales promelas* Larval Survival and Growth

All statistical interpretations generated by CETIS - Comprehensive Environmental Toxicity Information System (v2.1.4.6x64). CETIS created by Tidepool Scientific Software

Respectfully,

Blake Smith
Lab Supervisor

CETIS Summary Report

Report Date: 12 Sep-23 14:20 (p 1 of 2)
 Test Code/ID: 23-234-0392-cd / 06-0380-4389

Ceriodaphnia 7-d Survival and Reproduction Test

Waypoint Analytical Tennessee, LLC.

Batch ID: 06-0548-2271 **Test Type:** Reproduction-Survival (7d) **Analyst:** Lauren N. Richardson
Start Date: 22 Aug-23 12:17 **Protocol:** EPA/821/R-02-013 (2002) **Diluent:** 20% DMW
Ending Date: 29 Aug-23 12:22 **Species:** Ceriodaphnia dubia **Brine:** Not Applicable
Test Length: 7d 0h **Taxon:** **Source:** In-House Culture **Age:** <24

Sample ID: 01-3813-7599 **Code:** 23-234-0392 **Project:** WET Annual Compliance Test
Sample Date: 21 Aug-23 06:30 **Material:** POTW Effluent **Source:** Alliance Water Resources (BCCX) (TN)
Receipt Date: 22 Aug-23 10:25 **CAS (PC):** **Station:** Outfall 001
Sample Age: 30h (1.7 °C) **Client:** Alliance Water Resources (BCCX)

Sample Renewals

| Renewal | Sample Code | Sample Date | Receive Date | Renewal Date | Temp °C |
|---------|-------------|-----------------|-----------------|-----------------|---------|
| 1 | 23-234-0392 | 23 Aug-23 06:55 | 24 Aug-23 10:10 | 24 Aug-23 00:00 | 0.9 |
| 2 | 23-234-0392 | 25 Aug-23 06:25 | 26 Aug-23 11:05 | 26 Aug-23 00:00 | 4.2 |

Multiple Comparison Summary

| Analysis ID | Endpoint | Comparison Method | ✓ NOEL | LOEL | TOEL | PMSD | TU | S |
|--------------|------------------|-----------------------------------|--------|------|------|-------|----|---|
| 19-0970-4474 | 7d Survival Rate | Fisher Exact/Bonferroni-Holm Test | 100 | >100 | --- | --- | 1 | 1 |
| 14-6285-4423 | Reproduction | Steel Many-One Rank Sum Test | 100 | >100 | --- | 67.0% | 1 | 1 |

Point Estimate Summary

| Analysis ID | Endpoint | Point Estimate Method | ✓ Level | % | 95% LCL | 95% UCL | TU | S |
|--------------|--------------|------------------------------|---------|------|---------|---------|----|---|
| 11-9434-3888 | Reproduction | Linear Interpolation (ICPIN) | IC25 | >100 | --- | --- | <1 | 1 |

Test Acceptability

| Analysis ID | Endpoint | Attribute | Test Stat | TAC Limits | | | Overlap | Decision |
|--------------|------------------|--------------|-----------|------------|-------|-----|-----------------|----------|
| | | | | Lower | Upper | | | |
| 19-0970-4474 | 7d Survival Rate | Control Resp | 0.7 | 0.8 | << | Yes | Below Criteria | |
| 11-9434-3888 | Reproduction | Control Resp | 15.8 | 15 | << | Yes | Passes Criteria | |
| 14-6285-4423 | Reproduction | Control Resp | 15.8 | 15 | << | Yes | Passes Criteria | |
| 14-6285-4423 | Reproduction | PMSD | 0.6695 | 0.13 | 0.47 | Yes | Above Criteria | |

7d Survival Rate Summary

| Conc-% | Code | Count | Mean | 95% LCL | 95% UCL | Min | Max | Std Err | Std Dev | CV% | %Effect |
|--------|------|-------|--------|---------|---------|--------|--------|---------|---------|--------|---------|
| 0 | L | 10 | 0.7000 | 0.3544 | 1.0460 | 0.0000 | 1.0000 | 0.1528 | 0.4830 | 69.01% | 0.00% |
| 6.25 | | 10 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 0.0000 | 0.0000 | 0.00% | -42.86% |
| 12.5 | | 10 | 0.8000 | 0.4984 | 1.1020 | 0.0000 | 1.0000 | 0.1333 | 0.4216 | 52.70% | -14.29% |
| 25 | | 10 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 0.0000 | 0.0000 | 0.00% | -42.86% |
| 50 | | 10 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 0.0000 | 0.0000 | 0.00% | -42.86% |
| 100 | | 10 | 0.9000 | 0.6738 | 1.1260 | 0.0000 | 1.0000 | 0.1000 | 0.3162 | 35.14% | -28.57% |

Reproduction Summary

| Conc-% | Code | Count | Mean | 95% LCL | 95% UCL | Min | Max | Std Err | Std Dev | CV% | %Effect |
|--------|------|-------|------|---------|---------|-----|-----|---------|---------|--------|---------|
| 0 | L | 10 | 15.8 | 7.391 | 24.21 | 0 | 29 | 3.717 | 11.75 | 74.40% | 0.00% |
| 6.25 | | 10 | 28.7 | 25.15 | 32.25 | 19 | 35 | 1.571 | 4.968 | 17.31% | -81.65% |
| 12.5 | | 10 | 25.6 | 15.64 | 35.56 | 0 | 39 | 4.405 | 13.93 | 54.41% | -62.03% |
| 25 | | 10 | 29.7 | 25.38 | 34.02 | 18 | 39 | 1.909 | 6.038 | 20.33% | -87.97% |
| 50 | | 10 | 31.1 | 26.24 | 35.96 | 15 | 37 | 2.147 | 6.79 | 21.83% | -96.84% |
| 100 | | 10 | 27.6 | 17.45 | 37.75 | 0 | 41 | 4.485 | 14.18 | 51.39% | -74.68% |

CETIS Summary Report

Report Date: 12 Sep-23 14:20 (p 2 of 2)
Test Code/ID: 23-234-0392-cd / 06-0380-4389

Ceriodaphnia 7-d Survival and Reproduction Test

Waypoint Analytical Tennessee, LLC.

7d Survival Rate Detail

MD5: EB078F4AC200A407546A61ADE32C641F

| Conc-% | Code | Rep 1 | Rep 2 | Rep 3 | Rep 4 | Rep 5 | Rep 6 | Rep 7 | Rep 8 | Rep 9 | Rep 10 |
|--------|------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0 | L | 1.0000 | 1.0000 | 0.0000 | 1.0000 | 0.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 0.0000 |
| 6.25 | | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| 12.5 | | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 0.0000 | 0.0000 | 1.0000 |
| 25 | | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| 50 | | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| 100 | | 0.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |

Reproduction Detail

MD5: F478C9935903636D63D0A937A2FC652E

| Conc-% | Code | Rep 1 | Rep 2 | Rep 3 | Rep 4 | Rep 5 | Rep 6 | Rep 7 | Rep 8 | Rep 9 | Rep 10 |
|--------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|
| 0 | L | 29 | 26 | 0 | 20 | 0 | 21 | 27 | 22 | 13 | 0 |
| 6.25 | | 35 | 19 | 32 | 31 | 26 | 24 | 33 | 25 | 31 | 31 |
| 12.5 | | 22 | 39 | 34 | 30 | 35 | 33 | 30 | 1 | 0 | 32 |
| 25 | | 18 | 36 | 32 | 33 | 39 | 29 | 30 | 29 | 23 | 28 |
| 50 | | 35 | 28 | 25 | 37 | 35 | 35 | 36 | 15 | 33 | 32 |
| 100 | | 6 | 41 | 0 | 36 | 35 | 21 | 40 | 35 | 30 | 32 |

7d Survival Rate Binomials

| Conc-% | Code | Rep 1 | Rep 2 | Rep 3 | Rep 4 | Rep 5 | Rep 6 | Rep 7 | Rep 8 | Rep 9 | Rep 10 |
|--------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|
| 0 | L | 1/1 | 1/1 | 0/1 | 1/1 | 0/1 | 1/1 | 1/1 | 1/1 | 1/1 | 0/1 |
| 6.25 | | 1/1 | 1/1 | 1/1 | 1/1 | 1/1 | 1/1 | 1/1 | 1/1 | 1/1 | 1/1 |
| 12.5 | | 1/1 | 1/1 | 1/1 | 1/1 | 1/1 | 1/1 | 1/1 | 0/1 | 0/1 | 1/1 |
| 25 | | 1/1 | 1/1 | 1/1 | 1/1 | 1/1 | 1/1 | 1/1 | 1/1 | 1/1 | 1/1 |
| 50 | | 1/1 | 1/1 | 1/1 | 1/1 | 1/1 | 1/1 | 1/1 | 1/1 | 1/1 | 1/1 |
| 100 | | 0/1 | 1/1 | 1/1 | 1/1 | 1/1 | 1/1 | 1/1 | 1/1 | 1/1 | 1/1 |

CETIS Measurement Report

Report Date: 12 Sep-23 14:20 (p 1 of 3)
Test Code/ID: 23-234-0392-cd / 06-0380-4389

Ceriodaphnia 7-d Survival and Reproduction Test

Waypoint Analytical Tennessee, LLC.

| | | |
|-------------------------------------|--|---|
| Batch ID: 06-0548-2271 | Test Type: Reproduction-Survival (7d) | Analyst: Lauren N. Richardson |
| Start Date: 22 Aug-23 12:17 | Protocol: EPA/821/R-02-013 (2002) | Diluent: 20% DMW |
| Ending Date: 29 Aug-23 12:22 | Species: Ceriodaphnia dubia | Brine: Not Applicable |
| Test Length: 7d 0h | Taxon: | Source: In-House Culture Age: <24 |

| | | |
|--------------------------------------|--|---|
| Sample ID: 01-3813-7599 | Code: 23-234-0392 | Project: WET Annual Compliance Test |
| Sample Date: 21 Aug-23 06:30 | Material: POTW Effluent | Source: Alliance Water Resources (BCCX) (TN) |
| Receipt Date: 22 Aug-23 10:25 | CAS (PC): | Station: Outfall 001 |
| Sample Age: 30h (1.7 °C) | Client: Alliance Water Resources (BCCX) | |

CETIS Measurement Report

Report Date: 12 Sep-23 14:20 (p 2 of 3)
Test Code/ID: 23-234-0392-cd / 06-0380-4389

Ceriodaphnia 7-d Survival and Reproduction Test

Waypoint Analytical Tennessee , LLC.

Total Residual Chlorine-mg/L

| Conc-% | Code | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|--------|------|---|---|---|---|---|---|---|
| 0 | L | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 100 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Conductivity-µS/cm

| Conc-% | Code | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|--------|------|-------|-------|-------|-------|-------|-------|-------|
| 0 | L | 189.7 | 184.3 | 189.8 | 189.5 | 192.1 | 189.1 | 187.2 |
| 100 | | 577.8 | 576.3 | 593.6 | 578.8 | 569.2 | 568 | 567.6 |

Final Dissolved Oxygen-mg/L

| Conc-% | Code | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|--------|------|-----|-----|-----|------|------|-----|-----|
| 0 | L | 9.5 | 9.8 | 9.9 | 11 | 11.5 | 9 | 8.4 |
| 6.25 | | 9.7 | 9.7 | 9.8 | 10.5 | 11.2 | 8.9 | 8.4 |
| 12.5 | | 9.8 | 9.8 | 9.8 | 8.9 | 10.8 | 9.3 | 8.8 |
| 25 | | 9.4 | 9.6 | 9.7 | 10.1 | 10.8 | 9.1 | 8.9 |
| 50 | | 9.8 | 9.7 | 9.8 | 10.1 | 11 | 9.1 | 9 |
| 100 | | 10 | 9.8 | 9.8 | 9.8 | 11 | 9.1 | 9 |

Initial Dissolved Oxygen-mg/L

| Conc-% | Code | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|--------|------|-----|-----|------|-----|------|------|-----|
| 0 | L | 6.6 | 9.3 | 9.1 | 9.1 | 11.4 | 10.2 | 8.3 |
| 6.25 | | 6.7 | 9.4 | 9.2 | 9.2 | 11 | 10.4 | 8.2 |
| 12.5 | | 6.9 | 9.4 | 9.5 | 9.2 | 11 | 10.5 | 8.3 |
| 25 | | 7 | 9.4 | 9.8 | 9.4 | 10.6 | 10.6 | 8.3 |
| 50 | | 7.2 | 9.5 | 10.2 | 9.7 | 11 | 10.8 | 8.3 |
| 100 | | 7.5 | 9.9 | 10.3 | 10 | 11.2 | 10.9 | 8.6 |

Final pH-Units

| Conc-% | Code | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|--------|------|-----|-----|-----|-----|-----|-----|-----|
| 0 | L | 8.5 | 8.6 | 8.4 | 8.1 | 8.6 | 8.6 | 8.1 |
| 6.25 | | 8.5 | 8.6 | 8.5 | 8.5 | 8.6 | 8.7 | 8.1 |
| 12.5 | | 8.6 | 8.6 | 8.5 | 8.6 | 8.6 | 8.8 | 8.5 |
| 25 | | 8.5 | 8.6 | 8.5 | 8.6 | 8.7 | 8.7 | 8.6 |
| 50 | | 8.6 | 8.7 | 8.6 | 8.6 | 8.6 | 8.8 | 8.7 |
| 100 | | 8.7 | 8.7 | 8.5 | 8.6 | 8.7 | 8.9 | 8.6 |

Initial pH-Units

| Conc-% | Code | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|--------|------|-----|-----|-----|-----|-----|-----|-----|
| 0 | L | 8.2 | 8.2 | 8.2 | 8.2 | 8.1 | 8 | 8.4 |
| 6.25 | | 8.2 | 8.2 | 8 | 8.2 | 8.1 | 8.1 | 8.4 |
| 12.5 | | 8.2 | 8.2 | 8.1 | 8.1 | 8.1 | 8.2 | 8.3 |
| 25 | | 8.1 | 8 | 8 | 8 | 8 | 8.1 | 8.2 |
| 50 | | 8 | 7.9 | 7.9 | 7.9 | 8 | 8 | 8 |
| 100 | | 7.9 | 7.7 | 7.6 | 7.8 | 8 | 8 | 7.9 |

Final Temperature-°C

| Conc-% | Code | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|--------|------|------|------|------|------|------|------|------|
| 0 | L | 25.3 | 25.1 | 25 | 25 | 25.5 | 25.2 | 25 |
| 6.25 | | 25.2 | 25.1 | 24.8 | 25 | 25.6 | 25.3 | 24.1 |
| 12.5 | | 25.1 | 25 | 25.1 | 25.1 | 25.5 | 25.2 | 24.2 |
| 25 | | 25.1 | 25 | 25 | 25 | 25.5 | 25.1 | 24.9 |
| 50 | | 25.1 | 25 | 25.1 | 25.1 | 25.5 | 25.1 | 25 |
| 100 | | 25.3 | 25.1 | 25.2 | 25 | 25.4 | 25.2 | 25.1 |

CETIS Measurement Report

Report Date: 12 Sep-23 14:20 (p 3 of 3)
Test Code/ID: 23-234-0392-cd / 06-0380-4389

Ceriodaphnia 7-d Survival and Reproduction Test

Waypoint Analytical Tennessee, LLC.

Initial Temperature-°C

| Conc-% | Code | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|--------|------|------|------|------|------|------|------|------|
| 0 | L | 24.1 | 24.6 | 24 | 24.1 | 24.1 | 24.1 | 24.1 |
| 6.25 | | 24.1 | 24.8 | 24.4 | 24.1 | 24 | 24.2 | 24.2 |
| 12.5 | | 24.2 | 24.8 | 24.4 | 24.2 | 24.1 | 24.1 | 24.1 |
| 25 | | 24.1 | 24.9 | 24.5 | 24.1 | 24.2 | 24.1 | 24.1 |
| 50 | | 24.1 | 25 | 24.7 | 24.1 | 24.1 | 24.2 | 24.2 |
| 100 | | 24.2 | 25.2 | 25.1 | 24.2 | 24.1 | 24.2 | 24.3 |

CETIS Summary Report

Report Date: 12 Sep-23 14:33 (p 1 of 2)
 Test Code/ID: 23-234-0392-fh / 15-8318-1785

Fathead Minnow 7-d Larval Survival and Growth Test

Waypoint Analytical Tennessee, LLC.

| | | |
|--------------------------------------|--|---|
| Batch ID: 07-9695-3806 | Test Type: Growth-Survival (7d) | Analyst: Lauren N. Richardson |
| Start Date: 22 Aug-23 13:37 | Protocol: EPA/821/R-02-013 (2002) | Diluent: 20% DMW |
| Ending Date: 29 Aug-23 14:04 | Species: Pimephales promelas | Brine: Not Applicable |
| Test Length: 7d 0h | Taxon: | Source: Aquatic Biosystems, CO Age: <24 |
| Sample ID: 01-3813-7599 | Code: 23-234-0392 | Project: WET Annual Compliance Test |
| Sample Date: 21 Aug-23 06:30 | Material: POTW Effluent | Source: Alliance Water Resources (BCCX) (TN) |
| Receipt Date: 22 Aug-23 10:25 | CAS (PC): | Station: Outfall 001 |
| Sample Age: 31h (1.7 °C) | Client: Alliance Water Resources (BCCX) | |

Sample Renewals

| Renewal | Sample Code | Sample Date | Receive Date | Renewal Date | Temp °C |
|---------|-------------|-----------------|-----------------|-----------------|---------|
| 1 | 23-234-0392 | 23 Aug-23 06:55 | 24 Aug-23 10:10 | 24 Aug-23 00:00 | 0.9 |
| 2 | 23-234-0392 | 25 Aug-23 06:25 | 26 Jun-23 11:05 | 26 Aug-23 00:00 | 4.2 |

Multiple Comparison Summary

| Analysis ID | Endpoint | Comparison Method | ✓ NOEL | LOEL | TOEL | PMSD | TU | S |
|--------------|--------------------|----------------------------------|--------|------|------|-------|----|---|
| 05-7266-2333 | 7d Survival Rate | Steel Many-One Rank Sum Test | 100 | >100 | --- | 8.48% | 1 | 1 |
| 00-3356-4455 | Mean Dry Weight-mg | Dunnett Multiple Comparison Test | 100 | >100 | --- | 30.8% | 1 | 1 |

Point Estimate Summary

| Analysis ID | Endpoint | Point Estimate Method | ✓ Level | % | 95% LCL | 95% UCL | TU | S |
|--------------|--------------------|------------------------------|---------|------|---------|---------|----|---|
| 03-7260-5224 | Mean Dry Weight-mg | Linear Interpolation (ICPIN) | IC25 | >100 | --- | --- | <1 | 1 |

Test Acceptability

| Analysis ID | Endpoint | Attribute | Test Stat | TAC Limits | | | Overlap | Decision |
|--------------|--------------------|--------------|-----------|------------|-------|-----|-----------------|----------|
| | | | | Lower | Upper | | | |
| 05-7266-2333 | 7d Survival Rate | Control Resp | 0.975 | 0.8 | << | Yes | Passes Criteria | |
| 00-3356-4455 | Mean Dry Weight-mg | Control Resp | 0.59 | 0.25 | << | Yes | Passes Criteria | |
| 03-7260-5224 | Mean Dry Weight-mg | Control Resp | 0.59 | 0.25 | << | Yes | Passes Criteria | |
| 00-3356-4455 | Mean Dry Weight-mg | PMSD | 0.3079 | 0.12 | 0.3 | Yes | Above Criteria | |

7d Survival Rate Summary

| Conc-% | Code | Count | Mean | 95% LCL | 95% UCL | Min | Max | Std Err | Std Dev | CV% | %Effect |
|--------|------|-------|--------|---------|---------|--------|--------|---------|---------|-------|---------|
| 0 | L | 4 | 0.9750 | 0.8954 | 1.0550 | 0.9000 | 1.0000 | 0.0250 | 0.0500 | 5.13% | 0.00% |
| 6.25 | | 4 | 0.9500 | 0.8581 | 1.0420 | 0.9000 | 1.0000 | 0.0289 | 0.0577 | 6.08% | 2.56% |
| 12.5 | | 4 | 0.9750 | 0.8954 | 1.0550 | 0.9000 | 1.0000 | 0.0250 | 0.0500 | 5.13% | 0.00% |
| 25 | | 4 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 0.0000 | 0.0000 | 0.00% | -2.56% |
| 50 | | 4 | 0.9500 | 0.8581 | 1.0420 | 0.9000 | 1.0000 | 0.0289 | 0.0577 | 6.08% | 2.56% |
| 100 | | 4 | 0.9750 | 0.8954 | 1.0550 | 0.9000 | 1.0000 | 0.0250 | 0.0500 | 5.13% | 0.00% |

Mean Dry Weight-mg Summary

| Conc-% | Code | Count | Mean | 95% LCL | 95% UCL | Min | Max | Std Err | Std Dev | CV% | %Effect |
|--------|------|-------|--------|---------|---------|------|------|---------|---------|--------|---------|
| 0 | L | 4 | 0.59 | 0.462 | 0.718 | 0.49 | 0.68 | 0.04021 | 0.08042 | 13.63% | 0.00% |
| 6.25 | | 4 | 0.6125 | 0.5445 | 0.6805 | 0.58 | 0.67 | 0.02136 | 0.04272 | 6.97% | -3.81% |
| 12.5 | | 4 | 0.6825 | 0.5075 | 0.8575 | 0.55 | 0.81 | 0.05498 | 0.11 | 16.11% | -15.68% |
| 25 | | 4 | 0.65 | 0.5247 | 0.7753 | 0.56 | 0.75 | 0.03937 | 0.07874 | 12.11% | -10.17% |
| 50 | | 4 | 0.61 | 0.3551 | 0.8649 | 0.4 | 0.74 | 0.0801 | 0.1602 | 26.26% | -3.39% |
| 100 | | 4 | 0.6975 | 0.4956 | 0.8994 | 0.57 | 0.85 | 0.06343 | 0.1269 | 18.19% | -18.22% |

CETIS Summary Report

Report Date: 12 Sep-23 14:33 (p 2 of 2)
Test Code/ID: 23-234-0392-fh / 15-8318-1785

Fathead Minnow 7-d Larval Survival and Growth Test

Waypoint Analytical Tennessee, LLC.

7d Survival Rate Detail

MD5: 16504C7AD63D8B1CA8A5BCF5650B9A49

| Conc-% | Code | Rep 1 | Rep 2 | Rep 3 | Rep 4 |
|--------|------|--------|--------|--------|--------|
| 0 | L | 0.9000 | 1.0000 | 1.0000 | 1.0000 |
| 6.25 | | 1.0000 | 0.9000 | 0.9000 | 1.0000 |
| 12.5 | | 0.9000 | 1.0000 | 1.0000 | 1.0000 |
| 25 | | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| 50 | | 1.0000 | 0.9000 | 0.9000 | 1.0000 |
| 100 | | 1.0000 | 1.0000 | 1.0000 | 0.9000 |

Mean Dry Weight-mg Detail

MD5: 8813A120A64FFE62E95421E142BBEA86

| Conc-% | Code | Rep 1 | Rep 2 | Rep 3 | Rep 4 |
|--------|------|-------|-------|-------|-------|
| 0 | L | 0.68 | 0.62 | 0.57 | 0.49 |
| 6.25 | | 0.67 | 0.58 | 0.58 | 0.62 |
| 12.5 | | 0.72 | 0.55 | 0.81 | 0.65 |
| 25 | | 0.75 | 0.63 | 0.66 | 0.56 |
| 50 | | 0.73 | 0.74 | 0.4 | 0.57 |
| 100 | | 0.85 | 0.62 | 0.75 | 0.57 |

7d Survival Rate Binomials

| Conc-% | Code | Rep 1 | Rep 2 | Rep 3 | Rep 4 |
|--------|------|-------|-------|-------|-------|
| 0 | L | 9/10 | 10/10 | 10/10 | 10/10 |
| 6.25 | | 10/10 | 9/10 | 9/10 | 10/10 |
| 12.5 | | 9/10 | 10/10 | 10/10 | 10/10 |
| 25 | | 10/10 | 10/10 | 10/10 | 10/10 |
| 50 | | 10/10 | 9/10 | 9/10 | 10/10 |
| 100 | | 10/10 | 10/10 | 10/10 | 9/10 |

CETIS Measurement Report

Report Date: 12 Sep-23 14:52 (p 1 of 3)
Test Code/ID: 23-234-0392-fh / 15-8318-1785

Fathead Minnow 7-d Larval Survival and Growth Test

Waypoint Analytical Tennessee, LLC.

| | | |
|-------------------------------------|--|---|
| Batch ID: 07-9695-3806 | Test Type: Growth-Survival (7d) | Analyst: Lauren N. Richardson |
| Start Date: 22 Aug-23 13:37 | Protocol: EPA/821/R-02-013 (2002) | Diluent: 20% DMW |
| Ending Date: 29 Aug-23 14:04 | Species: Pimephales promelas | Brine: Not Applicable |
| Test Length: 7d 0h | Taxon: | Source: Aquatic Biosystems, CO Age: <24 |

| | | |
|--------------------------------------|--|---|
| Sample ID: 01-3813-7599 | Code: 23-234-0392 | Project: WET Annual Compliance Test |
| Sample Date: 21 Aug-23 06:30 | Material: POTW Effluent | Source: Alliance Water Resources (BCCX) (TN) |
| Receipt Date: 22 Aug-23 10:25 | CAS (PC): | Station: Outfall 001 |
| Sample Age: 31h (1.7 °C) | Client: Alliance Water Resources (BCCX) | |

CETIS Measurement Report

Report Date: 12 Sep-23 14:52 (p 2 of 3)
Test Code/ID: 23-234-0392-fh / 15-8318-1785

Fathead Minnow 7-d Larval Survival and Growth Test

Waypoint Analytical Tennessee , LLC.

Total Residual Chlorine-mg/L

| Conc-% | Code | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|--------|------|---|---|---|---|---|---|---|
| 0 | L | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 100 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Conductivity-µS/cm

| Conc-% | Code | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|--------|------|-------|-------|-------|-------|-------|-------|-------|
| 0 | L | 189.7 | 184.3 | 189.8 | 189.5 | 192.1 | 189.1 | 187.2 |
| 100 | | 577.8 | 576.3 | 593.6 | 578.8 | 569.2 | 568 | 567.6 |

Final Dissolved Oxygen-mg/L

| Conc-% | Code | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|--------|------|-----|-----|-----|-----|-----|-----|-----|
| 0 | L | 7.1 | 7.5 | 7.7 | 7.8 | 8.4 | 7.1 | 7.6 |
| 6.25 | | 7.1 | 7.5 | 7.5 | 7.6 | 9.1 | 7.1 | 7.4 |
| 12.5 | | 7.1 | 7.4 | 7.6 | 7.9 | 8.9 | 6.4 | 6.3 |
| 25 | | 7.1 | 7.5 | 7.6 | 7.9 | 9.2 | 6.1 | 5.9 |
| 50 | | 6.9 | 7.4 | 7.6 | 7.9 | 9.1 | 6.1 | 6 |
| 100 | | 7.3 | 7.5 | 7.6 | 7.8 | 9 | 6 | 6 |

Initial Dissolved Oxygen-mg/L

| Conc-% | Code | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|--------|------|-----|-----|------|-----|------|------|-----|
| 0 | L | 6.6 | 9.3 | 9.1 | 9.1 | 11.4 | 10.2 | 8.3 |
| 6.25 | | 6.7 | 9.4 | 9.2 | 9.2 | 11 | 10.4 | 8.2 |
| 12.5 | | 6.9 | 9.4 | 9.5 | 9.2 | 11 | 10.5 | 8.3 |
| 25 | | 7 | 9.4 | 9.8 | 9.4 | 10.6 | 10.6 | 8.3 |
| 50 | | 7.2 | 9.5 | 10.2 | 9.7 | 11 | 10.8 | 8.3 |
| 100 | | 7.5 | 9.9 | 10.3 | 10 | 11.2 | 10.9 | 8.6 |

Final pH-Units

| Conc-% | Code | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|--------|------|-----|-----|-----|-----|-----|-----|-----|
| 0 | L | 7.7 | 7.6 | 7.6 | 7.7 | 8 | 7.8 | 8 |
| 6.25 | | 7.7 | 7.6 | 7.7 | 7.6 | 7.7 | 7.9 | 7.5 |
| 12.5 | | 7.8 | 7.6 | 7.6 | 7.6 | 7.8 | 7.8 | 7.6 |
| 25 | | 7.8 | 7.7 | 7.7 | 7.7 | 7.7 | 7.8 | 7.6 |
| 50 | | 7.9 | 7.9 | 7.7 | 7.7 | 7.7 | 7.9 | 7.5 |
| 100 | | 8.1 | 8.1 | 7.8 | 7.8 | 7.8 | 8 | 7.8 |

Initial pH-Units

| Conc-% | Code | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|--------|------|-----|-----|-----|-----|-----|-----|-----|
| 0 | L | 8.2 | 8.2 | 8.2 | 8.2 | 8.1 | 8 | 8.4 |
| 6.25 | | 8.2 | 8.2 | 8 | 8.2 | 8.1 | 8.1 | 8.4 |
| 12.5 | | 8.2 | 8.2 | 8.1 | 8.1 | 8.1 | 8.2 | 8.3 |
| 25 | | 8.1 | 8 | 8 | 8 | 8 | 8.1 | 8.2 |
| 50 | | 8 | 7.9 | 7.9 | 7.9 | 8 | 8 | 8 |
| 100 | | 7.9 | 7.7 | 7.6 | 7.8 | 8 | 8 | 7.9 |

Final Temperature-°C

| Conc-% | Code | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|--------|------|------|------|------|------|------|------|------|
| 0 | L | 24.7 | 24.3 | 24 | 24.8 | 25.2 | 24.8 | 25 |
| 6.25 | | 24.8 | 24.6 | 24.2 | 24.8 | 25.1 | 24.8 | 25 |
| 12.5 | | 24.9 | 24.6 | 24.6 | 24.9 | 25.1 | 24.3 | 25 |
| 25 | | 24.9 | 24.6 | 24.7 | 24.9 | 25 | 24.6 | 24.9 |
| 50 | | 25 | 24.7 | 24.6 | 24.7 | 25.2 | 24.9 | 25 |
| 100 | | 24.9 | 24.6 | 24.5 | 24.6 | 25.2 | 24.8 | 25 |

CETIS Measurement Report

Report Date: 12 Sep-23 14:52 (p 3 of 3)
Test Code/ID: 23-234-0392-fh / 15-8318-1785

Fathead Minnow 7-d Larval Survival and Growth Test

Waypoint Analytical Tennessee, LLC.

Initial Temperature-°C

| Conc-% | Code | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|--------|------|------|------|------|------|------|------|------|
| 0 | L | 24.1 | 24.6 | 24 | 24.1 | 24.1 | 24.1 | 24.1 |
| 6.25 | | 24.1 | 24.8 | 24.4 | 24.1 | 24 | 24.2 | 24.2 |
| 12.5 | | 24.2 | 24.8 | 24.4 | 24.2 | 24.1 | 24.1 | 24.1 |
| 25 | | 24.1 | 24.9 | 24.5 | 24.1 | 24.2 | 24.1 | 24.1 |
| 50 | | 24.1 | 25 | 24.7 | 24.1 | 24.1 | 24.2 | 24.2 |
| 100 | | 24.2 | 25.2 | 25.1 | 24.2 | 24.1 | 24.2 | 24.3 |

Additional Toxicity Test Information

1. Methods/Instrumentation used in chemical analysis:
 - Dissolved oxygen, DM 4: (SM 4500-O G-2016)
 - pH, PH 21: (SM 4500-H + B-2011)
 - Temperature, T148 & T124
 - Conductivity, C 2: (SM 2510 B-2011)
 - Alkalinity: (SM 2320 B-2011)
 - Hardness: (EPA 200.7 / SM 2340 B-2011)
 - Total Residual Chlorine: (SM 4500-CL G-2011)
 - Reported value of “0” indicates result below detection limit of 0.02 mg/L
 - Reported value of “1” indicates result above detection limit of 0.02 mg/L
 - EPA Acute Manual Edition and Date: EPA-821-R-02-012, OCT 2002 (Fifth edition)
 - EPA Chronic Manual Edition and Date: EPA-821-R-02-013, OCT 2002 (Fourth edition)
2. Laboratory
 - Incubator Temperature: 25± 1°C
 - Incubator ID: BIO Thermometer ID: 120554
 - Sample Temperature: 25± 3°C
 - Sample Temperatures are read after the organisms have been transferred and counted.
 - Depending on temperature of laboratory and time spent on organisms the temperature of the sample may drop below limits. However, the organisms are maintained at 25± 3°C
 - Light Cycle: 16 hours light/ 8 hours dark
 - Light intensity: 50-100 foot-candles, average
 - Control (Dilution) Water: Dilute mineral water made with 20 % Perrier in Nanopure (20%DMW)
 - Maintained in the incubator at 25± 1°C
 - Pretreatment: none
3. Method 1002.0 *Ceriodaphnia dubia* Survival and Reproduction
 - Test chambers: 30 mL disposable plastic beakers
 - Volume per chamber: 15 mL
 - Number of organisms per chamber: 1
 - Number of replicates: 10
 - Food: *Ceriodaphnia dubia* are fed 0.15mL *Raphidocelis subcapitata* (Algae) and YTC solution daily.
 - Acclimation of organisms: In house cultures are raised at 25°C. Purchased organisms are allowed to reach 25°C prior to use.
4. Method 1000.0 *Pimephales promelas* (Fathead minnow) Larval Survival and Growth
 - Test chambers: 20 oz. Disposable plastic cups
 - Volume per chamber: 250 mL
 - Average number of organisms per chamber: 10
 - Number of replicates per concentration: 4
 - Food: Fathead minnows are fed 0.15 mL *Artemia* brine shrimp hatched in laboratory twice daily
 - Acclimation of organisms: Dilution water is added until organisms are contained in a culture media that consists of 80% dilution water. Organisms are allowed to reach 25°C prior to use.
5. Reference Toxicity
 - Reference toxicity tests are performed monthly on each method performed by the laboratory.
 - Potassium Chloride is used as the reference toxicity chemical for vertebrate species
 - Current chemical ID: CS 6169894
 - Sodium Chloride is used as the reference toxicity chemical for invertebrate species
 - Current chemical ID: CS 8205752
6. 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. Attachments are allowed on separate pages as needed.
 - None

30521

Alliance Water Resources
Mr. Phil Webster
Attn: Waste Water Treatment Plan
1045 Horsehead Rd
Pikeville , TN 37367

Project Toxicity Testing
Information :

Report Date : 09/12/2023
Received : 08/22/2023



Andrea R. Brownfield
Project manager

Report Number : **23-234-0392**

REPORT OF ANALYSIS

Lab No : **96641**

Matrix: **Aqueous**

Sample ID : **Outfall 001 Comp 1**

Sampled: **8/21/2023 6:30**

| Test | Results | Units | MQL | DF | Date / Time Analyzed | By | Analytical Method |
|-----------------------------|-------------|-------|-------|----|----------------------|-----|-------------------|
| Alkalinity (as CaCO3) | 222 | mg/L | 1 | 1 | 09/01/23 09:30 | JJZ | 2320B-2011 |
| Bicarbonate | 222 | mg/L | 1 | 1 | 09/01/23 09:30 | JJZ | 2320B-2011 |
| Carbonate | <2 | mg/L | 2 | 1 | 09/01/23 09:30 | JJZ | 2320B-2011 |
| Calcium | 47.1 | mg/L | 0.100 | 1 | 08/29/23 22:16 | TJS | EPA-200.7 |
| Hardness as CaCO3(SM-2340B) | 139 | mg/L | 0.100 | 1 | 08/29/23 22:16 | | EPA-200.7 |
| Magnesium | 5.23 | mg/L | 0.100 | 1 | 08/29/23 22:16 | TJS | EPA-200.7 |

**Qualifiers/
Definitions**

DF

Dilution Factor

MQL

Method Quantitation Limit



30521

Alliance Water Resources
Mr. Phil Webster
Attn: Waste Water Treatment Plan
1045 Horsehead Rd
Pikeville , TN 37367

Project Toxicity Testing
Information :

Report Date : 09/12/2023
Received : 08/22/2023

Andrea R. Brownfield
Project manager

Report Number : **23-234-0392**

REPORT OF ANALYSIS

Lab No : **96642**

Matrix: **Aqueous**

Sample ID : **Outfall 001 Comp 2**

Sampled: **8/23/2023 6:55**

| Test | Results | Units | MQL | DF | Date / Time Analyzed | By | Analytical Method |
|-----------------------------|-------------|-------|-------|----|----------------------|-----|-------------------|
| Alkalinity (as CaCO3) | 209 | mg/L | 1 | 1 | 09/06/23 09:45 | JJZ | 2320B-2011 |
| Bicarbonate | 209 | mg/L | 1 | 1 | 09/06/23 09:45 | JJZ | 2320B-2011 |
| Carbonate | <2 | mg/L | 2 | 1 | 09/06/23 09:45 | JJZ | 2320B-2011 |
| Calcium | 45.5 | mg/L | 0.100 | 1 | 08/29/23 22:22 | TJS | EPA-200.7 |
| Hardness as CaCO3(SM-2340B) | 135 | mg/L | 0.100 | 1 | 08/29/23 22:22 | | EPA-200.7 |
| Magnesium | 5.13 | mg/L | 0.100 | 1 | 08/29/23 22:22 | TJS | EPA-200.7 |

**Qualifiers/
Definitions**

DF

Dilution Factor

MQL

Method Quantitation Limit



30521

Alliance Water Resources
Mr. Phil Webster
Attn: Waste Water Treatment Plan
1045 Horsehead Rd
Pikeville , TN 37367

Project Toxicity Testing

Information :

Report Date : 09/12/2023

Received : 08/22/2023

Andrea R. Brownfield
Project manager

Report Number : **23-234-0392**

REPORT OF ANALYSIS

Lab No : **96643**

Matrix: **Aqueous**

Sample ID : **Outfall 001 Comp 3**

Sampled: **8/25/2023 6:25**

| Test | Results | Units | MQL | DF | Date / Time Analyzed | By | Analytical Method |
|-----------------------------|-------------|-------|-------|----|----------------------|-----|-------------------|
| Alkalinity (as CaCO3) | 210 | mg/L | 1 | 1 | 09/07/23 09:40 | AMS | 2320B-2011 |
| Bicarbonate | 210 | mg/L | 1 | 1 | 09/07/23 09:40 | AMS | 2320B-2011 |
| Carbonate | <2 | mg/L | 2 | 1 | 09/07/23 09:40 | AMS | 2320B-2011 |
| Calcium | 49.2 | mg/L | 0.100 | 1 | 08/29/23 22:27 | TJS | EPA-200.7 |
| Hardness as CaCO3(SM-2340B) | 146 | mg/L | 0.100 | 1 | 08/29/23 22:27 | | EPA-200.7 |
| Magnesium | 5.62 | mg/L | 0.100 | 1 | 08/29/23 22:27 | TJS | EPA-200.7 |

**Qualifiers/
Definitions**

DF

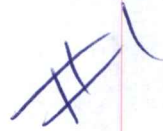
Dilution Factor

MQL

Method Quantitation Limit

| | |
|-----------------|---------------|
| Kit ID: | 199080 |
| Initiated By: | Sydney Andres |
| Initiated Date: | 5/23/2023 |
| Project Comment | Comp. 1 |

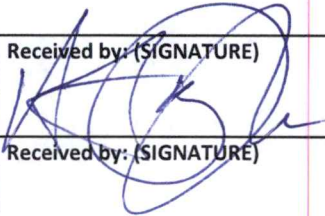
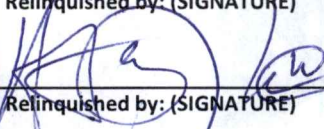
CHAIN-OF-CUSTODY



| Company Name | | Company Number | | Client Project Manager/Contact | | | Purchase Order Number | | |
|---------------------------------------|--------|-------------------------|--------|---|-----------|------------------|--|---------------|--|
| Alliance Water Resources | | 30521 | | Mr. Phil Webster | | | | | |
| Site Name | | Project Number | | <input type="checkbox"/> RUSH – Additional charges apply <input type="checkbox"/> Special Detection Limits(s) Date Results Needed | | | Method of Shipment | | |
| Bioassay - Annual - A - 08/20-21/2023 | | | | | | | <input type="checkbox"/> Fed Ex <input type="checkbox"/> UPS <input type="checkbox"/> USPS <input type="checkbox"/> Courier <input type="checkbox"/> Client Drop Off Other | | |
| LIMS Project ID | | Project Manager Phone # | | Project Manager Email | | | Site/Facility ID # | | |
| Alliance Water - BCCX Bioassay | | 931-994-1416 | | pwebster@alliancewater.com | | | TNG056626 | | |
| Date | Time | Sample ID | Matrix | Grab/Comp | # of Cont | Container Type | Preservation | Analyses | |
| 8-21-23 | 6:30AM | Outfall 001 - Comp. 1 | AQU | C | 2 | Plastic - Gallon | NONE | Chronic CD/FH | |
| 8-21-23 | 6:30AM | Outfall 001 - Comp. 1 | AQU | C | 1 | Plastic - Pint | NONE | Alkalinity | |
| 8-21-23 | 6:30AM | Outfall 001 - Comp. 1 | AQU | C | 1 | Plastic - Pint | HNO3 - Nitric Acid | Hardness | |



23-234-0392
 30521
 08-22-2023
 11:32:35
 Alliance Water Resources
 Toxicity Testing

| For Laboratory Use Only | | | Sampled by (Name - Print) | Client Remarks/Comments | | | |
|-------------------------|---------------|--------------|---|------------------------------|---|--------------------------|-----------|
| Ice | Custody Seals | Lab Comments | AARON ADKINS | | | | |
| Y/N | Y/N | | Relinquished by: (SIGNATURE) | Date Time | Received by: (SIGNATURE) | Date Time | |
| | | | | 8-21-23 11:05 |  | 8-21-23 11:05 | |
| | | | | Relinquished by: (SIGNATURE) | Date Time | Received by: (SIGNATURE) | Date Time |
| Blank/Cooler Temp | | |  | 8-21-23 15:46 | | | |
| 1.7 T99 SHT | | | Relinquished by: (SIGNATURE) | Date Time | Received by: (SIGNATURE) | Date Time | |
| | | | | |  | 8/22/23 1025 | |



#12

CHAIN-OF-CUSTODY

| | |
|-----------------|---------------|
| Kit ID: | 199081 |
| Initiated By: | Sydney Andres |
| Initiated Date: | 5/23/2023 |
| Project Comment | Comp. 2 |

| | | | |
|---------------------------------------|-------------------------|---|---|
| Company Name | Company Number | Client Project Manager/Contact | Purchase Order Number |
| Alliance Water Resources | 30521 | Mr. Phil Webster | |
| Site Name | Project Number | <input type="checkbox"/> RUSH – Additional charges apply <input type="checkbox"/> Special Detection Limits(s) Date Results Needed | Method of Shipment <input type="checkbox"/> Fed Ex <input type="checkbox"/> UPS <input type="checkbox"/> USPS <input checked="" type="checkbox"/> Courier <input type="checkbox"/> Client Drop Off Other |
| Bioassay - Annual - B - 08/22-23/2023 | | | |
| LIMS Project ID | Project Manager Phone # | Project Manager Email | Site/Facility ID # |
| Alliance Water - BCCX Bioassay | 931-994-1416 | pwebster@alliancewater.com | TP 0056626 |

| Date | Time | Sample ID | Matrix | Grab/Comp | # of Cont | Container Type | Preservation | Analyses |
|---------|------|-----------------------|--------|-----------|-----------|------------------|--------------------|---------------|
| 8/23/23 | 0655 | Outfall 001 - Comp. 2 | AQU | C | 2 | Plastic - Gallon | NONE | Chronic CD/FH |
| 8/23/23 | 0655 | Outfall 001 - Comp. 2 | AQU | C | 1 | Plastic - Pint | NONE | Alkalinity |
| 8/23/23 | 0655 | Outfall 001 - Comp. 2 | AQU | C | 1 | Plastic - Pint | HNO3 - Nitric Acid | Hardness |


 23-234-0392
 Alliance Water Resources
 Toxicity Testing / 8/22/23/8/23/23
 30521
 08-22-2023
 11:32:35

| For Laboratory Use Only | | | Sampled by (Name - Print) | Client Remarks/Comments | | |
|-------------------------|---------------|--------------|------------------------------|-------------------------|--------------------------|---------------|
| Ice | Custody Seals | Lab Comments | Phil Webster | | | |
| Y/N | Y/N | | Relinquished by: (SIGNATURE) | Date Time | Received by: (SIGNATURE) | Date Time |
| | | | | 8-23-23 9:20 A | | 8/23/23 09:20 |
| | | | | | | |
| Blank/Cooler Temp | | | Relinquished by: (SIGNATURE) | Date Time | Received by: (SIGNATURE) | Date Time |
| 0.9°C | | | | 8-23-23 15:41 | | |
| TB37 me | | | Relinquished by: (SIGNATURE) | Date Time | Received by: (SIGNATURE) | Date Time |
| | | | | | Mallory Embury | 8/24/23 10:10 |



| | |
|------------------------|---------------|
| Kit ID: | 199082 |
| Initiated By: | Sydney Andres |
| Initiated Date: | 5/23/2023 |
| Project Comment | Comp. 3 |

CHAIN-OF-CUSTODY

| | | | |
|---------------------------------------|--------------------------------|---|---|
| Company Name | Company Number | Client Project Manager/Contact | Purchase Order Number |
| Alliance Water Resources | 30521 | Mr. Phil Webster | |
| Site Name | Project Number | <input type="checkbox"/> RUSH – Additional charges apply <input type="checkbox"/> Special Detection Limits(s) Date Results Needed | Method of Shipment <input type="checkbox"/> Fed Ex <input type="checkbox"/> UPS <input type="checkbox"/> USPS <input type="checkbox"/> Courier <input type="checkbox"/> Client Drop Off Other |
| Bioassay - Annual - C - 08/24-25/2023 | | | |
| LIMS Project ID | Project Manager Phone # | Project Manager Email | Site/Facility ID # |
| Alliance Water - BCCX Bioassay | 931-994-1416 | pwebster@alliancewater.com | TN0056626 |

| Date | Time | Sample ID | Matrix | Grab/Comp | # of Cont | Container Type | Preservation | Analyses |
|---------|------|-----------------------|--------|-----------|-----------|------------------|--------------------|---------------|
| 8/25/23 | 0625 | Outfall 001 - Comp. 3 | AQU | C | 3 | Plastic - Gallon | NONE | Chronic CD/FH |
| 8/25/23 | 0625 | Outfall 001 - Comp. 3 | AQU | C | 1 | Plastic - Pint | NONE | Alkalinity |
| 8/25/23 | 0625 | Outfall 001 - Comp. 3 | AQU | C | 1 | Plastic - Pint | HNO3 - Nitric Acid | Hardness |


 23-234-0392
 30521
 Alliance Water Resources
 Toxicity Testing / 8/22/23/8/23/23
 08-22-2023
 11:32:35


| For Laboratory Use Only | | | Sampled by (Name - Print) | Client Remarks/Comments | | | |
|-------------------------|---------------|--------------|------------------------------|-------------------------|--------------------------|------------------|--|
| Ice | Custody Seals | Lab Comments | AARON ADKINS | | | | |
| Y/N | Y/N | | Relinquished by: (SIGNATURE) | Date Time | Received by: (SIGNATURE) | Date Time | |
| | | | <i>[Signature]</i> | 8-25-23 08:41 | <i>[Signature]</i> | 8-25-23 08:41 | |
| | | | Relinquished by: (SIGNATURE) | Date Time | Received by: (SIGNATURE) | Date Time | |
| | | | <i>[Signature]</i> | 8-25-23 12:10 | | | |
| Blank/Cooler Temp | | | Relinquished by: (SIGNATURE) | Date Time | Received by: (SIGNATURE) | Date Time | |
| T100 4.2°C | | cel | <i>[Signature]</i> | | <i>[Signature]</i> | 8/24/23 11:05 | |

Fw: BCCX WWT plant MOR for August 23 TN0056626

Angela Oberschmidt

Wed 9/13/2023 11:33 AM

To: Cali Calderwood <Cali.Calderwood@tn.gov>

 3 attachments (2 MB)

MORBLD35AUG23.pdf; ROLLAVGBLD35AUG23.pdf; WET AUG23.pdf;

For BCCX

From: Phil Webster <pwebster@alliancewater.com>**Sent:** Wednesday, September 13, 2023 9:49 AM**To:** Angela Oberschmidt <Angela.Oberschmidt@tn.gov>**Cc:** Evan Romo <eromo@alliancewater.com>; Bruce G. Fields <Bruce.G.Fields@tn.gov>**Subject:** [EXTERNAL] BCCX WWT plant MOR for August 23 TN0056626

***** This is an EXTERNAL email. Please exercise caution. DO NOT open attachments or click links from unknown senders or unexpected email - STS-Security. *****

Angela:

Attached are the August 23 MOR and T&P rolling average reports for TN0056626. Of special note the facility passed the IC25 test for Pimephales promelas but failed the IC25 test for Ceriodaphnia dubia. The failure was due to a control issue at the contract lab and not related to the water quality in the plant effluent. I have been in contact with the lab, and we have scheduled a retest for the week of September 25. I have also attached a copy of the WET test (IC25) results. If you have any question please let me know.

Thanks,

Phil