



September 3, 2020

Biomonitoring Testing
for
East Effluent

Control No. 248035-1

Prepared for:

Ms. Whitney Young
City Water & Light of Jonesboro
5205 Ingels Road
Jonesboro, AR 72401

Prepared by:

AMERICAN INTERPLEX CORPORATION
8600 Kanis Road
Little Rock, AR 72204-2322



City Water & Light of Jonesboro
ATTN: Ms. Whitney Young
5205 Ingels Road
Jonesboro, AR 72401

Re: *Ceriodaphnia dubia*
East Effluent
NPDES Permit No. AR0043401 AFIN16-00936

Dear Ms. Whitney Young:

This report is the analytical results and supporting information for the samples submitted to American Interplex Corporation (AIC). 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 Chief Operating Officer 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. Test results are summarized below:

Method 1002.0 Chronic *Ceriodaphnia dubia* Survival and Reproduction Test: The No Observable Effects Concentration (NOEC) for survival occurred at 100 % effluent, which is equal to the critical dilution of 100 %. The NOEC for reproduction occurred at 100 % effluent, which is above the sub-lethal limit of 80 %. **The sample, therefore, PASSED both lethal and sub-lethal effects for the *Ceriodaphnia dubia* test.**

AMERICAN INTERPLEX CORPORATION

A handwritten signature in black ink, appearing to read 'John Overbey', is written over a horizontal line.

John Overbey
Chief Operating Officer

PDF cc: City Water & Light of Jonesboro
ATTN: Mr. Adam Saulsbury
asaulsbury@jonesborocwl.org

City Water & Light of Jonesboro
ATTN: Mr. Jody Gibson
jgibson@jonesborocwl.org

City Water & Light of Jonesboro
ATTN: Mr. Jay Earley
jearley@jonesborocwl.org

City Water & Light of Jonesboro
ATTN: Ms. Whitney Young
wyoung@jonesborocwl.org

City Water & Light of Jonesboro
ATTN: Ms. Tamara Blankenship
tblankenship@jonesborocwl.org

Table of Contents

- I. Control Acceptance Criteria
- II. Outlined Report
- III. Data Analysis
- IV. Standard Reference Toxicants
- V. Organism History
- VII. Results Summary
 - Ceriodaphnia dubia*
- Appendix A: Raw Data
 - A1: Test 1002.0
 - Ceriodaphnia dubia* Survival and Reproduction
 - A2: Statistics
 - A3: Reference Toxicant
- Appendix B: Summary Forms

I. Control Acceptance Criteria

Ceriodaphnia dubia Method 1002.0

CRITERIA	RESULTS	PASS/FAIL
Control Survival > or = 80%	100	PASS
Control Reproduction > or = 15 per Surviving Female	23.9	PASS
Control CV < or = 40% per Surviving Female	24.6	PASS
Reproduction Minimum Significant Difference 13 to 47%	19.9	PASS
Critical Dilution CV < or = 40%	14.0	PASS

II. Outlined Report

A. Introduction

1. Permit Number: AR0043401 AFIN16-00936
2. Test Requirements: Test Method 1002.0

B. Source of Effluent/Dilution Water:

1. Effluent Samples:
 - a. Sampling Point: East Effluent
 - b. Chemical Data:

Analysis	Sample 1	Sample 2	Sample 3
Dissolved oxygen (mg/l)	7.6	8.0	6.6
pH (standard units)	8.0	8.0	8.5
Alkalinity (mg/l as CaCO ₃)	180	170	110
Hardness (mg/l as CaCO ₃)	140	120	110
Conductivity (umhos/cm)	800	740	730
Residual Chlorine (mg/l)	<0.05	<0.05	<0.05
Ammonia as N (mg/l)	1.4	1.8	<0.1

2. Dilution Water Samples:
Moderately Hard

Analysis	247913-1
Dissolved oxygen (mg/l)	7.1
pH (standard units)	8.2
Alkalinity (mg/l as CaCO ₃)	58
Hardness (mg/l as CaCO ₃)	88
Conductivity (umhos/cm)	320
Residual Chlorine (mg/l)	<0.05

C. Test Methods

1. Test methods used:

Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, EPA-821-R-02-013; test Method 1002.0, *Ceriodaphnia dubia* Survival and Reproduction.

2. Endpoint: No Observable Effects Concentration (NOEC)

3. Test Conditions:

Ceriodaphnia dubia Survival and Reproduction Method 1002.0

Date & Time Test Initiated: August 26, 2020 at 1140
Date & Time Test Terminated: September 01, 2020 at 1320
Type & Volume of Test Chamber: 30 ml disposable beaker
Volume of Sample: 15 ml
Number of Organisms per replicate: 1
Number of Replicates per dilution: 10

4. Source of test organisms: Obtained from in-house cultures

5. Test Temperature: 25 +/- 1 degree Celsius

D. Test Organisms

1. Scientific Name

a. Test 1002.0 *Ceriodaphnia dubia*

III. Data Analysis

The data was analyzed using American Interplex Corporation's Laboratory Information Management Software based on Toxstat and following EPA method criteria.

Ceriodaphnia dubia survival data was analyzed with Fisher's Exact Test. Reproduction data was analyzed using Kolmogorov's Test for Normality and Bartlett's test and analyzed with Dunnett's Test to determine the No Observable Effects Concentration (NOEC) for Reproduction.

IV. Standard Reference Toxicants

The sensitivity of the offspring is determined by performing a standard reference toxicant test monthly. Sodium chloride in synthetic moderately hard water is used as prescribed in EPA-821-R-02-013.

Ceriodaphnia dubia

A chronic reference test was performed on August 18, 2020 at 1140 to August 24, 2020 at 1149

The results were as follows: (Control No. 247846-2.)

Survival LC-50: 1456.1 mg/l

Reproduction IC-25: 592.3 mg/l

Reproduction PMSD: 14.8

V. Organism History

Ceriodaphnia dubia

Date: August 26, 2020

Age: <24 hours

Source: In-house culture

Water: Moderately hard synthetic

Temperature: 25 deg.C

VII. Results Summary *Ceriodaphnia dubia*, Cladoceran Survival and Reproduction Test -- Method 1002.0

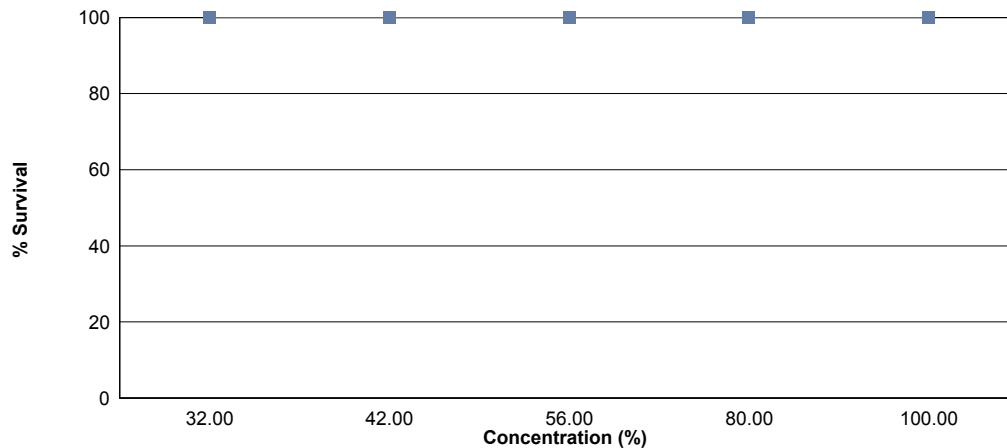
Neonates are exposed in a static renewal system to different concentrations of effluent with dilution water until 60% of surviving control organisms have three broods of offspring or a maximum of eight test days.

Effluent dilutions for this test were 32 %, 42 %, 56 %, 80 %, 100 % in accordance with the NPDES permit.

The low flow or 'critical' dilution is specified in the NPDES permit as 100 % effluent.

The test was initiated on August 26, 2020 at 1140 and continued through September 01, 2020 at 1320. Statistical analyses were performed on the observed data and the no observable effects concentrations (NOECs) were as follows:

- a.) NOEC survival = 100 % effluent
- b.) NOEC reproduction = 100 % effluent



Summary of the 6-day <i>Ceriodaphnia dubia</i> Survival and Reproduction Data		
Concentration	Percent Survival	Mean Reproduction
Control	100	23.9
32 %	100	31.6
42 %	100	31.4
56 %	100	29.4
80 %	100	30.7
100 %	100	31.6

Appendix A1: Test 1002.0

Ceriodaphnia dubia Survival and Reproduction

Date and Time Test Initiated: August 26, 2020 at 1140
Date and Time Test Terminated: September 01, 2020 at 1320

Concentration: Control														
Day	Replicate										No. of Young	No. of Adults	Young per Adult	
	1	2	3	4	5	6	7	8	9	10				
1	0	0	0	0	0	0	0	0	0	0	0	0	10	0.00
2	0	0	0	0	0	0	0	0	0	0	0	0	10	0.00
3	4	3	3	4	0	4	3	4	5	4	34	10	3.40	
4	0	0	0	0	3	0	0	0	0	0	3	10	0.300	
5	11	5	4	8	8	7	7	8	6	11	75	10	7.50	
6	16	15	3	13	15	12	11	12	14	16	127	10	12.7	
7														
8														
TOTAL	31	23	10	25	26	23	21	24	25	31	239	10	23.9	

Concentration: 32 %													
Day	Replicate										No. of Young	No. of Adults	Young per Adult
	1	2	3	4	5	6	7	8	9	10			
1	0	0	0	0	0	0	0	0	0	0	0	10	0.00
2	0	0	0	0	0	0	0	0	0	0	0	10	0.00
3	3	4	5	5	5	4	3	4	4	4	41	10	4.10
4	0	0	0	0	0	0	0	0	0	0	0	10	0.00
5	9	10	9	10	12	7	10	12	10	12	101	10	10.1
6	14	18	19	22	19	16	17	15	16	18	174	10	17.4
7													
8													
TOTAL	26	32	33	37	36	27	30	31	30	34	316	10	31.6

Concentration: 42 %													
Day	Replicate										No. of Young	No. of Adults	Young per Adult
	1	2	3	4	5	6	7	8	9	10			
1	0	0	0	0	0	0	0	0	0	0	0	10	0.00
2	0	0	0	0	0	0	0	0	0	0	0	10	0.00
3	4	4	5	4	3	4	5	6	4	5	44	10	4.40
4	0	0	0	0	0	0	0	0	0	0	0	10	0.00
5	8	11	9	10	10	11	11	11	9	12	102	10	10.2
6	19	21	16	19	8	19	16	17	14	19	168	10	16.8
7													
8													
TOTAL	31	36	30	33	21	34	32	34	27	36	314	10	31.4

Appendix A1: Test 1002.0

Ceriodaphnia dubia Survival and Reproduction

Date and Time Test Initiated: August 26, 2020 at 1140
Date and Time Test Terminated: September 01, 2020 at 1320

Concentration: 56 %														
Day	Replicate										No. of Young	No. of Adults	Young per Adult	
	1	2	3	4	5	6	7	8	9	10				
1	0	0	0	0	0	0	0	0	0	0	0	0	10	0.00
2	0	0	0	0	0	0	0	0	0	0	0	0	10	0.00
3	3	4	0	4	4	4	4	4	4	4	4	35	10	3.50
4	0	0	4	0	0	5	0	0	0	0	0	9	10	0.900
5	10	9	10	10	10	0	7	12	2	12	82	10	8.20	
6	19	13	12	19	23	14	20	13	17	18	168	10	16.8	
7														
8														
TOTAL	32	26	26	33	37	23	31	29	23	34	294	10	29.4	

Concentration: 80 %														
Day	Replicate										No. of Young	No. of Adults	Young per Adult	
	1	2	3	4	5	6	7	8	9	10				
1	0	0	0	0	0	0	0	0	0	0	0	0	10	0.00
2	0	0	0	0	0	0	0	0	0	0	0	0	10	0.00
3	5	4	3	3	0	4	4	4	4	3	34	10	3.40	
4	0	0	0	0	4	0	0	0	2	0	6	10	0.600	
5	10	10	11	9	9	10	11	12	0	9	91	10	9.10	
6	21	17	15	16	18	14	17	21	17	20	176	10	17.6	
7														
8														
TOTAL	36	31	29	28	31	28	32	37	23	32	307	10	30.7	

Concentration: 100 %														
Day	Replicate										No. of Young	No. of Adults	Young per Adult	
	1	2	3	4	5	6	7	8	9	10				
1	0	0	0	0	0	0	0	0	0	0	0	0	10	0.00
2	0	0	0	0	0	0	0	0	0	0	0	0	10	0.00
3	4	0	4	4	4	4	4	3	4	3	34	10	3.40	
4	0	4	0	0	0	0	0	0	0	0	4	10	0.400	
5	10	9	10	10	11	9	11	7	9	10	96	10	9.60	
6	16	12	17	21	24	15	21	19	15	22	182	10	18.2	
7														
8														
TOTAL	30	25	31	35	39	28	36	29	28	35	316	10	31.6	

Appendix A2: Statistics

Ceriodaphnia dubia Survival

Fisher's Exact Test			
Identification	Alive	Dead	Total Animals
Control	10	0	10
32 %	10	0	10
Total	20	0	20

Critical Fisher's value (10,10,10) (alpha=0.05) is 6. b value is 10. Since b is greater than 6 there is NO SIGNIFICANT DIFFERENCE between CONTROL and TREATMENT at the 0.05 level.

Fisher's Exact Test			
Identification	Alive	Dead	Total Animals
Control	10	0	10
42 %	10	0	10
Total	20	0	20

Critical Fisher's value (10,10,10) (alpha=0.05) is 6. b value is 10. Since b is greater than 6 there is NO SIGNIFICANT DIFFERENCE between CONTROL and TREATMENT at the 0.05 level.

Fisher's Exact Test			
Identification	Alive	Dead	Total Animals
Control	10	0	10
56 %	10	0	10
Total	20	0	20

Critical Fisher's value (10,10,10) (alpha=0.05) is 6. b value is 10. Since b is greater than 6 there is NO SIGNIFICANT DIFFERENCE between CONTROL and TREATMENT at the 0.05 level.

Fisher's Exact Test			
Identification	Alive	Dead	Total Animals
Control	10	0	10
80 %	10	0	10
Total	20	0	20

Critical Fisher's value (10,10,10) (alpha=0.05) is 6. b value is 10. Since b is greater than 6 there is NO SIGNIFICANT DIFFERENCE between CONTROL and TREATMENT at the 0.05 level.

Appendix A2: Statistics

Ceriodaphnia dubia Survival

Fisher's Exact Test			
Identification	Alive	Dead	Total Animals
Control	10	0	10
100 %	10	0	10
Total	20	0	20

Critical Fisher's value (10,10,10) (alpha=0.05) is 6. b value is 10. Since b is greater than 6 there is NO SIGNIFICANT DIFFERENCE between CONTROL and TREATMENT at the 0.05 level.

Summary of Fisher's Exact Test				
Group	Identification	Exposed	Dead	Sig 0.05
0	Control	10	0	
1	32 %	10	0	
2	42 %	10	0	
3	56 %	10	0	
4	80 %	10	0	
5	100 %	10	0	

Appendix A2: Statistics

Ceriodaphnia dubia Reproduction

Kolmogorov Test for Normality	No Transformation
<p>D = 0.065 D* = 0.51 Critical D* = 1.035</p> <p style="text-align: right;">(alpha = 0.01, N = 60)</p> <p>Data PASS normality test (alpha = 0.01).</p>	

Bartlett's Test for Homogeneity of Variance	No Transformation
<p>Calculated B1 statistic = 2.486 Critical B = 15.086</p> <p style="text-align: right;">(alpha = 0.01, df = 5)</p> <p>Data PASS B1 homogeneity test at 0.01 level.</p>	

Appendix A2: Statistics

Ceriodaphnia dubia Reproduction

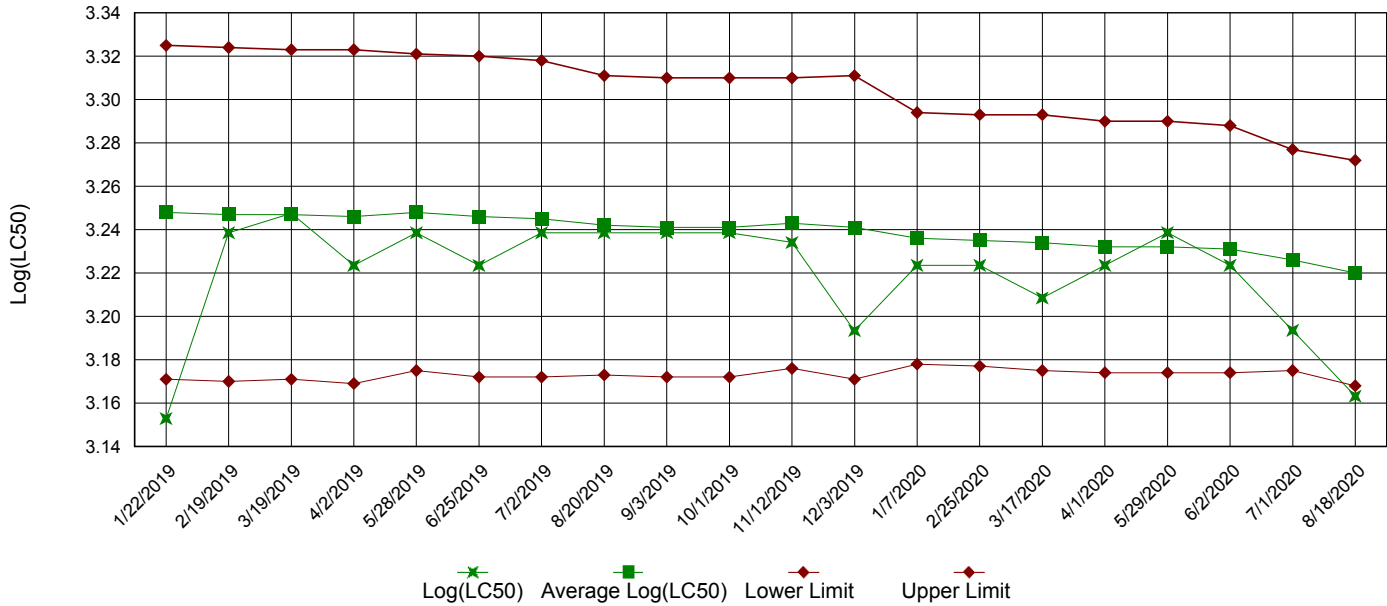
ANOVA Table				No Transformation	
SOURCE	DF	SS	MS	F	
Between	5	448.1	89.63	4.228	
Within (Error)	54	1145	21.2		
Total	59	1593			
Critical F = 3.38 (alpha = 0.01, df = 5,54)					
2.38 (alpha = 0.05, df = 5,54)					
Since F > Critical F REJECT Ho: All equal (alpha = 0.05)					

Dunnett's Test - Table 1 of 2					No Transformation	
Ho:Control<Treatment						
Group	Identification	Transformed Mean	Mean In Original Units	T Stat	Sig 0.05	
1	Control	23.9	23.9			
2	32 %	31.6	31.6	-3.739		
3	42 %	31.4	31.4	-3.642		
4	56 %	29.4	29.4	-2.671		
5	80 %	30.7	30.7	-3.302		
6	100 %	31.6	31.6	-3.739		
Dunnett's critical value = 2.31 (1 Tailed, alpha = 0.05, df [used] = 5,40) (Actual df = 5,54)						

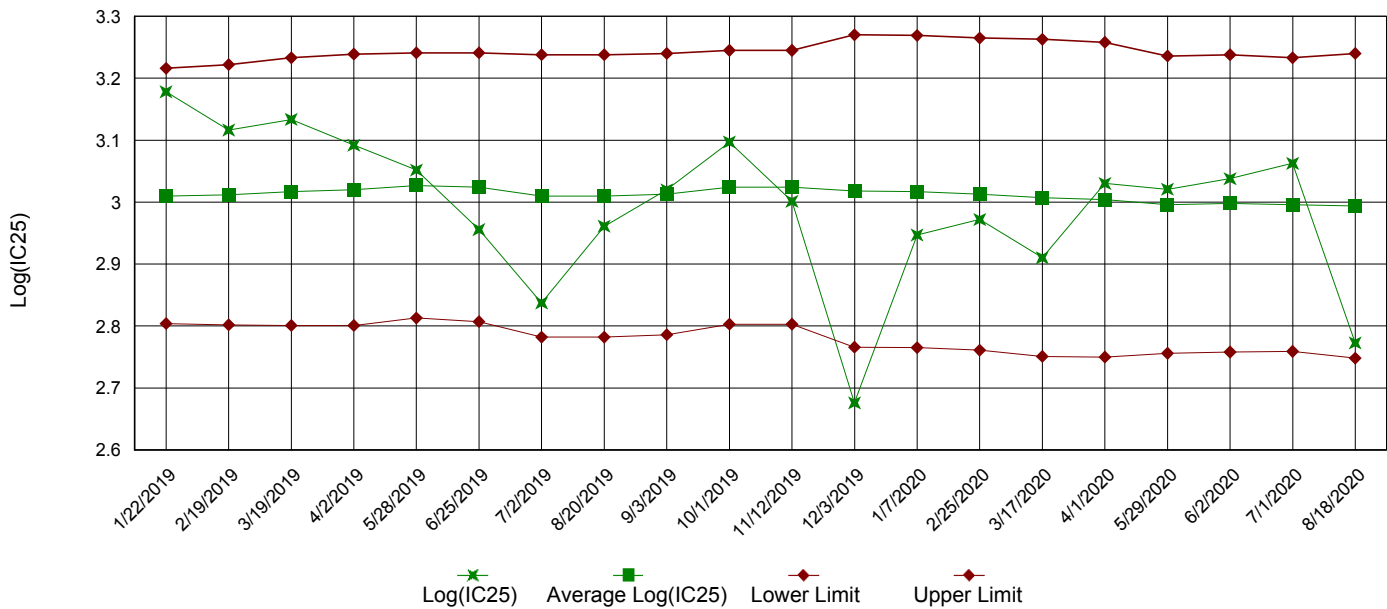
Dunnett's Test - Table 2 of 2						No Transformation	
Ho:Control<Treatment							
Group	Identification	Num of Reps	Min Sig Diff (In Orig. Units)	% of Control	Difference From Control		
1	Control	10					
2	32 %	10	4.757	19.9	-7.7		
3	42 %	10	4.757	19.9	-7.5		
4	56 %	10	4.757	19.9	-5.5		
5	80 %	10	4.757	19.9	-6.8		
6	100 %	10	4.757	19.9	-7.7		

Appendix A3: Test 1002.0
Chronic Reference Toxicant, *Ceriodaphnia dubia*

LC50 Survival Data



IC25 Reproduction Data



Appendix B: Test 1002.0
SUMMARY REPORTING FORMS
CHRONIC BIOMONITORING
Ceriodaphnia dubia
SURVIVAL AND REPRODUCTION

Permittee: City Water & Light of Jonesboro

NPDES No.: AR0043401 AFIN16-00936

Date and Time Test Initiated: August 26, 2020 at 1140

Date and Time Test Terminated: September 01, 2020 at 1320

Dilution water used: Moderately Hard

PERCENT SURVIVAL

Time of Reading	Control	Percent Effluent				
		32 %	42 %	56 %	80 %	100 %
24 hour	100	100	100	100	100	100
48 hour	100	100	100	100	100	100
6 day	100	100	100	100	100	100

NUMBER OF YOUNG PRODUCED PER FEMALE @ 6 DAYS

Replicates	Control	Percent Effluent				
		32 %	42 %	56 %	80 %	100 %
A	31	26	31	32	36	30
B	23	32	36	26	31	25
C	10	33	30	26	29	31
D	25	37	33	33	28	35
E	26	36	21	37	31	39
F	23	27	34	23	28	28
G	21	30	32	31	32	36
H	24	31	34	29	37	29
I	25	30	27	23	23	28
J	31	34	36	34	32	35
Mean per Adult	23.9	31.6	31.4	29.4	30.7	31.6
Mean per Surviving Adult	23.9	31.6	31.4	29.4	30.7	31.6
CV %	24.6	11.3	14.6	16.3	13.2	14.0

CV = Coefficient of variation = standard deviation * 100 / mean
(calculated based on young produced by surviving females)

Appendix B: 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	(100 %)	<u> </u> YES	<u> X </u> NO
b.) 1/2 LOW FLOW DILUTION	(NA)	<u> </u> YES	<u> </u> NO

2. Dunnett's 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	(100 %)	<u> </u> YES	<u> X </u> NO
b.) 1/2 LOW FLOW DILUTION	(NA)	<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: 100 % (TOP3B)
6. LOEC *Ceriodaphnia* Lethality: 100 % (TXP3B)
7. NOEC *Ceriodaphnia* Sublethality: 100 % (TPP3B)
8. LOEC *Ceriodaphnia* Sublethality: 100 % (TYP3B)
9. Coefficient of variation for *Ceriodaphnia* Reproduction: 24.6 (TQP3B)
10. Lethality for this test: 100 % (51710 or 51710P)
11. Sublethality for this test: 100 % (51710 or 51710Q)

Appendix B: Test 1002.0
CHRONIC TOXICITY SUMMARY FORM
Ceriodaphnia dubia
CHEMICAL PARAMETERS CHART

PERMITTEE: City Water & Light of Jonesboro
NPDES NO.: AR0043401 AFIN16-00936
CONTACT: Ms. Whitney Young
ANALYST: 280, 310, 343

Test Initiated: DATE: August 26, 2020 TIME: 1140
Test Terminated: DATE: September 01, 2020 TIME: 1320

DILUTION	DAY						
	1	2	3	4	5	6	7
Control							
D.O. Initial	7.1	6.9	6.9	7.3	7.1	7.1	7.2
Final	7.2	7.2	7.2	7.0	7.0	7.1	--
pH Initial	8.2	8.0	8.2	8.1	8.2	8.2	8.1
Final	8.3	8.3	8.4	8.2	8.3	8.2	--

DILUTION	DAY						
	1	2	3	4	5	6	7
32 %							
D.O. Initial	7.6	7.1	7.5	7.1	6.8	7.1	7.2
Final	7.0	7.2	7.0	7.1	7.2	7.1	--
pH Initial	8.1	8.1	8.1	8.1	8.3	8.1	8.0
Final	8.5	8.5	8.5	8.4	8.5	8.4	--

DILUTION	DAY						
	1	2	3	4	5	6	7
42 %							
D.O. Initial	7.4	7.2	7.9	7.1	6.7	7.0	7.3
Final	7.3	7.4	7.2	7.1	7.1	7.0	--
pH Initial	8.1	8.1	8.0	8.1	8.3	8.1	8.0
Final	8.5	8.5	8.6	8.4	8.5	8.4	--

DILUTION	DAY						
	1	2	3	4	5	6	7
56 %							
D.O. Initial	7.1	6.8	7.7	7.1	6.6	7.0	7.2
Final	6.7	7.2	7.2	6.8	7.2	7.0	--
pH Initial	8.1	8.2	8.0	8.1	8.4	8.1	8.0
Final	8.6	8.6	8.6	8.4	8.6	8.4	--

DILUTION	DAY						
	1	2	3	4	5	6	7
80 %							
D.O. Initial	7.6	7.0	7.8	7.1	6.6	7.2	7.0
Final	6.9	7.2	7.4	6.9	7.3	7.1	--
pH Initial	8.1	8.2	8.0	8.1	8.5	8.0	8.0
Final	8.7	8.7	8.7	8.5	8.6	8.5	--

DILUTION	DAY						
	1	2	3	4	5	6	7
100 %							
D.O. Initial	7.6	7.7	8.0	7.2	6.6	7.3	7.0
Final	6.9	7.2	7.0	6.9	7.3	7.2	--
pH Initial	8.0	8.2	8.0	8.1	8.5	8.0	8.0
Final	8.7	8.7	8.7	8.6	8.7	8.6	--

Alkalinity	Hardness	Conductivity	Chlorine	Sample ID
180	140	800	<0.05	East Effluent 26-AUG-20
170	120	740	<0.05	East Effluent 28-AUG-20
110	110	730	<0.05	East Effluent 31-AUG-20

Alkalinity	Hardness	Conductivity	Chlorine	Sample ID
58	88	320	<0.05	247913-1



COPY

CHAIN OF CUSTODY / ANALYSIS REQUEST FORM

PAGE 2 OF 3

Client: Jonesboro CWL

Project Reference: Biomonitoring

Project Manager: Whitney Young

Sampled By: JG/RS

AIC Control No: 248035

AIC Proposal No:

Carrier:

Received Temperature C: 0.9

Remarks:

Field pH calibration on @

Buffer:

Turnaround Time Requested: (Please circle) NORMAL or EXPEDITED IN ___ DAYS

Expedited results requested by:

Who should AIC contact with questions: _____

Phone: _____ Fax: _____

Report Attention to: _____

Report Address to: _____

Email Address: _____

9/2014

ANALYSES REQUESTED

NO OF BOTTLES	PO No.	MATRIX	GRAB	COMP	DATE/TIME COLLECTED	NO OF BOTTLES	ANALYSES REQUESTED	NO OF BOTTLES	PO No.	MATRIX	GRAB	COMP	DATE/TIME COLLECTED	NO OF BOTTLES	ANALYSES REQUESTED
1		WATER	X	X	8:00-7:00AM 8/25-20/20	1		1		WATER	X	X	8:00-7:00AM 8/25-20/20	1	
		SOIL								SOIL					

V = VOA vials
N = Nitric acid pH2
H = HCl to pH2
B = NaOH to pH12
T = Sodium Thiosulfate
Z = Zinc acetate
A = (NH4)2SO4, NH4OH

Relinquished By: Jood Cook
Date/Time: 8-26-20 10:35 AM

Received in Lab By: DANNY BROWN
Date/Time: 8-26-20 1235

Comments:

FORM 0060



CHAIN OF CUSTODY / ANALYSIS REQUEST FORM

PAGE 3 OF 3

Client: Jonesboro CWL		AIC CONTROL NO: 24803	
Project Reference: Biomonitoring		AIC PROPOSAL NO:	
Project Manager: Whitney Young		Carrier: CWL	
Sampled By: MH		Received Temperature C	
AIC Sample Identification: East Effluent		Remarks	
Date/Time Collected: 8/30-5/12/08 8:00-7:00AM			
G R A B			
C O M P			
M A T R I X			
W A T E R			
S O I L			
NO OF BOTTLES		ANALYSES REQUESTED	
1 X			
Container Type		Field pH calibration	
Preservative		on @	
G = Glass		Buffer:	
NO = none		T = Sodium Thiosulfate	
S = Sulfuric acid pH2		Z = Zinc acetate	
P = Plastic		A = (NH ₄) ₂ SO ₄ , NH ₄ OH	
V = VOA vials			
N = Nitric acid pH2			
Turnaround Time Requested: (Please circle)		Received	
NORMAL or EXPEDITED IN ___ DAYS		By:	
Expedited results requested by:		Date/Time	
Who should AIC contact with questions:		Received in Lab	
Phone: _____ Fax: _____		By: <i>Whitney Young</i>	
Report Attention to:		Date/Time	
Report Address to:		8-31-20	
Email Address:		1039	
Comments:			