

August 25, 2017

Biomonitoring Testing
for
Outfall 001
Cabot

Control No. 215394-1

Prepared for:

Mr. Matt Bienvenu
McClelland Consulting Engineers, Inc.
Post Office Box 34087
Little Rock, AR 72203-4087

Prepared by:

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



McClelland Consulting Engineers, Inc.
ATTN: Mr. Matt Bienvenu
Post Office Box 34087
Little Rock, AR 72203-4087

Re: Chronic 7-Day Renewal utilizing *Ceriodaphnia dubia*
Outfall 001 - Cabot
NPDES Permit No. AR0021661 AFIN:43-00059

Dear Mr. Matt Bienvenu:

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 equal to the critical dilution of 100 %. **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: McClelland Consulting Engineers, Inc.
ATTN: Mr. Matt Bienvenu
mbienvenu@mce.us.com

McClelland Consulting Engineers, Inc.
ATTN: Mr. Dan Beranek
dberanek@mce.us.com

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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	24.1	PASS
Control CV < or = 40% per Surviving Female	13.9	PASS
Reproduction Minimum Significant Difference 13 to 47%	18.5	PASS
Critical Dilution CV < or = 40%	14.1	PASS

II. Outlined Report

A. Introduction

1. Permit Number: AR0021661 AFIN:43-00059
2. Test Requirements: Test Method 1002.0

B. Source of Effluent/Dilution Water:

1. Effluent Samples:
 - a. Sampling Point: Outfall 001
 - b. Chemical Data:

Analysis	Sample 1	Sample 2	Sample 3
Dissolved oxygen (mg/l)	7.6	7.5	7.5
pH (standard units)	7.2	7.5	7.9
Alkalinity (mg/l as CaCO ₃)	41	78	92
Hardness (mg/l as CaCO ₃)	100	97	92
Conductivity (umhos/cm)	480	480	400
Residual Chlorine (mg/l)	<0.05	<0.05	<0.05
Ammonia as N (mg/l)	<0.1	0.11	0.12

2. Dilution Water Samples:
Moderately Hard

Analysis	215072
Dissolved oxygen (mg/l)	7.6
pH (standard units)	7.9
Alkalinity (mg/l as CaCO ₃)	59
Hardness (mg/l as CaCO ₃)	80
Conductivity (umhos/cm)	300
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 15, 2017 at 1435

Date & Time Test Terminated: Aug 22, 2017 at 1420

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 Steel's Many-One Rank Test to determine the No Observable Effects Concentration (NOEC) for Reproduction. Dunnett's Test was used to calculate the PMSD.

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 July 3, 2017 at 1245 to July 10, 2017 at 1520

The results were as follows: (Control No. 214133-2.)

Survival LC-50: 1823 mg/l

Growth IC-25: 1114 mg/l

Growth PMSD: 14.6

V. Organism History

Ceriodaphnia dubia

Date: August 15, 2017

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

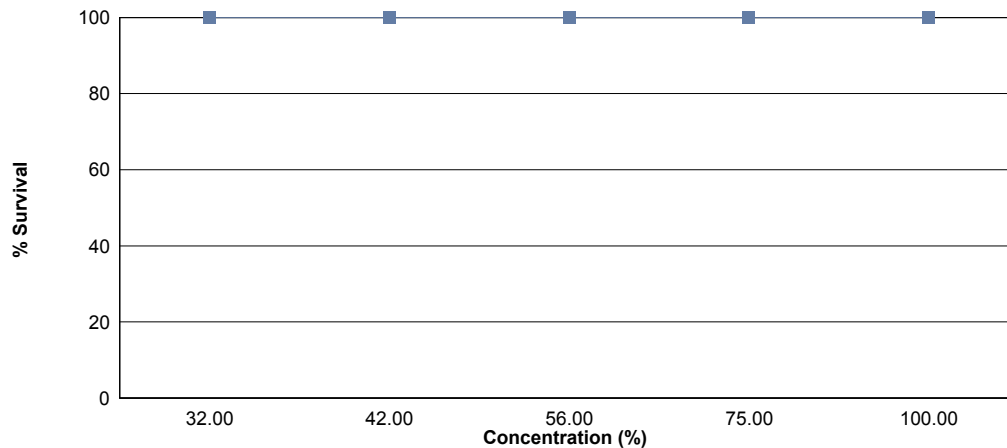
Neonates are exposed in a static renewal system to different concentrations of effluent with dilution water until 60% of surviving control organisms have three broods of offspring or a maximum of eight test days.

Effluent dilutions for this test were 32 %, 42 %, 56 %, 75 %, 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 15, 2017 at 1435 and continued through Aug 22, 2017 at 1420. 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 7-day <i>Ceriodaphnia dubia</i> Survival and Reproduction Data		
Concentration	Percent Survival	Mean Reproduction
Control	100	24.1
32 %	100	28.6
42 %	100	27.6
56 %	100	30.6
75 %	100	33.1
100 %	100	32.7

Appendix A1: Test 1002.0

Ceriodaphnia dubia Survival and Reproduction

Date and Time Test Initiated: August 15, 2017 at 1435

Date and Time Test Terminated: Aug 22, 2017 at 1420

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	0	0	0	0	0	0	0	0	0	0	0	0	10	0.00
4	3	5	3	0	4	4	4	4	4	4	4	35	10	3.50
5	7	10	9	7	0	5	9	7	8	8	8	70	10	7.00
6	0	0	0	10	7	0	0	4	0	0	0	21	10	2.10
7	11	13	13	13	11	10	12	11	11	10	10	115	10	11.5
8														
TOTAL	21	28	25	30	22	19	25	26	23	22		241	10	24.1

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	0	10	0.00
2	0	0	0	0	0	0	0	0	0	0	0	0	10	0.00
3	0	0	0	0	0	0	0	0	0	0	0	0	10	0.00
4	0	3	3	5	4	5	6	0	0	2	2	28	10	2.80
5	7	11	9	0	0	9	0	0	8	8	8	52	10	5.20
6	14	0	0	10	7	0	13	0	13	0	0	57	10	5.70
7	14	13	15	17	14	16	18	14	15	13	13	149	10	14.9
8														
TOTAL	35	27	27	32	25	30	37	14	36	23		286	10	28.6

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	0	10	0.00
2	0	0	0	0	0	0	0	0	0	0	0	0	10	0.00
3	0	0	0	0	0	0	0	0	0	0	0	0	10	0.00
4	4	4	2	5	5	6	4	4	4	3	3	41	10	4.10
5	8	9	9	0	0	0	9	11	12	7	7	65	10	6.50
6	0	0	0	11	9	10	0	0	0	2	2	32	10	3.20
7	16	16	14	14	13	11	14	13	13	14	14	138	10	13.8
8														
TOTAL	28	29	25	30	27	27	27	28	29	26		276	10	27.6

Appendix A1: Test 1002.0

Ceriodaphnia dubia Survival and Reproduction

Date and Time Test Initiated: August 15, 2017 at 1435

Date and Time Test Terminated: Aug 22, 2017 at 1420

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	0	0	0	0	0	0	0	0	0	0	0	0	10	0.00
4	3	4	4	3	4	4	4	4	5	4	39	10	3.90	
5	11	12	10	10	0	11	10	10	10	11	95	10	9.50	
6	0	0	0	0	12	0	0	0	0	0	12	10	1.20	
7	14	17	12	16	23	15	15	16	18	14	160	10	16.0	
8														
TOTAL	28	33	26	29	39	30	29	30	33	29	306	10	30.6	

Concentration: 75 %														
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	0	0	0	0	0	0	0	0	0	0	0	10	0.00	
4	5	5	3	4	5	4	4	0	4	4	38	10	3.80	
5	0	11	13	0	0	11	12	8	11	10	76	10	7.60	
6	11	0	0	14	10	0	0	15	0	0	50	10	5.00	
7	17	17	17	15	14	15	19	19	19	15	167	10	16.7	
8														
TOTAL	33	33	33	33	29	30	35	42	34	29	331	10	33.1	

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	10	0.00	
2	0	0	0	0	0	0	0	0	0	0	0	10	0.00	
3	0	0	0	0	0	0	0	0	0	0	0	10	0.00	
4	4	6	5	7	7	3	4	4	5	5	50	10	5.00	
5	10	12	14	0	0	9	12	11	11	10	89	10	8.90	
6	0	0	0	12	13	0	0	0	12	0	37	10	3.70	
7	15	18	18	18	19	13	18	17	17E	15	151	10	15.1	
8														
TOTAL	29	36	37	37	39	25	34	32	28	30	327	10	32.7	

E = Excluded fourth brood neonates

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
75 %	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	75 %	10	0	
5	100 %	10	0	

Appendix A2: Statistics

Ceriodaphnia dubia Reproduction

Kolmogorov Test for Normality	No Transformation
<p>D = 0.0836 D* = 0.6559 Critical D* = 1.035 (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 = 18.16 Critical B = 15.086 (alpha = 0.01, df = 5)</p> <p>Data FAIL B1 homogeneity test at 0.01 level.</p>	

Steel's Many-One Rank Test				No Transformation	
Ho:Control<Treatment					
Group	Identification	Rank Sum	Critical Value	DF	Sig 0.05
1	Control				
2	32 %	131.00	75.00	10.00	
3	42 %	137.00	75.00	10.00	
4	56 %	147.00	75.00	10.00	
5	75 %	152.50	75.00	10.00	
6	100 %	148.00	75.00	10.00	

Critical values are 1 tailed (k=5)

Appendix A2: Statistics

Ceriodaphnia dubia Reproduction

Dunnett's Test for PMSD Calculation (excluding deaths if applicable)

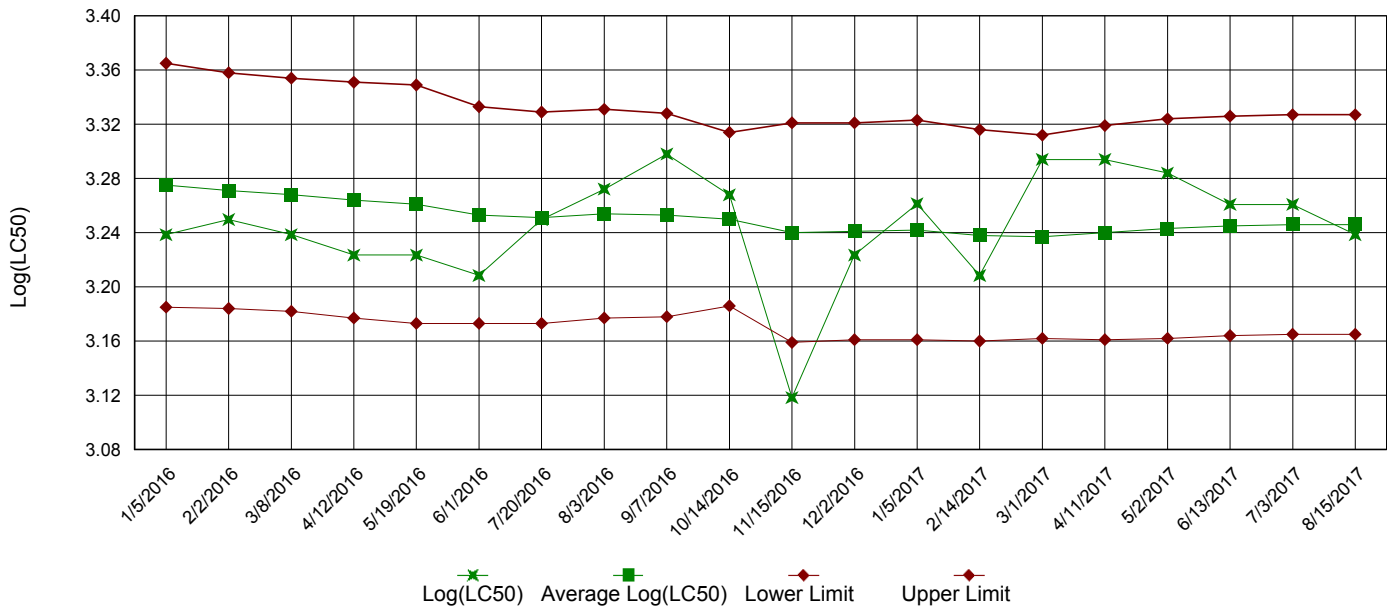
ANOVA Table				No Transformation	
SOURCE	DF	SS	MS	F	
Between	5	579.8	116	6.257	
Within (Error)	54	1001	18.54		
Total	59	1581			
Critical F = 3.38 (alpha = 0.01, df = 5,54) 2.38 (alpha = 0.05, df = 5,54)					
Since F > Critical F REJECT Ho: All equal (alpha = 0.05)					

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	24.1	24.1			
2	32 %	28.6	28.6	-2.337		
3	42 %	27.6	27.6	-1.818		
4	56 %	30.6	30.6	-3.376		
5	75 %	33.1	33.1	-4.674		
6	100 %	32.7	32.7	-4.466		
Dunnett's critical value = 2.31 (1 Tailed, alpha = 0.05, df [used] = 5,40) (Actual df = 5,54)						

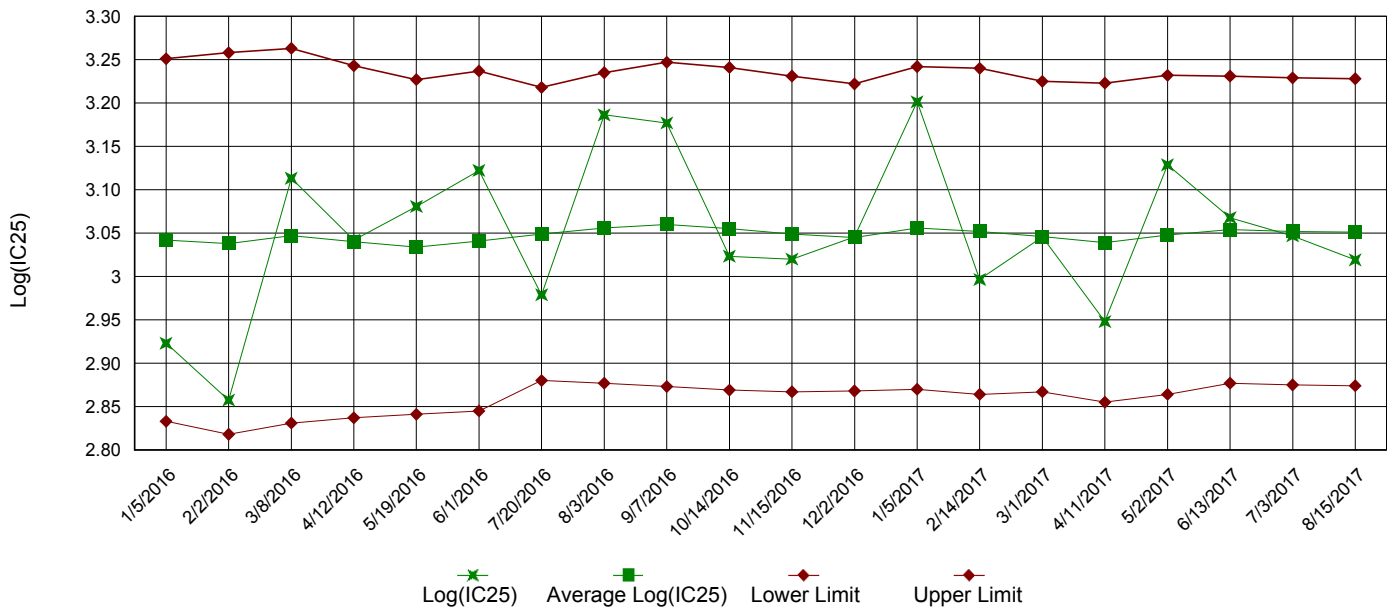
Dunnett's Test - Table 2 of 2					No Transformation	
Ho:Control<Treatment						
Group	Identification	Num of Reps	Min Sig Diff (In Orig. Units)	% of Control	Difference From Control	
1	Control	10				
2	32 %	10	4.448	18.5	-4.5	
3	42 %	10	4.448	18.5	-3.5	
4	56 %	10	4.448	18.5	-6.5	
5	75 %	10	4.448	18.5	-9	
6	100 %	10	4.448	18.5	-8.6	

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: McClelland Consulting Engineers, Inc.

NPDES No.: AR0021661 AFIN:43-00059

Date and Time Test Initiated: August 15, 2017 at 1435

Date and Time Test Terminated: Aug 22, 2017 at 1420

Dilution water used: Moderately Hard

PERCENT SURVIVAL

Time of Reading	Control	Percent Effluent				
		32 %	42 %	56 %	75 %	100 %
24 hour	100	100	100	100	100	100
48 hour	100	100	100	100	100	100
7 day	100	100	100	100	100	100

NUMBER OF YOUNG PRODUCED PER FEMALE @ 7 DAYS

Replicates	Control	Percent Effluent				
		32 %	42 %	56 %	75 %	100 %
A	21	35	28	28	33	29
B	28	27	29	33	33	36
C	25	27	25	26	33	37
D	30	32	30	29	33	37
E	22	25	27	39	29	39
F	19	30	27	30	30	25
G	25	37	27	29	35	34
H	26	14	28	30	42	32
I	23	36	29	33	34	28
J	22	23	26	29	29	30
Mean per Adult	24.1	28.6	27.6	30.6	33.1	32.7
Mean per Surviving Adult	24.1	28.6	27.6	30.6	33.1	32.7
CV %	13.9	24.5	5.45	11.9	11.3	14.1

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. 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	(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: 14.1 (TQP3B)

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

PERMITTEE: McClelland Consulting Engineers,
NPDES NO.: AR0021661 AFIN:43-00059
CONTACT: Mr. Matt Bienvenu
ANALYST: 280, 310, 322

Test Initiated: DATE: August 15, 2017 TIME: 1435
Test Terminated: DATE: Aug 22, 2017 TIME: 1420

DILUTION	DAY						
	1	2	3	4	5	6	7
Control							
D.O. Initial	7.6	7.6	7.5	8.1	7.5	7.9	7.5
Final	7.4	7.2	7.9	7.7	7.9	8.1	7.5
pH Initial	7.9	7.8	7.9	7.8	7.8	7.8	7.9
Final	8.1	8.1	8.2	8.1	8.3	8.1	7.7

DILUTION	DAY						
	1	2	3	4	5	6	7
32 %							
D.O. Initial	7.6	7.4	7.2	7.8	7.9	8.0	7.8
Final	6.4	6.9	6.0	7.6	8.2	7.8	7.7
pH Initial	7.6	7.6	7.8	7.7	7.8	7.7	7.7
Final	7.9	8.0	7.9	8.0	8.5	8.2	7.9

DILUTION	DAY						
	1	2	3	4	5	6	7
42 %							
D.O. Initial	7.7	7.3	7.6	7.6	7.6	7.8	7.9
Final	6.8	6.9	6.4	7.7	8.0	8.0	7.7
pH Initial	7.5	7.6	7.7	7.6	7.8	7.7	7.8
Final	8.0	8.0	8.0	8.0	8.4	8.2	7.9

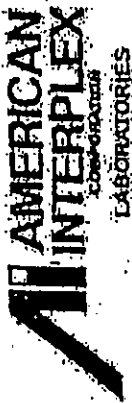
DILUTION	DAY						
	1	2	3	4	5	6	7
56 %							
D.O. Initial	7.7	7.2	6.8	7.5	7.6	7.8	8.2
Final	7.0	6.8	6.5	7.6	8.1	8.1	7.5
pH Initial	7.5	7.6	7.7	7.6	7.8	7.7	7.7
Final	8.0	7.9	7.9	8.0	8.3	8.3	8.0

DILUTION	DAY						
	1	2	3	4	5	6	7
75 %							
D.O. Initial	7.6	7.3	7.1	7.6	7.5	7.8	7.8
Final	6.6	6.7	6.6	7.4	7.8	8.1	7.5
pH Initial	7.3	7.5	7.6	7.6	7.8	7.8	7.7
Final	8.0	8.0	8.0	8.0	8.2	8.3	8.1

DILUTION	DAY						
	1	2	3	4	5	6	7
100 %							
D.O. Initial	7.6	7.5	7.5	7.6	7.5	7.9	7.7
Final	7.0	6.2	6.3	7.6	8.0	8.0	7.6
pH Initial	7.2	7.4	7.5	7.5	7.9	7.8	7.6
Final	7.9	7.8	7.9	7.8	8.1	8.4	8.1

Alkalinity	Hardness	Conductivity	Chlorine	Sample ID
41	100	480	<0.05	Cabot 14-AUG-17
78	97	480	<0.05	Cabot 16-AUG-17
92	92	400	<0.05	Cabot 18-AUG-17

Alkalinity	Hardness	Conductivity	Chlorine	Sample ID
59	80	300	<0.05	215072



CHAIN OF CUSTODY / ANALYSIS REQUEST FORM

PAGE 1 OF 1

Client: MCE		PO No.	NO. OF BOTTLES	ANALYSES REQUESTED		AIC CONTROL NO. 215394
Project Reference: Tim Joyner		MATRIX	3			AIC PROPOSAL NO.
Sample Manager: Josh Johnson		WATER				Carrier: MCE
By: Josh Johnson		CDMP				Received Temperature: 0.6
AIC No. Cabot		GRAB				Remarks:
Date/Time Collected: 8/14/17 0800						
Date/Time Delivered: 8/14/17 1014						
Container Type: Plastic						
Preservative:						
G = Glass						
NO = none						
P = Plastic						
S = Sulphuric acid						
acid pH2						
V = VOA vials						
N = Nitric acid						
pH2						
H = HCl to pH2						
B = NaOH to pH2						
Y = Sodium Hydroxide						
Z = Zinc acetate						
A = NH4SO4 NH4OH						
Turnaround Time Requested: (Please circle) NORMAL or EXPEDITED IN _____ DAYS						
Expedited results requested by: Josh Johnson						
Who should AIC contact with questions: Josh Johnson						
Phone: _____ Fax: _____						
Report Attention to: _____						
Report Address to: _____						
Email Address: _____						
92044						

FORM 0069



CHAIN OF CUSTODY / ANALYSIS REQUEST FORM

Client: <i>mce</i>		PO No.		NO OF BOTTLES		ANALYSES REQUESTED											
Project Reference:		MATT BURN		WATER		SOIL											
Project Manager: <i>Teste James</i>		Date/Time Collected: <i>8/17/17</i>		GRA B		COMP											
Sampled By: <i>James</i>		Sample Identification: <i>Cobot</i>		X		X											
AIC No.:		Date/Time Collected: <i>8/18/17</i>		3													
Carrier:		Received Temperature C: <i>1.0</i>		Remarks:													
AIC CONTROL NO: <i>215394</i>		AIC PROPOSAL NO:		Field pH calibration on _____ @ _____		Buffer:											
T = Sodium Thiosulfate		Z = Zinc acetate		H = HCl to pH2		B = NaOH to pH12		V = VOA vials		N = Nitric acid pH2		A = (NH ₄) ₂ SO ₄ , NH ₄ OH		Date/Time Received: <i>8/18/17 0900</i>			
Relinquished By: <i>[Signature]</i>		Date/Time Relinquished: <i>8-18-17 0810</i>		Received By: <i>[Signature]</i>		Date/Time Received: <i>8/18/17 1135</i>		Relinquished By: <i>[Signature]</i>		Date/Time Relinquished: <i>8/18/17 1135</i>		Received in Lab By: <i>[Signature]</i>		Date/Time Received in Lab: <i>8-18-17 1135</i>			
Turnaround Time Requested: (Please circle) <u> </u>		Normal or EXPEDITED IN <u> </u> DAYS		Expedited results requested by: _____		Who should AIC contact with questions: _____		Phone: _____ Fax: _____		Report Attention to: _____		Report Address to: _____		Email Address: _____			
Comments: _____																	