



LELAP Certificate No.: 02027

Product Biomonitoring Report

Menidia beryllina (EPA Method 1006) &
Americamysis bahia (EPA Method 1007)

prepared for
Corrosion Innovations
Client Contact: Jim Knocke

CHLOR*RID SP8 RINSE.
EE USA Project No.: Q-1662-20
Sample Collected: September 25, 2020, at 16:47

M. beryllina

SURVIVAL 7-Day NOEC/LOEC = 0.03%/0.06% Product (PR)
GROWTH 7-Day NOEC/LOEC = <0.03%/0.03% PR
% CV = 3.82

A. bahia

SURVIVAL 7-Day NOEC/LOEC = 0.0100%/0.0150% PR
GROWTH 7-Day NOEC/LOEC = 0.0050%/0.0100% PR
% CV = 10.3

Report Date: August 04, 2023
by
ENVIRONMENTAL ENTERPRISES USA, INC.
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This report contains seven pages plus five appendices, A - E. This report must not be reproduced in part, only in whole. The results and conclusions presented in this report apply only to the sample(s) tested. All results should be considered valid unless otherwise noted in the report.

This is an amended report. The original report identified the product as "Corr-Ze 100". At the client's request, the product name has been updated to CHLOR*RID SP8 Rinse.

Michele Ellis
Effluents Testing Supervisor

Michele Ellis
Effluents Testing Supervisor

David L. Daniel
President
QA/QC Officer

CHLOR*RID SP8 RINSE

SWORN TO AND SUBSCRIBED BEFORE ME THIS	
<u>4</u>	DAY OF <u>August</u> <u>23</u>
<u>Marie Betts</u>	
<p style="text-align: right;">1 of 7</p>	

Marie Betts #159677
 Louisiana Notary Public Commissioned for Life
 St. Tammany Parish * Statewide Jurisdiction

8/4/23
DATE

DATE

Q-1662-20

INLAND SILVERSIDE (*Menidia beryllina*) LARVAL SURVIVAL & GROWTH TEST
EPA-821-R-02-014: METHOD 1006

TEST OVERVIEW

A 7-day static-renewal toxicity test was conducted by Environmental Enterprises USA, Inc. (EE USA) to determine toxicity of PR CHLOR*RID SP8 RINSE to *Menidia beryllina* larvae. Methods, materials, and results are presented in this document. Test organisms were cultured at EE USA and were 11-days-old when this test was initiated. Synthetic seawater was used as the laboratory performance control (LPC) solution and diluent in this test. Five replicates of the LPC solution and five PR concentrations were prepared initially and renewed daily. PR concentrations tested were 0.03, 0.06, 0.12, 0.25, and 0.50%. This test was initiated October 06, 2020, at 15:37 and completed October 13, 2020, at 09:15.

MATERIALS AND METHODS

Materials and methods for the work performed are stated in EPA-821-R-02-014: Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms. Actual materials and methods are detailed below. This test was performed with strict adherence to the requirements of Method 1006 and/or the Western Gulf of Mexico OCS General Permit. The recommendations and suggestions made elsewhere in EPA-821-R-02-014 were incorporated whenever applicable to optimize the experimental design. Dilution water was prepared with hw-MARINEMIX + Bio-elements and Crystal Sea Marinemix Bioassay Laboratory Formula sea salts (80:20) and deionized water and adjusted to 25 parts per thousand (ppt) salinity.

M. beryllina was cultured and maintained at 24±1°C and 25 ppt salinity. Several clutches from different females comprised the embryo pool from which test organism population hatched. Test organisms were fed 200 – 300 µl of a standardized suspension of less than 24-hour-old *Artemia* nauplii twice daily by replicate. The standard suspension is equal to 0.05 g wet weight strained nauplii per ml synthetic seawater. Test organisms were not fed on Day 7. One day prior to test initiation, eight inland silverside minnows were transferred randomly into 30 test chambers with 250 ml synthetic seawater. These test chambers were then placed in the environmental chamber.

Sensitivity of test organisms to a known toxicant was determined by performing a chronic Standard Reference Toxicant (SRT) test, MN2010, with potassium chloride (GFS Chemicals, Lot 19190172). The SRT test was initiated on October 01, 2020, with 11-day-old *M. beryllina* larvae. Appendix E contains *M. beryllina* SRT control charts.

	SURVIVAL	GROWTH
NOEC:	686 mg/L	686 mg/L
LOEC:	980 mg/L	>686 mg/L

The product used in this test was delivered to EE USA on September 29, 2020 (Appendix D). This sample was used to prepare a 1% stock solution. The stock solution was used to prepare the initial and subsequent renewal test solutions. Test chambers were labeled with replicate identification, and EE USA's project number. Six treatments, five PR concentrations and a LPC were prepared daily (Appendix A, page 1).

Each treatment was poured into a new acid-washed 1-gallon plastic container and placed in an environmental chamber to warm up to test temperature. After the test solutions reached test temperature, initial water quality parameters (temperature, dissolved oxygen (DO), and salinity) were measured. At the end of each 24-hour exposure period, prior to renewal, the ending DO, temperature, salinity, and pH in each treatment were recorded also (Appendix A, pages 11 - 17). Alkalinity, pH, and salinity were measured in the LPC October 06, October 08, and October 10, 2020 (Appendix A, page 2).

On Day 0, the preloaded replicate test chambers were removed from the environmental chamber and carefully examined. Dead or injured larvae were replaced with organisms from the same batch and this test was initiated by renewal: excess food and debris was removed by pipette and 90% of the treatment solution was poured out of each replicate. Aliquots of freshly prepared treatments were poured gently into each replicate as appropriate and then this test was placed in the environmental chamber. Surviving test organisms were disturbed as little as possible during renewal. On Days 1 - 6, the test was renewed.

Every 24 hours, survival was recorded (Appendix A, pages 3 - 5). After seven days, the final survival data were recorded and this test was terminated. Surviving *M. beryllina* were rinsed in deionized water, placed on a tared weighing dish, and dried at 60+/-4°C for 24 hours by replicate. After cooling for at least 30 minutes, dried *M. beryllina* were weighed and the average individual dry weight for each replicate was calculated (Appendix B, page 4). The average individual dry weight is equal to the replicate weight divided by the number of original larvae.

Summary of Experimental Conditions

Test Organisms: 11-day-old *Menidia beryllina* larvae.
Dilution Water: Synthetic seawater, 25 ppt salinity.
Temperature: 25 \pm 1°C.
Photoperiod: 16 hours light; 8 hours dark.
Test Chambers: Rectangular Pyrex dish, 21 cm x 11 cm x 7 cm. Total volume = 1.45 L.
Test Solution Volume: 500 ml.
Aeration: No.
Test Solution Renewal: Yes.

Test acceptability criteria (TAC) include minimum LPC survival, 80%, minimum mean dry weight for surviving *M. beryllina* in the LPC, \geq 0.50 mg, and maximum percent coefficient of variation (%CV) in the LPC and critical dilution for survival and growth, \leq 40. The %CV was calculated using the number of surviving *M. beryllina* in each replicate. This test met all TAC. Survival in the concurrent LPC was 100.0%. The mean dry weight of surviving *M. beryllina* in the LPC was 1.513 mg and the highest %CV for survival and growth in the LPC and critical dilution was 3.82 (Appendix B, pages 2 & 5).

RESULTS AND CONCLUSION

The response used in statistical analysis of survival data was the proportion of surviving test organisms per replicate. These proportions were transformed by the Arc Sine Square Root Transformation and then tested for normal distribution and homogeneity of variance using Shapiro-Wilk's and Bartlett's tests, respectively. Survival data were normally distributed, unequal in variance, and further evaluated by the nonparametric alternative, Steel's Many-One Rank Test. The No Observed Effect Concentration (NOEC) for impaired *M. beryllina* survival was 0.03% PR. The Lowest Observed Effect Concentration (LOEC) was 0.06% PR. For this *M. beryllina* survival data set, the minimum statistically significant percent difference (MSDp) was 14.3 (Appendix B, page 2).

The response used in growth data analysis was the average individual dry weight for each replicate: replicate weight divided by the number of original larvae. Growth data were not transformed and concentrations demonstrating significant mortality are routinely excluded from subsequent data analysis. Growth data were tested for normal distribution and homogeneity of variance using Shapiro-Wilk's and Bartlett's tests, respectively. Growth data were normally distributed, equal in variance, and further evaluated by the parametric alternative, Dunnett's Test. The NOEC for impaired *M. beryllina* growth was <0.03% PR. The LOEC was 0.03% PR. For this *M. beryllina* growth data set, the MSD_p was 8.89 (Appendix B, page 4).

Survival of *M. beryllina* larvae exposed to CHLOR*RID SP8 RINSE was reduced significantly at 0.06% PR (the LOEC). Growth was reduced significantly at 0.03% PR (the LOEC). Survival and growth data summary statistics are presented in Appendix B.

A 96-hour range finding test was originally initiated on September 30, 2020 (EE USA Project No.: Q-1661-20). The test was terminated at 24 hours due to high mortality. A second 96-hour range finding test was initiated on October 1, 2020 (EE USA Project No.: Q-1664-20). Appendix F contains the raw data pages.

MYSID (*Americanamysis bahia*) SURVIVAL, GROWTH, AND FECUNDITY TEST
EPA-821-R-02-014: METHOD 1007

TEST OVERVIEW

A 7-day static-renewal toxicity test was conducted by EE USA to determine toxicity of PR CHLOR*RID SP8 RINSE to *Americanamysis bahia* juveniles. Methods, materials, and results are presented in this document. Organisms used in this test were cultured at EE USA and 7-days-old when this test was initiated. Synthetic seawater was used as the LPC solution and diluent in this test. Eight replicates of the LPC solution and five PR concentrations were prepared initially and renewed daily. PR concentrations tested were 0.0025, 0.0050, 0.0100, 0.0150, and 0.0300%. This test was initiated October 06, 2020, at 15:20 and completed October 13, 2020, at 10:05.

MATERIALS AND METHODS

Materials and methods for the work performed are stated in EPA-821-R-02-014: Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms. Actual materials and methods are detailed below. This test was performed with strict adherence to the requirements of Method 1007 and/or the Western Gulf of Mexico OCS General Permit with the following exception(s):

- 1) during this test, recorded temperatures fell outside the required range by not more than 0.8°C on at least one occasion. This was a minor excursion and did not affect the results of this test.

The recommendations and suggestions made elsewhere in EPA-821-R-02-014 were incorporated whenever applicable to optimize the experimental design. Dilution water was prepared with hw-MARINEMIX + Bio-elements and Crystal Sea Marinemix Bioassay Laboratory Formula sea salts (80:20) and deionized water and adjusted to 25 ppt salinity.

A. bahia was cultured and maintained at 24±1°C and 25 ppt salinity. Six days before initiating this test, approximately 500, 12- to 24-hour-old mysids were collected from breeding cultures, moved to a holding system, and acclimated to 26±1°C. Test organisms were fed 100 – 175 µl of a standardized suspension of less than 24-hour-old *Artemia* nauplii twice daily by replicate. The standard suspension is equal to 0.05 g wet weight strained nauplii per ml synthetic seawater.

Sensitivity of test organisms to a known toxicant was determined by performing a chronic Standard Reference Toxicant (SRT) test AB2010, with potassium chloride (GFS Chemicals, Lot 19190172). The SRT test was initiated on October 01, 2020, with 7-day-old *A. bahia*. Appendix E contains *A. bahia* SRT control charts.

	SURVIVAL	GROWTH
NOEC:	416 mg/L	250 mg/L
LOEC:	694 mg/L	416 mg/L

The product used in this test was delivered to EE USA on September 29, 2020 (Appendix D). This sample was used to prepare a 1% stock solution. The stock solution was used to prepare the initial and subsequent renewal test solutions. Test chambers were labeled with replicate identification, and EE USA's project number. Six treatments, five PR concentrations and a LPC were prepared daily (Appendix A, page 1).

Each treatment was poured into a new acid-washed 1-gallon plastic container and placed in an environmental chamber to warm up to test temperature. After the test solutions reached test temperature, initial water quality parameters (temperature, DO, and salinity) were measured. At the end of each 24-hour exposure period, prior to renewal, the ending DO, temperature, salinity, and pH in each treatment were recorded also (Appendix A, pages 13 - 16). Alkalinity, pH, and salinity were measured in the LPC October 06, October 08, and October 10, 2020 (Appendix A, page 1).

On Day 0, the treatments were poured into their respective test chambers, five *A. bahia* juveniles were distributed randomly to each, and then this test was placed in the environmental chamber. On Days 1 - 6, the test was renewed: excess food and debris was removed by pipette and 90% of the treatment solution was poured out of each replicate. Aliquots of freshly prepared treatments were poured gently into each replicate as appropriate. Surviving test organisms were disturbed as little as possible during renewal.

Every 24 hours, survival was recorded (Appendix A, pages 11 - 13). After seven days, the final survival data were recorded and this test was terminated. Surviving *A. bahia* were rinsed in deionized water, placed on a tared weighing dish, and dried at 60+/-4°C for 24 hours by replicate. After cooling for at least 30 minutes, dried *A. bahia* were weighed and the average individual dry weight for each replicate was calculated (Appendix C, page 5). The average individual dry weight is equal to the replicate weight divided by the number of original mysids.

Summary of Experimental Conditions

Test Organisms: 7-day-old *Americamysis bahia* juveniles.
Dilution Water: Synthetic seawater, 25 ppt salinity.
Temperature: 26±1°C.
Photoperiod: 16 hours light; 8 hours dark.
Test Chambers: Disposable plastic cups, 9 cm in diameter. Total volume = 300 ml.
Test Solution Volume: 150 ml.
Aeration: No.
Test Solution Renewal: Yes.

TAC include minimum LPC survival, 80%, minimum mean dry weight for surviving *A. bahia* in the LPC, ≥0.20 mg, and maximum %CV in the LPC and critical dilution for survival and growth, ≤40. The %CV was calculated using the number of surviving *A. bahia* in each replicate. This test met all TAC. Survival in the concurrent LPC was 100.0%. The mean dry weight of surviving *A. bahia* in the LPC was 0.420 mg and the highest %CV for survival and growth in the LPC and critical dilution was 10.3 (Appendix C, pages 3 & 6).

RESULTS AND CONCLUSION

The response used in statistical analysis of survival data was the proportion of surviving test organisms per replicate. These proportions were transformed by the Arc Sine Square Root Transformation and then tested for normal distribution and homogeneity of variance using Shapiro-Wilk's and Bartlett's tests, respectively. Survival data were not normally distributed and were further evaluated by the nonparametric alternative, Steel's Many-One Rank Test. The NOEC for impaired *A. bahia* survival was 0.0100% PR. The LOEC was 0.0150% PR. For this *A. bahia* survival data set, the MSD_p was 8.82 (Appendix C, page 3).

The response used in growth data analysis was the average individual dry weight for each replicate: replicate weight divided by the number of original larvae. Growth data were not transformed and concentrations demonstrating significant mortality are routinely excluded from subsequent data analysis. Growth data were tested for normal distribution and homogeneity of variance using Shapiro-Wilk's and Bartlett's tests, respectively. Growth data were normally distributed, equal in variance, and further evaluated by the parametric alternative, Dunnett's Test. The NOEC for impaired *A. bahia* growth was 0.0050% PR. The LOEC was 0.0100% PR. For this *A. bahia* growth data set, the MSD_p was 10.7 (Appendix C, page 5).

Survival of *A. bahia* exposed to CHLOR*RID SP8 RINSE was reduced significantly at 0.0150% PR (the LOEC). Growth was reduced significantly at 0.0100% PR (the LOEC). Survival and growth data summary statistics are presented in Appendix C.

A 96-hour range finding test was originally initiated on September 30, 2020 (EE USA Project No.: Q-1661-20). The test was terminated at 24 hours due to high mortality. A second 96-hour range finding test was initiated on October 1, 2020 (EE USA Project No.: Q-1664-20). Appendix F contains the raw data pages.

REFERENCES

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U. S. Environmental Protection Agency, March 1983. Methods for Chemical Analysis of Water and Wastes, EPA 600-4-79-020. Office of Research and Development. Washington, DC 20460.

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U.S. Environmental Protection Agency. July 2000. Method Guidance and Recommendations for Whole Effluent Toxicity (WET) Testing (40 CFR Part 136). EPA 821-B-00-004. Office of Water (4303). Washington, DC 20460.

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U.S. Environmental Protection Agency Region VI, Effective: October 1, 2017. Final NPDES General Permit for New and Existing Sources and New Dischargers in the Offshore Subcategory of the Oil and Gas Extraction Category for the Western Portion of the Outer Continental Shelf of the Gulf of Mexico (GMG290000). FR Volume 82, No. 189: 45845, October 2, 2017.

Environmental Enterprises USA, Inc.

APPENDIX A

Corrosion Innovations – Corr-Ze 100

Jim Knocke

Test Concentrations, % Product (PR)

<i>Menidia beryllina</i>	Total Volume/ Concentration, ml	Color Code	ml SSOL	ml DH ₂ O
0.50	2500.00	Black	1250.00	1250.00
0.25	"	Red	625.00	1875.00
0.12	"	Yellow	300.00	2200.00
0.06	"	Green	150.00	2350.00
0.03	"	Blue	75.00	2425.00
0 LP0.0C	"	White	0.00	2500.00

Total Volume (ml) of PR needed per day= 2400.00

Total Volume (ml) of PR needed for test duration= 16800.00

<i>Americamysis bahia</i>	Total Volume/ Concentration, ml	Color Code	ml SSOL	ml DH ₂ O
0.0300	1200.00	Black	36.00	1164.00
0.0150	"	Red	18.00	1182.00
0.0100	"	Yellow	12.00	1188.00
0.0050	"	Green	6.00	1194.00
0.0025	"	Blue	3.00	1197.00
0 LP0.0C	"	White	0.00	1200.00

Total Volume (ml) of PR needed per day= 75.00

Total Volume (ml) of PR needed for test duration= 525.00

Sample preparation:1% Stock Solution (SSOL) : 200.0 ml Corr-Ze 100 + 19800 ml DH₂OPrepared by : MR Date : 10/06/20Data Pages & Calculations by: Michael E QA/QC Check by: MRobbin

$$\begin{aligned}M. beryllina &= 5 \text{ Reps} \times 500 \text{ ml} \\&= 2500 \text{ ml}\end{aligned}$$

$$\begin{aligned}A. bahia &= 8 \text{ Reps} \times 150 \text{ ml} \\&= 1200 \text{ ml}\end{aligned}$$

Prep Date	10/06	10/07	10/08	10/09	10/10	10/11	10/12
DH ₂ O Lot #	25R- <u>273</u> -20	25R- <u>274</u> -20	25R- <u>275</u> -20	25R- <u>276</u> -20	25R- <u>277</u> -20	25R- <u>278</u> -20	25R- <u>279</u> -20
Sample #	1	1	1	1	1	1	1
Initial	<u>AMS</u>	<u>MR</u>	<u>AMS</u>	<u>SM</u>	<u>AM</u>	<u>AM</u>	<u>MR</u>

Comments: (2) Correction on all data pages 10/14/20 ME

Corr-Ze 100

(2)
P-1662-20
NOEC/LOEC

Corrosion Innovations – Corr-Ze 100

DH₂O = Dilution Water = Synthetic Seawater, 25 ppt

	LPC	M #	LPC	M #	LPC	M #
Date	10/06		10/08		10/10	
Alkalinity	80	//	88	//	88	//
Salinity	25.1	1B	24.9	1B	24.9	1B
pH	8.0	3n	8.0	3n	8.1	3n
	TW		TW		TW	

LPC: Laboratory Performance Control, synthetic seawater; Alkalinity (EPA Method 310.2): mg/L as CaCO₃; Salinity (EPA Method 120.1): ppt; pH (EPA Method 150.1): su; M#: meter number
Dissolved Oxygen, Electrode (EPA Method 360.1): mg/L; Temperature, Thermometric (EPA Method 170.1): °C

**Inland Silverside Minnow, *Menidia beryllina*Larval Survival and
Growth Test, Method 1006**

Corrosion Innovations – Corr-Ze 100

Test Organisms Age: 11 Days Old Test Organisms Source: EE
 Test Initiation At: 1537 on 10/6/20
 Counted by: MR QC/QA by: CM Loaded by: CM
 Organism Lot # MN-269-20

Exposure Chamber: 1.5 L Pyrex dish.

***M. beryllina* Daily Survival Data**

Treatment: 0% PR									White
Rep.	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	
1	8	7	7	8	8	8	8	8	
2	8	8	8	8	8	8	8	8	
3	8	8	8	8	8	8	8	8	
4	8	8	8	8	8	8	8	8	
5	8	8	8	8	8	8	8	8	
Initials	CM	SM	AMHS	AMHS	CM	CM	SM	SM	

Treatment: 0.03% PR									Blue
Rep.	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	
6	8	8	8	8	8	8	8	8	
7	8	8	8	8	8	8	8	8	
8	8	8	8	8	8	8	8	8	
9	8	7	6	6	6	6	6	6	
10	8	9	8	8	8	8	6	6	
Initials	CM	SM	AMHS	AMHS	CM	CM	SM	SM	

Comments: _____

***M. beryllina* Daily Survival Data Cont.**

Treatment: 0.06% PR								Green
Rep.	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
11	8	6	6	6	4	4	4	4
12	8	7	4	3	3	3	3	3
13	8	8	7	8	8	4	4	4
14	8	9	8	7	2	2	2	2
15	8	6	9	4	4	2	2	2
Initials	cm	sm	Ams	Ams	cm	cm	sm	sm

Treatment: 0.12% PR								Yellow
Rep.	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
16	8	4	4	4	4	4	2	2
17	8	5	5	4	3	0	0	0
18	8	5	4	3	3	1	0	0
19	8	4	3	2	2	2	2	2
20	8	2	2	2	2	0	0	0
Initials	cm	sm	Ams	Ams	cm	cm	sm	sm

Treatment: 0.25% PR								Red
Rep.	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
21	8	0	0	0	0	0	0	0
22	8	0	0	0	0	0	0	0
23	8	0	0	0	0	0	0	0
24	8	0	0	0	0	0	0	0
25	8	0	0	0	0	0	0	0
Initials	cm	sm	Ams	Ams	cm	cm	sm	sm

Comments: _____

Corr-Ze 100

***M. beryllina* Daily Survival Data Cont.**

Treatment: 0.50% PR								Black
Rep.	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
26	8	0	0	0	0	0	0	0
27	8	0	0	0	0	0	0	0
28	8	0	0	0	0	0	0	0
29	8	0	0	0	0	0	0	0
30	8	0	0	0	0	0	0	0
Initials	CM	SM	IAMS	AMS	CM	CM	SM	SM
Time	1537	1042	1045	0813	0837	0819	1025	0915

Test Completed on: 10/13/20

***M. beryllina* Water Quality Data**

All Treatments: Initial Temp., 24.5 to 26.4°C. Final Temp., 23.5 to 26.4°C. Initial & Final Dissolved Oxygen (DO): 4.0 to 7.5 mg/L.
 LPC: Initial Salinity, 24.5 to 25.4 ppt. I: initial water quality. F: final water quality.

Day 0		Treatment % PR						
10/06/20	LPC	0.03	0.06	0.12	0.25	0.50	Meter #	Comments _____
DO I	7.0	7.0	6.9	7.2	7.1	7.1	57	_____
Temp I	23.7	23.9	24.2	24.2	23.9	23.9	1B	_____
Salinity I	25.1	25.1	25.0	25.0	25.0	24.9	1B	_____
Tech Initials:	AMS							Time: 1437

Day 1		Treatment % PR						
10/07/20	LPC	0.03	0.06	0.12	0.25	0.50	Meter #	Comments _____
DO F	6.3	6.5	6.5	6.4	6.1	6.10	57	_____
Temp F	25.9	25.8	25.7	25.7	25.6	25.6	1B	_____
Salinity F	25.5	25.3	25.3	25.3	25.2	25.2	1B	_____
pH F	7.9	8.4	8.4	8.8	9.2	9.5	3n	_____
Tech Initials:	SM							Time: 0856

DO: mg/L pH: su Salinity: ppt Temp: °C

Corr-Ze 100

Q_P(2)
P-1662-20
NOEC/LOEC

***M. beryllina* Water Quality Data Cont.**

All Treatments: Initial Temp., 24.5 to 26.4°C. Final Temp., 23.5 to 26.4°C. Initial & Final Dissolved Oxygen (DO): 4.0 to 7.5 mg/L.
 LPC: Initial Salinity, 24.5 to 25.4 ppt. I: initial water quality. F: final water quality.

Day 1		Treatment % PR						Comments _____ _____ _____ _____ _____
10/07/20	LPC	0.03	0.06	0.12	0.25	0.50	Meter #	
DO I	7.2	7.3	7.3	7.3	7.4	7.4	S7	
Temp I	24.9	25.0	24.9	24.9	24.8	24.7	IB	
Salinity I	25.1	25.1	25.1	25.1	25.0	24.9	IB	
Tech Initials:	SM							
Time:	0916							

Day 2		Treatment % PR						Comments _____ _____ _____ _____ _____
10/08/20	LPC	0.03	0.06	0.12	0.25	0.50	Meter #	
DO F	10.4	10.4	10.3	10.3				S7
Temp F	25.8	26.0	25.9	25.9				IB
Salinity F	25.4	25.4	25.4	25.3				IB
pH F	7.9	8.2	8.3	8.5				3n
Tech Initials:	SM							
Time:	0911							

Day 2		Treatment % PR						Comments _____ _____ _____ _____ _____
10/08/20	LPC	0.03	0.06	0.12	0.25	0.50	Meter #	
DO I	7.2	7.2	7.2	7.2				S7
Temp I	24.8	24.9	24.8	24.6				IB
Salinity I	24.9	24.9	24.8	24.8				IB
Tech Initials:	SM							
Time:	0923							

Day 3		Treatment % PR						Comments _____ _____ _____ _____ _____
10/09/20	LPC	0.03	0.06	0.12	0.25	0.50	Meter #	
DO F	4.8	4.7	4.8	4.6				S7
Temp F	26.1	26.1	26.4	26.1				IB
Salinity F	25.1	25.2	25.2	25.2				IB
pH F	7.9	8.2	8.3	8.6				37
Tech Initials:	SM							
Time:	0721							

DO: mg/L pH: su Salinity: ppt Temp: °C

Corr-Ze 100

***M. beryllina* Water Quality Data Cont.**

All Treatments: Initial Temp., 24.5 to 26.4°C. Final Temp., 23.5 to 26.4°C. Initial & Final Dissolved Oxygen (DO): 4.0 to 7.5 mg/L.
 LPC: Initial Salinity, 24.5 to 25.4 ppt. I: initial water quality. F: final water quality.

Day 3		Treatment % PR							Comments _____ _____ _____ _____ _____
10/09/20		LPC	0.03	0.06	0.12	0.25	0.50	Meter #	
DO	I	7.1	7.1	7.1	7.1				J7
Temp	I	24.6	24.6	24.6	24.7				1B 3N
Salinity	I	24.8	24.8	24.7	24.7				1B 3N
Tech Initials: JMK		Time: 0748							

Day 4		Treatment % PR							Comments _____ _____ _____ _____ _____
10/10/20		LPC	0.03	0.06	0.12	0.25	0.50	Meter #	
DO	F	6.7	6.5	6.4	6.4				S7
Temp	F	26.4	26.4	26.4	26.3				1B
Salinity	F	25.0	25.2	25.1	25.1				1B
pH	F	8.0	8.2	8.2	8.4				3N
Tech Initials: MFE		Time: 0731							

Day 4		Treatment % PR							Comments _____ _____ _____ _____ _____
10/10/20		LPC	0.03	0.06	0.12	0.25	0.50	Meter #	
DO	I	7.2	7.2	7.2	7.2				S7
Temp	I	24.6	24.7	24.7	24.6				1B
Salinity	I	24.9	24.9	24.8	24.7				1B
Tech Initials: MFE		Time: 0750							

Day 5		Treatment % PR							Comments _____ _____ _____ _____ _____
10/11/20		LPC	0.03	0.06	0.12	0.25	0.50	Meter #	
DO	F	7.0	6.8	6.4	6.3				S7
Temp	F	26.0	26.1	26.2	26.2				1B
Salinity	F	25.2	25.2	25.2	25.1				1B
pH	F	8.0	8.2	8.2	8.4				3N
Tech Initials: MFE		Time: 0720							

DO: mg/L pH: su Salinity: ppt Temp: °C

Corr-Ze 100

***M. beryllina* Water Quality Data Cont.**

All Treatments: Initial Temp., 24.5 to 26.4°C. Final Temp., 23.5 to 26.4°C. Initial & Final Dissolved Oxygen (DO): 4.0 to 7.5 mg/L.
 LPC: Initial Salinity, 24.5 to 25.4 ppt. I: initial water quality. F: final water quality.

Day 5		Treatment % PR						Comments _____ _____ _____ _____ _____
10/11/20		LPC	0.03	0.06	0.12	0.25	0.50	
DO I		7.2	7.3	7.4	7.4			S7
Temp I		24.4	24.5	24.6	24.6			IB
Salinity I		24.9	24.8	24.8	24.8			IB
Tech Initials: ME								Time: 0757

Day 6		Treatment % PR						Comments _____ _____ _____ _____ _____
10/12/20		LPC	0.03	0.06	0.12	0.25	0.50	
DO F		6.5	6.2	5.8	4.7			S7
Temp F		20.2	20.1	20.2	20.2			IB
Salinity F		25.3	25.2	25.1	25.1			IB
pH F		7.9	8.1	8.2	8.4			3N
Tech Initials: SM								Time: 0840

Day 6		Treatment % PR						Comments _____ _____ _____ _____ _____
10/12/20		LPC	0.03	0.06	0.12	0.25	0.50	
DO I		7.3	7.3	7.3	7.3			S7
Temp I		24.9	25.4	25.9	25.7			IB
Salinity I		25.0	24.9	24.8	24.8			IB
Tech Initials: SM								Time: 0848

Day 7		Treatment % PR						Comments _____ _____ _____ _____ _____
10/13/20		LPC	0.03	0.06	0.12	0.25	0.50	
DO F		6.3	5.9	5.2	5.4			S7
Temp F		20.0	20.0	20.1	20.0			IB
Salinity F		25.3	25.0	25.3	25.1			IB
pH F		7.9	8.0	8.1	8.2			3N
Tech Initials:								Time: 0834

DO: mg/L pH: su Salinity: ppt Temp: °C

Corr-Ze 100

7 Day *M. beryllina* Growth Data

Rep #	Treatment % PR	A Final Weight (mg)	B Initial Weight (mg)	C No. of Orig. Larvae	D No. of Surv. Larvae
1	0	28.55	16.21	8	8
2	"	25.66	14.12	8	8
3	"	26.20	13.84	8	8
4	"	25.34	13.65	8	8
5	"	24.107	12.04	8	8
6	0.03	26.79	14.45	8	8
7	"	24.54	13.07	8	8
8	"	22.25	12.68	8	8
9	"	23.21	13.53	8	6
10	"	22.26	12.73	8	6
11	0.06	19.10	12.70	8	4
12	"	17.47	12.80	8	3
13	"	18.27	12.23	8	4
14	"	14.79	12.02	8	2
15	"	15.166	11.22	8	2

Comments: _____

7 Day *M. beryllina* Growth Data Cont.

Rep #	Treatment % PR	A Final Weight (mg)	B Initial Weight (mg)	C No. of Orig. Larvae	D No. of Surv. Larvae
16	0.12	18.12	14.65	8	2
17	"		15.80	8	0
18	"		13.93	8	0
19	"	17.45	15.48	8	2
20	"		14.86	8	0
21	0.25		14.49	8	0
22	"		15.29	8	0
23	"		14.10	8	0
24	"		14.52	8	0
25	"		13.41	8	0
26	0.50		11.83	8	0
27	"		12.97	8	0
28	"		12.30	8	0
29	"		13.82	8	0
30	"		13.40	8	0

Initial Foil Wts at 1207 on 10 / 12 /2020 (AMS) Scale#: 3B

Oven Temp. 59.0 °C Therm. #: TTS9

Begin Drying Survivors at 0915 on 10 / 13 /2020 (SM) ^{oabs} Oven #: N

Finish Drying Survivors at 1404 on 10 / 14 /2020 (SAT) ^{ams} (A)

Final Foil Wts. at 1124 on 10 / 14 /2020 (SM) Scale #: 2R

Data Entry by: MH

QA/QC Officer: ME

(A) error 10114120sm

Mysid, *Americamysis bahia*
Survival, Growth, and Fecundity Test, Method 1007

Corrosion Innovations – Corr-Ze 100

Test Organisms Age: 7 Days Old Test Organisms Source: EE
 Counted by: AMS Test Initiation At: 1526 on 10/10/20
 QC/QA by: cm Loaded by: AMS
 Organism Lot # Ab-494L-20

Exposure Chamber: 300 ml plastic cup.

A. *bahia* Daily Survival Data

Treatment: 0% PR									White
Rep.	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	
1/2	5/5	S/S							
3/4	5/5	S/S							
5/6	5/5	S/S							
7/8	5/5	S/S							
Initials	AMS	sm	AMS	M	CM	CM	sm	CM	

Treatment: 0.0025% PR									Blue
Rep.	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	
9/10	5/5	S/S							
11/12	5/5	S/S							
13/14	5/5	S/S							
15/16	5/5	S/S							
Initials	AMS	sm	AMS	M	CM	CM	sm	CM	

Comments: _____

A. bahia Daily Survival Data Cont.

Treatment: 0.0050% PR								Green
Rep.	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
17/18	5/5	S/S						
19/20	5/5	S/S						
21/22	5/5	S/S						
23/24	5/5	S/S						
Initials	Ams	sm	Ams	M	CM	CM	sm	cm

Treatment: 0.0100% PR								Yellow
Rep.	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
25/26	5/5	S/S						
27/28	5/5	S/S						
29/30	5/5	S/4	5/4	5/4	S/4	S/4	S/4	S/4
31/32	5/5	S/S						
Initials	Ams	sm	Ams	M	CM	CM	sm	cm

Treatment: 0.0150% PR								Red
Rep.	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
33/34	5/5	S/S	S/S	S/S	S/S	S/4	S/3	3/2
35/36	5/5	S/S	S/S	S/S	S/S	S/S	2/4	2/2
37/38	5/5	S/S	S/S	S/S	S/S	S/S	3/2	3/2
39/40	5/5	S/S	S/S	S/S	S/S	4/5	4/5	3/2
Initials	Ams	sm	Ams	M	CM	CM	sm	cm

Comments: _____

A. bahia Daily Survival Data Cont.

Treatment 0.0300% PR								Black
Rep.	Day 0	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
41/42	5/5	5/5	5/5	4/2	1/0	0/0	0/0	0/0
43/44	5/5	5/5	4/5	2/3 ^(B)	1/0	0/0	0/0	0/0
45/46	5/5	5/5	5/4	5/4	1/0	0/0	0/0	0/0
47/48	5/5	5/5	5/5	0/4	0/0	0/0	0/0	0/0
Initials	AMS	Sm	AMS	SM	CM	CM	Sm	CM
Time	1520	1100	1130	0950	1900	0844	1120	1005

Test Completed on: 10/13/20

(B) ERROR
10/13/2020**A. bahia Water Quality Data**

All Treatments: Initial Temp., 24.5 to 26.4°C. Final Temp., 24.5 to 27.4°C. Initial & Final Dissolved Oxygen (DO): 4.0 to 7.5 mg/L.
 LPC: Initial Salinity, 24.5 to 25.4 ppt. I: initial water quality. F: final water quality.

Day 0		Treatment % PR						Comments _____
10/06/20	LPC	0.0025	0.0050	0.0100	0.0150	0.0300	Meter #	
DO I	7.0	4.9	7.1	7.0	7.0	7.1	57	
Temp I	24.2	24.2	24.1	23.7	24.0	24.1	1B	
Salinity I	24.9	25.0	25.0	25.2	25.1	25.0	1B	
Tech Initials:	AMS						Time: 1439	

Day 1		Treatment % PR						Comments (A) Error 10/07/20 Sm
10/07/20	LPC	0.0025	0.0050	0.0100	0.0150	0.0300	Meter #	
DO F	6.3	① 0.2	① 0.2	6.4	6.1	5.70	57	
Temp F	25.9	25.8	25.7	25.7	25.6	25.6	1B	
Salinity F	26.2	26.1	26.2	26.2	26.2	26.4	1B	
pH F	7.9	7.8	7.9	8.0	7.9	8.1	3n	
Tech Initials:	Sm						Time: 0850	①

DO: mg/L pH: su Salinity: ppt Temp: °C

0859

A. bahia Water Quality Data Cont.

All Treatments: Initial Temp., 24.5 to 26.4°C. Final Temp., 24.5 to 27.4°C. Initial & Final Dissolved Oxygen (DO): 4.0 to 7.5 mg/L
 LPC: Initial Salinity, 24.5 to 25.4 ppt. I: initial water quality. F: final water quality.

Day 1		Treatment % PR							Comments _____ _____ _____ _____
10/07/20	LPC	0.0025	0.0050	0.0100	0.0150	0.0300	Meter #		
DO I	7.3	7.3	7.3	7.3	7.3	7.3	7.3	S7	
Temp I	25.0	24.8	24.9	25.0	24.9	25.1	25.1	IB	
Salinity I	25.0	25.1	25.1	25.1	25.1	25.1	25.1	IB	
Tech Initials:	SM		Time: 0921						

Day 2		Treatment % PR							Comments _____ _____ _____ _____
10/08/20	LPC	0.0025	0.0050	0.0100	0.0150	0.0300	Meter #		
DO F	6.1	6.2	6.1	6.1	6.1	6.0	6.0	S7	
Temp F	25.0	24.9	24.9	25.0	25.0	24.8	24.8	IB	
Salinity F	26.8	26.6	26.9	26.9	26.9	26.8	26.8	IB	
pH F	7.8	7.8	7.8	7.9	7.9	8.1	8.1	3n	
Tech Initials:	SM		Time: 0913						

Day 2		Treatment % PR							Comments _____ _____ _____ _____
10/08/20	LPC	0.0025	0.0050	0.0100	0.0150	0.0300	Meter #		
DO I	7.2	7.2	7.2	7.2	7.2	7.2	7.2	S7	
Temp I	24.7	24.8	24.7	24.7	24.8	24.8	24.8	IB	
Salinity I	24.9	24.9	24.9	24.9	24.9	24.9	24.9	IB	
Tech Initials:	SM		Time: 0927						

Day 3		Treatment % PR							Comments _____ _____ _____ _____
10/09/20	LPC	0.0025	0.0050	0.0100	0.0150	0.0300	Meter #		
DO F	6.4	6.4	6.0	5.8	5.9	6.0	6.0	S7	
Temp F	25.4	25.4	25.4	25.4	25.7	25.0	25.0	IB	
Salinity F	26.5	26.2	26.3	26.2	26.3	26.6	26.6	IB	
pH F	7.8	7.8	7.8	7.9	7.9	8.1	8.1	3n	
Tech Initials:	MK		Time: 0722						

DO: mg/L pH: su Salinity: ppt Temp: °C

Corr-Ze 100

Q P-1662-20
NOEC/LOEC

A. bahia Water Quality Data Cont.

All Treatments: Initial Temp., 24.5 to 26.4°C. Final Temp., 24.5 to 27.4°C. Initial & Final Dissolved Oxygen (DO): 4.0 to 7.5 mg/L.
 LPC: Initial Salinity, 24.5 to 25.4 ppt. I: initial water quality. F: final water quality.

Day 3		Treatment % PR							Comments _____ _____ _____ _____ _____	
10/09/20		LPC	0.0025	0.0050	0.0100	0.0150	0.0300	Meter #		
DO	I	7.1	7.1	7.1	7.1	7.1	7.1	57		
Temp	I	24.7	24.7	24.8	24.8	24.8	24.9	1B		
Salinity	I	24.8	24.8	24.8	24.8	24.8	24.8	1B		
Tech Initials: JH		Time: 0749								

Day 4		Treatment % PR							Comments _____ _____ _____ _____ _____	
10/10/20		LPC	0.0025	0.0050	0.0100	0.0150	0.0300	Meter #		
DO	F	6.3	6.2	6.1	5.9	5.9	6.1	57		
Temp	F	25.6	25.7	25.6	25.6	25.6	25.3	1B		
Salinity	F	26.2	26.0	26.0	26.0	26.2	26.2	1B		
pH	F	7.9	7.9	7.9	7.9	7.9	8.2	3N		
Tech Initials: ME		Time: 0732								

Day 4		Treatment % PR							Comments _____ _____ _____ _____ _____	
10/10/20		LPC	0.0025	0.0050	0.0100	0.0150	0.0300	Meter #		
DO	I	7.1	7.2	7.2	7.2	7.2	7.2	57		
Temp	I	24.6	24.7	24.7	24.7	24.7	24.8	1B		
Salinity	I	24.7	24.8	24.8	24.8	24.8	24.8	1B		
Tech Initials: ME		Time: 0752								

Day 5		Treatment % PR							Comments _____ _____ _____ _____ _____	
10/11/20		LPC	0.0025	0.0050	0.0100	0.0150	0.0300	Meter #		
DO	F	6.4	6.0	6.1	5.9	5.8	6.2	57		
Temp	F	25.5	25.4	25.4	25.4	25.4	25.0	1B		
Salinity	F	26.0	26.3	26.3	26.3	26.3	26.4	1B		
pH	F	7.9	7.8	7.8	7.8	7.9	8.2	3N		
Tech Initials: ME		Time: 0732								

DO: mg/L pH: su Salinity: ppt Temp: °C

Corr-Ze 100

Q.P. ②
1662-20
NOEC/LOEC

A. bahia Water Quality Data Cont.

All Treatments: Initial Temp., 24.5 to 26.4°C. Final Temp., 24.5 to 27.4°C. Initial & Final Dissolved Oxygen (DO): 4.0 to 7.5 mg/L.
 LPC: Initial Salinity, 24.5 to 25.4 ppt. I: initial water quality. F: final water quality.

Day 5		Treatment % PR							Comments _____ _____ _____ _____ _____
10/11/20	LPC	0.0025	0.0050	0.0100	0.0150	0.0300	Meter #		
DO I		7.2	7.3	7.3	7.3	7.4	7.3	S7	
Temp I		24.5	24.6	24.6	24.5	24.5	24.5	1B	
Salinity I		24.7	24.8	24.8	24.8	24.8	24.8	1B	
Tech Initials:	ME							Time: 0759	

Day 6		Treatment % PR							Comments _____ _____ _____ _____ _____
10/12/20	LPC	0.0025	0.0050	0.0100	0.0150	0.0300	Meter #		
DO F		6.3	6.3	6.3	8.6	5.4		S7	
Temp F		25.4	25.4	25.3	25.3	25.4		1B	
Salinity F		26.2	26.3	26.3	26.2	26.2		1B	
pH F		7.8	7.8	7.9	7.8	7.8		3N	
Tech Initials:	SM							Time: 0842	

Day 6		Treatment % PR							Comments _____ _____ _____ _____ _____
10/12/20	LPC	0.0025	0.0050	0.0100	0.0150	0.0300	Meter #		
DO I		7.3	7.3	7.3	7.3	7.3		S7	
Temp I		24.7	25.1	25.3	25.5	25.7		1B	
Salinity I		24.7	24.8	24.8	24.8	24.8		1B	
Tech Initials:	SM							Time: 0852	

Day 7		Treatment % PR							Comments _____ _____ _____ _____ _____
10/13/20	LPC	0.0025	0.0050	0.0100	0.0150	0.0300	Meter #		
DO F		4.4	5.9	5.2	5.4	5.8		S7	
Temp F		24.0	24.0	24.0	25.9	24.0		1B	
Salinity F		25.3	25.1	25.0	25.2	25.1		1B	
pH F		7.9	8.1	8.1	8.4	8.3		3N	
Tech Initials:	AMS							Time: 0837	

DO: mg/L pH: su Salinity: ppt Temp: °C

Corr-Ze 100

 Q P-1662-20
 NOEC/LOEC

7 Day *A. bahia* Growth Data

Rep #	Treatment % PR	A Final Weight (mg)	B Initial Weight (mg)	C No. of Orig. Larvae	D No. of Surv. Larvae
1	0	7.22	5.21	5	5
2	"	7.59	5.34	5	5
3	"	8.11	5.83	5	5
4	"	7.23	4.82	5	5
5	"	6.81	4.90	5	5
6	"	7.16	4.94	5	5
7	"	7.48	5.68	5	5
8	"	6.80	4.87	5	5
9	0.0025	7.68	5.95	5	5
10	"	6.74	4.97	5	5
11	"	7.23	5.21	5	5
12	"	6.65	4.68	5	5
13	"	6.48	4.48	5	5
14	"	6.58	4.63	5	5
15	"	7.09	5.10	5	5
16	"	6.87	5.04	5	5
17	0.0050	7.75	5.55	5	5
18	"	7.09	4.94	5	5
19	"	7.06	4.89	5	5
20	"	6.29	4.42	5	5
21	"	6.37	4.32	5	5
22	"	7.07	4.97	5	5
23	"	5.98	4.23	5	5
24	"	5.79	4.09	5	5

7 Day *A. bahia* Growth Data Cont.

Rep #	Treatment % PR	A Final Weight (mg)	B Initial Weight (mg)	C No. of Orig. Larvae	D No. of Surv. Larvae
25	0.0100	7.42	6.16	5	5
26	"	6.54	4.83	5	5
27	"	5.75	4.31	5	5
28	"	5.70	4.34	5	4
29	"	6.86	5.13	5	5
30	"	6.09	4.87	5	4
31	"	6.16	4.94	5	5
32	"	7.02	5.09	5	5
33	0.0150	6.46	5.75	5	3
34	"	5.36	4.75	5	2
35	"	6.02	5.59	5	2
36	"	5.28	4.53	5	2
37	"	5.86	4.97	5	3
38	"	5.34	4.77	5	2
39	"	5.91	5.18	5	3
40	"	5.37	4.78	5	2
41	0.0300		4.73	5	0
42	"		5.13	5	0
43	"		5.61	5	0
44	"		5.17	5	0
45	"		4.87	5	0
46	"		5.59	5	0
47	"		5.43	5	0
48	"		4.74	5	6

Initial Foil Wts at 1200 on 10/12/2020 (AMS) Scale#: 3B

Oven Temp. 59.0 °C Therm. #: T159

Begin Drying Survivors at 1005 on 10/13/2020 (CM) Oven #: 11

Finish Drying Survivors at 0905 on 10/14/2020 (AMS)

Final Foil Wts. at 1154 on 10/14/2020 (SM) Scale #: 2R

Data Entry by: MR

QA/QC Officer: ME

Comments: _____

Corrosion Innovations – Corr-Ze 100**Feeding Chart**

Artemia Lot #	
090618-1	
Initial	MH

M. beryllina

AM			
Date	Amount, μl	Time	Initials
10/07/20	200	0820	MH
10/08/20	200	0820	CM
10/09/20	250	0726	CM
10/10/20	250	0710	CM
10/11/20	300	0719	CM
10/12/20	300	0833	MH

PM			
Date	Amount, μl	Time	Initials
10/06/20	200	1615	UB
10/07/20	200	1440	CM
10/08/20	200	1556	CM
10/09/20	250	1417	TB
10/10/20	250	1425	JE
10/11/20	300	1423	BE
10/12/20	300	1600	MH

A. bahia

AM			
Date	Amount, μl	Time	Initials
10/07/20	100	0827	MH
10/08/20	150	0821	CM
10/09/20	150	0727	CM
10/10/20	150	0712	CM
10/11/20	150	0722	CM
10/12/20	175	0834	MH
10/13/20	175	0822	SM

PM			
Date	Amount, μl	Time	Initials
10/06/20	100	1618	UB
10/07/20	100	1441	CM
10/08/20	150	1557	CM
10/09/20	150	1416	TB
10/10/20	150	1424	JE
10/11/20	150	1422	BE
10/12/20	175	1600	MH

Data Pages

- Company name & contact matches client file.
- Product matches client file.
- Dilution series are correct:

M. beryllina dilution series:

0.03, 0.06, 0.12, 0.25, 0.50.

A. bahia dilution series:

0.0025, 0.0050, 0.0100, 0.0250, 0.0500.

- Calculations on mixing page are correct. (sign mixing page)
- Dates, dilutions, test method, # of replicates, replicate volume, product, acceptance limits, data analysis endpoint, and test organisms are correct throughout data pages.
- Format correct. (spaces for all entries, page numeration, no split pages, etc.)

M

Initials

10/6/20

Date

Chain-of-Custody

- Product on COC matches sample bottle.
- Product on COC matches test data pages.
- Lab # on COC matches sample bottle.
- Lab # on COC matches test data pages.
- Sample volume is sufficient for test duration. (Sample volume in container(s) checked against sample volume on mixing page)
(Sample volume insufficient if sample volume available < sample volume needed)

M

Initials

10/6/20

Date

Jugs & Labels

- Lab # on jug and labels matches test data pages.
- Dilution water type is on jug. (i.e. 25 ppt, 20 ppt, MHSF, etc.)
- Dilutions on jugs and labels match dilutions on test data pages.
- Jugs are color-coded. (see mixing page for appropriate color code sequence)

M

Initials

10/6/20

Date

Raw Data QC/QA by: *MOL*

10/13/20

Environmental Enterprises USA, Inc.

APPENDIX B

CETIS Test Data Worksheet

 Report Date: 14 Oct-20 13:08 (p 1 of 1)
 Test Code/ID: mn166220 / 09-7631-6454

Inland Silverside 7-d Larval Survival and Growth Test **Environmental Enterprises USA, Inc.**

Start Date:	06 Oct-20 15:37	Species:	Menidia beryllina	Sample Code:	Q-1662-20
End Date:	13 Oct-20 09:15	Protocol:	EPA/821/R-02-014 (2002)	Sample Source:	NPDES Permit #
Sample Date:	25 Sep-20 16:47	Material:	Product	Sample Station:	

Conc-mg/L	Code	Rep	Pos	# Exposed	1d Survival	2d Survival	3d Survival	4d Survival	5d Survival	6d Survival	7d Survival	Total Weight-mg	Tare Weight-mg	Pan Count
0	LP	1	2	8						8	28.55	16.21	8	
0	LP	2	13	8						8	25.66	14.12	8	
0	LP	3	8	8						8	26.2	13.86	8	
0	LP	4	6	8						8	25.34	13.65	8	
0	LP	5	10	8						8	24.67	12.06	8	
0.03		1	24	8						8	26.79	14.45	8	
0.03		2	20	8						8	24.54	13.8	8	
0.03		3	22	8						8	22.25	12.68	8	
0.03		4	28	8						6	23.21	13.53	6	
0.03		5	21	8						6	22.26	12.73	6	
0.06		1	25	8						4	19.1	12.7	4	
0.06		2	29	8						3	17.47	12.8	3	
0.06		3	3	8						4	18.27	12.23	4	
0.06		4	17	8						2	14.79	12.02	2	
0.06		5	23	8						2	15.66	11.22	2	
0.12		1	1	8						2	18.12	14.65	2	
0.12		2	19	8						0	0	0	0	
0.12		3	4	8						0	0	0	0	
0.12		4	27	8						2	17.45	15.48	2	
0.12		5	11	8						0	0	0	0	
0.25		1	30	8						0	0	0	0	
0.25		2	16	8						0	0	0	0	
0.25		3	9	8						0	0	0	0	
0.25		4	14	8						0	0	0	0	
0.25		5	5	8						0	0	0	0	
0.5		1	26	8						0	0	0	0	
0.5		2	18	8						0	0	0	0	
0.5		3	15	8						0	0	0	0	
0.5		4	7	8						0	0	0	0	
0.5		5	12	8						0	0	0	0	

CETIS Analytical Report

Report Date: 14 Oct-20 13:09 (p 1 of 2)
 Test Code/ID: mn166220 / 09-7631-6454

Inland Silverside 7-d Larval Survival and Growth Test						Environmental Enterprises USA, Inc.			
Analysis ID: 19-1291-7145		Endpoint: 7d Survival Rate			CETIS Version: CETISv1.9.7				
Analyzed: 14 Oct-20 13:09		Analysis: Nonparametric-Control vs Treatments			Status Level: 1				
Edit Date: 14 Oct-20 13:04		MD5 Hash: 96CBC4BDCAE110DACD92FBC65683879			Editor ID: 006-654-742-5				
Data Transform	Alt Hyp		NOEL	LOEL	TOEL	TU	MSDu	PMSD	
Angular (Corrected)	C > T		0.03	0.06	0.04243	---	0.1429	14.29%	

Steel Many-One Rank Sum Test

Control	vs	Conc-mg/L	Test Stat	Critical	Ties	DF	P-Type	P-Value	Decision($\alpha:5\%$)
Control	0.03	22.5	17	1	8	CDF	0.3045	Non-Significant Effect	
	0.06*	15	17	0	8	CDF	0.0123	Significant Effect	
	0.12*	15	17	0	8	CDF	0.0123	Significant Effect	

Test Acceptability Criteria TAC Limits

Attribute	Test Stat	Lower	Upper	Overlap	Decision
Control Resp	1	0.8	>>	Yes	Passes Criteria

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision($\alpha:5\%$)
Between	3.84839	1.2828	3	57.7	<1.0E-05	Significant Effect
Error	0.355688	0.0222305	16			
Total	4.20407		19			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision($\alpha:1\%$)
Variance	Bartlett Equality of Variance Test				Indeterminate
Distribution	Shapiro-Wilk W Normality Test	0.9034	0.866	0.0478	Normal Distribution

7d Survival Rate Summary

Conc-mg/L	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	LP	5	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	0.00%
0.03		5	0.9000	0.7300	1.0000	1.0000	0.7500	1.0000	0.0612	15.21%	10.00%
0.06		5	0.3750	0.2198	0.5302	0.3750	0.2500	0.5000	0.0559	33.33%	62.50%
0.12		5	0.1000	0.0000	0.2700	0.0000	0.0000	0.2500	0.0612	136.93%	90.00%
0.25		5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	---	100.00%
0.5		5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	---	100.00%

Angular (Corrected) Transformed Summary

Conc-mg/L	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	LP	5	1.3930	1.3930	1.3930	1.3930	1.3930	1.3930	0.0000	0.00%	0.00%
0.03		5	1.2550	1.0190	1.4900	1.3930	1.0470	1.3930	0.0847	15.10%	9.93%
0.06		5	0.6554	0.4929	0.8180	0.6591	0.5236	0.7854	0.0586	19.97%	52.95%
0.12		5	0.3161	0.0808	0.5513	0.1777	0.1777	0.5236	0.0847	59.94%	77.31%
0.25		5	0.1777	0.1777	0.1778	0.1777	0.1777	0.1777	0.0000	0.00%	87.24%
0.5		5	0.1777	0.1777	0.1778	0.1777	0.1777	0.1777	0.0000	0.00%	87.24%

7d Survival Rate Detail

Conc-mg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	LP	1.0000	1.0000	1.0000	1.0000	1.0000
0.03		1.0000	1.0000	1.0000	0.7500	0.7500
0.06		0.5000	0.3750	0.5000	0.2500	0.2500
0.12		0.2500	0.0000	0.0000	0.2500	0.0000
0.25		0.0000	0.0000	0.0000	0.0000	0.0000
0.5		0.0000	0.0000	0.0000	0.0000	0.0000

CETIS Analytical Report

Report Date: 14 Oct-20 13:09 (p 2 of 2)
 Test Code/ID: mn166220 / 09-7631-6454

Inland Silverside 7-d Larval Survival and Growth Test Environmental Enterprises USA, Inc.

Analysis ID:	19-1291-7145	Endpoint:	7d Survival Rate	CETIS Version:	CETISv1.9.7
Analyzed:	14 Oct-20 13:09	Analysis:	Nonparametric-Control vs Treatments	Status Level:	1
Edit Date:	14 Oct-20 13:04	MD5 Hash:	96CBC4BDCAE110DACP92FBC65683879	Editor ID:	006-654-742-5

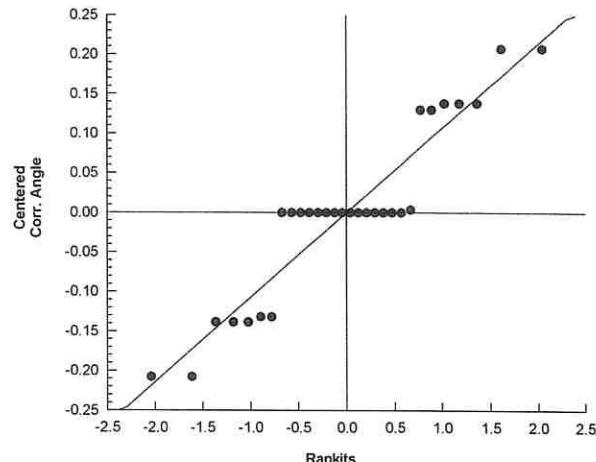
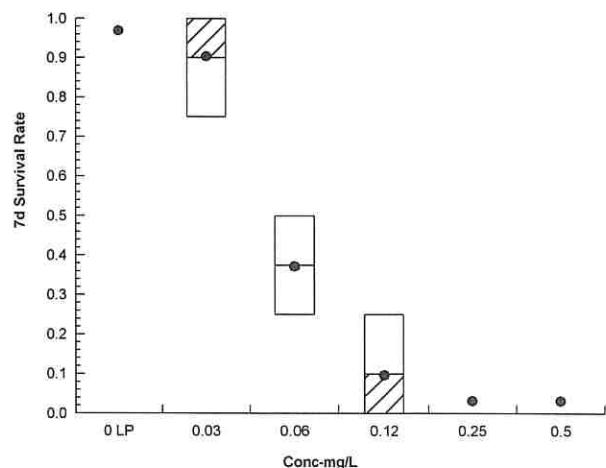
Angular (Corrected) Transformed Detail

Conc-mg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	LP	1.3930	1.3930	1.3930	1.3930	1.3930
0.03		1.3930	1.3930	1.3930	1.0470	1.0470
0.06		0.7854	0.6591	0.7854	0.5236	0.5236
0.12		0.5236	0.1777	0.1777	0.5236	0.1777
0.25		0.1777	0.1777	0.1777	0.1777	0.1777
0.5		0.1777	0.1777	0.1777	0.1777	0.1777

7d Survival Rate Binomials

Conc-mg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	LP	8/8	8/8	8/8	8/8	8/8
0.03		8/8	8/8	8/8	6/8	6/8
0.06		4/8	3/8	4/8	2/8	2/8
0.12		2/8	0/8	0/8	2/8	0/8
0.25		0/8	0/8	0/8	0/8	0/8
0.5		0/8	0/8	0/8	0/8	0/8

Graphics



CETIS Analytical Report

Report Date: 14 Oct-20 13:09 (p 1 of 1)
 Test Code/ID: mn166220 / 09-7631-6454

Inland Silverside 7-d Larval Survival and Growth Test							Environmental Enterprises USA, Inc.							
Analysis ID: 09-4274-1980			Endpoint: Mean Dry Biomass-mg			CETIS Version: CETISv1.9.7								
Analyzed: 14 Oct-20 13:09			Analysis: Parametric-Two Sample			Status Level: 1								
Edit Date: 14 Oct-20 13:04			MD5 Hash: E8BA4959D2375813A247A54E8D1CD374				Editor ID: 006-654-742-5							
Data Transform	Alt Hyp	Comparison Result					PMSD							
Untransformed	C > T	0.03mg/L failed mean dry biomass-mg endpoint					8.89%							
Equal Variance t Two-Sample Test														
Control	vs	Conc-mg/L	Test Stat	Critical	MSD	DF	P-Type	P-Value	Decision($\alpha:5\%$)					
Control		0.03*	2.993	1.86	0.135	8	CDF	0.0086	Significant Effect					
Test Acceptability Criteria														
Attribute	Test Stat	Lower	Upper	Overlap	TAC Limits									
PMSD	0.0889	0.11	0.28	Yes	Below Criteria									
ANOVA Table														
Source	Sum Squares		Mean Square		DF	F Stat		P-Value	Decision($\alpha:5\%$)					
Between	0.117181		0.117181		1	8.96		0.0172	Significant Effect					
Error	0.104631		0.0130789		8									
Total	0.221812				9									
ANOVA Assumptions Tests														
Attribute	Test			Test Stat	Critical	P-Value	Decision($\alpha:1\%$)							
Variance	Variance Ratio F Test			6.815	23.15	0.0899	Equal Variances							
Distribution	Shapiro-Wilk W Normality Test			0.8558	0.7411	0.0681	Normal Distribution							
Mean Dry Biomass-mg Summary														
Conc-mg/L	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect			
0	LP	5	1.513	1.441	1.585	1.543	1.442	1.576	0.02587	3.82%	0.00%			
0.03		5	1.297	1.109	1.484	1.21	1.191	1.543	0.06754	11.65%	14.31%			
Mean Dry Biomass-mg Detail														
Conc-mg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5								
0	LP	1.543	1.442	1.543	1.461	1.576								
0.03		1.543	1.343	1.196	1.21	1.191								
Graphics														

CETIS Summary Report

Report Date: 14 Oct-20 13:09 (p 1 of 1)
 Test Code/ID: mn166220 / 09-7631-6454

Inland Silverside 7-d Larval Survival and Growth Test	Environmental Enterprises USA, Inc.
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Multiple Comparison Summary

Analysis ID	Endpoint	Comparison Method	✓	NOEL	LOEL	TOEL	PMSD	S
04-6647-3409	Mean Dry Weight-mg	Bonferroni Adj t Test		0.12	>0.12	---	33.7%	1

Test Acceptability

Analysis ID	Endpoint	Attribute	TAC Limits				Overlap	Decision
			Test Stat	Lower	Upper			
04-6647-3409	Mean Dry Weight-mg	Control Resp	1.513	0.5	>>		Yes	Passes Criteria

Mean Dry Weight-mg Summary

Conc-mg/L	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	LP	5	1.513	1.441	1.585	1.442	1.576	0.02587	0.05786	3.82%	0.00%
0.03		5	1.457	1.233	1.681	1.196	1.613	0.08065	0.1803	12.38%	3.73%
0.06		5	1.654	1.249	2.059	1.385	2.22	0.1459	0.3263	19.72%	-9.34%
0.12		2	1.36	-3.405	6.125	0.985	1.735	0.375	0.5303	38.99%	10.11%

Mean Dry Weight-mg Detail

MD5: 59EB48E56368211781BCD66CB2F93411

Conc-mg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	LP	1.543	1.442	1.543	1.461	1.576
0.03		1.543	1.343	1.196	1.613	1.588
0.06		1.6	1.557	1.51	1.385	2.22
0.12		1.735	---	---	0.985	---
0.25		---	---	---	---	---
0.5		---	---	---	---	---

Environmental Enterprises USA, Inc.

APPENDIX C

CETIS Test Data Worksheet

 Report Date: 14 Oct-20 13:18 (p 1 of 2)
 Test Code/ID: ab166220 / 19-5476-7216

Americamysis 7-d Survival, Growth and Fecundity Test
Environmental Enterprises USA, Inc.

 Start Date: 06 Oct-20 15:20 Species: Americamysis bahia
 End Date: 13 Oct-20 10:05 Protocol: EPA/821/R-02-014 (2002)
 Sample Date: 25 Sep-20 16:47 Material: Product

 Sample Code: Q-1662-20
 Sample Source: NPDES Permit #
 Sample Station:

Conc-mg/L	Code	Rep	Pos	# Exposed	1d Survival	2d Survival	3d Survival	4d Survival	5d Survival	6d Survival	7d Survival	Total Wgt-mg	Wgt-mg Rate	Pan Count	Total Females	Gravid
0	LP	1	7	5						5	7.22	5.21	5			
0	LP	2	6	5						5	7.59	5.34	5			
0	LP	3	35	5						5	8.11	5.83	5			
0	LP	4	40	5						5	7.23	4.82	5			
0	LP	5	4	5						5	6.81	4.9	5			
0	LP	6	26	5						5	7.16	4.94	5			
0	LP	7	32	5						5	7.48	5.68	5			
0	LP	8	29	5						5	6.8	4.87	5			
0.0025		1	20	5						5	7.68	5.95	5			
0.0025		2	30	5						5	6.74	4.97	5			
0.0025		3	36	5						5	7.23	5.21	5			
0.0025		4	43	5						5	6.65	4.68	5			
0.0025		5	13	5						5	6.48	4.48	5			
0.0025		6	44	5						5	6.58	4.63	5			
0.0025		7	25	5						5	7.09	5.1	5			
0.0025		8	12	5						5	6.87	5.06	5			
0.005		1	22	5						5	7.75	5.55	5			
0.005		2	37	5						5	7.09	4.96	5			
0.005		3	18	5						5	7.06	4.89	5			
0.005		4	17	5						5	6.29	4.42	5			
0.005		5	10	5						5	6.37	4.32	5			
0.005		6	2	5						5	7.07	4.97	5			
0.005		7	28	5						5	5.98	4.23	5			
0.005		8	33	5						5	5.79	4.09	5			
0.01		1	21	5						5	7.42	6.16	5			
0.01		2	3	5						5	6.54	4.83	5			
0.01		3	19	5						5	5.75	4.31	5			
0.01		4	41	5						4	5.7	4.36	4			
0.01		5	47	5						5	6.86	5.13	5			
0.01		6	15	5						4	6.09	4.87	4			
0.01		7	14	5						5	6.16	4.96	5			
0.01		8	34	5						5	7.02	5.09	5			
0.015		1	8	5						3	6.46	5.75	3			
0.015		2	5	5						2	5.36	4.75	2			
0.015		3	11	5						2	6.02	5.59	2			
0.015		4	42	5						2	5.28	4.53	2			
0.015		5	38	5						3	5.86	4.97	3			
0.015		6	27	5						2	5.34	4.77	2			
0.015		7	48	5						3	5.91	5.18	3			
0.015		8	45	5						2	5.37	4.78	2			

CETIS Test Data Worksheet

 Report Date:
 Test Code/ID:

 14 Oct-20 13:18 (p 2 of 2)
 ab166220 / 19-5476-7216

Conc-mg/L	Code	Rep	Pos	# Exposed	1d Survival	2d Survival	3d Survival	4d Survival	5d Survival	6d Survival	7d Survival	Total Females	Gravid	
												Pan Count	Tare Wgt-mg	Total Wgt-mg
0.03		1	16	5							0	0	0	
0.03		2	23	5							0	0	0	
0.03		3	9	5							0	0	0	
0.03		4	24	5							0	0	0	
0.03		5	46	5							0	0	0	
0.03		6	1	5							0	0	0	
0.03		7	31	5							0	0	0	
0.03		8	39	5							0	0	0	

CETIS Analytical Report

Report Date: 14 Oct-20 13:18 (p 1 of 2)
 Test Code/ID: ab166220 / 19-5476-7216

Americamysis 7-d Survival, Growth and Fecundity Test				Environmental Enterprises USA, Inc.			
Analysis ID: 05-7378-5217		Endpoint: 7d Survival Rate		CETIS Version: CETISv1.9.7			
Analyzed: 14 Oct-20 13:18		Analysis: Nonparametric-Control vs Treatments		Status Level: 1			
Edit Date: 14 Oct-20 13:14		MD5 Hash: 90C08A7B2173A1FC3E9BEF1BAD5D0FB		Editor ID: 006-654-742-5			

Data Transform	Alt Hyp	NOEL	LOEL	TOEL	TU	MSDu	PMSD
Angular (Corrected)	C > T	0.01	0.015	0.01225	---	0.08819	8.82%

Steel Many-One Rank Sum Test

Control	vs	Conc-mg/L	Test Stat	Critical	Ties	DF	P-Type	P-Value	Decision($\alpha:5\%$)
Control		0.0025	68	47	1	14	CDF	0.8000	Non-Significant Effect
		0.005	68	47	1	14	CDF	0.8000	Non-Significant Effect
		0.01	60	47	1	14	CDF	0.4450	Non-Significant Effect
		0.015*	36	47	0	14	CDF	0.0015	Significant Effect

Test Acceptability Criteria TAC Limits

Attribute	Test Stat	Lower	Upper	Overlap	Decision
Control Resp	1	0.8	>>	Yes	Passes Criteria

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision($\alpha:5\%$)
Between	2.10187	0.525469	4	114.2	<1.0E-05	Significant Effect
Error	0.161084	0.0046024	35			
Total	2.26296		39			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision($\alpha:1\%$)
Variance	Bartlett Equality of Variance Test				Indeterminate
Distribution	Shapiro-Wilk W Normality Test	0.823	0.9236	2.1E-05	Non-Normal Distribution

7d Survival Rate Summary

Conc-mg/L	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	LP	8	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	0.00%
0.0025		8	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	0.00%
0.005		8	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	0.00%
0.01		8	0.9500	0.8726	1.0000	1.0000	0.8000	1.0000	0.0327	9.75%	5.00%
0.015		8	0.4750	0.3885	0.5615	0.4000	0.4000	0.6000	0.0366	21.79%	52.50%
0.03		8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	---		100.00%

Angular (Corrected) Transformed Summary

Conc-mg/L	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	LP	8	1.3450	1.3450	1.3450	1.3450	1.3450	1.3450	0.0000	0.00%	0.00%
0.0025		8	1.3450	1.3450	1.3450	1.3450	1.3450	1.3450	0.0000	0.00%	0.00%
0.005		8	1.3450	1.3450	1.3450	1.3450	1.3450	1.3450	0.0000	0.00%	0.00%
0.01		8	1.2860	1.1940	1.3780	1.3450	1.1070	1.3450	0.0390	8.57%	4.43%
0.015		8	0.7602	0.6731	0.8474	0.6847	0.6847	0.8861	0.0368	13.71%	43.49%
0.03		8	0.2255	0.2255	0.2255	0.2255	0.2255	0.2255	0.0000	0.00%	83.24%

7d Survival Rate Detail

Conc-mg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	LP	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
0.0025		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
0.005		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
0.01		1.0000	1.0000	1.0000	0.8000	1.0000	0.8000	1.0000	1.0000
0.015		0.6000	0.4000	0.4000	0.4000	0.6000	0.4000	0.6000	0.4000
0.03		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

CETIS Analytical Report

Report Date:

14 Oct-20 13:18 (p 2 of 2)

Test Code/ID:

ab166220 / 19-5476-7216

Americamysis 7-d Survival, Growth and Fecundity Test

Environmental Enterprises USA, Inc.

Analysis ID: 05-7378-5217

Endpoint: 7d Survival Rate

CETIS Version: CETISv1.9.7

Analyzed: 14 Oct-20 13:18

Analysis: Nonparametric-Control vs Treatments

Status Level: 1

Edit Date: 14 Oct-20 13:14

MD5 Hash: 90C08A7B2173A1FC3E9BEF1BAD5D0FB

Editor ID: 006-654-742-5

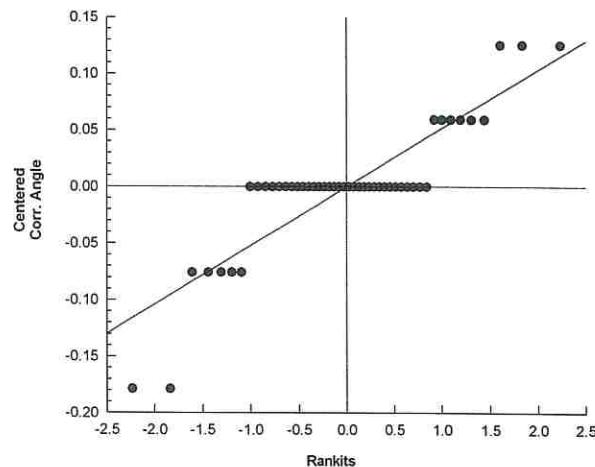
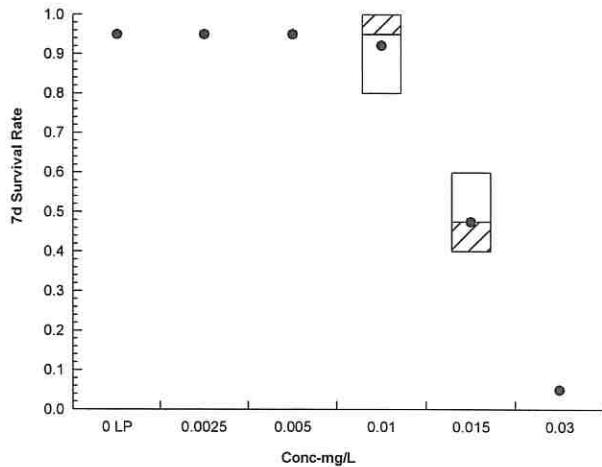
Angular (Corrected) Transformed Detail

Conc-mg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	LP	1.3450	1.3450	1.3450	1.3450	1.3450	1.3450	1.3450	1.3450
0.0025		1.3450	1.3450	1.3450	1.3450	1.3450	1.3450	1.3450	1.3450
0.005		1.3450	1.3450	1.3450	1.3450	1.3450	1.3450	1.3450	1.3450
0.01		1.3450	1.3450	1.3450	1.1070	1.3450	1.1070	1.3450	1.3450
0.015		0.8861	0.6847	0.6847	0.6847	0.8861	0.6847	0.8861	0.6847
0.03		0.2255	0.2255	0.2255	0.2255	0.2255	0.2255	0.2255	0.2255

7d Survival Rate Binomials

Conc-mg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	LP	5/5	5/5	5/5	5/5	5/5	5/5	5/5	5/5
0.0025		5/5	5/5	5/5	5/5	5/5	5/5	5/5	5/5
0.005		5/5	5/5	5/5	5/5	5/5	5/5	5/5	5/5
0.01		5/5	5/5	5/5	4/5	5/5	4/5	5/5	5/5
0.015		3/5	2/5	2/5	2/5	3/5	2/5	3/5	2/5
0.03		0/5	0/5	0/5	0/5	0/5	0/5	0/5	0/5

Graphics



CETIS Analytical Report

Report Date: 14 Oct-20 13:19 (p 1 of 1)
 Test Code/ID: ab166220 / 19-5476-7216

Americamysis 7-d Survival, Growth and Fecundity Test

Environmental Enterprises USA, Inc.

Analysis ID:	16-7391-4238	Endpoint:	Mean Dry Biomass-mg	CETIS Version:	CETISv1.9.7
Analyzed:	14 Oct-20 13:19	Analysis:	Parametric-Control vs Treatments	Status Level:	1
Edit Date:	14 Oct-20 13:14	MD5 Hash:	C1E66A6B4A47E6EB36B7869F9A979057	Editor ID:	006-654-742-5

Data Transform	Alt Hyp	NOEL	LOEL	TOEL	TU	MSDu	PMSD
Untransformed	C > T	0.005	0.01	0.007071	---	0.04501	10.71%

Dunnett Multiple Comparison Test

Control	vs	Conc-mg/L	Test Stat	Critical	MSD	DF	P-Type	P-Value	Decision($\alpha:5\%$)
Control	0.0025		1.878	2.154	0.045	14	CDF	0.0851	Non-Significant Effect
	0.005		1.005	2.154	0.045	14	CDF	0.3258	Non-Significant Effect
	0.01*		5.957	2.154	0.045	14	CDF	<1.0E-05	Significant Effect

Test Acceptability Criteria

Attribute	Test Stat	Lower	Upper	Overlap	Decision
PMSD	0.1071	0.11	0.37	Yes	Below Criteria

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision($\alpha:5\%$)
Between	0.0715894	0.0238631	3	13.66	1.1E-05	Significant Effect
Error	0.0489265	0.0017474	28			
Total	0.120516		31			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision($\alpha:1\%$)
Variance	Bartlett Equality of Variance Test	4.553	11.34	0.2076	Equal Variances
Distribution	Shapiro-Wilk W Normality Test	0.9547	0.9081	0.1963	Normal Distribution

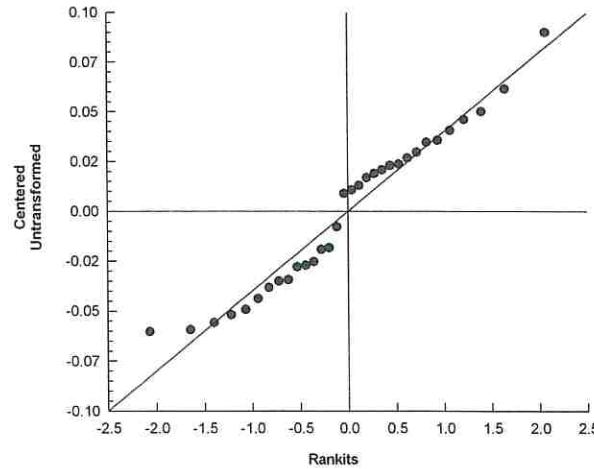
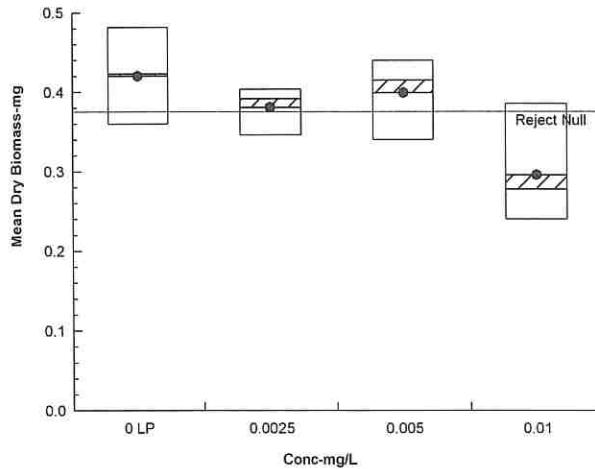
Mean Dry Biomass-mg Summary

Conc-mg/L	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	LP	8	0.4202	0.384	0.4565	0.423	0.36	0.482	0.01532	10.31%	0.00%
0.0025		8	0.381	0.3617	0.4003	0.392	0.346	0.404	0.008177	6.07%	9.34%
0.005		8	0.3992	0.3666	0.4319	0.415	0.34	0.44	0.01383	9.79%	5.00%
0.01		8	0.2958	0.2496	0.3419	0.278	0.24	0.386	0.01952	18.67%	29.63%

Mean Dry Biomass-mg Detail

Conc-mg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	LP	0.402	0.45	0.456	0.482	0.382	0.444	0.36	0.386
0.0025		0.346	0.354	0.404	0.394	0.4	0.39	0.398	0.362
0.005		0.44	0.426	0.434	0.374	0.41	0.42	0.35	0.34
0.01		0.252	0.342	0.288	0.268	0.346	0.244	0.24	0.386

Graphics



CETIS Summary Report

Report Date: 14 Oct-20 13:19 (p 1 of 1)
 Test Code/ID: ab166220 / 19-5476-7216

Americamysis 7-d Survival, Growth and Fecundity Test

Environmental Enterprises USA, Inc.

Multiple Comparison Summary

Analysis ID	Endpoint	Comparison Method	✓ NOEL	LOEL	TOEL	PMSD	S
08-6426-4087	Mean Dry Weight-mg	Dunnett Multiple Comparison Test	✓ 0.005	0.01	0.007071	11.3%	1

Test Acceptability

Analysis ID	Endpoint	Attribute	TAC Limits			Overlap	Decision
			Test Stat	Lower	Upper		
08-6426-4087	Mean Dry Weight-mg	Control Resp	0.4202	0.2	>>	Yes	Passes Criteria

Mean Dry Weight-mg Summary

Conc-mg/L	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	LP	8	0.4202	0.384	0.4565	0.36	0.482	0.01532	0.04333	10.31%	0.00%
0.0025		8	0.381	0.3617	0.4003	0.346	0.404	0.008177	0.02313	6.07%	9.34%
0.005		8	0.3992	0.3666	0.4319	0.34	0.44	0.01383	0.0391	9.79%	5.00%
0.01		8	0.3118	0.27	0.3535	0.24	0.386	0.01766	0.04996	16.02%	25.82%
0.015		8	0.2815	0.2395	0.3234	0.215	0.375	0.01773	0.05015	17.82%	33.03%

Mean Dry Weight-mg Detail

MD5: 5534C6EE87854CD68A1A26F3AD7FAC29

Conc-mg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8
0	LP	0.402	0.45	0.456	0.482	0.382	0.444	0.36	0.386
0.0025		0.346	0.354	0.404	0.394	0.4	0.39	0.398	0.362
0.005		0.44	0.426	0.434	0.374	0.41	0.42	0.35	0.34
0.01		0.252	0.342	0.288	0.335	0.346	0.305	0.24	0.386
0.015		0.2367	0.305	0.215	0.375	0.2967	0.285	0.2433	0.295
0.03	---	---	---	---	---	---	---	---	---

Environmental Enterprises USA, Inc.

APPENDIX D

ENVIRONMENTAL ENTERPRISES USA, INC.

5845 Pearl Acres Rd., Suite D

Slidell, Louisiana 70461

(985) 646-2787

Kit No. Book



CHAIN - OF - CUSTODY RECORD

Client: Corrosion Innovations

Contact Person: Jim Knocke

Address: 4020 Strawberry Road

Phone#: 423-604-1919

Pasadena, TX 77504

P.O. #

Email: jim@corrinnovations.com

Project:

- RUSH
 VERBAL
 OTHER

Sample Description	Date Collected	Time Collected	No. of Containers	Analysis Request	Date & Time Relinquished By:			
Corr-Z 100	9-25-20	4:47pm	1	A. bahia 96-hr Acute RFT, Method 2007.0 & M. beryllina 96-hr Acute RFT, Method 2006.0	④ Lot # 11/25/20 40	Q-11061-20(RFT)	Q-11061-20(1 day)	
				A. bahia 7-day Chronic, Method 1007.0 & beryllina 7-day Chronic, Method 1006.0	SR-17-827-20 NO 1			

(④) wrong date 10-7-20

25.8°C 60
9-24-20 10

Z 14596W 031488 9159



ENVIRONMENTAL ENTERPRISES USA, INC.

58485 Pearl Acres Rd, Suite D

Slidell, Louisiana 70461

(985) 646-2787

10-1-20 J
Kit No.

CHAIN - OF - CUSTODY RECORD

Special Handling

Request

 RUSH VERBAL OTHER

Client: Corrosion Innovations

Address: 4020 Strawberry Road

Pasadena, TX 77504

Contact Person: Jim Knocke

Phone#: 423-604-1919

P.O. #

Email: jim@corrinnovations.comProject: Aqueous Toxicity: Corr-Ze 100

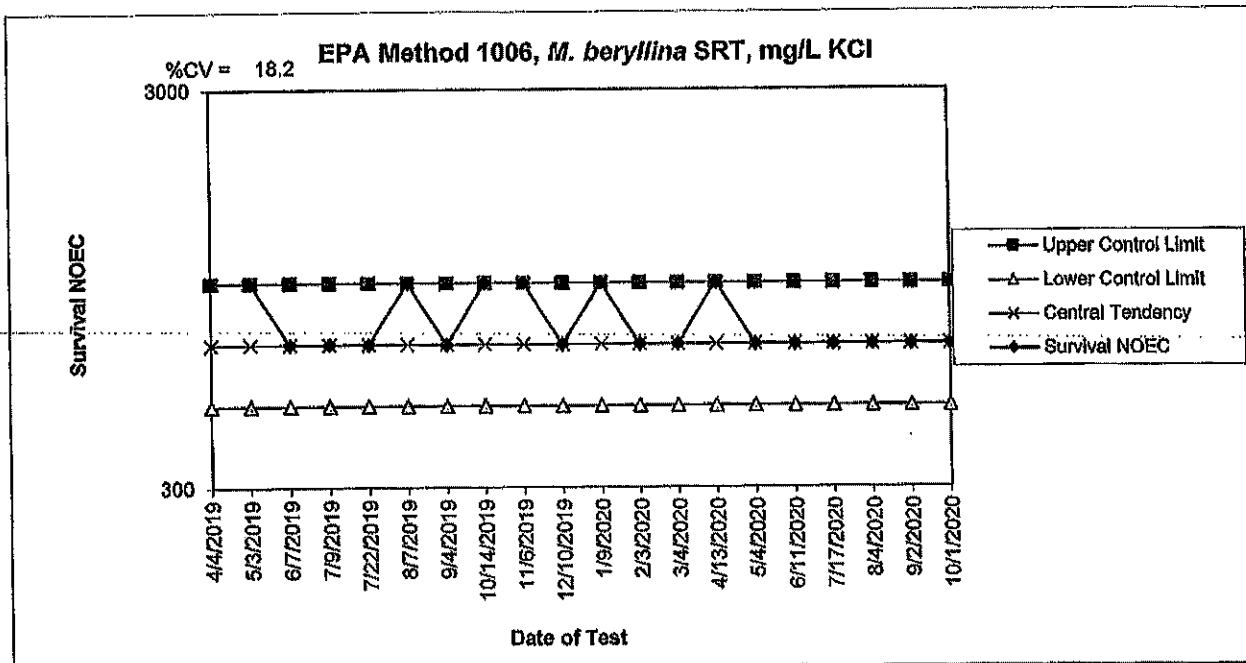
Sample Description	Date Collected	Time Collected	No. of Containers	Analysis Request	S/R No.	Lab No.
Corr-Ze 100	9-21-2020	5:03PM	1	A. bahia 96-hr Acute RFT, Method 2007.0 & M. beryllina 96-hr Acute RFT, Method 2006.0	1105816640 SB-12792-20-A61	Q - 11041-10(RFT)
				A. bahia 7-day Chronic, Method 1007.0 & beryllina 7-day Chronic, Method 1006.0	M. 16	Q - 110410(RFT)

Collected By: <i>Jim Knocke</i>	Date & Time 5:03PM 9-21-2020	Relinquished By: <i>Jim Knocke to UPS</i>	Date & Time 9-21-2020 5:45PM
Received By: <i>Jeanine Smith</i>	Date & Time 09-28-20 10:00	Relinquished By: <i>Jeanine Smith</i>	Date & Time 09-28-20 10:30
Received By: <i>Erica Sosa</i>	Date & Time 9-28-20 10:40	Relinquished By:	Date & Time
Received By:	Date & Time	Relinquished By:	Date & Time
Received By:	Date & Time	Relinquished By:	Date & Time

USPS Tracking #: 9400 1118 9956 4465 1527 23

Environmental Enterprises USA, Inc.

APPENDIX E



Dilution Series = 480, 686, 980, 1400, & 2000 mg/l KCl; Dilution Factor = 0.7

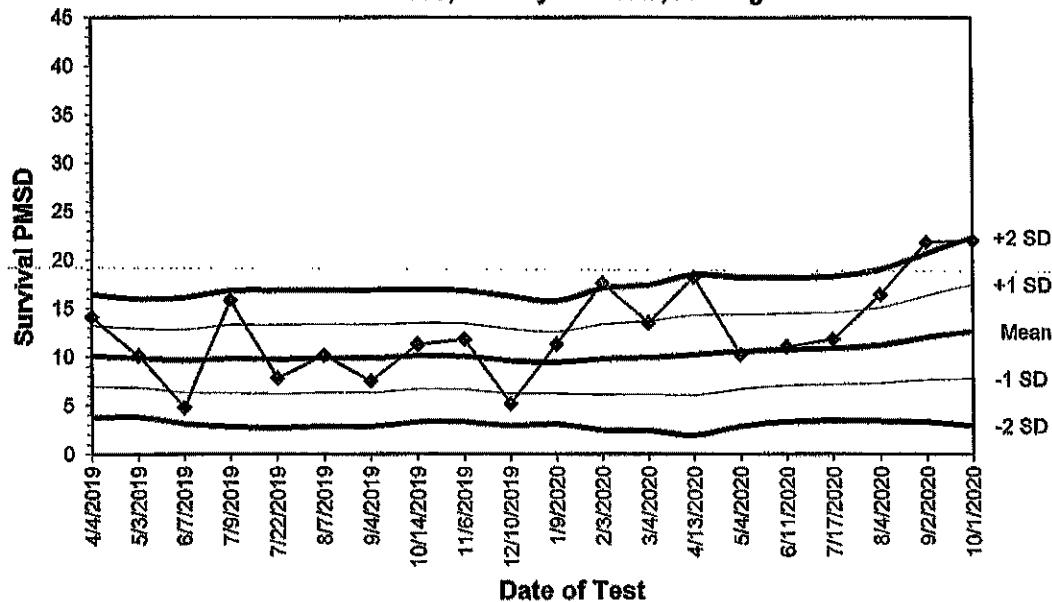
Organism Source	Test #	Test Date	Survival NOEC	% Control Survival	Survival PMSD	Upper Control Limit	Lower Control Limit	Central Tendency	SRT Lot #
EE USA	MN1904	4/4/2019	980	100.0	14.1	980	480	686	177483
EE USA	MN1905	5/3/2019	980	97.5	10.1	980	480	686	177483
EE USA	MN1906	6/7/2019	686	100.0	4.8	980	480	686	177483
EE USA	MN1907	7/9/2019	686	100.0	15.8	980	480	686	177483
EE USA	MN1908	7/22/2019	686	100.0	7.8	980	480	686	C799290
EE USA	MN1909	8/7/2019	980	100.0	10.1	980	480	686	C799290
EE USA	MN1910	9/4/2019	686	100.0	7.5	980	480	686	C799290
EE USA	MN1912	10/14/2019	980	97.5	11.3	980	480	686	C799290
EE USA	MN1913	11/6/2019	980	95.0	11.8	980	480	686	C799290
EE USA	MN1914	12/10/2019	686	100.0	5.2	980	480	686	C799290
EE USA	MN2001	1/9/2020	980	97.5	11.3	980	480	686	181155
EE USA	MN2002	2/3/2020	686	95.0	17.6	980	480	686	181155
EE USA	MN2003	3/4/2020	686	97.5	13.5	980	480	686	181155
EE USA	MN2004	4/13/2020	980	97.5	18.2	980	480	686	181155
EE USA	MN2006	5/4/2020	686	100.0	10.2	980	480	686	181155
EE USA	MN2006	6/11/2020	686	97.5	11.0	980	480	686	181155
EE USA	MN2007	7/17/2020	686	95.0	11.8	980	480	686	181155
EE USA	MN2008	8/4/2020	686	100.0	16.4	980	480	686	181155
EE USA	MN2009	9/2/2020	686	87.5	21.8	980	480	686	181155/19190172
EE USA	MN2010	10/1/2020	686	92.5	22.0	980	480	686	19190172

MN1907 - The central tendency shifted from 980 to 686 mg/L KCl.

MN1911 - Training test.

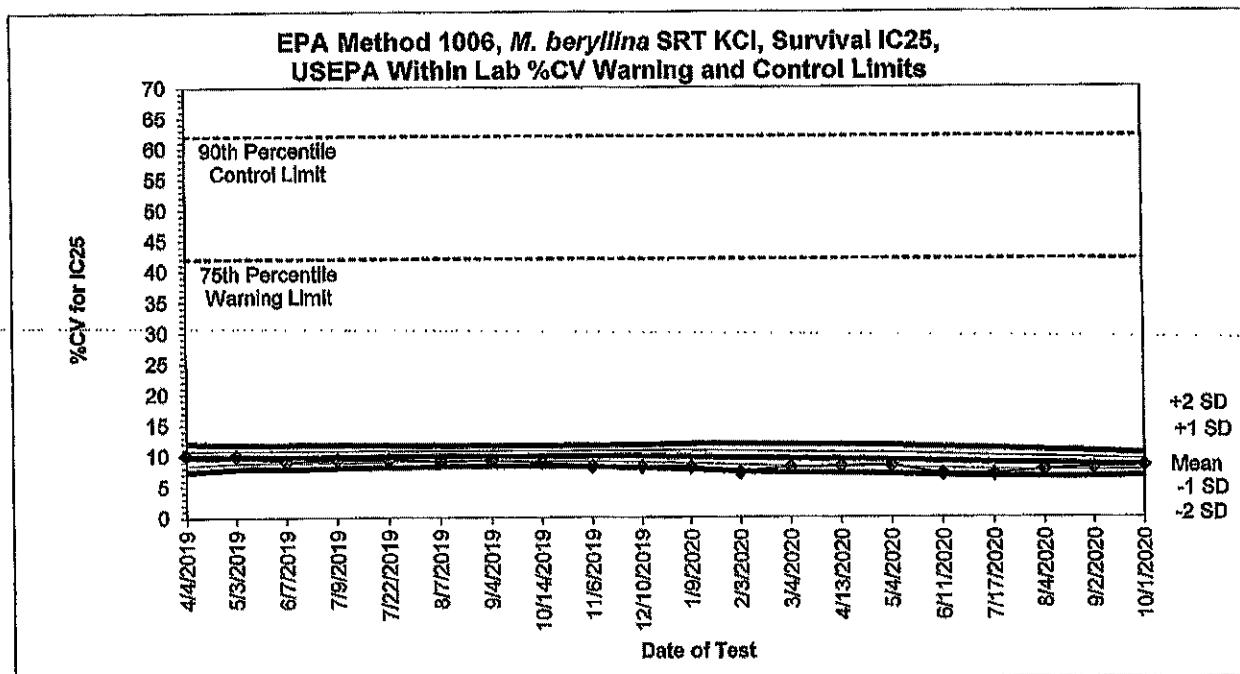
QAQC by: *MHC 10/13/20*

CV% = 38.5 EPA Method 1006, *M. beryllina* SRT, KCl mg/l



Test #	Test Date	Survival PMSD	Mean	-1 SD	-2 SD	+1 SD	+2 SD	SRT Lot #
MN1904	4/4/2019	14.1	10.1	6.9	3.8	13.3	16.6	177483
MN1905	5/3/2019	10.1	9.9	6.9	3.8	13.0	16.0	177483
MN1906	6/7/2019	4.8	9.6	6.4	3.1	12.9	16.1	177483
MN1907	7/9/2019	15.8	9.8	6.3	2.8	13.3	16.8	177483
MN1908	7/22/2019	7.8	9.8	6.2	2.7	13.3	16.8	C799290
MN1909	8/7/2019	10.1	9.9	6.4	2.9	13.4	16.9	C799290
MN1910	9/4/2019	7.5	9.9	6.3	2.8	13.4	16.9	C799290
MN1912	10/14/2019	11.3	10.1	6.7	3.3	13.6	16.9	C799290
MN1913	11/6/2019	11.8	10.1	6.7	3.3	13.4	16.8	C799290
MN1914	12/10/2019	5.2	9.6	6.2	2.9	12.9	16.2	C799290
MN2001	1/9/2020	11.3	9.4	6.3	3.1	12.6	16.7	181155
MN2002	2/3/2020	17.6	9.8	6.1	2.5	13.4	17.1	181155
MN2003	3/4/2020	13.5	9.9	6.2	2.4	13.7	17.4	181155
MN2004	4/13/2020	18.2	10.2	6.1	1.9	14.3	18.6	181155
MN2005	5/4/2020	10.2	10.5	6.7	2.9	14.4	18.2	181155
MN2006	6/11/2020	11.0	10.8	7.0	3.3	14.5	18.2	181155
MN2007	7/17/2020	11.8	10.9	7.2	3.5	14.6	18.3	181155
MN2008	8/4/2020	16.4	11.2	7.3	3.4	15.1	18.0	181155
MN2009	9/2/2020	21.8	12.0	7.7	3.3	16.4	20.7	19190172
MN2010	10/1/2020	22.0	12.6	7.8	2.9	17.6	22.3	19190172

QAQC by: MAO 10/13/20

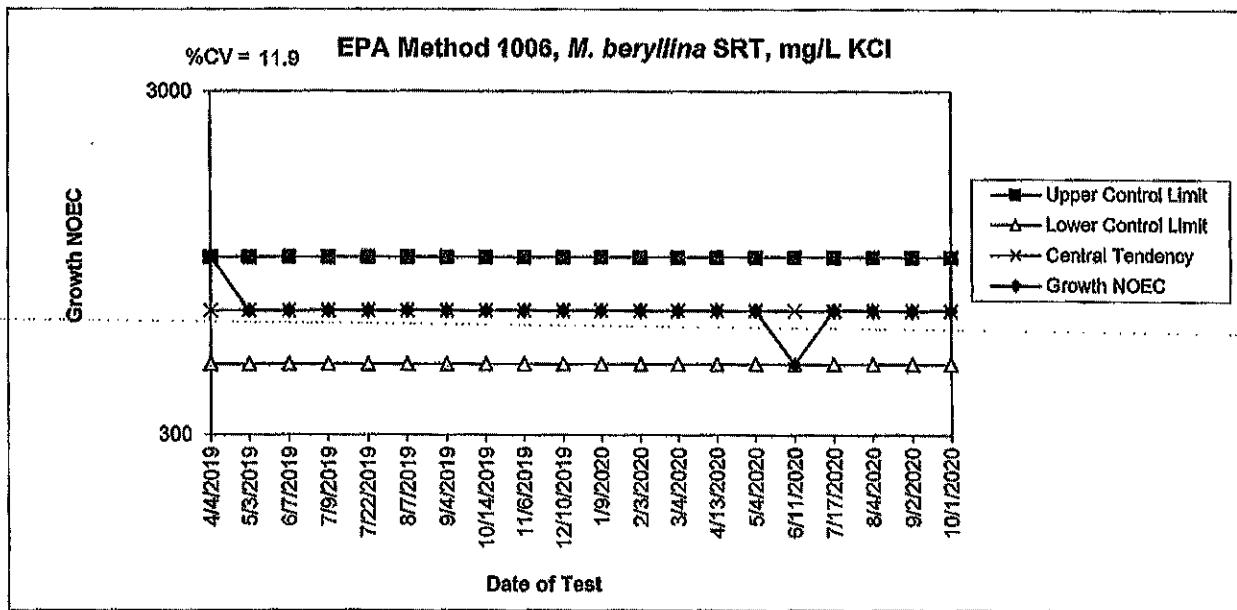


15%CV = 10th percentile, 22%CV = 25th percentile, 35%CV = 50th percentile. CV percentile values from Appendix B-6, Table B-1 of EPA's

"Understanding and Accounting for Method Variability in WET Applications Under the NPDES Program", June 30, 2000.

Test #	Test Date	%CV for IC25	Mean %CV	-1 SD	-2 SD	+1 SD	+2 SD	75th Warning Limit	90th Control Limit	SRT Lot #
MN1904	4/4/2019	10.1	9.7	8.5	7.4	10.8	12.0	42.0	62.0	177483
MN1905	5/3/2019	10.0	9.8	8.8	7.8	10.8	11.8	42.0	62.0	177483
MN1906	6/7/2019	9.0	9.8	8.8	7.8	10.8	11.8	42.0	62.0	177483
MN1907	7/9/2019	9.4	9.9	8.9	8.0	10.8	11.8	42.0	62.0	177483
MN1908	7/22/2019	9.4	9.9	9.0	8.1	10.8	11.7	42.0	62.0	C799290
MN1909	8/7/2019	9.0	9.9	9.1	8.2	10.8	11.7	42.0	62.0	C799290
MN1910	8/4/2019	9.2	10.0	9.1	8.3	10.8	11.6	42.0	62.0	C799290
MN1912	10/14/2019	8.9	10.0	9.1	8.3	10.8	11.6	42.0	62.0	C799290
MN1913	11/6/2019	8.3	10.0	9.1	8.2	10.8	11.7	42.0	62.0	C799290
MN1914	12/10/2019	8.2	9.9	8.9	8.0	10.8	11.8	42.0	62.0	C799290
MN2001	1/9/2020	8.2	9.8	8.8	7.8	10.8	11.9	42.0	62.0	181155
MN2002	2/3/2020	7.3	9.6	8.5	7.4	10.8	11.9	42.0	62.0	181155
MN2003	3/4/2020	8.1	9.5	8.4	7.2	10.7	11.8	42.0	62.0	181155
MN2004	4/13/2020	8.2	9.4	8.2	7.1	10.6	11.7	42.0	62.0	181155
MN2005	5/4/2020	8.4	9.3	8.1	7.0	10.5	11.6	42.0	62.0	181155
MN2006	6/11/2020	7.0	9.1	7.9	6.8	10.2	11.4	42.0	62.0	181155
MN2007	7/17/2020	7.0	8.9	7.7	6.6	10.0	11.2	42.0	62.0	181155
MN2008	8/4/2020	7.7	8.7	7.6	6.5	9.8	10.9	42.0	62.0	181155/19190172
MN2009	9/2/2020	8.0	8.6	7.6	6.6	9.6	10.6	42.0	62.0	19190172
MN2010	10/1/2020	8.4	8.5	7.6	6.7	9.4	10.3	42.0	62.0	19190172

QAQC by: MKO 10/13/20



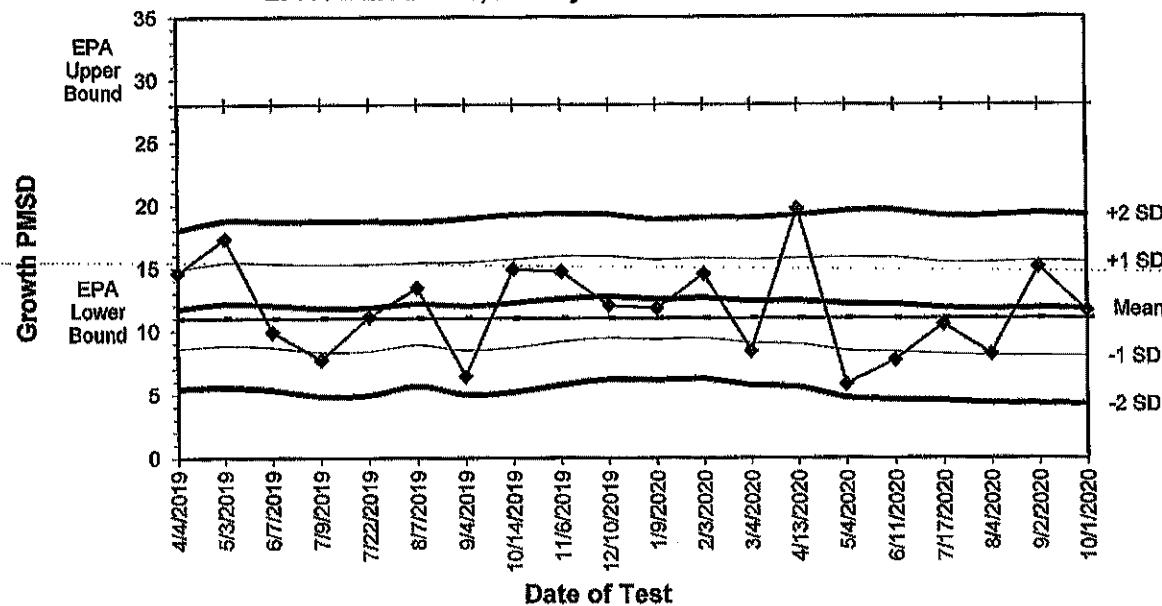
Dilution Series = 480, 686, 980, 1400, & 2000 mg/l KCl; Dilution Factor = 0.7

Test #	Test Date	Growth NOEC	Mean Control Growth	Growth PMSD	Upper Control Limit	Lower Control Limit	Central Tendency	SRT Lot #
MN1904	4/4/2019	980	1.373	14.6	980	480	686	177483
MN1905	5/3/2019	686	1.666	17.3	980	480	686	177483
MN1906	6/7/2019	686	1.745	9.9	980	480	686	177483
MN1907	7/9/2019	686	1.633	7.7	980	480	686	177483
MN1908	7/22/2019	686	1.508	11.1	980	480	686	C799290
MN1909	8/7/2019	686	1.336	13.4	980	480	686	C799290
MN1910	9/4/2019	686	1.769	6.4	980	480	686	C799290
MN1912	10/14/2019	686	1.259	14.9	980	480	686	C799290
MN1913	11/6/2019	686	1.339	14.7	980	480	686	C799290
MN1914	12/10/2019	686	1.360	12.0	980	480	686	C799290
MN2001	1/9/2020	686	1.362	11.8	980	480	686	181155
MN2002	2/3/2020	686	1.463	14.5	980	480	686	181155
MN2003	3/4/2020	686	1.877	8.4	980	480	686	181155
MN2004	4/13/2020	686	1.566	19.7	980	480	686	181155
MN2005	5/4/2020	686	1.798	5.8	980	480	686	181155
MN2006	6/11/2020	480	1.633	7.7	980	480	686	181155
MN2007	7/17/2020	686	1.575	10.5	980	480	686	181155
MN2008	8/4/2020	686	1.405	8.2	980	480	686	181155
MN2009	9/2/2020	686	1.578	15.1	980	480	686	181155/19190172
MN2010	10/1/2020	686	1.232	11.6	980	480	686	181155/19190172

MN1911 - Training test.

QAQC by: AKAO 10/13/20

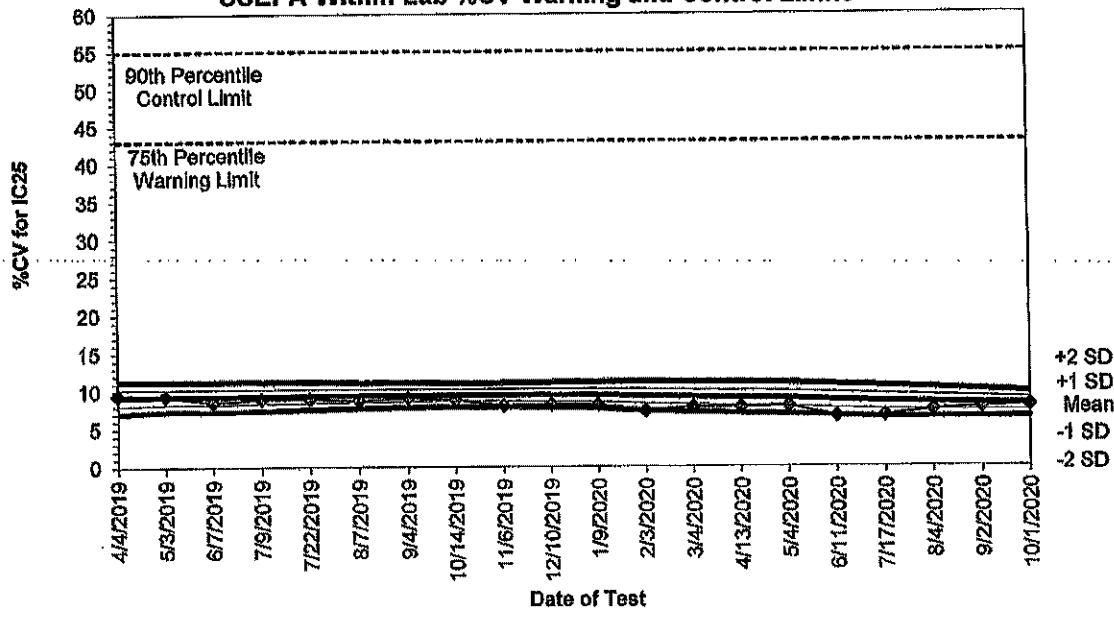
CV% = 32.0 EPA Method 1006, *M. beryllina* SRT Growth PMSD



Test #	Test Date	Growth PMSD	Mean PMSD	-1 SD	-2 SD	+1 SD	+2 SD	Upper PMSD Bound	Lower PMSD Bound	SRT Lot #
MN1904	4/4/2019	14.6	11.8	8.6	5.5	14.9	18.0	28	11	177483
MN1905	5/3/2019	17.3	12.2	8.9	5.6	15.5	18.8	28	11	177483
MN1906	6/7/2019	9.9	12.0	8.7	5.4	15.4	18.7	28	11	177483
MN1907	7/9/2019	7.7	11.8	8.3	4.8	15.3	18.7	28	11	177483
MN1908	7/22/2019	11.1	11.8	8.4	4.9	16.3	18.7	28	11	C799290
MN1909	8/7/2019	13.4	12.2	8.9	5.7	16.4	18.7	28	11	C799290
MN1910	9/4/2019	6.4	12.0	8.5	5.0	15.5	18.9	28	11	C799290
MN1912	10/14/2019	14.9	12.2	8.7	6.2	15.7	19.2	28	11	C799290
MN1913	11/6/2019	14.7	12.6	9.2	5.8	16.0	19.4	28	11	C799290
MN1914	12/10/2019	12.0	12.7	9.5	6.2	16.0	19.3	28	11	C799290
MN2001	1/9/2020	11.8	12.5	9.3	6.2	15.7	18.9	28	11	181155
MN2002	2/3/2020	14.5	12.6	9.4	6.2	15.8	19.0	28	11	181155
MN2003	3/4/2020	8.4	12.4	9.0	5.7	15.7	19.0	28	11	181155
MN2004	4/13/2020	19.7	12.4	9.0	5.6	15.8	19.2	28	11	181155
MN2005	5/4/2020	6.8	12.2	8.5	4.8	15.9	19.6	28	11	181155
MN2006	6/11/2020	7.7	12.1	8.4	4.6	16.9	19.6	28	11	181155
MN2007	7/17/2020	10.5	11.8	8.2	4.5	15.6	19.2	28	11	181155
MN2008	8/4/2020	8.2	11.8	8.0	4.3	15.5	19.2	28	11	181155
MN2009	9/2/2020	15.1	11.8	8.1	4.3	15.6	19.4	28	11	181155/19190172
MN2010	10/1/2020	11.6	11.8	8.0	4.2	15.6	19.3	28	11	19190172

QAQC by: MLA 10/13/20

**EPA Method 1006, *M. beryllina* SRT KCl, Growth IC25
USEPA Within Lab %CV Warning and Control Limits**

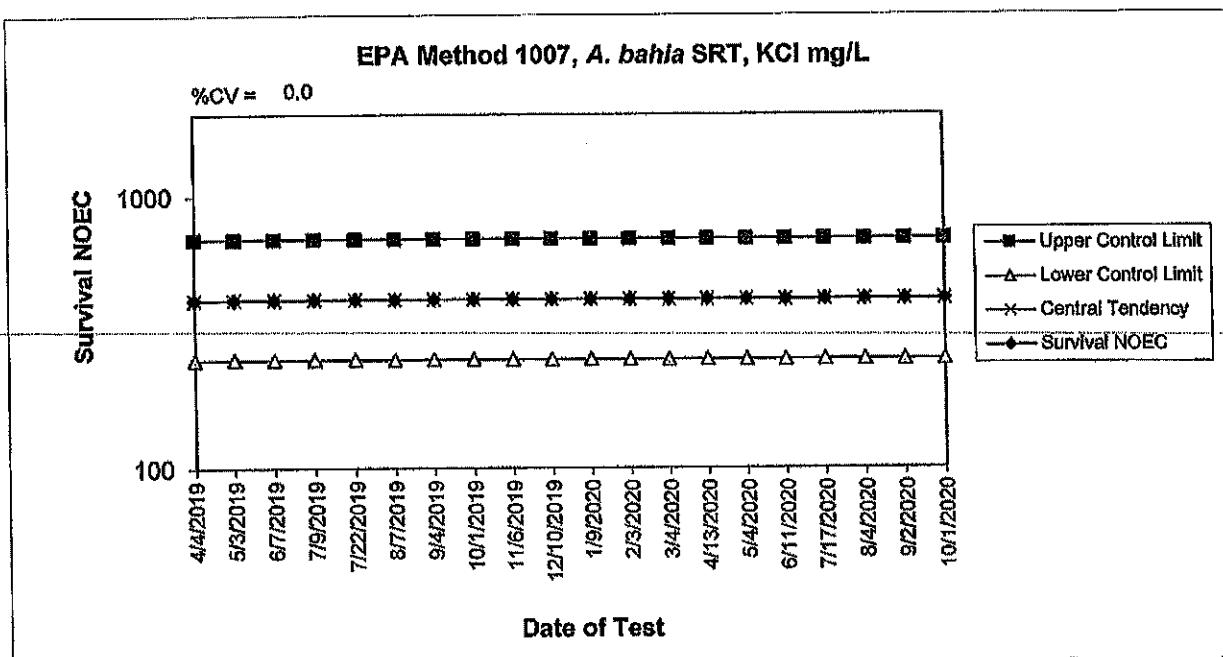


5%CV = 10th percentile, 18%CV = 25th percentile, 27%CV = 60th percentile. CV percentile values from Appendix B-6, Table B-1 of EPA's

"Understanding and Accounting for Method Variability in WET Applications Under the NPDES Program", June 30, 2000.

Test #	Test Date	%CV for IC25	Mean %CV	-1 SD	-2 SD	+1 SD	+2 SD	75th Warning Limit	90th Control Limit	SRT Lot #
MN1904	4/4/2019	9.5	9.2	8.1	7.0	10.3	11.4	43.0	55.0	177483
MN1905	5/3/2019	9.3	9.3	8.3	7.3	10.3	11.3	43.0	55.0	177483
MN1906	6/7/2019	8.5	9.3	8.3	7.3	10.3	11.3	43.0	55.0	177483
MN1907	7/9/2019	8.9	9.3	8.4	7.4	10.3	11.2	43.0	55.0	177483
MN1908	7/22/2019	8.9	9.4	8.5	7.6	10.3	11.2	43.0	55.0	C799290
MN1909	8/7/2019	8.7	9.4	8.6	7.7	10.3	11.1	43.0	55.0	C799290
MN1910	9/4/2019	9.0	9.4	8.6	7.8	10.3	11.1	43.0	55.0	C799290
MN1912	10/14/2019	8.8	9.5	8.7	7.9	10.3	11.1	43.0	55.0	C799290
MN1913	11/6/2019	8.0	9.5	8.7	7.9	10.3	11.1	43.0	55.0	C799290
MN1914	12/10/2019	8.1	9.4	8.6	7.8	10.3	11.1	43.0	55.0	C799290
MN2001	1/9/2020	8.1	9.4	8.5	7.6	10.3	11.2	43.0	55.0	181155
MN2002	2/3/2020	7.3	9.3	8.3	7.3	10.2	11.2	43.0	55.0	181155
MN2003	3/4/2020	7.8	9.1	8.1	7.2	10.1	11.1	43.0	55.0	181155
MN2004	4/13/2020	7.8	9.0	8.0	7.0	10.0	11.1	43.0	55.0	181155
MN2005	5/4/2020	8.0	8.9	7.9	6.9	10.0	11.0	43.0	55.0	181155
MN2006	6/11/2020	6.6	8.7	7.7	6.6	9.8	10.8	43.0	55.0	181155
MN2007	7/17/2020	6.7	8.5	7.5	6.4	9.6	10.6	43.0	55.0	181155
MN2008	8/4/2020	7.4	8.4	7.4	6.4	9.4	10.3	43.0	55.0	181155/181156/
MN2009	9/2/2020	7.7	8.3	7.4	6.4	9.2	10.1	43.0	55.0	19190172
MN2010	10/1/2020	8.0	8.2	7.3	6.5	9.0	9.8	43.0	55.0	19190172

QAQC by: Mto 10/13/20



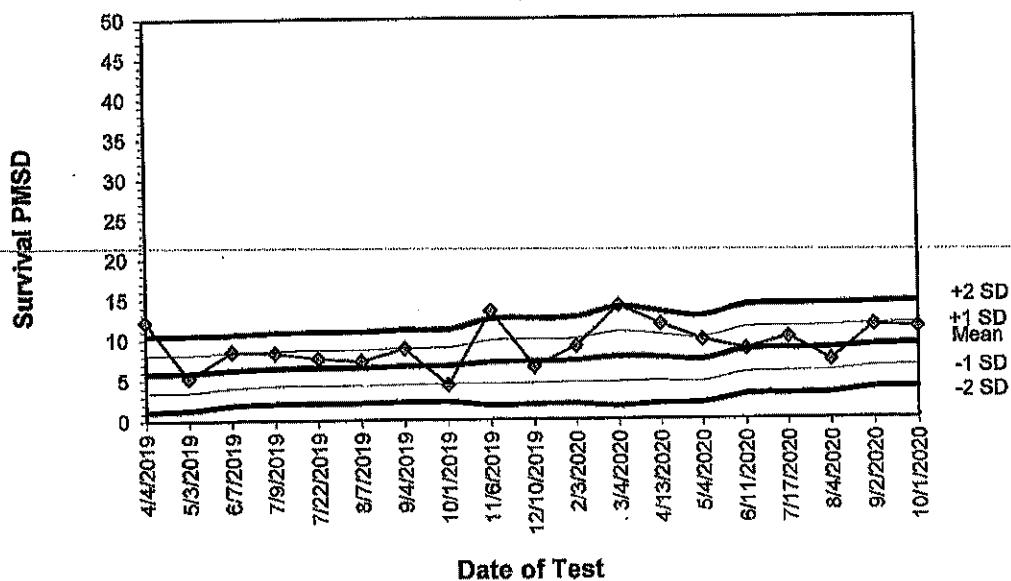
Dilution Series = 150, 250, 416, 694, & 1157 mg/l KCl; Dilution Factor = 0.60

Organism Source	Test #	Test Date	Survival NOEC	% Control Survival	Survival PMSD	Upper Control Limit	Lower Control Limit	Central Tendency	SRT Lot #
EE USA	AB1904	4/4/2019	416	100.0	12.2	694	250	416	177483
EE USA	AB1905	5/3/2019	416	100.0	5.3	694	250	416	177483
EE USA	AB1906	6/7/2019	416	97.5	8.5	694	250	416	177483
EE USA	AB1907	7/9/2019	416	97.5	8.3	694	250	416	177483
EE USA	AB1908	7/22/2019	416	100.0	7.6	694	250	416	C799290
EE USA	AB1909	8/7/2019	416	100.0	7.3	694	250	416	C799290
EE USA	AB1910	9/4/2019	416	100.0	8.8	694	250	416	C799290
EE USA	AB1911	10/1/2019	416	100.0	4.3	694	250	416	C799290
EE USA	AB1912	11/6/2019	416	92.5	13.4	694	250	416	C799290
EE USA	AB1913	12/10/2019	416	97.5	6.6	694	250	416	C799290
EE USA	AB2001	1/9/2020	416	100.0	①NA	694	250	416	181165
EE USA	AB2002	2/3/2020	416	97.5	9.0	694	250	416	181165
EE USA	AB2003	3/4/2020	416	95.0	14.0	694	250	416	181165
EE USA	AB2004	4/13/2020	416	100.0	11.7	694	250	416	181165
EE USA	AB2005	5/4/2020	416	100.0	9.7	694	250	416	181165
EE USA	AB2006	6/11/2020	416	100.0	8.6	694	250	416	181165
EE USA	AB2007	7/17/2020	416	97.5	10.0	694	250	416	181165
EE USA	AB2008	8/4/2020	416	100.0	7.2	694	250	416	181165
EE USA	AB2009	9/2/2020	416	100.0	11.4	694	250	416	181165 / 19190172
EE USA	AB2010	10/1/2020	416	100.0	11.1	694	250	416	19190172

① - NA = Not Available. The PMSD could not be calculated for this data set. There was an "all or nothing" response pattern.

QAQC by: MAO 10/13/20

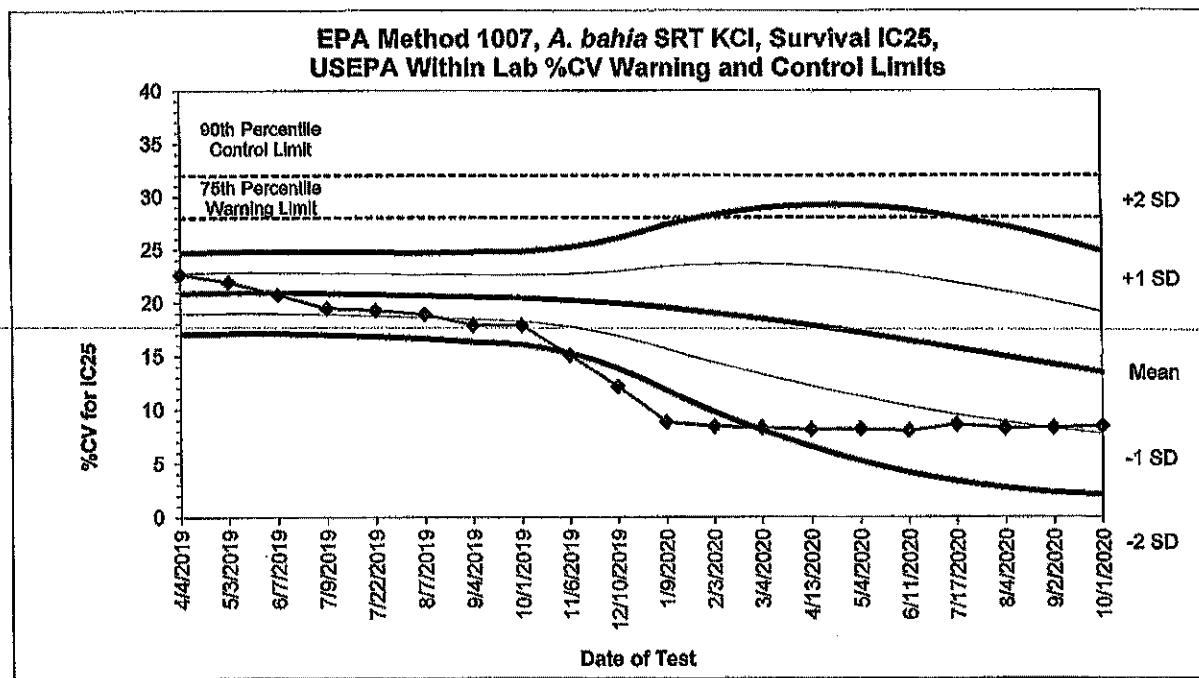
CV% = 29.3

EPA Method 1007, *A. bahia* SRT Survival PMSD

Test #	Test Date	Survival PMSD	Mean PMSD	-1 SD	-2 SD	+1 SD	+2 SD	SRT Lot #
AB1904	4/4/2019	12.2	5.8	3.5	1.2	8.2	10.5	177483
AB1905	5/3/2019	5.3	5.9	3.6	1.3	8.2	10.5	177483
AB1906	6/7/2019	8.5	6.2	4.1	1.9	8.4	10.6	177483
AB1907	7/9/2019	8.3	6.4	4.3	2.1	8.6	10.8	177483
AB1908	7/22/2019	7.6	6.5	4.3	2.1	8.7	10.9	C799290
AB1909	8/7/2019	7.3	6.5	4.3	2.1	8.7	10.9	C799290
AB1910	9/4/2019	8.8	6.7	4.5	2.2	8.9	11.2	C799290
AB1911	10/1/2019	4.3	6.7	4.5	2.2	8.9	11.1	C799290
AB1912	11/6/2019	13.4	7.1	4.5	1.8	9.8	12.5	C799290
AB1913	12/10/2019	6.5	7.2	4.5	1.9	9.8	12.5	C799290
AB2001	1/9/2020	①NA						181155
AB2002	2/3/2020	9.0	7.3	4.6	2.0	9.9	12.6	181155
AB2003	3/4/2020	14.0	7.7	4.7	1.6	10.8	13.9	181155
AB2004	4/13/2020	11.7	7.6	4.8	2.0	10.4	13.2	181155
AB2005	5/4/2020	9.7	7.3	4.7	2.0	10.0	12.7	181155
AB2006	6/11/2020	8.6	8.5	5.8	3.0	11.3	14.0	181155
AB2007	7/17/2020	10.0	8.6	5.8	3.1	11.4	14.1	181155
AB2008	8/4/2020	7.2	8.6	5.9	3.1	11.4	14.1	181155 /
AB2009	9/2/2020	11.4	9.0	6.4	3.6	11.6	14.2	19190172
AB2010	10/1/2020	11.1	9.1	6.5	3.9	11.7	14.4	19190172

①NA - Not applicable. The PMSD could not be calculated for this data set. There was an "all or nothing" response pattern.

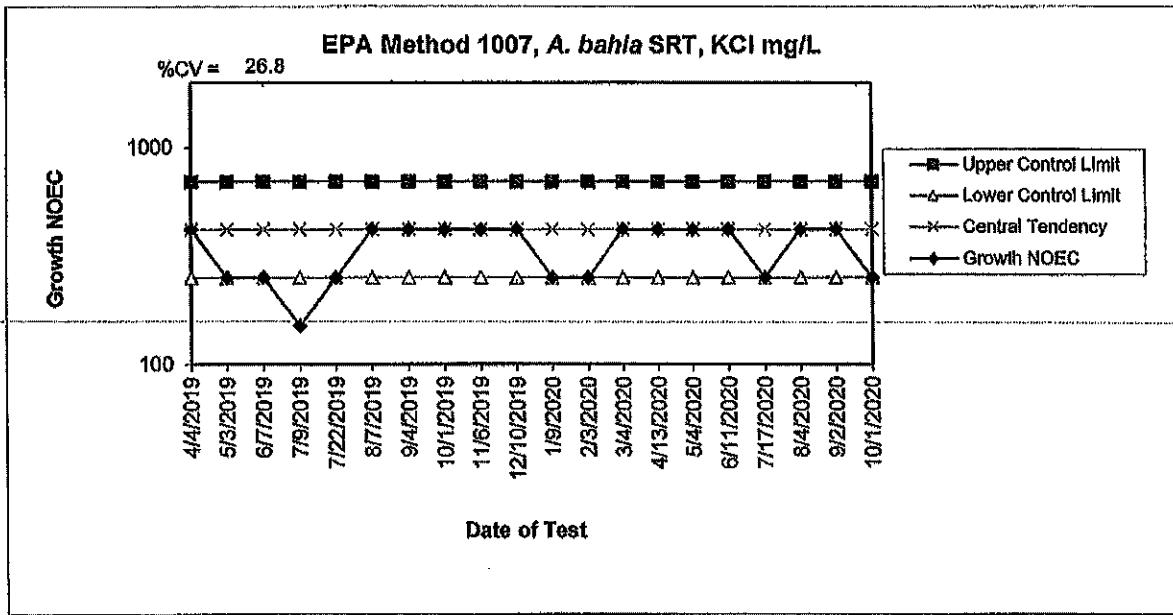
QAQC by: MAO 10/13/20



17%CV = 10th percentile, 17%CV = 25th percentile, 21%CV = 50th percentile. CV percentile values from Appendix B-6, Table B-1 of EPA's "Understanding and Accounting for Method Variability in WET Applications Under the NPDES Program", June 30, 2000.

Test #	Test Date	%CV for IC25	Mean %CV	-1 SD	-2 SD	+1 SD	+2 SD	75th Warning Limit	90th Control Limit	SRT Lot #
AB1904	4/4/2019	22.7	20.9	19.0	17.1	22.8	24.7	28.0	32.0	177483
AB1905	5/3/2019	21.9	21.0	19.0	17.1	22.9	24.8	28.0	32.0	177483
AB1906	6/7/2019	20.7	20.9	19.0	17.1	22.9	24.8	28.0	32.0	177483
AB1907	7/9/2019	19.5	20.9	18.9	17.0	22.8	24.8	28.0	32.0	177483
AB1908	7/22/2019	19.3	20.8	18.8	16.8	22.7	24.7	28.0	32.0	C799290
AB1909	8/7/2019	18.9	20.6	18.6	16.6	22.7	24.7	28.0	32.0	C799290
AB1910	9/4/2019	17.9	20.5	18.4	16.3	22.6	24.8	28.0	32.0	C799290
AB1911	10/1/2019	17.9	20.4	18.2	16.1	22.6	24.8	28.0	32.0	C799290
AB1912	11/6/2019	15.0	20.2	17.7	15.2	22.7	25.2	28.0	32.0	C799290
AB1913	12/10/2019	12.1	19.9	16.9	13.8	23.0	26.0	28.0	32.0	C799290
AB2001	1/9/2020	8.8	19.5	16.7	11.8	23.4	27.3	28.0	32.0	181155
AB2002	2/3/2020	8.4	19.0	14.4	9.8	23.6	28.2	28.0	32.0	181155
AB2003	3/4/2020	8.3	18.5	13.3	8.1	23.7	28.9	28.0	32.0	181155
AB2004	4/13/2020	8.1	17.9	12.2	6.5	23.5	29.2	28.0	32.0	181155
AB2005	5/4/2020	8.1	17.2	11.2	5.2	23.2	29.1	28.0	32.0	181155
AB2006	6/11/2020	8.0	16.4	10.3	4.1	22.6	28.8	28.0	32.0	181155
AB2007	7/17/2020	8.6	16.7	9.5	3.4	21.9	28.0	28.0	32.0	181155
AB2008	8/4/2020	8.3	15.0	8.8	2.7	21.1	27.2	28.0	32.0	181155
AB2009	9/2/2020	8.3	14.2	8.2	2.3	20.2	26.1	28.0	32.0	181155 / 19190172
AB2010	10/1/2020	8.4	13.5	7.8	2.1	19.2	24.8	28.0	32.0	19190172

QAQC by: MAO 10/3/20



Dilution Series = 150, 250, 416, 694, & 1157 mg/l KCl; Dilution Factor = 0.60

Test #	Test Date	Growth NOEC	Mean Control Growth	Growth PMSD	Upper Control Limit	Lower Control Limit	Central Tendency	SRT Lot #
AB1904	4/4/2019	416	0.366	11.4	694	250	416	177483
AB1905	5/3/2019	250	0.370	13.3	694	250	416	177483
AB1906	6/7/2019	250	0.359	12.3	694	250	416	177483
AB1907	7/9/2019	150	0.401	11.4	694	250	416	177483
AB1908	7/22/2019	250	0.388	18.0	694	250	416	C799290
AB1909	8/7/2019	416	0.374	12.4	694	250	416	C799290
AB1910	9/4/2019	416	0.367	17.5	694	250	416	C799290
AB1911	10/1/2019	416	0.363	12.7	694	250	416	C799290
AB1912	11/6/2019	416	0.348	17.6	694	250	416	C799290
AB1913	12/10/2019	416	0.393	14.0	694	250	416	C799290
AB2001	1/9/2020	250	0.385	9.3	694	250	416	181155
AB2002	2/3/2020	250	0.444	9.1	694	250	416	181155
AB2003	3/4/2020	416	0.417	10.9	694	250	416	181155
AB2004	4/13/2020	416	0.340	10.3	694	250	416	181155
AB2005	5/4/2020	416	0.387	11.4	694	250	416	181155
AB2006	6/11/2020	416	0.362	9.4	694	250	416	181155
AB2007	7/17/2020	250	0.400	13.0	694	250	416	181155
AB2008	8/4/2020	416	0.357	14.1	694	250	416	181155
AB2009	9/2/2020	416	0.324	13.4	694	250	416	181155 / 19190172
AB2010	10/1/2020	260	0.376	12.1	694	250	416	19190172

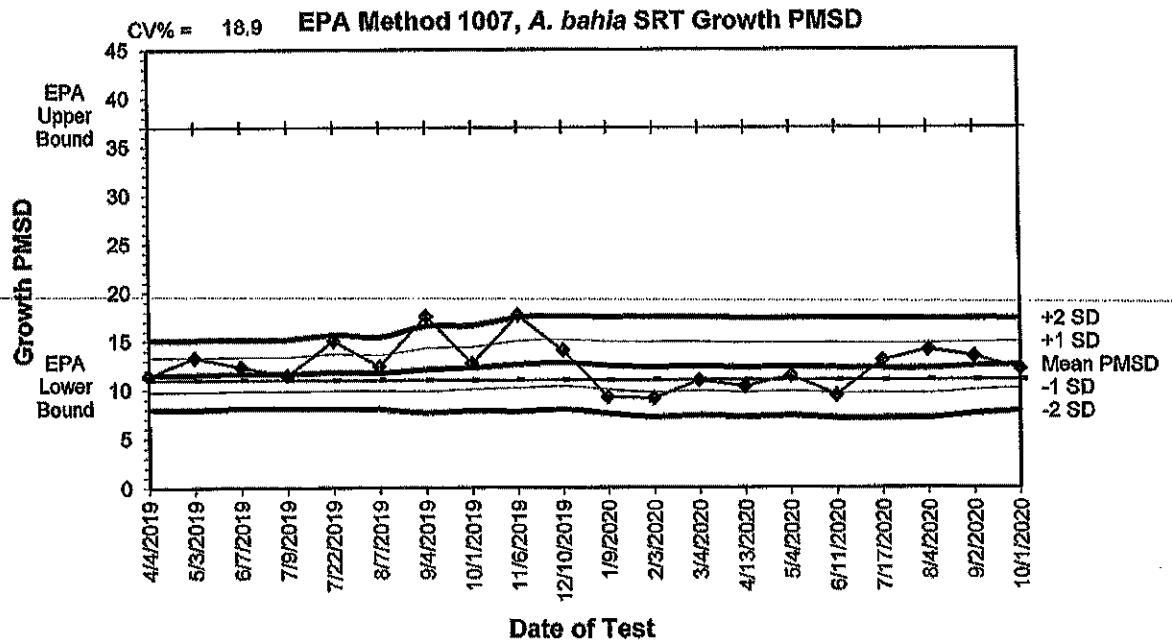
AB1907 - This is a valid test. The central tendency shifted from 416 to 250 mg/L KCl.

AB1909 - This is a valid test. The central tendency shifted from 250 to 416 mg/L KCl. The shift in central tendency caused a previous test result, AB1907, to fall below the new lower control limit. One out of 20 test results are expected to fall outside of control limits by chance alone. Ongoing laboratory performance is acceptable.

AB2001 - This is a valid test. The central tendency shifted from 416 to 250 mg/L KCl.

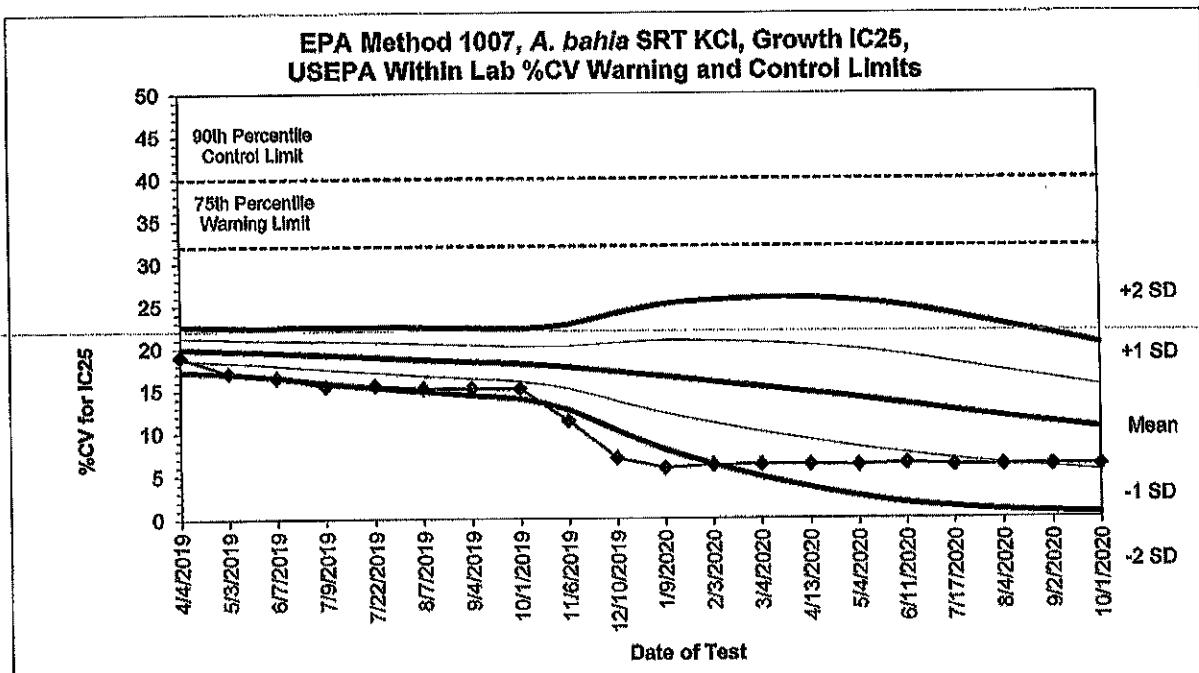
AB2004 - This is a valid test. The central tendency shifted from 250 to 416 mg/L KCl. The shift in central tendency caused a previous test result, AB1907, to fall below the new lower control limit. One out of 20 test results are expected to fall outside of control limits by chance alone. Ongoing laboratory performance is acceptable.

QAQC by: MKO 10/13/20



Test #	Test Date	Growth PMSD	Mean PMSD	-1 SD	-2 SD	+1 SD	+2 SD	Upper PMSD Bound	Lower PMSD Bound	SRT Lot #
AB1904	4/4/2019	11.4	11.6	9.8	8.0	13.3	15.1	37	11	177483
AB1905	5/3/2019	13.3	11.6	9.8	8.0	13.3	15.1	37	11	177483
AB1906	6/7/2019	12.3	11.6	9.9	8.1	13.4	15.2	37	11	177483
AB1907	7/9/2019	11.4	11.6	9.8	8.1	13.4	15.2	37	11	177483
AB1908	7/22/2019	15.0	11.8	9.9	8.0	13.7	16.6	37	11	C799290
AB1909	8/7/2019	12.4	11.7	9.9	8.0	13.6	15.4	37	11	C799290
AB1910	9/4/2019	17.5	12.1	9.9	7.6	14.3	16.5	37	11	C799290
AB1911	10/1/2019	12.7	12.2	10.1	7.9	14.4	16.6	37	11	C799290
AB1912	11/6/2019	17.6	12.6	10.2	7.8	15.0	17.4	37	11	C799290
AB1913	12/10/2019	14.0	12.8	10.4	8.0	15.2	17.6	37	11	C799290
AB2001	1/9/2020	9.3	12.5	10.0	7.6	15.0	17.4	37	11	181155
AB2002	2/3/2020	9.1	12.3	9.8	7.2	14.9	17.5	37	11	181155
AB2003	3/4/2020	10.9	12.4	9.9	7.4	14.9	17.4	37	11	181155
AB2004	4/13/2020	10.3	12.3	9.7	7.2	14.8	17.4	37	11	181155
AB2005	5/4/2020	11.4	12.3	9.8	7.3	14.8	17.3	37	11	181155
AB2006	6/11/2020	9.4	12.2	9.7	7.1	14.8	17.4	37	11	181155
AB2007	7/17/2020	13.0	12.2	9.6	7.1	14.7	17.3	37	11	181155
AB2008	8/4/2020	14.1	12.2	9.6	7.1	14.7	17.3	37	11	181155
AB2009	9/2/2020	13.4	12.4	10.0	7.5	14.9	17.3	37	11	181155 / 19190172
AB2010	10/1/2020	12.1	12.6	10.2	7.8	14.9	17.3	37	11	19190172

QAQC by: MHO 10/13/20



21%CV = 10th percentile, 24%CV = 25th percentile, 28%CV = 50th percentile, CV percentile values from Appendix B-6, Table B-1 of EPA's

"Understanding and Accounting for Method Variability In WET Applications Under the NPDES Program", June 30, 2000.

Test #	Test Date	%CV for IC25	Mean %CV	-1 SD	-2 SD	+1 SD	+2 SD	75th Warning Limit	90th Control Limit	SRT Lot #
AB1904	4/4/2019	19.0	20.0	18.6	17.3	21.3	22.7	32.0	40.0	177483
AB1905	5/3/2019	17.1	19.7	18.4	17.0	21.1	22.5	32.0	40.0	177483
AB1906	6/7/2019	16.5	19.5	18.0	16.6	20.9	22.4	32.0	40.0	177483
AB1907	7/9/2019	15.6	19.2	17.5	15.9	20.9	22.5	32.0	40.0	177483
AB1908	7/22/2019	15.5	18.9	17.1	15.3	20.7	22.5	32.0	40.0	C799290
AB1909	8/7/2019	15.2	18.6	16.7	14.8	20.6	22.4	32.0	40.0	C799290
AB1910	9/4/2019	15.2	18.3	16.4	14.4	20.3	22.3	32.0	40.0	C799290
AB1911	10/1/2019	15.1	18.1	16.0	14.0	20.2	22.2	32.0	40.0	C799290
AB1912	11/6/2019	11.4	17.7	15.2	12.6	20.2	22.7	32.0	40.0	C799290
AB1913	12/10/2019	7.0	17.1	13.7	10.2	20.6	24.1	32.0	40.0	C799290
AB2001	1/9/2020	5.9	16.6	12.3	8.0	20.8	25.1	32.0	40.0	181155
AB2002	2/3/2020	6.2	15.9	11.1	6.3	20.7	25.6	32.0	40.0	181155
AB2003	3/4/2020	6.2	15.3	10.1	4.8	20.6	25.8	32.0	40.0	181155
AB2004	4/13/2020	6.2	14.7	9.1	3.6	20.3	25.8	32.0	40.0	181155
AB2005	5/4/2020	6.1	14.0	8.3	2.5	19.7	25.5	32.0	40.0	181155
AB2006	6/11/2020	6.4	13.3	7.5	1.8	19.1	24.8	32.0	40.0	181155
AB2007	7/17/2020	6.2	12.5	6.9	1.2	18.2	23.8	32.0	40.0	181155
AB2008	8/4/2020	6.1	11.8	6.3	0.9	17.2	22.7	32.0	40.0	181155
AB2009	9/2/2020	6.1	11.1	5.9	0.6	16.3	21.6	32.0	40.0	181155 / 19190172
AB2010	10/1/2020	6.1	10.4	5.5	0.6	15.4	20.4	32.0	40.0	19190172

QAQC by: WAO 10/13/20

Environmental Enterprises USA, Inc.

APPENDIX F

Corrosion Innovations – Corr-Ze 100 Range Finding Test (RFT)

Jim Knocke

Test Concentrations, % Product (PR)

<i>Menidia beryllina</i>	<i>Americamysis bahia</i>	Total Volume/ Concentration, ml	Color Code	ml SSOL	ml DH ₂ O
0.0300		800.0	Black	24.00	776.00
0.0150		"	Red	12.00	788.00
0.0100		"	Yellow	8.00	792.00
0.0050		"	Green	4.00	796.00
0.0025		"	Blue	2.00	798.00
0.0		"	White	0.00	800.00
Total Volume (ml) of CTS needed per day=					50.00
Total Volume (ml) of CTS needed for test duration=					100.00

1% Stock Solution (SSOL): 1.0 ml Corr-Ze 100 + 99.0 ml DH₂O

Data Pages & Calculations by: Michelle Zellis QA/QC Check by: M. Roblin

$$\begin{aligned} M. \text{ beryllina} &= 2 \text{ Rep} \times 200 \text{ ml} \\ &= 200 \text{ ml} \end{aligned}$$

$$\begin{aligned} A. \text{ bahia} &= 2 \text{ Rep} \times 200 \text{ ml} \\ &= 200 \text{ ml} \end{aligned}$$

DH₂O = Dilution Water = Synthetic Seawater, 25 ppt

	LPC	M #	LPC	M #
Date	10/01		10/03	
Alkalinity	84	//	88	//
Salinity	24.7	18	25.2	18
pH	8.0	3n	8.0 ² X	8.03n
	SM		SM	

LPC: Laboratory Performance Control, synthetic seawater; Alkalinity (EPA Method 310.2): mg/L as CaCO₃; Salinity (EPA Method 120.1): ppt; pH (EPA Method 150.1): su; M#: meter number
Dissolved Oxygen, Electrode (EPA Method 360.1): mg/L; Temperature, Thermometric (EPA Method 170.1): °C

Prep Date	10/01		10/03	
DH ₂ O Lot #	25R-	208	-20	25R- 209 -20
Sample #	1		1	
Initial	AMS		AMS	

(A) Error 10/03/20 AMS

Comments: Renew at 48 hrs, and feed *M. beryllina* 2 hours prior to renewal.

Inlandsilverside Minnow, *Menidia beryllina*

Acute Static-Renewal 96 – Hour Definitive Test

EPA-821-R-02-012: Section 9 Method 2006

**Corrosion Innovations – Corr-Ze 100
Range Finding Test (RFT)**

Test Organisms Age: 13 Days Old Test Organisms Source: EE
 Test Initiation At: 1555 on 10 / 1 /20
 Counted by: AMS QC/QA by: MR Loaded by: AMS
 Organism Lot # MR - 2022 - 20

Exposure Chamber: 16 oz. plastic cups. Feeding: None.

Survival Data

Time	Treatment % PR												Initials
	R E P	LPC White	R E P	0.0025 Blue	R E P	0.0050 Green	R E P	0.0100 Yellow	R E P	0.0150 Red	R EP	0.0300 0.300 Black	
0 HR <u>1555</u>	1	8	3	8	5	8	7	8	9	8	11	8	10/01/20 AMS
	2	8	4	8	6	8	8	8	10	8	12	8	
	///		///		///		///	///	///		///	///	
24 HR <u>1052</u>	1	8	3	8	5	8	7	8	9	8	11	8	10/02/20 Ams
	2	8	4	8	6	8	8	8	10	8	12	8	
	///		///		///		///	///	///		///	///	
48 HR <u>0843</u>	1	8	3	8	5	8	7	8	9	8	11	8	10/03/20 Ams
	2	7	4	8	6	8	8	8	10	8	12	8	
	///		///		///		///	///	///		///	///	
72 HR <u>0904</u>	1	8	3	8	5	8	7	8	9	8	11	8	10/04/20 AMS
	2	7	4	8	6	8	8	8	10	8	12	8	
	///		///		///		///	///	///		///	///	
96 HR <u>0909</u> <u>1344</u>	1	8	3	8	5	8	7	8	9	8	11	8	10/05/20 SM
	2	7	4	8	6	8	8	8	10	8	12	8	
	///		///		///		///	///	///		///	///	
% Surv	93.8	100	100	100	100	100	100	100	100	100	100	100	

Data Entry by: ME QA/QC Officer: M

(C) Error 10/01/2020 ME

(A) Error 10/4/20 Ams

(B) Error 10/05/20 SM 2 of 9

Mysid, *Americamysis bahia*
 Acute Static-Renewal 48 – Hour Definitive Test
 EPA-821-R-02-012: Section 9 Method 2007

Corrosion Innovations – Corr-Ze 100
Range Finding Test (RFT)

Test Organisms Age: 5 Days Old Test Organisms Source: EE
 Test Initiation At: 1557 on 10 / 1 / 20
 Counted by: AMS QC/QA by: ME Loaded by: AMS
 Organism Lot # A0-489-20

Exposure Chamber: 16 oz. plastic cups.

Survival Data

Time	Treatment % PR												Initials
	R E P	LPC White	RE P	0.0025 Blue	R E P	0.0050 Green	R E P	0.0100 Yellow	R E P	0.0150 Red	R EP	0.0300 -0.300(A) Black	
0 HR <u>1557</u>	1	8	3	8	5	8	7	8	9	8	11	8	10/01/20 AMS
	2	8	4	8	6	8	8	8	10	8	12	8	
		///	///		///		///	///	///	///	///	///	
24 HR <u>1119</u>	1	8	3	8	5	8	7	8	9	8	11	8	10/02/20 ME
	2	8	4	8	6	8	8	8	10	8	12	8	
		///	///		///		///	///	///	///	///	///	
48 HR <u>0855</u>	1	8	3	8	5	8	7	8	9	8	11	8	10/03/20 AMS
	2	8	4	8	6	8	8	8	10	8	12	8	
		///	///		///		///	///	///	///	///	///	
72 HR <u>1009</u>	1	8	3	8	5	8	7	8	9	8	11	3	10/04/20 AMS
	2	8	4	8	6	8	8	8	10	8	12	6	
		///	///		///		///	///	///	///	///	///	
96 HR <u>1359</u>	1	8	3	8	5	8	7	8	9	8	11	0	10/05/20 SM
	2	8	4	8	6	8	8	8	10	8	12	0	
		///	///		///		///	///	///	///	///	///	
% Surv		100	100	100		100		100		100		0.0	

Data Entry by: ME QA/QC Officer: M

(A) error 100% come

Q-1664-20 RFT
LC50

Water Quality Data

All Treatments: Temp., 23.5 to 26.4°C. Initial & Final Dissolved Oxygen (DO): 4.0 to 7.5 mg/L.
 LPC: Initial Salinity, 24.5 to 25.4 ppt. I: initial water quality. F: final water quality.

Initial, <i>M. beryllina</i> & <i>A. bahia</i>							
0 HR	Treatment % PR						
10/01/20	LPC	0.0025	0.0060	0.0100	0.0150	0.0300	Meter #
DO	7.2	7.2	7.3	7.2	7.2	7.2	57
Temp	23.9	25.6	26.2	26.4	26.1	26.3	1B
Salinity	24.7	25.0	25.1	25.0	25.1	25.1	1B
Tech Initials:	CM			Time: 1453			

Comments _____

Final, <i>M. beryllina</i>							
24 HR	Treatment % PR						
10/02/20	LPC	0.0025	0.0060	0.0100	0.0150	0.0300	Meter #
DO	5.3	5.2	4.8	5.1	5.0	5.1	57
Temp	25.2	25.2	25.2	25.3	25.3	25.2	1B
Salinity	25.2	25.3	25.4	25.3	25.2	25.2	1B
pH	7.5	7.7	7.7	8.0	8.1	8.5	3n
Tech Initials:	SM			Time: 0919			

Comments A
 remeasured off
 10/02/20 SM

Final, <i>A. bahia</i>							
24 HR	Treatment % PR						
10/02/20	LPC	0.0025	0.0060	0.0100	0.0150	0.0300	Meter #
DO	5.2	5.0	5.0	5.2	5.2	5.5	57
Temp	25.2	25.1	25.2	25.1	25.2	25.1	1B
Salinity	24.7	25.2	25.3	25.2	25.2	25.1	1B
pH	7.7	7.7	7.8	8.0	8.1	8.5	3n
Tech Initials:	SM			Time: 0922			

Comments _____

DO: mg/L pH: su Salinity: ppt Temp: °C

Q-1664-20 RFT
LC50

Water Quality Data

All Treatments: Temp., 23.5 to 26.4°C. Initial & Final Dissolved Oxygen (DO): 4.0 to 7.5 mg/L.
 LPC: Initial Salinity, 24.5 to 25.4 ppt. I: initial water quality. F: final water quality.

Final, <i>M. beryllina</i>							
48 HR	Treatment % CTS						
10/03/20	LPC	0.0025	0.0060	0.0100	0.0150	0.0300	Meter #
DO	5.1	5.4	5.4	5.8	5.8	5.4	J7
Temp	25.0	25.4	25.4	25.2	25.4	25.1	IB
Salinity	25.4	25.9	25.5	25.8	25.5	25.8	IB
pH	7.4	7.4	7.4	7.7	7.7	7.9	31
Tech Initials:	JW			Time: 0734			

Comments _____

Final, <i>A. bahia</i>							
48 HR	Treatment % CTS						
10/03/20	LPC	0.0025	0.0060	0.0100	0.0150	0.0300	Meter #
DO	5.4	5.4	5.4	5.7	5.4	5.4	J7
Temp	25.4	25.4	25.4	25.4	25.4	25.7	IB
Salinity	25.4	25.4	25.4	25.3	25.4	25.5	IB
pH	7.5	7.5	7.6	7.7	7.8	7.9	31
Tech Initials:	JW			Time: 0730			

Comments _____

Initial, <i>M. beryllina</i> & <i>A. bahia</i>							
48 HR	Treatment % PR						
10/03/20	LPC	0.0025	0.0060	0.0100	0.0150	0.0300	Meter #
DO	7.1	7.1	7.1	7.1	7.1	7.0	J7
Temp	24.6	24.6	24.6	24.6	24.6	24.6	IB
Salinity	25.0	25.0	25.0	25.0	25.1	25.1	IB
Tech Initials:	JW			Time: 0744			

Comments _____

DO: mg/L pH: su Salinity: ppt Temp: °C

Q-1664-20 RFT
LC50

Water Quality Data

All Treatments: Temp., 23.5 to 26.4°C. Initial & Final Dissolved Oxygen (DO): 4.0 to 7.5 mg/L.
 LPC: Initial Salinity, 24.5 to 25.4 ppt. I: initial water quality. F: final water quality.

Final, <i>M. beryllina</i>							
72 HR	Treatment % PR						
10/04/20	LPC	0.0025	0.0060	0.0100	0.0150	0.0300	Meter #
DO	10.3	10.1	10.1	10.3	10.2	10.2	57
Temp	25.5	25.5	25.10	25.5	25.5	25.5	IB
Salinity	25.4	25.3	25.4	25.3	25.4	25.3	IB
pH	7.8	7.8	7.9	8.0	8.1	8.3	3n
Tech Initials:	SM						
	Time: 0738						

Comments _____

Final, <i>A. bahia</i>							
72 HR	Treatment % PR						
10/04/20	LPC	0.0025	0.0060	0.0100	0.0150	0.0300	Meter #
DO	10.4	10.0	5.9	10.2	10.2	5.9	57
Temp	25.4	25.5	25.10	25.5	25.5	25.6	IB
Salinity	24.9	25.3	25.5	25.3	25.4	25.3	IB
pH	7.8	7.7	7.7	7.9	8.0	8.3	3n
Tech Initials:	SM						
	Time: 0740						

Comments _____

DO: mg/L pH: su Salinity: ppt Temp: °C

Q-1664-20 RFT
LC50

Water Quality Data

All Treatments: Temp., 23.5 to 26.4°C. Initial & Final Dissolved Oxygen (DO): 4.0 to 7.5 mg/L.
 LPC: Initial Salinity, 24.5 to 25.4 ppt. I: initial water quality. F: final water quality.

Final, <i>M. beryllina</i>							
96 HR	Treatment % PR						
10/05/20	LPC	0.0025	0.0060	0.0100	0.0150	0.0300	Meter #
DO	6.0	5.8	5.2	5.4	5.7	5.9	5.7
Temp	25.6	25.8	25.1	25.6	25.6	25.5	IB
Salinity	25.7	25.4	25.8	25.4	25.8	25.4	IB
pH	7.7	7.6	7.5	7.7	7.8	7.9	3n
Tech Initials:	SM						
Time:	0850						

Comments _____

Final, <i>A. bahia</i>							
96 HR	Treatment % PR						
10/05/20	LPC	0.0025	0.0060	0.0100	0.0150	0.0300	Meter #
DO	6.0	5.8	5.7	5.4	5.6	5.5	5.7
Temp	25.6	25.7	25.8	25.7	25.8	25.8	IB
Salinity	25.7	25.4	25.6	25.4	25.6	25.4	IB
pH	7.7	7.6	7.6	7.6	7.7	7.9	3n
Tech Initials:	SM						
Time:	0852						

Comments _____

DO: mg/L pH: su Salinity: ppt Temp: °C

Q-1664-20 RFT
LC50

**Corrosion Innovations – Corr-Ze 100 –
Range Finding Test (RFT)**

Feeding Chart

Artemia	Lot #
072519-1	
Initial	TRP

M. beryllina

AM			
Date	Amount, µl	Time	Initials
10/03/20	200	0734	SM

PM			
Date	Amount, µl	Time	Initials

A. bahia

AM			
Date	Amount, µl	Time	Initials
10/02/20	200	0714	AMS
10/03/20	200	0735	SM
10/04/20	200	0733	TR
10/05/20	200	0816	ME

PM			
Date	Amount, µl	Time	Initials
10/01/20	200	1641	CM
10/02/20	200	1604	SM
10/03/20	200	1422	ZB
10/04/20	200	1355	CH

QA/QC Data Pages

- Company name & contact matches client file.
- Product matches client file.

Dilution series

D.0025, D.0050, D.0100, D.0150, D.0300.

- Calculations on mixing page are correct. (sign mixing page)
- Dates, dilutions, test method, # of replicates, replicate volume, area & block, acceptance limits, data analysis endpoint, and test organisms are correct throughout data pages.
- Format correct. (spaces for all entries, page numeration, no split pages, etc.)

ME

Initials

10/01/20

Date

QA/QC Chain-of-Custody

- Product on COC matches sample bottle.
- Product on COC matches test data pages.
- Lab # on COC matches sample bottle.
- Lab # on COC matches test data pages.
- Sample volume is sufficient for test duration. (Sample volume in container(s) checked against sample volume on mixing page)

Sample volume available: 3000 mlSample volume needed: 1.0 ml

(Sample volume insufficient if sample volume available < sample volume needed)

ME

Initials

10/01/20

Date

Jugs & Labels

- Lab # on jug and labels matches test data pages.
- Dilution water type is on jug. (i.e. 25 ppt, 20 ppt, MHSF, etc.)
- Dilutions on jugs and labels match dilutions on test data pages.
- Jugs are color-coded. (see mixing page for appropriate color code sequence)

ME

Initials

10/01/20

Date

Raw Data QC/QA by: Michelle Dier 10/01/20

CETIS Summary Report

 Report Date: 20 Oct-20 14:18 (p 1 of 1)
 Test Code/ID: mn166420 / 12-3023-2998

Inland Silverside Acute Survival Test
Environmental Enterprises USA, Inc.
Test Acceptability

Analysis ID	Endpoint	Attribute	TAC Limits					Overlap	Decision
			Test Stat	Lower	Upper	>>			
20-5940-0823	96h Survival Rate	Control Resp	0.9375	0.9	>>		Yes	Passes Criteria	

96h Survival Rate Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	LP	2	0.9375	0.1434	1.7320	0.8750	1.0000	0.0625	0.0884	9.43%	0.00%
0.0025		2	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	---	-6.67%
0.005		2	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	---	-6.67%
0.01		2	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	---	-6.67%
0.015		2	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	---	-6.67%
0.03		2	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	---	-6.67%

96h Survival Rate Detail

MD5: 7F922D750B7BEF4440CD0366037F1E7C

Conc-%	Code	Rep 1	Rep 2
0	LP	1.0000	0.8750
0.0025		1.0000	1.0000
0.005		1.0000	1.0000
0.01		1.0000	1.0000
0.015		1.0000	1.0000
0.03		1.0000	1.0000

96h Survival Rate Binomials

Conc-%	Code	Rep 1	Rep 2
0	LP	8/8	7/8
0.0025		8/8	8/8
0.005		8/8	8/8
0.01		8/8	8/8
0.015		8/8	8/8
0.03		8/8	8/8

CETIS Summary Report

Report Date:

20 Oct-20 14:20 (p 1 of 1)

Test Code/ID:

ab166420 / 02-0316-4465

Americamysis Acute Survival Test**Environmental Enterprises USA, Inc.****96h Survival Rate Summary**

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	LP	2	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	---	0.00%
0.0025		2	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	---	0.00%
0.005		2	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	---	0.00%
0.015		2	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	---	0.00%
0.03		2	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	---	0.00%
0.1		2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	---	100.00%

96h Survival Rate Detail

MD5: 74541CD6AD6FACA0E53F933A2955C85A

Conc-%	Code	Rep 1	Rep 2
0	LP	1.0000	1.0000
0.0025		1.0000	1.0000
0.005		1.0000	1.0000
0.015		1.0000	1.0000
0.03		1.0000	1.0000
0.1		0.0000	0.0000

96h Survival Rate Binomials

Conc-%	Code	Rep 1	Rep 2
0	LP	8/8	8/8
0.0025		8/8	8/8
0.005		8/8	8/8
0.015		8/8	8/8
0.03		8/8	8/8
0.1		0/8	0/8

Corrosion Innovations – Corr-Ze 100 Range Finding Test (RFT)

Jim Knocke

Test Concentrations, % Product (PR)

<i>Menidia</i> <i>beryllina</i>	<i>Americamysis</i> <i>bahia</i>	Total Volume/ Concentration, ml	Color Code	ml PR	ml DH ₂ O
3.00		800.0	Black	24.00	776.00
1.50		"	Red	12.00	788.00
1.00		"	Yellow	8.00	792.00
0.50		"	Green	4.00	796.00
0.25		"	Blue	2.00	798.00
0.0		"	White	0.00	800.00
Total Volume (ml) of CTS needed per day=					50.00
Total Volume (ml) of CTS needed for test duration=					100.00

Data Pages & Calculations by: Michele Ellin QA/QC Check by: J. M. Hobley

$$\begin{aligned}M. beryllina &= 2 \text{ Rep} \times 200 \text{ ml} \\&= 200 \text{ ml}\end{aligned}$$

$$\begin{aligned}A. bahia &= 2 \text{ Rep} \times 200 \text{ ml} \\&= 200 \text{ ml}\end{aligned}$$

DH₂O = Dilution Water = Synthetic Seawater, 25 ppt

	LPC	M #	LPC	M #
Date	09/30		10/02	
Alkalinity	8.0	//		//
Salinity	18			
pH	8.0	BN		
	ME			

LPC: Laboratory Performance Control, synthetic seawater; Alkalinity (EPA Method 310.2): mg/L as CaCO₃; Salinity (EPA Method 120.1): ppt; pH (EPA Method 150.1): su; M#: meter number
Dissolved Oxygen, Electrode (EPA Method 360.1): mg/L; Temperature, Thermometric (EPA Method 170.1): °C

Prep Date	09/30		10/02	
DH ₂ O Lot #	25R-	207	-20	25R- -20
Sample #	1		1	
Initial	CW			

Comments: Renew at 48 hrs, and feed *M. beryllina* 2 hours prior to renewal.

This test was terminated at 24 hours due to high mortality in the *M. beryllina* and *A. bahia*.
Q-1661-20 RFT
LC50

Inlandsilverside Minnow, *Menidia beryllina*Acute Static-Renewal 96 – Hour Definitive Test
EPA-821-R-02-012: Section 9 Method 2006**Corrosion Innovations – Corr-Ze 100
Range Finding Test (RFT)**

Test Organisms Age: 12 Days Old Test Organisms Source: EE
 Test Initiation At: 1447 on 09/30/20
 Counted by: AMS QC/QA by: SH Loaded by: SH
 Organism Lot # NW-201-20

Exposure Chamber: 16 oz. plastic cups. Feeding: None.

Survival Data

Time	Treatment % PR												Initials
	R E P	LPC White	R E P	0.25 Blue	R E P	0.50 Green	R E P	1.00 Yellow	R E P	1.50 Red	R EP	3.00 Black	
0 HR	1	8	3	8	5	8	7	8	9	8	11	8	09/30/20 SH
	2	8	4	8	6	8	8	8	10	8	12	8	
		/		/		/		/		/		/	
24 HR	1	8	3	1	5	0	7	0	9	0	11	0	10/01/20 ME
	2	8	4	3	6	0	8	0	10	0	12	0	
		/		/		/		/		/		/	
48 HR	1		3		5		7		9		11		10/02/20
	2		4		6		8		10		12		
		/		/		/		/		/		/	
72 HR	1		3		5		7		9		11		10/03/20
	2		4		6		8		10		12		
		/		/		/		/		/		/	
96 HR	1		3		5		7		9		11		10/04/20
	2		4		6		8		10		12		
		/		/		/		/		/		/	
% Surv													

Data Entry by: _____ QA/QC Officer: _____

Q-1661-20 RFT
LC50

Mysid, *Americamysis bahia*
 Acute Static-Renewal 48 – Hour Definitive Test
 EPA-821-R-02-012: Section 9 Method 2007

Corrosion Innovations – Corr-Ze 100
Range Finding Test (RFT)

Test Organisms Age: S Days Old Test Organisms Source: EE
 Test Initiation At: 1449 on 09/30/20
 Counted by: AMS QC/QA by: SH Loaded by: SH
 Organism Lot # AB-486-20

Exposure Chamber: 16 oz. plastic cups.

Survival Data

Time	Treatment % PR												Initials
	R E P	LPC White	RE P	0.25 Blue	R E P	0.50 Green	R E P	1.00 Yellow	R E P	1.50 Red	R EP	3.00 Black	
0 HR <u>1449</u>	1	8	3	8	5	8	7	8	9	8	11	8	<u>SH</u>
	2	8	4	8	6	8	8	8	10	8	12	8	
		///		///		///		///		///		///	
24 HR <u>1032</u>	1	8	3	0	5	0	7	0	9	0	11	0	<u>ME</u>
	2	8	4	0	6	0	8	0	10	0	12	0	
		///		///		///		///		///		///	
48 HR	1		3		5		7		9		11		<u>ME</u>
	2		4		6		8		10		12		
		///		///		///		///		///		///	
72 HR	1		3		5		7		9		11		<u>ME</u>
	2		4		6		8		10		12		
		///		///		///		///		///		///	
96 HR	1		3		5		7		9		11		<u>ME</u>
	2		4		6		8		10		12		
		///		///		///		///		///		///	
% Surv													

Data Entry by: _____ QA/QC Officer: _____

Water Quality Data

All Treatments: Temp., 23.5 to 26.4°C. Initial & Final Dissolved Oxygen (DO): 4.0 to 7.5 mg/L.
 LPC: Initial Salinity, 24.5 to 25.4 ppt. I: initial water quality. F: final water quality.

Initial, <i>M. beryllina</i> & <i>A. bahia</i>								
0 HR	Treatment % PR							Comments _____
09/30/20	LPC	0.25	0.50	1.00	1.50	3.00	Meter #	Comments _____
DO	7.2	7.3	7.4	7.3	7.3	7.2	57	Comments _____
Temp	23.7	24.8	23.9	23.6	23.7	23.8	IB	Comments _____
Salinity	24.5	24.8	24.5	24.4	24.2	23.5	IB	Comments _____
Tech Initials:	CM							Time: 1445

Final, <i>M. beryllina</i>								
24 HR	Treatment % PR							Comments _____
10/01/20	LPC	0.25	0.50	1.00	1.50	3.00	Meter #	Comments _____
DO	5.9	5.3	5.8	5.7	5.9	5.4	57	Comments _____
Temp	25.2	25.2	25.2	25.1	25.0	24.8	IB	Comments _____
Salinity	25.1	25.1	25.0	24.8	24.8	24.1	IB	Comments _____
pH	7.7	9.2	9.6	9.8	9.8	9.8	3N	Comments _____
Tech Initials:	CM							Time: 0940

Final, <i>A. bahia</i>								
24 HR	Treatment % PR							Comments _____
10/01/20	LPC	0.25	0.50	1.00	1.50	3.00	Meter #	Comments _____
DO	5.3	5.4	5.5	5.6	5.3	5.2	57	Comments _____
Temp	25.1	24.8	25.0	25.0	24.7	24.5	IB	Comments _____
Salinity	25.0	25.2	24.9	24.7	24.5	23.9	IB	Comments _____
pH	8.0	9.3	9.6	9.7	9.8	9.8	3N	Comments _____
Tech Initials:	CM							Time: 0942

DO: mg/L pH: su Salinity: ppt Temp: °C

Q-1661-20 RFT
LC50

Water Quality Data

All Treatments: Temp., 23.5 to 26.4°C. Initial & Final Dissolved Oxygen (DO): 4.0 to 7.5 mg/L.
LPC: Initial Salinity, 24.5 to 25.4 ppt. **I:** Initial water quality. **F:** final water quality.

Final, <i>M. beryllina</i>							
48 HR	Treatment % CTS						
10/02/20	LPC	0.25	0.50	1.00	1.50	3.00	Meter #
DO							
Temp							
Salinity							
pH							
Tech Initials:	Time:						

Comments _____

Final, <i>A. bahia</i>							
48 HR	Treatment % CTS						
10/02/20	LPC	0.25	0.50	1.00	1.50	3.00	Meter #
DO							
Temp							
Salinity							
pH							
Tech Initials:	Time:						

Comments _____

Initial, <i>M. beryllina & A. bahia</i>							
48 HR	Treatment % PR						
10/02/20	LPC	0.25	0.50	1.00	1.50	3.00	Meter #
DO							
Temp							
Salinity							
Tech Initials:	Time:						

Comments _____

DO: mg/L pH: su Salinity: ppt Temp: °C

Q-1661-20 RFT
 LC50

Water Quality Data

All Treatments: Temp., 23.5 to 26.4°C. Initial & Final Dissolved Oxygen (DO): 4.0 to 7.5 mg/L.
 LPC: Initial Salinity, 24.5 to 25.4 ppt. I: initial water quality. F: final water quality.

Final, <i>M. beryllina</i>							
72 HR	Treatment % PR						
10/03/20	LPC	0.25	0.50	1.00	1.50	3.00	Meter #
DO							
Temp							
Salinity							
pH							
Tech Initials:				Time:			

Comments _____

Final, <i>A. bahia</i>							
72 HR	Treatment % PR						
10/03/20	LPC	0.25	0.50	1.00	1.50	3.00	Meter #
DO							
Temp							
Salinity							
pH							
Tech Initials:				Time:			

Comments _____

DO: mg/L pH: su Salinity: ppt Temp: °C

Q-1661-20 RFT
LC50

Water Quality Data

All Treatments: Temp., 23.5 to 26.4°C. Initial & Final Dissolved Oxygen (DO): 4.0 to 7.5 mg/L.
 LPC: Initial Salinity, 24.5 to 25.4 ppt. I: initial water quality. F: final water quality.

Final, <i>M. beryllina</i>							
96 HR	Treatment % PR						
10/04/20	LPC	0.25	0.50	1.00	1.50	3.00	Meter #
DO							
Temp							
Salinity							
pH							
Tech Initials:	Time:						

Comments _____

Final, <i>A. bahia</i>							
96 HR	Treatment % PR						
10/04/20	LPC	0.25	0.50	1.00	1.50	3.00	Meter #
DO							
Temp							
Salinity							
pH							
Tech Initials:	Time:						

Comments _____

DO: mg/L pH: su Salinity: ppt Temp: °C

**Corrosion Innovations – Corr-Ze 100 –
Range Finding Test (RFT)**

Feeding Chart

<i>Artemia</i> Lot #	
072519-1	
Initial	<i>JMC</i>

M. beryllina

AM			
Date	Amount, µl	Time	Initials
10/02/20	200		

PM			
Date	Amount, µl	Time	Initials

A. bahia

AM			
Date	Amount, µl	Time	Initials
10/01/20	200		
10/02/20	200		
10/03/20	200		
10/04/20	200		

PM			
Date	Amount, µl	Time	Initials
09/30/20	200	1656	AM5
10/01/20	200		
10/02/20	200		
10/03/20	200		

QA/QC Data Pages

- Company name & contact matches client file.
- Product matches client file.

Dilution series

0.25, 0.50, 1.00, 1.50, 3.00.

- Calculations on mixing page are correct. (sign mixing page)
- Dates, dilutions, test method, # of replicates, replicate volume, area & block, acceptance limits, data analysis endpoint, and test organisms are correct throughout data pages.
- Format correct. (spaces for all entries, page numeration, no split pages, etc.)

M

Initials

9/30/20

Date

QA/QC Chain-of-Custody

- Product on COC matches sample bottle.
- Product on COC matches test data pages.
- Lab # on COC matches sample bottle.
- Lab # on COC matches test data pages.
- Sample volume is sufficient for test duration. (Sample volume in container(s) checked against sample volume on mixing page)

Sample volume available: 100.0 mlSample volume needed: 100.0 ml

(Sample volume insufficient if sample volume available < sample volume needed)

M

Initials

9/30/20

Date

Jugs & Labels

- Lab # on jug and labels matches test data pages.
- Dilution water type is on jug. (i.e. 25 ppt, 20 ppt, MHSF, etc.)
- Dilutions on jugs and labels match dilutions on test data pages.
- Jugs are color-coded. (see mixing page for appropriate color code sequence)

SH

Initials

9-30-20

Date

Raw Data QC/QA by: Dickie0900 10/2/20

ENVIRONMENTAL ENTERPRISES USA, INC.
SAMPLE RECEIPT / ACCEPTANCE (SRA) FORM

CLIENT: Corrosion Innovations KIT NO. Box
 DATE RECEIVED: 9-29-20 CL NO. N/A LAB NO. Q-1661-70 (RFT)
 LOCATION: N/A Q-1662-70 (7day)

SAMPLE RECEIPT:

- Sample Kit Supplied by: EE USA..... Client..... ???..... Other.....
Ice Chest....., Cardboard Box....., Styrofoam Box....., Other..... How many containers in kit?
At EE USA: Ice & H₂O, [Dry, H₂O, Ice packs, Other, (Temp.....°C, Temp ID#....)]
- Ice chest received... Circle one; *delivered by Hot Shot, FEDEX, UPS, Client, etc. mark NA.
NA or SB: Fridge, Ice & H₂O, [Dry, H₂O, Ice packs (Frozen? Yes....or No....), Other.....]
- If Ice & H₂O received... How? Loose, Bagged, Bottled, or Other...Comment: _____
- Sample container(s) in good condition (sealed & unbroken)? YES..... NO.....
- Sample container label(s) filled out completely? YES..... NO..... N/A.....
If not, mark all that apply. For O&G (PW) OCSG & Well #'s N/A. For O&G (WF) OCSG N/A
a) Date & time collected..... c) OCSG number.....
b) Collected by d) Well number
- Chain-of-Custody form (COC) filled out completely? YES..... NO.....
If not, mark all that apply.
a) No COC..... f) Date & time collected.....
b) Collected by g) Received by.....
c) Relinquished by..... h) Date and/or time of transfer...
d) Location..... i) Waste type.....
e) Company name.....
- Custody seal(s) received with this sample kit? YES..... NO..... Were custody seals used? YES.... NO....
And if used, were they intact? YES..... NO..... Were custody seals filled out? YES..... NO.....

COMMENTS: (No E&B site label)

Information recorded by: AF 9/29/20

SAMPLE ACCEPTANCE: TOX: EFF CTS PW DF ; ANALY BIOD
 O&G: PW WF ; PROD.: NCP WAF SBF ;
 ADD.: DF CTS ; GC/MS: DF ; OTHER: Product

- Was each sample container appropriate (EPA Protocol)? Unknown YES..... NO.....
Plastic..... Glass..... Number of samples for location?.....
- Does the recorded information on the COC and label agree? YES..... NO.....
Client Sample ID, Collection location, date, & time. Collected by.
- Was sufficient amount of each sample received? YES..... NO.....
Container size...1 gal, Estimated Volume...1 gal Head space...0..... (mls or liters).
- Was each sample received within the proper holding time? YES..... NO.....
- Was each sample received at the proper temperature? (See COC for temp) YES..... NO..... N/A

Oil & Grease Lab Only:

- Sample verified for proper acid preservation & temp within 1 hour of sample receipt? YES..... NO.....
- Is the initial pH <2 su? YES..... NO.....
If no, how many mls of 6NHCL was added to make pH <2 su? mls..... OL#

COMMENTS & CLIENT CONTACT INFO (name, date, instructions):

Information recorded by: ME 9/30/20

NA=not applicable, SB=Shorebase, or CL=Certified Lot Number, PW= Produced Water, WF=Well Fluid

ENVIRONMENTAL ENTERPRISES USA, INC.
SAMPLE RECEIPT / ACCEPTANCE (SRA) FORM

CLIENT: Corrosion Innovations

KIT NO. -

DATE RECEIVED: 9.28.20

CL NO. -

LOCATION: Lab Sample/ Product

LAB NO. Q-11661-20 RFT

SAMPLE RECEIPT:

1. Sample Kit Supplied by: EE USA..... Client ???..... Other.....
Ice Chest....., Cardboard Box....., Styrofoam Box....., Other..... How many containers in kit? 1
2. Ice chest received... Circle one; *delivered by Hot Shot, FEDEX, UPS, Client, etc. mark NA.
 NA or SB: Fridge, Ice & H₂O, [Dry, H₂O, Ice packs, Other, (Temp.....°C, Temp ID#....)]
At EEE USA: Ice & H₂O, Dry H₂O, Ice packs (Frozen? Yes:...or No:...), Other.....
If Ice & H₂O received... How? Loose, Bagged, Bottled, or Other...Comment: _____
3. Sample container(s) in good condition (sealed & unbroken)? YES NO.....
4. Sample container label(s) filled out completely? YES NO..... N/A.....
If not, mark all that apply. For O&G (PW) OCSG & Well #'s N/A. For O&G (WF) OCSG N/A
a) Date & time collected..... c) OCSG number.....
b) Collected by d) Well number.....
5. Chain-of-Custody form (COC) filled out completely? YES NO.....
If not, mark all that apply.
a) No COC..... f) Date & time collected.....
b) Collected by g) Received by.....
c) Relinquished by..... h) Date and/or time of transfer...
d) Location..... i) Waste type.....
e) Company name.....
6. Custody seal(s) received with this sample kit? YES..... NO Were custody seals used? YES..... NO.....
And if used, were they intact? YES..... NO.....
Were custody seals filled out? YES..... NO.....

COMMENTS:

Information recorded by: JK 09/28/20

SAMPLE ACCEPTANCE: TOX: EFF CTS PW DF ; ANALY BIOD
O&G: PW WF ; PROD.: NCP WAF SBF ;
ADD.: DF CTS ; GC/MS: DF ; OTHER: Product unknown

7. Was each sample container appropriate (EPA Protocol)? YES..... NO.....
Plastic Glass..... Number of samples for location?
8. Does the recorded information on the COC and label agree? YES NO.....
Client Sample ID, Collection location, date, & time. Collected by.
9. Was sufficient amount of each sample received? YES NO.....
Container size 100....., Estimated Volume 100....., Head space 0..... (mls or liters).
10. Was each sample received within the proper holding time? YES NO.....
11. Was each sample received at the proper temperature? (See COC for temp) YES..... NO..... N/A

Oil & Grease Lab Only:

12. Sample verified for proper acid preservation & temp within 1 hour of sample receipt? YES..... NO.....
13. Is the initial pH <2 su? YES..... NO.....
If no, how many mls of 6NHC_l was added to make pH <2 su?mls..... OL#

COMMENTS & CLIENT CONTACT INFO (name, date, instructions):

Information recorded by: M/E

9/28/20

NA=not applicable, SB=Shorebase, or CL=Certified Lot Number, PW=Produced Water, WF=Well Fluid