

AQUATIC TOXICOLOGY REPORT

Project Name:

Location:

SPOKANE COUNTY REGIONAL WRF

SPOKANE, WASHINGTON

^c/_o Jacobs

Prepared by: Eurofins Environment Testing Northwest, LLC - ASL

(formerly Eurofins TestAmerica – ASL)

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Accredited in accordance with NELAP

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Lab I.D. No. B5626

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Results relate only to the items tested and the sample(s) as received by the laboratory. The results included in this report have been reviewed for compliance and meet all requirements for accredited parameters. All data have been found to be compliant with laboratory protocol, with the exception of any items noted in this report. For questions, please contact the Project Manager (contact info on next page).

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INTRODUCTION

Eurofins Environment Testing Northwest, LLC Applied Sciences Laboratory (EETNW - ASL) conducted toxicity testing on sample(s) from the Jacobs - Spokane County Regional Water Reclamation Facility, Spokane, Washington.

Testing was conducted on behalf of: Jacobs

The Project Name was: Spokane County Regional Water Reclamation facility

Testing was initiated on: May 11, 2023

The test(s) were conducted using:

• the water flea (*Ceriodaphnia dubia*)

OVERVIEW OF REGULATORY GUIDANCE

The following provides an overview and excerpts of applicable permit specifics, regulatory guidance, and other relevant information. This is intended only as a helpful guide, from a laboratory perspective, for understanding test outcomes. The final responsibility for interpretation of results remains with the client and/or regulatory agency.

The following guidance is taken from EETNW-ASL's reading of the NPDES permit for Spokane County Regional Water Reclamation Facility (permit #WA0093317, effective Aug. 1, 2022, expired July 31, 2027).

Acute toxicity:

- *Effluent Limit for Acute Toxicity:*
 - "No toxicity detected in a test concentration representing the acute critical effluent concentration (ACEC)."
 - "The ACEC equals 50% effluent."
- *Compliance with the Effluent Limit for Acute Toxicity:*
 - "Compliance with the effluent limit for acute toxicity means the results ... show no statistically significant difference in survival between the control and the ACEC."
 - \circ "The Permittee must determine the statistical significance by conducting a hypothesis test at the 0.05 level of significance ..." (i.e. alpha = 0.05)
 - "If the difference in survival between the control and the ACEC is less than 10 percent, ... must conduct the hypothesis test at the 0.01 level of significance."
- *Compliance Testing for Acute Toxicity:*
 - "Conduct acute toxicity testing on final effluent once per quarter. The permittee must begin quarterly monitoring for the quarter beginning on 7/1/2022."
 - \circ "... using each of the species listed in Table 17 on a rotating basis."
- *Response to Noncompliance with the Effluent Limit for Acute Toxicity:*

• "If a toxicity test ... determines a statistically significant difference in response between the ACEC and the control ... the Permittee must begin additional testing within one week of receiving the test results".

Chronic toxicity:

- *Effluent Limit for Chronic Toxicity:*
 - "No toxicity detected in a test concentration representing the chronic critical effluent concentration (CCEC)."
 - "The CCEC equals 6.4% effluent."
- *Compliance with the Effluent Limit for Chronic Toxicity:*
 - "Compliance with the effluent limit for chronic toxicity means the results ... show no statistically significant difference in response between the control and the CCEC."
 - \circ "The Permittee must determine the statistical significance by conducting a hypothesis test at the 0.05 level of significance ..." (i.e. alpha = 0.05)
 - "If the difference in survival between the control and the CCEC is less than 20 percent, ... must conduct the hypothesis test at the 0.01 level of significance."
- *Compliance Testing for Chronic Toxicity:*
 - "Perform the chronic toxicity tests using the CCEC, the ACEC, and a control, or with a full dilution series."
 - \circ "Conduct chronic toxicity testing on final effluent once per quarter. The permittee must begin quarterly monitoring for the quarter beginning on 7/1/2022."
 - o "... using each of the species listed in Table 18 on a rotating basis."
- *Response to Noncompliance with the Effluent Limit for Chronic Toxicity:*
 - "If a toxicity test ... determines a statistically significant difference in response between the CCEC and the control ... the Permittee must begin additional testing within one week of receiving the test results".

The following is taken from the WDOE guidance (WQ-R-95-80, June 2016 revision):

- "To reduce WET limit violations due to statistically significance that is a Type I error (false positive), we lower the alpha for hypothesis testing when differences in test organisms response are small."
- "Alpha will be lowered from 0.05 to 0.01 if a 10% difference in an acute test is significant or a 20% difference in a chronic test is significant."

SUMMARY OF TEST RESULTS

Exhibits 1 and 2 provide a summary of the final test results.

EXHIBIT 1 Summary of Acute Test Results

Species	NOEC (%)	LOEC (%)	LC50 (%)	Was a statistically significant difference between control and ACEC shown?
C. dubia	100	> 100	> 100	No
NT /	1 0 11	1		

Note: acronyms are as defined below.

From the NPDES permit - *Effluent Limit for Acute Toxicity*: "No acute toxicity detected in a test concentration representing the acute critical effluent concentration [ACEC = 50%]."

More detailed information is provided in the Results and Discussion section.

EXHIBIT 2 Summary of Chronic Test Results

Species	NOEC	LOEC	IC25	Was a statistically significant difference between control and CCEC
	(/0)	(/0)	(/0)	shown?
C. dubia	25.0	50.0	40.4	No

Note: acronyms are as defined below.

From the NPDES permit - *Effluent Limit for Chronic Toxicity*: "No chronic toxicity detected in a test concentration representing the chronic critical effluent concentration [CCEC = 6.4%]."

More detailed information is provided in the Results and Discussion section.

ACRONYM DEFINITIONS (from EPA guidance):

NOEC = No Observed Effect Concentration: The highest test concentration that causes no observable adverse effects on the test organisms (i.e. no statistically significant reduction from the control).

LOEC = Low Observed Effect Concentration: The lowest test concentration that does cause an observable adverse effect on the test organisms (i.e. is statistically significant reduction from the control).

 LC_{50} = Lethal Concentration (50%): A point estimate of the test concentration that would cause death in 50 percent of the test population.

 IC_{25} = Inhibition Concentration (25%): A point estimate of the test concentration that would cause a 25 percent reduction of a non-quantal biological measurement (i.e. growth, reproduction, etc.) for the test population.

SAMPLE INFORMATION

Exhibits 3 and 4 provides a summary of the sample conditions as received.

EXHIBIT 3 Sample Conditions on Receipt

Sample ID	BIO2305100	9, BIO23051208, I	BIO23051508
EETNW - ASL SDG		B5626	
+ suffix	-01	-02	-03
Collection - Date and Time	05/10/2023	05/12/2023	05/15/2023
	08:53	08:36	10:13
Receipt - Date and Time	05/11/2023	05/13/2023	05/16/2023
Date and Thile	09:15	09:58	08:45
$T_{omportune}$ (°C)	-0.7 (not	0.2	-0.7 (not
Temperature (C)	frozen)	0.2	frozen)
Dissolved Oxygen (mg/L)	10.0	9.6	9.1
pH	7.9	7.8	7.9
Conductivity (µS/cm)	1016	1213	936
Total Residual Chlorine (mg/L)	0.02	0.02	0.03
Ammonia (mg/L as NH ₃ -N)	0.20	0.14	0.20
Total Hardness (mg/L as CaCO ₃)	250	267	264
Total Alkalinity (mg/L as CaCO ₃)	81	108	103

METHODS AND MATERIALS

TEST METHODS

The acute test methods were performed according to: *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms*, USEPA Office of Water (2002), EPA-821-R-02-012.

The chronic test methods were performed according to: *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms*, Fourth Edition, (2002), EPA-821-R-02-013.

Additional guidance was provided by:

- *Whole Effluent Toxicity Testing Guidance and Test Review Criteria*, Washington State Department of Ecology (revised June 2016) Pub# WQ-R-95-80.
- *Method Guidance and Recommendations for Whole Effluent Toxicity (WET) Testing* (40 CFR Part 136), (EPA August 2000), EPA 821-B-00-004.

DEVIATIONS FROM PROTOCOLS

Deviations from required procedures in the test methods:

• None noted.

Deviations from <u>recommended</u> procedures in the test methods:

- Not_all subsequent uses of a sample occurred within the WDOE recommended maximum holding time of 72 hours past the time of sample collection. See Sample Collection and Storage section for further detail.
- For the *C. dubia* acute test, some of the instantaneous temperature readings fell outside of the <u>recommended</u> range of 20±1°C. However, the <u>required</u> test condition of a temperature deviation (i.e. maximum minus minimum) of no more than 3 °C was met. This situation is detailed further in the Results and Discussion section of this report.

TEST DESIGN

The following summarizes the conditions used for both overall testing and the specifics for each test (observations and notations can be found on the datasheets in Appendix A):

Overall Test Design:

- Acute tests: 6.4, 12.5, 25, 50, and 100 percent sample + dilution water for the control.
- Chronic tests: 6.4, 12.5, 25, 50, and 100 percent sample + dilution water for the control.

Test Organism Conditions:

- All organisms tested were fed and maintained during culturing, acclimation, and testing as prescribed by the EPA (2002).
- The test organisms appeared vigorous and in good condition prior to testing.

C. dubia acute test: (WDOE)

- Source: EETNW ASL's in-house cultures
- Age: Less than 24 hours old
- Design: Four test vessels per concentration, five organisms per vessel
- Test Solution Renewal: None (i.e. static test)
- Monitoring:
 - Daily: Survival, DO, pH, and temperature; all concentrations.
 - Test Initiation and Termination: Conductivity, all concentrations
- Termination: 48 hours.
- Endpoints: Survival (at termination)

C. dubia chronic test:

- Source: EETNW ASL's in-house cultures
- Age: Less than 24 hours old and within an 8-hour age range, with blocking by known parentage
- Design: Ten test vessels per concentration, one organism per vessel
- Test Solution Renewal: Daily
- Monitoring:
 - Daily: Survival and neonate production (with brood determination)

- o Daily: DO and pH in pre and post-renewal solutions, all concentrations
- o Daily: Temperature in pre-renewal solutions, all concentrations
- With each new sample: Conductivity in post-renewal solutions, control and highest sample concentration
- Termination: When 60%+ of surviving control organisms produce a 3rd brood.
 - Survival: @ after 7 days.
 - Reproduction: When 60%+ of surviving control organisms produce a 3^{rd} brood.
- Endpoints: Survival (at termination) and Reproduction (through first 3 broods)

DILUTION WATER

The dilution water used was the standard culture water used by EETNW - ASL:

• Reconstituted, moderately hard water (as per EPA protocol) with a total hardness of 75 to 105 mg/L as CaCO₃ and an alkalinity of 50 to 75 mg/L as CaCO₃.

SAMPLE COLLECTION AND STORAGE

Samples were collected by Jacobs - Spokane personnel. The samples were accepted as scheduled by EETNW - ASL. Chain of Custody and Sample Receipt Records are provided in Appendix C.

- All samples were received within the EPA recommended 0 to 6 °C range.
- All samples were received within the WDOE required 0 to 6 °C range.
- All samples were within the EPA recommended maximum holding time of 36 hours of sample collection.
- All subsequent uses of a sample occurred within the EPA recommended maximum holding time of 72 hours past the time of initial use of that sample.
- <u>Not</u> all subsequent uses of a sample occurred within the WDOE recommended maximum holding time of 72 hours past the time of sample collection.
 - The sample was collected on May 12, 2023 at 08:36. The subsequent use of that sample took place on Day 4, in the chronic test, at 10:02 (73 hours and 26 minutes past collection of the sample).
- Following receipt, the samples were stored in the dark at 0 to 6 °C until test solutions were prepared and tested.

SAMPLE PREPARATION

Samples used during these tests were:

• Temperature adjusted prior to test initiation and each daily renewal.

DATA ANALYSIS

The statistical analyses performed for the acute tests were those outlined in *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms*, USEPA Office of Water, Fifth Edition (2002), EPA-821-R-02-012, using CETIS.

The statistical analyses performed for the chronic tests were those outlined in *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms*, USEPA Office of Water, Fourth Edition (EPA 2002), EPA-821-R-02-013, using CETIS.

- The specific statistical analysis and CETIS version used for each endpoint evaluation is listed with the statistical outputs included with each test in Appendix A.
- If any additional analysis methods were also used, an explanation of the rationale and reference to the source method is included with the presentation of those results below.

Additional guidance was provided by:

• *Whole Effluent Toxicity Testing Guidance and Test Review Criteria*, Washington State Department of Ecology (revised Jun 2016) Pub# WQ-R-95-80.

RESULTS AND DISCUSSION

The raw data sheets for all tests are presented in Appendix A.

ACUTE BIOASSAYS

Table 1 summarizes the survival data for the *C. dubia* acute test.

Ta Summary of <i>C</i> .	ble 1 f Acute Results dubia
Sample Concentration (%)	Percent Survival (at Test Termination)
Control	100
6.40	100
12.5	100
25.0	100
50.0	100
100	95

Statistical analysis in accordance with the EPA protocol and WDOE guidance results in:

- NOEC = 100 %
- LOEC > 100 %
- $LC_{50} > 100 \%$

From the NPDES permit - *Effluent Limit for Acute Toxicity*: "No acute toxicity detected in a test concentration representing the acute critical effluent concentration [ACEC = 50%]."

• No statistically significant difference between control and ACEC was shown.

EPA guidance recommends test temperature to remain at $20\pm1^{\circ}$ C for the acute tests. On days 1 and 2 of the *C. dubia* test, the instantaneous temperatures in the test concentrations were slightly outside of this range at 20.8 to 21.2 °C. However, the <u>required</u> test condition of a temperature deviation (i.e. maximum minus minimum) over the entire test period of no more than 3 °C was met ($21.2 - 20.2 = 1.2^{\circ}$ C). The EPA acute manual Section 4.9.2 states: "An individual test may be conditionally acceptable if the temperature, DO, and other specified conditions fall outside specifications, depending on the degree of departure and the objectives of the tests. The acceptability of the test would depend on the experience and professional judgment of the laboratory investigator and the reviewing staff of the regulatory authority". It is the laboratory's professional judgment that the minor deviation in the test temperature from the recommended conditions did not appear to affect the test results and the test should be accepted.

Dissolved oxygen concentrations remained at 4.0 mg/L or greater throughout the test period. Other than notes, test temperatures remained in the range of 20 ± 1 °C.

The *C. dubia* acute test meets Test Acceptability Criteria (TAC) of a minimum 90 percent control survival. Unless referenced above, the tests proceeded without any noted deviations or interruptions that could have affected test results. The testing should be considered "valid".

CHRONIC BIOASSAYS

Su	Table 2 Immary of Chronic Res	ults
Sample Concentration (%)	Percent Survival	Mean Number of Young Per Adult
Control	100	29.2
6.40	100	30.7
12.5	100	28.8
25.0	100	28.8
50.0	90	19.6 ^a
100	100	10.5 ^a

Table 2 summarizes the survival and reproduction data for the C. dubia chronic test.

Statistical analysis in accordance with the EPA protocol results in:

- NOEC = 25.0 %
- LOEC = 50.0 %
- $IC_{25} = 40.4 \%$

From the NPDES permit - *Effluent Limit for Chronic Toxicity*: "No chronic toxicity detected in a test concentration representing the chronic critical effluent concentration [CCEC = 6.4%]."

• No statistically significant difference between control and CCEC was shown.

Dissolved oxygen concentrations remained at 4.0 mg/L or greater throughout the test period. Other than noted, test temperatures remained at $25\pm1^{\circ}$ C.

The *C. dubia* test meets Test Acceptability Criteria (TAC) for a minimum 80 percent control survival and a minimum 15 young produced per surviving control adult. Unless referenced above, the tests proceeded without any noted deviations or interruptions that could have affected test results. The testing should be considered "valid".

REFERENCE TOXICANT TESTS

Reference toxicant (reftox) testing is performed to document both initial and ongoing laboratory performance of the test method(s). While the health of the test organisms is primarily evaluated by the performance of the laboratory control, reftox test results also may be used to assess the health and sensitivity of the test organisms. Reftox test results within their respective cumulative summary (Cusum) chart limits are indicative of consistent laboratory performance and normal test organism sensitivity.

The results of the reftox tests indicate that the test organisms were within their respective cusum chart limits based on EPA guidelines. This demonstrates ongoing laboratory proficiency of the test methods and suggests normal test organism sensitivity in the associated client testing.

The C. dubia reftox tests were conducted using sodium chloride.

The data sheets for the reference toxicant tests are provided in Appendix B.

Tables 3 and 4 summarize the reference toxicant test results and Cusum chart limits.

Та	ble 3	
Acute Reference	Гохіса nt Tests (g	g/L)
Species	LC ₅₀	Cusum Chart Limits
C. dubia	2.46	1.92 to 2.89

Та	ble 4	
Chronic Reference	Toxicant Tests	(g/L)
Species	IC25	Cusum Chart Limits
<i>C. dubia</i> (survival)	1.74	0.76 to 2.42
C. dubia (reproduction)	0.74	0.40 to 1.09

APPENDIX A

RAW DATA SHEETS

seurofins FRESHWATER TOXICITY TEST: SAMPLE AND DILUTION WATER DATA

Chent	Jacobs -	- Spokane Co	Junty RV	VRF			SDG # B 56 26-		Test Ini	tiation: Da	ate < 1	1-23		
Cq0 Contact	Brandi	i Andrews (50	9) 536-37	10					Test Termi	nation: Da	ate	52181		
pok		Collec	ted	Receive	p	Temp	Total Residual	Ammonia	Hardness	Alkalinity	DO	Hq	Cond.	60 um
Sample ID	Field ID	Date	Time	Date	Time	(°C)	Chlorine (mg/l)	NH ₃ -N	mg/l as	mg/l as	(mg/L)		(Su)	filtered?
B262		(mm/aa/yy)	(Pacific	(mm/aa/yy)	(Pacific		Dechlorination allowed	l/gm	CaCO ₃	CaCO ₃		- c		organisms
26.			Zone)		Zone)	as Rc'vd	as Rc'vd ~ / after Dechlor.	as Rc'vd	as Rc'vd	as Rc'vd	as Rc'vd	as kc'vd	as kc'vd	notea)
Beclo -01 13102	3051009	5/10/23	06:53	5/11/23	00 : ن	101	0.02 / -	0.20	250	81	ťÓ, 0	2-1	i0{6	х П
BS626-02 B183	13051208	S/11/23	JE : SI	22 / 61/ S	BS: 40	0.2	0,01 / -	0.14	267	108	9-6	82	1213	001
1019 E0- 201920	7651568	5 /1s/13	(): 11	5 1/6 123	Sh: 30	1.0-	- 50'D L'A	0.20	264	103	9.1	79	936	04
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Pa														
ge 14														
of 42							. /							
2							/							
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		- - - -					/							
			I	Reporting Limits		na	0.02 mg/L	0.10 mg/L	5 mg/L	5 mg/L	na	na	na	na
Z	<pre>{ote: "-" Indicates dat</pre>	a collection or de	chlorination	not needed. An	y other adjı	ustments to	samples prior to use are	documented	l in Comme	nts below o	r on Dilutio	ons page.		
	H H	ardness Alkalini	y Comment	s: 🗹 Indicates	the action	was taken,	$(\Box = action not taken):$		" – " = Sa	mple not de	chlorinated,	, or analyte	not collecte	d/needed.
Dilution Water		ng/l as mg/l as CaCO ₃ CaCO ₃												
Recon MH (FHM)	5 phcs	29 88												
	5763	104 104												
				-										
		Water Qual.	ity Meters U	^{[sed/ID#: Di}	ssolved Ox	tygen #	ر) # Hq 7	_ Conduct	ivity	#				

Jacobs Spokane - Cd ac&chr Doc Control ID: ASL 899-0122

seurofins FRESHWATER TOXICITY TEST: TEST ORGANISM INFORMATION

Client

Jacobs - Spokane County RWRF

Sample Designation (SDG): B

5626

		Ca # 4100	Cd # YIÚ		
Test Spe	cies Information	Ceriodaphnia dubia	Ceriodaphnia dubia		
		Chronic	Acute		
Organism	n Age at Initiation	<24 hrs, all within an 8 hr window	< 24 hrs		Ň
Test C	Container Size	30 ml	30 ml		
Те	est Volume	15 ml	25 ml		
Feeding:	Type and	0.10 ml Algae and	Algae and YCT		
	Amount	0.10 ml YCT daily	during acclimation		
Aeration:		🖾 None	🗹 None		
		Prior to use	Prior to use		
In Test Cham	bers via Slow Bubble :				
Accli	mation Period	<24 hrs	<24 hrs		
Orga	anism Source	In-House	In-House		
	Size	-	-		
Lo	bading Rate	-	-		

Dissolved Oxygen aeration justifications (in test chambers):

Test(s): \Box All \Box

Date:

Comments:

Test Solution Preparation and Dilution Record

Note: 🗆 Indicates task not done, 🗹 Indicates task was done. Temp adj. = Temperature adjusted to ambient or test temp

CItent: CI	Jacobs - Spok	ane County	RWRI	<u>د</u>			Ditto marks ('') indicate that	the same SDG, batch of	dilution water, o	or food as the	previous day's er	ntry was used	
obs ·	Ceriodaphnia	dubia - C	hronic										
- Sj	Test	Sample		Final	Test	Sample ID	Daily Sample Preparation	Dilution Water	YCT ID	Algae ID	Date	Time	Initials
pol	Concentration	Volume		Volume	Day	Used	(prior to dilution)	Used	Used	Used			
kar	(%)	(mls)		(mls)	0 (Initiation)	B Sulle _ OI	🗆 Temp adj, 🗋 Aerated	ID# 5749	#1433	#1425	> /U / 2022 LI	0 : 01	67
ie E	Control	0.00	↑	200	1	B5(alb -01	🗆 Temp adj, 🗌 Aerated	m# <i>S</i> 7 <i>3</i> 9	#[iu33	\$2h1#	SNU1" 2 10	0 :00	67
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T	otal Sample volum	e needed per d	ay =	388 mls	L	В -	🔲 Temp adj, 🔲 Aerated	ID#	#	#	"/ /	••	
	Ceriodaphnia	dubia - A	cute										
	Test	Sample		Final	Test	Sample ID	Daily Sample Preparation	Dilution Water	Date	Time	Initials		
	Concentration	Volume		Volume	Day	Used	(prior to dilution)	Used	(
	(%)	(mls)		(mls)	0 (Initiation)	BSlette -01	🔲 Temp adj, 🗌 Aerated	D# 5749	5/U/2020	CS:SS	40		

Total Sample volume needed per day = 388 mls

200 200

200

100 25 50

Page 16 of 42

200 200 200

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Control

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25.0 50.0 100

↑

12.8 0.00

> 6.40 12.5

<u>્રેક ev</u>	irofing	S		48 H	OUR FRES	HWATER	TOXICIT	Y TEST SUF	VIVAL /	AND WATE	R QUALIT	Y DATA				
Client		Jacobs -	Spokane Co	unty RWRF			Sample ID #	# B 567	16		Beginning, Da	ite_5/1	1123	Time	<u>450</u>	
Sample De	scription		•						_	_	Ending, Da	ate 5/1	3/13		130	2.
Random T	emplate Used	: Whiskey Cu	Lp random #	05		Waterbath/In	cubator Used:	# 7		Technician Time	0 hr 0 hr	<u></u> 1950	_ 24 hr 24 hr	<u>KG</u> 1:30	48 hr 48 hr	KO
Test Specie	.es	Ceriodaphn	ia dubia			ID#	Cd 1	101		Therm. ID#	0 hr	# 279	24 hr	# 279	48 hr	# 279
Percent	Test Container	Num	ber of Live Or	anisms	Disse	olved Oxygen	(mg/l)		рH		Г	emperature (°	·(٦)	Condu	netivity (um	ohs/cm)
	Number	0	24	48	0	24	48	0	24	48	0	24	48		24	48
Control	Surrogate	L				7,9			8.0			21.0				
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	В	5	5	5												
	С	5	5	5												
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6.40	Surrogate					8.1			8.1			2.0.8				
	A	5	5	5	8.1		8.0	8.0		8.1	71).4		20/9	393		391
	В	5	5	5												-
	C	5	5	\$										1		
	D	5	5	S						-						
12.5	Surrogate					8.1			8.1	<u> </u>	1	212		1		
	A	5	3	5	8.2		8.1	8.0		8.1	20.3		21,0	432		432
	В	5	5	इ						+						
	С	5	5	5						1			1	1		+
	D	5	s	5												
25	Surrogate					5,2			8.1			Q.T				
•	A	5	5	5	7.9		8.0	8.0		8.1	W. 2		21.0	514		512
	В	5	5	5									<u>† </u>			
	C	5	5	3									†			1
	D	5	5	3												
50	Surrogate					8.1			g. 1		 	20,9				T
	A	5	5	5	8.4		8,0	8.0		8/1	W.3		21.0	674		16
	В	5	S	\$									+			
	С	5	5	Ś						+						
	D	5	5	5												
100	Surrogate					8.1			8.1			21.0				T
	А	5	5	3	8.8		8.1	8.0		8-1	20.5		20.8	1008		941
	В	5	5	5												
	С	5	5	5												
	D	5	5	Ч												1

CETIS Summary Report

Ceriodaphnia	48-h Acute Surv	ival Test						Euro	ofins	Environme	ent Testing	NW - A	SL
Batch ID: Start Date: Ending Date: Test Length:	05-5826-4040 11 May-23 14:50 13 May-23 14:30 48h	Test Proto Spec Taxor	Type: ocol: ies: n:	Survival (48h) EPA/821/R-02-(Ceriodaphnia du Branchiopoda	012 (2002) ubia		An Di Br Sc	nalyst: luent: rine: purce:	Mod- In-He	-Hard Synth ouse Culture	etic Water	Age: <	24
Sample ID: Sample Date: Receipt Date: Sample Age:	10 May-23 08:53 11 May-23 09:15 30h	Code Mater CAS Clien	rial: (PC): it:	POTW Effluent			So St	oject: ource: ation:	Jaco	bs - Spokar	ne County R	egional	W
Multiple Com	parison Summar	У	_										_
Analysis ID	Endpoint		Compa	arison Method	0	(NOEL	LOEL	└	TOEL	PMSD	TU	<u>S</u>
14-2864-3781 Point Estimat Analysis ID 16-2880-5844	48n Survival Rat Endpoint 48h Survival Rat	e	Point I	Estimate Metho Interpolation (IC	od CPIN)		Level EC50	>100	/ }	95% LCL	9.2% 95% UCL 	1 TU <1	1 S 1
Test Accepta	bility					TAC Li	mits						
Analysis ID	Endpoint		Attribu	ıte	Test Stat	Lower	Upper	Over	lap	Decision			
Analysis ID 14-2864-3781	Endpoint 48h Survival Rat	е	Attribu Contro	ite I Resp	Test Stat	Lower 0.9	Upper >>	Over Yes	lap	Decision Passes Cr	iteria		
Analysis ID 14-2864-3781 16-2880-5844	Endpoint 48h Survival Rat 48h Survival Rat	e	Attribu Contro Contro	ite I Resp I Resp	Test Stat 1 1	Lower 0.9 0.9	Upper >> >>	Over Yes Yes	lap	Decision Passes Cr Passes Cr	iteria iteria		
Analysis ID 14-2864-3781 16-2880-5844 48h Survival	Endpoint 48h Survival Rat 48h Survival Rat Rate Summary	e	Attribu Contro Contro	ite I Resp I Resp	Test Stat 1 1	Lower 0.9 0.9	Upper >> >>	Over Yes Yes	lap	Decision Passes Cr Passes Cr	iteria iteria		
Analysis ID 14-2864-3781 16-2880-5844 48h Survival Conc-%	Endpoint 48h Survival Rat 48h Survival Rat Rate Summary Code	e e Count	Attribut Control Control Mean	I Resp I Resp 95% LCL	Test Stat 1 1 95% UCL	Lower 0.9 0.9 Min	Upper >> >>	Over Yes Yes Std E	lap Err	Decision Passes Cr Passes Cr Std Dev	iteria iteria CV%	%Effe	ct
Analysis ID 14-2864-3781 16-2880-5844 48h Survival Conc-% 0	Endpoint 48h Survival Rat 48h Survival Rat Rate Summary Code D	e e Count	Attribut Contro Contro Mean 1.0000	I Resp I Resp 95% LCL 0 1.0000	Test Stat 1 1 95% UCL 1.0000	Lower 0.9 0.9 Min 1.0000	Upper >> >> Max 1.0000	Over Yes Yes Std E	lap Err 00	Decision Passes Cr Passes Cr Std Dev 0.0000	iteria iteria CV%	%Effe 0.00%	ct
Analysis ID 14-2864-3781 16-2880-5844 48h Survival Conc-% 0 6.4	Endpoint 48h Survival Rat 48h Survival Rat Rate Summary Code D	e e <u>Count</u> 4 4	Attribu Contro Contro Mean 1.0000 1.0000	ute I Resp I Resp 95% LCL 0 1.0000 0 1.0000	Test Stat 1 95% UCL 1.0000 1.0000	Lower 0.9 0.9 Min 1.0000 1.0000	Upper >> >> Max 1.0000 1.0000	Over Yes Yes Std E 0.000 0.000	Err 00	Decision Passes Cr Passes Cr Std Dev 0.0000 0.0000	iteria iteria CV%	%Effe 0.00% 0.00%	ct
Analysis ID 14-2864-3781 16-2880-5844 48h Survival Conc-% 0 6.4 12.5	Endpoint 48h Survival Rat 48h Survival Rat Rate Summary Code D	e e Count 4 4 4	Attribu Contro Contro Mean 1.0000 1.0000 1.0000	95% LCL 1.0000 1.0000 1.0000 1.0000	Test Stat 1 1 95% UCL 1.0000 1.0000 1.0000	Lower 0.9 0.9 Min 1.0000 1.0000 1.0000	Upper >> >> Max 1.0000 1.0000 1.0000	Over Yes Yes Std E 0.000 0.000 0.000	Err 00 00	Decision Passes Cr Passes Cr Std Dev 0.0000 0.0000 0.0000	iteria iteria CV% 	%Effe 0.00% 0.00% 0.00%	ct
Analysis ID 14-2864-3781 16-2880-5844 48h Survival Conc-% 0 6.4 12.5 25	Endpoint 48h Survival Rat 48h Survival Rat Rate Summary Code D	e e <u>Count</u> 4 4 4 4 4	Attribu Contro Contro Mean 1.0000 1.0000 1.0000 1.0000	95% LCL 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	Test Stat 1 1 95% UCL 1.0000 1.0000 1.0000 1.0000	Lower 0.9 0.9 Min 1.0000 1.0000 1.0000 1.0000	Upper >> Max 1.0000 1.0000 1.0000 1.0000	Over Yes Yes Std E 0.000 0.000 0.000 0.000 0.000	Err 00 00 00 00	Decision Passes Cr Passes Cr Std Dev 0.0000 0.0000 0.0000 0.0000 0.0000	iteria iteria CV% 	%Effe 0.00% 0.00% 0.00%	ct
Analysis ID 14-2864-3781 16-2880-5844 48h Survival Conc-% 0 6.4 12.5 25 50	Endpoint 48h Survival Rat 48h Survival Rat Rate Summary Code D	e e Count 4 4 4 4 4 4	Attribu Contro Contro Mean 1.0000 1.0000 1.0000 1.0000	95% LCL 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	Test Stat 1 1 95% UCL 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	Lower 0.9 0.9 Min 1.0000 1.0000 1.0000 1.0000 1.0000	Upper >> Max 1.0000 1.0000 1.0000 1.0000 1.0000	Over Yes Yes Std E 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000	Err 00 00 00 00 00 00	Decision Passes Cr Passes Cr Std Dev 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000	iteria iteria CV% 	%Effe 0.00% 0.00% 0.00% 0.00%	ct
Analysis ID 14-2864-3781 16-2880-5844 48h Survival Conc-% 0 6.4 12.5 25 50 100	Endpoint 48h Survival Rat 48h Survival Rat Rate Summary Code D	e e 4 4 4 4 4 4 4 4 4	Attribu Contro Contro Mean 1.0000 1.0000 1.0000 1.0000 0.9500	ste I Resp I Resp 95% LCL 1.0000 1.0000 1.0000 1.0000 1.0000 0.1.0000 0.1.0000 0.7909	Test Stat 1 1 95% UCL 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	Lower 0.9 0.9 Min 1.0000 1.0000 1.0000 1.0000 0.8000	Upper >> Max 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	Over Yes Yes Std E 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000	Err 00 00 00 00 00 00 00	Decision Passes Cr Passes Cr Std Dev 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000	iteria iteria CV% 10.53%	%Effe 0.00% 0.00% 0.00% 0.00% 5.00%	ct
Analysis ID 14-2864-3781 16-2880-5844 48h Survival Conc-% 0 6.4 12.5 25 50 100 48h Survival	Endpoint 48h Survival Rat 48h Survival Rat Rate Summary Code D Rate Detail	e e <u>Count</u> 4 4 4 4 4 4 4	Attribu Contro Contro Mean 1.0000 1.0000 1.0000 1.0000 0.9500	95% LCL 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 0.1.0000 0.7909	Test Stat 1 1 95% UCL 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	Lower 0.9 0.9 Min 1.0000 1.0000 1.0000 1.0000 0.8000	Upper >> Max 1.0000 1.0000 1.0000 1.0000 1.0000 MM	Over Yes Yes Std E 0.000	Err 00 00 00 00 00 00 51548	Decision Passes Cr Passes Cr Std Dev 0.0000	iteria iteria CV% 10.53% C122A9EAF	%Effe 0.00% 0.00% 0.00% 0.00% 5.00%	ct
Analysis ID 14-2864-3781 16-2880-5844 48h Survival Conc-% 0 6.4 12.5 25 50 100 48h Survival Conc-%	Endpoint 48h Survival Rat 48h Survival Rat Rate Summary Code D Rate Detail Code	e e <u>Count</u> 4 4 4 4 4 4 4 8 Rep 1	Attribu Contro Contro 1.0000 1.0000 1.0000 1.0000 0.9500 Rep 2	I Resp I Resp 95% LCL 1.0000 1.0000 1.0000 1.0000 0.1.0000 0.7909 Rep 3	Test Stat 1 1 95% UCL 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	Lower 0.9 0.9 Min 1.0000 1.0000 1.0000 1.0000 0.8000	Upper >> Max 1.0000 1.0000 1.0000 1.0000 1.0000 M	Over Yes Yes Std E 0.000	Err 00 00 00 00 00 00 00 51545	Decision Passes Cr Passes Cr Std Dev 0.0000	iteria iteria CV% 10.53% C122A9EAF	%Effe 0.00% 0.00% 0.00% 0.00% 5.00%	ct
Analysis ID 14-2864-3781 16-2880-5844 48h Survival Conc-% 0 6.4 12.5 25 50 100 48h Survival Conc-% 0 0	Endpoint 48h Survival Rat 48h Survival Rat Rate Summary Code D Rate Detail Code D	e e 4 4 4 4 4 4 4 4 4 8 Rep 1 1.0000	Attribu Contro Contro 1.0000 1.0000 1.0000 0.9500 Rep 2 1.0000	ste I Resp I Resp 95% LCL 1.0000 1.0000 1.0000 1.0000 1.0000 0.1.0000 0.7909 Rep 3 1.0000	Test Stat 1 1 95% UCL 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	Lower 0.9 0.9 Min 1.0000 1.0000 1.0000 1.0000 0.8000	Upper >> Max 1.0000 1.0000 1.0000 1.0000 1.0000 M	Over Yes Yes Std E 0.000	Err 00 00 00 00 00 00 00 51545	Decision Passes Cr Passes Cr Std Dev 0.0000	iteria iteria CV% 10.53% C122A9EAF	%Effe 0.00% 0.00% 0.00% 0.00% 5.00%	ct
Analysis ID 14-2864-3781 16-2880-5844 48h Survival Conc-% 0 6.4 12.5 25 50 100 48h Survival Conc-% 0 6.4 0 6.4	Endpoint 48h Survival Rat 48h Survival Rat Rate Summary Code D Rate Detail Code D	e e 4 4 4 4 4 4 4 4 4 4 8 Rep 1 1.0000 1.0000	Attribu Contro Contro 1.0000 1.0000 1.0000 0.9500 Rep 2 1.0000 1.0000	I Resp I Resp 95% LCL 0 1.0000 0 1.0000 0 1.0000 0 1.0000 0 0.7909 Rep 3 1.0000 0 1.0000 0 1.0000	Test Stat 1 1 95% UCL 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	Lower 0.9 0.9 Min 1.0000 1.0000 1.0000 1.0000 0.8000	Upper >> >> Max 1.0000 1.0000 1.0000 1.0000 1.0000 M	Over Yes Yes Std E 0.000	Err 00 00 00 00 00 51549	Decision Passes Cr Passes Cr Std Dev 0.0000	iteria iteria CV% 10.53% C122A9EAF	%Effe 0.00% 0.00% 0.00% 0.00% 5.00%	ct
Analysis ID 14-2864-3781 16-2880-5844 48h Survival Conc-% 0 6.4 12.5 25 50 100 48h Survival Conc-% 0 6.4 12.5 25 50 100	Endpoint 48h Survival Rat 48h Survival Rat Rate Summary Code D Rate Detail Code D	e e 2 4 4 4 4 4 4 4 4 4 4 8 8 8 9 1.0000 1.0000	Attribu Contro Contro 1.0000 1.0000 1.0000 1.0000 0.9500 Rep 2 1.0000 1.0000 1.0000	ate I Resp I Resp 95% LCL 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	Test Stat 1 1 95% UCL 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	Lower 0.9 0.9 Min 1.0000 1.0000 1.0000 1.0000 0.8000	Upper >> Max 1.0000 1.0000 1.0000 1.0000 1.0000 M	Over Yes Yes Std E 0.000	Err 00 00 00 00 00 00 51549	Decision Passes Cr Passes Cr Std Dev 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.1000	iteria iteria CV% 10.53% C122A9EAF	%Effe 0.00% 0.00% 0.00% 0.00% 5.00%	ct
Analysis ID 14-2864-3781 16-2880-5844 48h Survival Conc-% 0 6.4 12.5 25 50 100 48h Survival Conc-% 0 6.4 12.5 25 50 100 48h Survival 25 50 100	Endpoint 48h Survival Rat 48h Survival Rat Rate Summary Code D Rate Detail Code D	e e 2 4 4 4 4 4 4 4 4 4 4 4 4 4 1.0000 1.0000 1.0000 1.0000	Attribu Contro Contro 1.0000 1.0000 1.0000 1.0000 0.9500 Rep 2 1.0000 1.0000 1.0000 1.0000	Ite I Resp I Resp 95% LCL 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	Test Stat 1 1 95% UCL 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000 1.0000	Lower 0.9 0.9 Min 1.0000 1.0000 1.0000 1.0000 0.8000	Upper >> >> Max 1.0000 1.0000 1.0000 1.0000 1.0000 M	Over Yes Yes Std E 0.000	Err 00 00 00 00 00 00 00 00 00 00 00 00	Decision Passes Cr Passes Cr Std Dev 0.0000 0.1000	iteria iteria 10.53% C122A9EAF	%Effe 0.00% 0.00% 0.00% 0.00% 5.00%	ct

48h Survival Rate Binomials

1.0000

1.0000

1.0000

100

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	5/5	5/5	5/5	5/5
6.4		5/5	5/5	5/5	5/5
12.5		5/5	5/5	5/5	5/5
25		5/5	5/5	5/5	5/5
50		5/5	5/5	5/5	5/5
100		5/5	5/5	5/5	4/5

0.8000

CETIS And	alytio	cal Repo	ort						Rep Test	ort Date: Code/ID:	18 N B562	/lay-23 09:2 601cda / 09	28 (p 1 of 2) 9-9022-7178
Ceriodaphnia	a 48-h	Acute Sur	vival Test							Eurofins	Environme	ent Testing	NW - ASL
Analysis ID: Analyzed:	14-2 18 M	864-3781 lay-23 9:28	En An	dpoint: 48h alysis: Nor	Survival Ra	ate -Control v	/s T	reatments	CET Stat	IS Version: us Level:	CETISv1	.9.7	
Edit Date:	18 M	lay-23 9:28	MC)5 Hash: 4DF	51549A082	2D490C12	22A	9EAFB648	33C6 Edit	or ID:	007-238-4	492-3	
Data Transfo	rm		Alt Hyp					NOEL	LOEL	TOEL	TU	MSDu	PMSD
Angular (Corr	ected)		C > T					100	>100		1	0.09205	9.20%
Steel Many-C	ne Ra	nk Sum Te	est										
Control	vs	Conc-%		Test Stat	Critical	Ties	DF	P-Type	P-Value	Decision(α:5%)		
Dilution Wate	r	6.4		18	10	1	6	CDF	0.8333	Non-Signi	ficant Effect		
		12.5		18	10	1	6	CDF	0.8333	Non-Signi	ficant Effect		
		25		18	10	1	6	CDF	0.8333	Non-Signi	ficant Effect		
		50		18	10	1	6	CDF	0.8333	Non-Signi	ficant Effect		
		100		16	10	1	6	CDF	0.6105	Non-Signi	ficant Effect		
ANOVA Table)												
Source		Sum Squ	ares	Mean Squ	lare	DF		F Stat	P-Value	Decision(α:5%)		
Between		0.0118141	1	0.0023628	;	5		1	0.4457	Non-Signi	ficant Effect		
Error		0.0425309	Ð	0.0023628	5	18							
Total		0.0543451	1			23		_					
ANOVA Assu	mptio	ns Tests											
Attribute		Test				Test St	at	Critical	P-Value	Decision(α:1%)		
Variance		Bartlett Ec	quality of V	ariance Test						Indetermir	nate		
Distribution		Shapiro-W	/ilk W Norr	nality Test		0.4634		0.884	<1.0E-05	Non-Norm	al Distributio	on	
48h Survival	Rate	Summary											
Conc-%		Code	Count	Mean	95% LCL	95% UC	CL	Median	Min	Max	Std Err	CV%	%Effect
0		D	4	1.0000	1.0000	1.0000		1.0000	1.0000	1.0000	0.0000	0.00%	0.00%
6.4			4	1.0000	1.0000	1.0000		1.0000	1.0000	1.0000	0.0000	0.00%	0.00%
12.5			4	1.0000	1.0000	1.0000		1.0000	1.0000	1.0000	0.0000	0.00%	0.00%
25			4	1.0000	1.0000	1.0000		1.0000	1.0000	1.0000	0.0000	0.00%	0.00%
50			4	1.0000	1.0000	1.0000		1.0000	1.0000	1.0000	0.0000	0.00%	0.00%
100			4	0.9500	0.7909	1.0000		1.0000	0.8000	1.0000	0.0500	10.53%	5.00%
Angular (Cor	rected	I) Transfor	med Sumr	mary									
Conc-%		Code	Count	Mean	95% LCL	95% UC	CL	Median	Min	Max	Std Err	CV%	%Effect
0		D	4	1.3450	1.3450	1.3460		1.3450	1.3450	1.3450	0.0000	0.00%	0.00%
6.4			4	1.3450	1.3450	1.3460		1.3450	1.3450	1.3450	0.0000	0.00%	0.00%
12.5			4	1.3450	1.3450	1.3460		1.3450	1.3450	1.3450	0.0000	0.00%	0.00%
25			4	1.3450	1.3450	1.3460		1.3450	1.3450	1.3450	0.0000	0.00%	0.00%
50			4	1.3450	1.3450	1.3460		1.3450	1.3450	1.3450	0.0000	0.00%	0.00%
100			4	1.2860	1.0960	1.4750		1.3450	1.1070	1.3450	0.0595	9.26%	4.43%

CETIS Ana	alytical Report			Report Date: Test Code/ID:	18 May-23 09:28 (p 2 of 2) B562601cda / 09-9022-7178
Ceriodaphnia	a 48-h Acute Surviva	al Test		Eurofins	Environment Testing NW - ASL
Analysis ID:	14-2864-3781	Endpoint:	48h Survival Rate	CETIS Version:	CETISv1.9.7
Analyzed:	18 May-23 9:28	Analysis:	Nonparametric-Control vs Treatments	Status Level:	1
Edit Date:	18 May-23 9:28	MD5 Hash:	4DF51549A082D490C122A9EAFB6483C6	Editor ID:	007-238-492-3

CETIS	S Ana	alytical Repo	ort						Report Test C	t Date: ode/ID:	18 B5	3 May-23 09:2 62601cda / 09	28 (p 1 of 1) 9-9022-7178
Ceriod	aphnia	a 48-h Acute Surv	vival Test							Eurofins	Environ	nent Testing	NW - ASL
Analys Analyz Edit Da	is ID: ed: ate:	16-2880-5844 18 May-23 9:28 18 May-23 9:28	End Anal MD5	point: ysis: Hash:	48h Survival Ra Linear Interpola 4DF51549A082	ate Ition (ICPI) 2D490C122	N) 2A9EAFI	36483C6	CETIS Status Editor	Version: Level: ID:	CETIS 1 007-23	v1.9.7 8-492-3	
Linear	Interpo	olation Options											
X Tran	sform	Y Transform	See	ł	Resamples	Exp 95%	δ CL Ι	Method					
Log(X+	·1)	Linear	1637	062	200	Yes	-	Two-Point	Interpola	ation			
Point B	Estimat	tes											
Level	%	95% LCL	95% UCL	τu	95% LCL	95% UCI	L						
EC50	>100)		<1									
48h Su	ırvival	Rate Summary				Calc	ulated V	/ariate(A/E	3)			Isoton	ic Variate
Conc-	%	Code	Count	Mean	Median	Min	Мах	CV	6	%Effect	A/B	Mean	%Effect
0		D	4	1.0000	1.0000	1.0000	1.000	0.00)%	0.00%	20/20	1.0000	0.00%
6.4			4	1.0000	1.0000	1.0000	1.000	0.00)%	0.00%	20/20	1.0000	0.00%
12.5			4	1.0000	1.0000	1.0000	1.000	0.00)%	0.00%	20/20	1.0000	0.00%
25			4	1.0000	1.0000	1.0000	1.000	0.00)%	0.00%	20/20	1.0000	0.00%

1.0000

0.8000

0.00%

10.53%

1.0000

1.0000

0.00%

5.00%

20/20

19/20

1.0000

0.9500

0.00%

5.00%

50

100

4

4

1.0000

0.9500

1.0000

1.0000



Ceriodaphnia dubia Survival and Reproduction Test Data Summary

Client	Ja	icobs - S	pokane	County F	RWRF		Test Star	t Date		1112	23	
Sample Descripti	on						Initial Sa	mple ID#	B	562	le	
Data summarized	by _	Tori	Cı	NWV	ine						·	
Percent												Total
or		I	Total Liv	e Young F	Produced i	n First 3 I	Broods per	Replicate	e		# Alive	Live
Concentration	A	B	C	D	E	F	G	H	I	J	Adults	Young
Control	30	31	30	30	23	26	30	31	30	26	10	292
	AD?	AD?	AD?	AD?	AD?	AD?	AD?	AD?	AD?	AD?	•	212
6.40 %	36	33	35	27	30	30	35	37	14	30	10	207
	AD?	AD?	AD?	AD?	AD?	AD?	AD?	AD?	AD?	AD?	10	100 1
12.5 %	18	35	33	26	33	29	35	36	27	14	10	200
	AD?	AD?	AD?	AD?	AD?	AD?	AD?	AD?	AD?	AD?		200
25 %	29	32	30	27	31	22	27	29	29	32	10	794
	AD?	AD?	AD?	AD?	AD?	AD?	AD?	AD?	AD?	AD?		200
50 %	35	33	21	24	15	15	7	24	17	13	9	194
· · · · · · · · · · · · · · · · · · ·	AD?	AD?	AD?	AD?	AD?	AD?	AD? 🗸	AD?	AD?	AD?		1100
100 %	8	Ц	13	11	le	17	16	17	8	5	10	105
	AD?	AD?	AD?	AD?	AD?	AD?	AD?	AD?	AD?	AD?		,

Survival data summarized through Day 7. 60%+ of surviving controls with 3+ broods first observed on Day _____.

 \checkmark

Μ

Ι

AD?

AD?

Test Organism Mortality (Adult dead) = AD?

Test Organism identified as Male =

Test Organism Injured during test =

of Alive Adults = Number of test organism alive at termination
 (for WDOE only, = Number of test organisms alive at Day 7)

Total Live Young = Total neonates produced in first 3 broods

Footnote: As per EPA-600-4-91-002 and EPA-821-R-02-013, *Ceriodaphnia dubia* test should be terminated when 60% of the surviving control organisms have produced their third brood, or at the end of <u>eight</u> days, whichever occurs first.

Also as per EPA-821-R-02-013 (13.10.9.1), "In this three-brood test, offspring from fourth or higher broods should not be counted and should not be included in the total number of neonates produced during the test."

💲 eur	ofins	s C	ERIODA	PHNIA	CHRO	NIC SUR	VIVAL	AND RE	PRODU	CTION	DATA		S	
Neo's obtain	ed from	Α	В	С	D	Е	F	G	Н	I	J	Incubator Us	ر sed: _ <u>#</u>	
Culture Bo	oard ID:	B	В	<u> </u>	ß	B	B	C	C	C	C	Random Ter	nplate /	
	Slot #:	1	[4	1/	28	38	33	9	7	14	13	Used: <u>6</u>	$\operatorname{conc} \# \mathcal{Q}$	
Client			Jacobs -	Spokane C	County RW	/RF			Test In	itiation: Date:	S / 11/20	Time:	12:04	
Sample Desc	ription				Initia	il Sample ID #	в 562	601	Term	ination: Date:	5/10/20)23 Time:	09:05	,
Technician	- Day 0 _	Dy Day 1	01 Day 2	2 07 Day	3 <u>7</u> Da	y4 IC Da	ay 5 7 1	Day 6 TC 1	Day 7 _ 04_	Day 8	······			-
Time	Day 0	LOI Day 1	1420 Day 2	2 1333 Day	3 1932 Da	y41002 Da	ay 51250 1	Day 6 1011	Day 7 UDOS	Day 8				
<u> </u>	1 1	1999 - Marine Marine - Ma			Daily Nu	mber of Live V	oung for each	Penlicate			- wonat	No Live	Daily Total	r
Percent	Day	А	В	С	Dully I tu	E E	F	G	Н	I	J	Adults	Live Young	
	1	Ű	0	0	0	0	0	Ũ	0	0	0	10	0]
	2	Ŭ	0	<u> </u>	<u> </u>	0	0	Ũ	0	0	0	10	0	4
5	3	0	0	<u> </u>	0	D P	0,0	<u>O</u>	O	.0	0	10	U	4
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Ŭ	5	0	10	10	10	162	1216	10	10	<u> </u>	0	10	10	4
		15		<u> </u>		1920	1315	15/5		10	12		62	4
	8	15		15	1.0		0	0	10	10	17		110	-
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	2	0	0	0	0	0	0	0	0	0	0	10	0	4
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2.5 (4	()	4	4	a	7	4	5	<u> </u>	4	<u> </u>		40	4
	5	12	<u> </u>		13				12				109	-
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	8								<u> </u>					1
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	6	11	0	0	\mathcal{O}	13	11	13	13	7		10	34	4
	7	12	16	16	14	0	U	U	<u> </u>	18	16	10	97	_
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50	5	12-	3	<u> </u>	7	4	Ч	TIAD	4	6	6	9	103	T
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	7	18	15	0	15	11	11		16	12	e	9	HB	718
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	2	0	0	Ø	0	0	0	0	0	0	0	10	0	4
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	6	0	- G	a	<u>0</u>	<	<u> </u>		⊢ ď –		D D		65	-
	/			<u> </u>	<u> </u>				U	U U	U		145	1
L	U U					1		1		L		L		1

"AD" = Adult Dead, "AY" = Aborted young, "M" = male organism, "F" = Female, "R" = Adult releasing young, "/" = split brood (carry-over brood / current day brood),
 "Inj" = Adult Injured during test solution renewal, replicate removed from analysis. "AM" = Adult missing, remove from analysis. A circled neonate count = 4th brood Jacobs - Spokane B5020.pdf
 Footnote: As per WDOE, C. dubia test reproduction should be when 60% of the surviving control organisms have produced their third brood (Days 6, 7, or 8). Survival is at seven days. Jacobs Spokane-Cd ac&chrDec Control ID: ASL899-0122

Client	Jacobs - Spokane County RWRF	CERIODAPHNIA WATER QUALITY DATAInitiatedDate $5/11/20 \mathcal{V}$ Time 12.04 InitiatedDate $5/11/20 \mathcal{V}$ $7/1000000000000000000000000000000000000$	Adults Isolated Date $\frac{5}{0.16/2003}$ Time $1/v$: 1.0
Sample Tech:	Day 0 04 Day 1 07 Day 2 $04/t$	Initial Sample ID# B SULV - UI Ke Day 3 て Day 4 て Day 5 て [1]	Neo's Collected Date $\frac{5/iu/20.27 \text{ Time}}{Day 6 \mathcal{L}}$ Day 7 $D\gamma$ Day 8
acoes -	$Day 0 \frac{13}{15.56} = \frac{16}{100} = \frac{16}{16} = \frac{16}{16} = \frac{16}{100} = \frac{16}{100}$	5 Day 3 03 032 Day 4 13 03 Day 5 14:45	Day 6 $12:25$ Day 7 $04:47$ Day 8 :
Titem.	$Day 0 = \frac{1}{2} \frac{1}$	Day 3 # 290 Day 4 # 250 Day 5 # 250	Day 6 # 290 Day 7 # 250 Day 8 #
ane	Dissolved Oxygen (mg/l)	PH	Temperature (°C) / Conductivity (μ S) (1 st use of each sample only)
B56			
26.pdp.nuoD	155 0.3 155 25 25 25 2.5 2.5 2.5 2.5 2.5 2.5 2.5	8.1 8.3 8.4 8.3 8.4 8.3 8.3 8.3 8.3 8.3 8.3 8.3 8.3 8.3 8.3	24 2 24 2 4 2 4 2 4 2 4 2 4 2 4 2 4 2 4
% 0‡	1 2. 5. 5 2. 4 2. 8 0 2. 4 2. 0 2. 0	8.0 8.1 84 5.3 84 8.74 8.3 8.3	5 1 22 24 25 25 25 25 2 25 4 20 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
⁷ '9	Jary har and sy ra	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1395 / 1444 / / / / / / / /
Pag&⁄2⊈ö	122/23/03/58/6: 8 / 0.2 (2	8.0 8.3 8.3 8.3 8.3 8.3 8.3 8.3 8.3 8.3 8.3	12 na / 201 25.0/24 25.1/25 3/24/2
₹ ₩2	/ 2/ 1/ 2/ 2/ D. A A (2)	8.0 Vr. V. V. V. V. V.	M37 / V/ / / / / / / / / /
% 57	7-7 5-1/ 5-1/ 5-4/ 8.0/ 82/78/	8.0 / °3/53/8.3/8.3/8.2/8.3/	1/2/ 12/24/24/24/24/24/24/24/24/24/24/24/24/24
7	/ wr/ rr/ cr/wr/ rr/ rr/	6.0/8.0/8.1/8.1/8.1/8.1/8.1/	617 / V / V / V / V
% (7.8 8.1/ 8.1/ 8.0/ 8.4/ 8.1/ B.0/ 2.7	79 6.3/ 83/8.3/ 53/8.3/ 8.3/ 8.3/	Anit here is 3/24. 3/24. 3/24. 3/24 by
2(15.0 /2.7 / A.S. / 2/ 1.5/	8.0 / 3.4 / 8 0 / 8.1 / 8.0 / 8.1 /	//////ssr//rrs/
% 0	8.0 8.0/ 5.2/ 3.3/ 44 / 81/ 8.1/ 2.2/ 2.8/	1/2/2/2/2/2/2/2/2/2/2/2/2/2/2/2/2/2/2/2	2 / W. J. V 24. V 24.5 / 24.0 / 24. V DU. 3
10	Vs. Vr. Vs. ON. a N. y N. 5/	1. 12 × 12. 16 × 16. 1 /8.1 /8.1	996 V Viss V V Brs V V V
COMM	ENTS: Temperatures taken just prior to test solution renewals. D(00, pH, and Conductivity taken following organism transfer.	(23.8)
- VI - +			= Temp out of recom. range

Jacobs Spokane - Cd ac&chrDoc Control ID: ASL899-0122

All other days: numerator represents pre-renewal conditions, denominator represents post-renewal conditions. LIALIOII. Ð

CETIS Summary Report

Ceriodaphnia	7-d Survival and	d Reproduction T	est				Eur	ofins	Environme	ent Testing	NW - AS	3L
Batch ID: Start Date: Ending Date:	15-7323-6910 11 May-23 12:04 18 May-23 09:05	Test Type: Protocol: Species:	Reproduction-S EPA/821/R-02- Ceriodaphnia d	Gurvival (7d) 013 (2002) ubia		A D B	nalyst:)iluent: Brine:	Mod	-Hard Synth	netic Water		
Test Length:	6d 21h	Taxon:	Branchiopoda			s	ource:	In-H	ouse Cultur	e	Age: <	24
Sample ID:	09-2602-3979	Code:	B5626-01			Р	roject:					
Sample Date:	10 May-23 08:53	Material:	POTW Effluent			S	ource:	Jaco	bs - Spoka	ne County R	legional	W
Receipt Date:	11 May-23 09:15	CAS (PC):				S	station:					
Sample Age:	27h	Client:										
Multiple Com	parison Summar	ry										
Analysis ID	Endpoint	Com	parison Method			NOEL	LOE	\sim	TOEL	PMSD	TU	s
03-0711-3351	7d Survival Rate	Fishe	er Exact/Bonferro	ni-Holm Tes	st (100	>100)			1	1
11-8253-1857	Reproduction	Stee	Many-One Rank	Sum Test		25	50		35.36	20.0%	4	1
Point Estimat	te Summary											
Analysis ID	Endpoint	Poin	t Estimate Metho	bd	$\langle \rangle$	Level	%	$\overline{}$	95% LCL	95% UCL	TU	s
04-0234-3606	Reproduction	Linea	ar Interpolation (IC	CPIN)		IC25	40.30	$\overline{\mathcal{I}}$	32.62	56.65	2.478	1
Test Acceptal	bility				TAC L	imits		-				
Analysis ID	Endpoint	Attri	bute	Test Stat	Lower	Upper	· Over	rlap	Decision			
03-0711-3351	7d Survival Rate	Cont	rol Resp	1	0.8	>>	Yes		Passes C	riteria		
04-0234-3606	Reproduction	Cont	rol Resp	29.2	15	>>	Yes		Passes C	riteria		
11-8253-1857	Reproduction	Cont	rol Resp	29.2	15	>>	Yes		Passes C	riteria		
11-8253-1857	Reproduction	PMS	D	0.2001	0.13	0.47	Yes		Passes C	riteria		
7d Survival R	ate Summary											
Conc-%	Code	Count Mea	n 95% LCL	95% UCL	Min	Max	Std I	Err	Std Dev	CV%	%Effe	ct
0	D	10 1.000	00 1.0000	1.0000	1.0000	1.0000	0.00	00	0.0000		0.00%	
6.4		10 1.000	00 1.0000	1.0000	1.0000	1.0000	0.00	00	0.0000		0.00%	
12.5		10 1.000	00 1.0000	1.0000	1.0000	1.0000	0.00	00	0.0000		0.00%	
25		10 1.000	00 1.0000	1.0000	1.0000	1.0000	0.00	00	0.0000		0.00%	
50		10 0.900	00 0.6738	1.1260	0.0000	1.0000	0.100	00	0.3162	35.14%	10.00%	6
100		10 1.000	00 1.0000	1.0000	1.0000	1.0000	0.000	00	0.0000		0.00%	
Reproduction	n Summary											
Conc-%	Code	Count Mea	n 95% LCL	95% UCL	Min	Max	Std I	Err	Std Dev	CV%	%Effe	ct
0	D	10 29.2	27.86	30.54	26	31	0.592	25	1.874	6.42%	0.00%	
6.4		10 30.7	25.91	35.49	14	37	2.119	9	6.701	21.83%	-5.14%	3
12.5		10 28.8	23.71	33.89	16	36	2.25		7.115	24.70%	1.37%	
25		10 28.8	26.67	30.93	22	32	0.940	04	2.974	10.33%	1.37%	
50		10 19.6	13.95	25.25	7	35	2.5		7.905	40.33%	32.88%	6
100		10 10.5	6.911	14.09	4	17	1.580	6	5.017	47.78%	64.04%	6



CETIS Summary Report

Report Date: Test Code/ID:

Ceriodaphnia 7-d Survival and Reproduction Test

Eurofins Environment Testing NW - ASL

7d Survival R	ate Detail						MD	5: 8344492	2524D16CA	F344FA011	2EBC0335
Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	D	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
6.4		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
12.5		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
25		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
50		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	1.0000	1.0000	1.0000
100		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Reproduction	n Detail						M	D5: B1578D	1E3D5375F	6DFDC50E	B60429E57
Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	D	30	31	30	30	28	26	30	31	30	26
6.4		36	33	35	27	30	30	35	37	14	30
12.5		18	35	33	26	33	29	35	36	27	16
25		29	32	30	27	31	22	27	29	29	32
50		35	23	21	26	15	15	7	24	17	13
100		8	4	13	11	6	17	16	17	8	5

7d Survival Rate Binomials

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	D	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
6.4		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
12.5		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
25		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
50		1/1	1/1	1/1	1/1	1/1	1/1	0/1	1/1	1/1	1/1
100		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1

CETIS Ana	alyti	cal Rep	ort					Report Date: 24 May-23 10:05 Test Code/ID: B562601cdc / 08-4 Eurofins Environment Testing N			05 (p 1 of 1) 8-4147-2909		
Ceriodaphnia	a 7-d \$	Survival a	nd Reprodu	uction Test						Eurofins	Environm	ent Testing	g NW - ASL
Analysis ID: Analyzed: Edit Date:	11-8 24 M 24 M	253-1857 lay-23 10:(lay-23 10:(En 01 An 00 ME	dpoint: Rep alysis: Nor D5 Hash: B7F	production parametric- 9818F753E	Control	vs T 2DBC	reatments A25BD015	CE Sta i8BE Ed	ETIS Version: atus Level: litor ID:	CETISv1 1 007-238	I.9.7 -492-3	
Data Transfo	rm		Alt Hyp					NOEL	LOEL	TOEL	τu	MSDu	PMSD
Untransforme	d		C > T					25	50	35.36	4	5.844	20.01%
Steel Many-C	Dne Ra	ank Sum 1	Fest										
Control	vs	Conc-%)	Test Stat	Critical	Ties	DF	P-Type	P-Value	e Decision	α:5%)		
Dilution Wate	r	6.4		123.5	75	1	18	CDF	0.9960	Non-Signi	ficant Effec	t	
		12.5		111	75	1	18	CDF	0.9347	Non-Signi	ficant Effec	t	
		25		102.5	75	3	18	CDF	0.7709	Non-Signi	ficant Effec	t	
		50*		66	75	1	18	CDF	0.0071	Significan	t Effect		
		100*		55	75	0	18	CDF	0.0004	Significan	t Effect		
Auxiliary Tes	ts												
Attribute		Test				Test \$	Stat	Critical	P-Value	Decision	α:5%)		
Outlier		Grubbs	Extreme Va	lue Test		3.058		3.2	0.0886	No Outlier	No Outliers Detected		
ANOVA Table	Э												
Source		Sum Squ	uares	Mean Squ	lare	DF		F Stat	P-Value	e Decision	α:5%)		
Between		3174.6		634.92		5		19.48	<1.0E-0	5 Significan	t Effect		
Error		1759.8		32.5889		54							
Total		4934.4				59		_					
ANOVA Assu	mptic	ons Tests											
Attribute		Test				Test \$	Stat	Critical	P-Value	e Decision	α:1%)		
Variance		Bartlett E	Equality of V	ariance Test		20.52		15.09	0.0010	Unequal \	/ariances		
Distribution		Shapiro-	Wilk W Norr	nality Test		0.956	1	0.9459	0.0305	Normal Di	stribution		
Reproduction	n Sum	nmary											
Conc-%		Code	Count	Mean	95% LCL	95% l	JCL	Median	Min	Max	Std Err	CV%	%Effect
0		D	10	29.2	27.86	30.54		30	26	31	0.5925	6.42%	0.00%
6.4			10	30.7	25.91	35.49		31.5	14	37	2.119	21.83%	-5.14%
12.5			10	28.8	23.71	33.89		31	16	36	2.25	24.70%	1.37%
25			10	28.8	26.67	30.93		29	22	32	0.9404	10.33%	1.37%
50			10	19.6	13.95	25.25		19	7	35	2.5	40.33%	32.88%
100			10	10.5	6.911	14.09		9.5	4	17	1.586	47.78%	64.04%

CETIS Ana	alyti	cal Repo	ort							Repo Test	rt Date: Code/ID:	24 B56	May-23 10:0 2601cdc / 08	95 (p 1 of 1) 3-4147-2909
Ceriodaphnia	a 7-d \$	Survival an	d Rep	roduction Te	est						Eurofins	Environm	ent Testing	NW - ASL
Analysis ID: Analyzed: Edit Date:	03-0 24 N 24 N	711-3351 /ay-23 10:01 /ay-23 10:00)	Endpoint: Analysis: MD5 Hash:	7d S STP 8344	Survival Rate 2xK Contin 4492524D16	e igency Table 6CAF344FA	es 0112EBC0	335	CETIS Statu Edito	S Version: s Level: r ID:	CETISv 1 007-238	1.9.7 -492-3	
Data Transfo	rm		Alt H	Чур				NOEL	LOE	L	TOEL	TU		
Untransforme	d		C > 1	Г				100	>100)		1		
Fisher Exact	Bonf	erroni-Holm	n Test											
Control	vs	Conc-%		Test S	Stat	P-Type	P-Value	Decision((α:5%)					
Dilution Wate	r	6.4		1.000	0	Exact	1.0000	Non-Signi	ficant	Effect				
		12.5		1.000	0	Exact	1.0000	Non-Signi	ficant	Effect				
		25		1.000	0	Exact	1.0000	Non-Signi	ficant	Effect				
		50		0.500	0	Exact	1.0000	Non-Signi	ficant	Effect				
		100		1.000	0	Exact	1.0000	Non-Significant Effect						
7d Survival F	Rate F	requencies												
Conc-%		Code	NR	R		NR + R	Prop NR	Prop R	%Ef	fect				
0		D	10	0		10	1.0000	0.0000	0.00	%				
6.4			10	0		10	1.0000	0.0000	0.00	%				
12.5			10	0		10	1.0000	0.0000	0.00	%				
25			10	0		10	1.0000	0.0000	0.00	%				
50			9	1		10	0.9000	0.1000	10.0	0%				
100			10	0		10	1.0000	0.0000	0.00	%				
7d Survival F	Rate S	ummary												
Conc-%		Code	Cou	nt Mean		95% LCL	95% UCL	Median	Min		Max	Std Err	CV%	%Effect
0		D	10	1.000	0	1.0000	1.0000	1.0000	1.00	00	1.0000	0.0000	0.00%	0.00%
6.4			10	1.000	0	1.0000	1.0000	1.0000	1.00	00	1.0000	0.0000	0.00%	0.00%
12.5			10	1.000	0	1.0000	1.0000	1.0000	1.00	00	1.0000	0.0000	0.00%	0.00%
25			10	1.000	0	1.0000	1.0000	1.0000	1.00	00	1.0000	0.0000	0.00%	0.00%
50			10	0.900	0	0.6738	1.0000	1.0000	0.00	00	1.0000	0.1000	35.14%	10.00%
100			10	1.000	0	1.0000	1.0000	1.0000	1.00	00	1.0000	0.0000	0.00%	0.00%

CETIS	CETIS Analytical Report								Repo Test	ort Date: Code/ID:	24 M B562	1ay-23 10: 601cdc / 0	05 (p 1 of 1))8-4147-2909
Ceriod	laphnia	a 7-d Survival an	d Reprodu	ction Tes	st					Eurofins	Environme	ent Testin	g NW - ASL
Analys Analyz Edit Da	sis ID: ed: ate:	04-0234-3606 24 May-23 10:0 24 May-23 10:00	End 1 Ana 0 MDS	point: lysis: 5 Hash:	Reproduction Linear Interpola 37F9818F753D	ition (ICPII)FECF2DB	N) BCA25E	3D0158BE	CET Statu Edito	S Version: us Level: or ID:	CETISv1. 1 007-238-4	9.7 192-3	
Linear X Tran	Interpo	olation Options Y Transform	See	d I	Resamples	Exp 95%	% CI	Method					
Log(X+	-1)	Linear	1740	538 2	200	Yes		Two-Point	Interp	olation			
Point I	Estimat	tes											
Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCI	L						
IC25	40.36	6 32.62	56.65	2.478	1.765	3.065							
Repro	ductior	n Summary				Ca	alculat	ed Variate				Isoto	nic Variate
Conc-	%	Code	Count	Mean	Median	Min	Max	c CV	6	%Effect		Mean	%Effect
0		D	10	29.2	30	26	31	6.42	2%	0.00%		29.95	0.00%
6.4			10	30.7	31.5	14	37	21.8	33%	-5.14%		29.95	0.00%
12.5			10	28.8	31	16	36	24.	70%	1.37%		28.8	3.84%
25			10	28.8	29	22	32	10.3	33%	1.37%		28.8	3.84%
50			10	19.6	19	7	35	40.3	33%	32.88%		19.6	34,56%

17

47.78%

64.04%

10.5

64.94%

100

10

10.5

9.5

4

APPENDIX B

REFERENCE TOXICANT DATA SHEETS

Log ID# $\sigma_{IB}OD - UD$ **Dintion Water Hardness (as CaCO) OV Itst Temperature 201 °C Dilution Water Atlantiny (as CaCO) OV Itst Temperature 0 h $T = V$ V 24 hr 48 hr 53 There. ID# 0 h $T = V$ V 24 hr 45 48 hr 53 Dissolved Oxygen pH Temperature (°C) $Conductivity (uS)$ 48 hr 25 Dissolved Oxygen pH Temperature (°C) $Conductivity (uS)$ 48 hr 25 0 24 48 0 24 48 hr 25 0 24 48 0 24 hr 24 hr 25 34° 0 24 48 0 24 hr 25 34° <th>Qı rioda</th> <th><u>A / QC</u> Refe <i>aphnia dubia</i> Stocl</th> <th>REFER rence Toxica k Solution</th> <th>ENCE TC</th> <th>Na Na in DI (AS</th> <th>NT DATA LCI STM Type]</th> <th>A SHEET</th> <th>Test Begi Test End</th> <th>n: Date : Date</th> <th>5 E</th> <th>12023</th> <th>Time</th> <th>14</th> <th>35</th>	Qı rioda	<u>A / QC</u> Refe <i>aphnia dubia</i> Stocl	REFER rence Toxica k Solution	ENCE TC	Na Na in DI (AS	NT DATA LCI STM Type]	A SHEET	Test Begi Test End	n: Date : Date	5 E	12023	Time	14	35	
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	use culture Rea,		cent Log ID #	# 5 BOC	30-80	20±1°C		*Dilu Dilutior	tion Wate Water H	rr (Recon	MH) ID# s CaCO ₃)	ICS IS	11		
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	4 hours			-				Dilution	Water Al	kalinity (a	s CaCO ₃)	ۍ کا	-0		
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	lone			Ţ	schnician	0 hr	トノ	Ч	24 hr	KG		48 hr	K6		
Item. ID # 0 hr 21 hr 48 hr 24 hr 24 hr 25 m 48 hr 25 m 35 m 36 m 25 m 36 m 25 m 31 hr 25 m 31 hr 25 m 31 hr 25 m 31 hr 31 hr <th <="" colspa="2" td=""><td>30 ml</td><td></td><td></td><td></td><td>Time</td><td>0 hr</td><td>1435</td><td></td><td>24 hr</td><td>1455</td><td></td><td>48 hr</td><td>1530</td><td></td></th>	<td>30 ml</td> <td></td> <td></td> <td></td> <td>Time</td> <td>0 hr</td> <td>1435</td> <td></td> <td>24 hr</td> <td>1455</td> <td></td> <td>48 hr</td> <td>1530</td> <td></td>	30 ml				Time	0 hr	1435		24 hr	1455		48 hr	1530	
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	25 ml			The	erm. ID #	0 hr _	862		24 hr	278		. 48 hr	275		
0 24 48 0 24 48 0 24 48 0 24 48 $\mathcal{S}.7$ 7.6 $\mathcal{S}.0$ $\mathcal{S}.1$ $\mathcal{S}.0$ $\mathcal{M}_{\mathcal{S}}$ \mathcal{I}°	Number of Live Organisms		Dis	solved Oxy (mg/l)	/gen		Hq		Tem]	perature	(°C)	Cone	ductivity ((Sη)	
$g.7$ 7.6 $g.0$ $g.0$ $g.1$ 2.6 $g.1$ $g.5$ 3.4° $g.7$ 7.6 $g.0$ $g.0$ $g.0$ $g.0$ 2.0° 2.2° 3.6° $g.7$ 7.6 $g.0$ 7.4 20.2 2.0° 2.2° 2.2° $g.7$ 7.6 $g.0$ 7.4 20.2 2.0° 2.2° 2.2° 2.2° 2.2° 2.2° $g.7$ $g.0$ $g.0$ 7.4 20.2 2.0° 2.1°	0 24 48	\sim	0	24	48	0	24	48	0	24	48	0	24	48	
$g_{1}g_{1}$ 7.6 $g_{2}G_{1}$ 7.4 20.7 20.5 230.0 220° $g_{1}7$ 7.6 $g_{2}G_{1}$ 7.4 20.7 20.5 230.0 216° $g_{1}7$ 7.6 $g_{2}G_{1}$ 7.4 20.7 20.6 210.9 216° 2710° 216° 2710° 270°	5 S S		8,7		7,6	8,0		0.8	10.12	20 k	20.5	372		361	
g.g 7.6 $g.0$ 7.4 20.7 10.6 2300 2200 2160 2710	5 S S								22						
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$\mathcal{S}.\mathcal{G}$ $\mathcal{S}.\mathcal{O}$ $\gamma.^{A}$ \mathcal{U} \mathcal{L} <	5 S S		8.7		7.F	8.0		1.1	ZU. Z	ک. <i>ط</i> لے	20 ic	3760		3180	
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\mathcal{S} - γ γ - α \mathcal{S} , 0 γ - α \mathcal{U} , 1 \mathcal{L}_{D} , c \mathcal{S} <td>5 5 5</td> <td></td> <td>8.8</td> <td></td> <td>B.D</td> <td>8.0</td> <td>,</td> <td>۲. ۲</td> <td>W, 2</td> <td>20. Y</td> <td>2.0.8</td> <td>421 ů</td> <td></td> <td>4 080</td>	5 5 5		8.8		B.D	8.0	,	۲. ۲	W, 2	20. Y	2.0.8	421 ů		4 080	
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$\mathcal{S}.7$ $\mathcal{S}.1$ $\mathcal{S}.1$ $\mathcal{Z}.9$ $\mathcal{I}.4$ $\mathcal{U}.\mathcal{L}$ $\mathcal{I}.0$ $\mathcal{I}.7$ $$	5 5 8		8.2		5,1	8.0		٤.	20. 1	20.0	205	onbs		5710	
$g.7$ $g.1$ 2.9 $g.1$ 2.9 $2.0.7$ 7770 7570 $(@ 20^{\circ}C): > 4.0$ and < 9.1 $pH: > 6.0$ and < 9.0 29.2 29.5 20.7 7770 7570 $(@ 20^{\circ}C): > 4.0$ and < 9.1 $pH: > 6.0$ and < 9.0 79.2 29.5 20.7 7570 7570 rements to be taken in that test chamber to avoid injuring the organisms 79.2 7.770 7570 7570 rements to be taken in that test chamber to avoid injuring the organismsWe verify this data is true and correct. 50 2.4 LTask Manager 90.0 Mov. We werify this data is true and correct. 50 2.4 LTask Manager 90.0 Mov. We werify this data is true and correct. 50 1.9 L 2 L 2 LMProject Manager 90.0 Mov. We werify this data is true and correct. 1.9 L 1.9 L to 2.89 Project Manager 0.0 Mov. We were the moder of the test chanager 1.9 L 1.9 L to 2.89 Project Manager 0.0 Mov. We were the test chanager 1.0 L	5 5 0														
$2m \cdot 2$ $2m \cdot $	5 1		6.7		1- <i>8</i>	2,9	•	7.9	20.2	20.5	20.7	0665		7570	
(@ 20°C): > 4.0 and < 9.1pH: > 6.0 and < 9.0Temperature + 1 °C(QA) none(recommended)(recommended)(recommended)(QA) nonerements to be taken in that test chamber to avoid injuring the organismsWe verify this data is true and correct. $Var M M M M M M M M M M M M M M M M M M M$	5 3 0						-	3	342	per 04 5/4					
(recommended)(recommended)(recommended)rements to be taken in that test chamber to avoid injuring the organismsWe verify this data is true and correct. 30 2.4 (LTask Manager 0 (W. M.	Survival in Controls: $\geq 90\%$	~	(@ 20	°C): > 4.0 and	1 < 9.1	< :Hq	~ 6.0 and < 9	0.0	Temp	erature +	۱ °C)	(QA) none		
rements to be taken in that test chamber to avoid injuring the organisms We verify this data is true and correct. 50 Z.H.Q. Task Manager 50 Z.H.Q. Task Manager 50 Z.H.Q. Project Manager 6 I.92 to Z.B.O Project Manager 6 I.02 to Z.B.O Project Manager 7 Mow W.T. QA Officer	(required TAC)			recommended		(rec	commended)		(re	commende	I)				
inits 1-92 to 2.89 Project Manager Davy Moruwer Moruwer Moruwer Moruwer Davy Moruwer M	urs, no DO, pH, or Cond. measu	cast	irements to	be taken in th	nat test chan	mber to avoio	d injuring th	e organism		We verify	this data i	s true and o	correct.		
inits 1.92 to 2.89 Project Manager TONN Control Lindon Lindon. In Hev. QA Officer M. B.	48 Hour LC	Г	50	J.	H.	~ 1	T	ask Mana	ger	ig-	N V	permina)		
hod WWAV. INHEV. QA Officer W. B.	l water lard Cusum Chart L	цĽ	imits	1.92	to to	2,89	d,	roiect Mai	, Jager	AE	R				
	Statistical Me	Me	thod	i war	His	nter.	Ø	, A Officer)	A	PÓ ۱				

Jacobs - Spokane B5626.pdf

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Ceriodaphnia dubia - ACUTE (EPA Test Method 2002.0)

SODIUM CHLORIDE (g/L)

Endpoint: 48 hour Survival

Stats Method: Probit, Spearman-Karber, Linear Interpolation

Test Conditions: Recon MH, 20 oC

From EPA 833-R-00-003:

10th Quartile CV (control limit) = 0.06

- 25th Quartile CV (*warning limit*) = 0.11
- 75th Quartile CV (warning *limit*) = 0.29
- 90th Quartile CV (*control limit*) = 0.34

Intralab CV is compared to EPA Warning limits (25th and 75th CV's) and Control limits (10th and 90th CV's), If lab CV is outside EPA Control limits, the EPA Control limits are used to set Cusum chart limits.

Event #	Cerio ID #	Test Start Date	LC50	Running Average	Running SD	Cusum Ch AVG-2SD	art Limits AVG+2SD	Intralab CV
219	4035	11/03/22	2.54	2.4	0.29	1.81	2.96	0.10
220	4049	12/08/22	2.37	2.4	0.25	1.92	2.93	0.10
221	4056	01/11/23	2.15	2.4	0.25	1.92	2.93	0.11
222	4066	02/06/23	2.15	2.4	0.26	1.89	2.93	0.11
223	4080	03/08/23	2.21	2.4	0.27	1.87	2.93	0.10
224	4089	04/05/23	2.46	2.4	0.24	1.92	2.90	0.10
225	4098	05/04/23	2.46	2.4	0.24	1.92	2.89	0.08

Ceriodaphnia dubia Survival and Reproduction Test Data Summary

Client		<u> </u>	QA / (QC			Test Star	t Date	51	4/2-	2	
Sample Descripti	on		NaC	1			Initial Sa	mple ID#	5	B())9.	-07	
Data summarized	l by _	To	vi Ci	(UM	vin	2						
Percent			70 4 1 7 1	X7 T				D 11				Total
Concentration	A	В		D D	E	F F	G G	H H		J	# Alive Adults	Live Young
Control	18	IV	34	24	32	30	27	32	31	15	10	261
	AD?	AD?	AD?	AD?	AD?	AD?	AD?	AD?	AD?	AD?		
0.25 g/L	26 AD?	24 AD?	24 AD?	23 AD?	34 AD?	23 AD?	18 AD?	29 AD?	38 AD?	12 AD?	10	245
0.50 g/L	17	24	30	24	31	24	24	26	31	3	10	234
1.0 g/L			AD?			AD? 20	AD? 20	AD?		AD?	10	160
1.5 g/L						2		13	10	3	9	102
2.0 g/L		G	2				3				le	12
4.0 g/L		AD?	AD?	(AD?	AD?		AD?	AD?	AD?	AD?	0	0
Test Organism M	ortality (A	dult dead) = AD?	\checkmark	II	# of Aliv	e Adults =	Number	of test orga	anism alive	e at termina	tion
Test Organism id	entified as	Male =	AD?	М		Total Liv	a Voung -	- Total no		duced in fi	not 2 1-ma - 1	_
Test Organism In	jured duri	ng test =	AD?	Ι		TOTALLIV	c roung -		mates pro		ist 5 brood	8
Footnote: As per surviving control	EPA-600 organisms	-4-91-002 s have pro	and EPA- duced thei	821-R-02- r third bro	-013, <i>Cert</i> ood, or at t	<i>iodaphnia</i> the end of	<i>dubia</i> tes <u>eight</u> days	t should b s, whichev	e terminat er occurs t	ed when 60 first.	0% of the	
Also as per EPA- and should not be	821-R-02- included	013 (13.1) in the tota	0.9.1), "In 11 number o	this three of neonate	-brood tes es produce	st, offsprin ed during t	g from fou he test."	urth or hig	her brood	s should no	ot be counte	ed
Endpoint	- Value	<u>e Cı</u>	isum Char	<u>t Limits</u>		Task	Manager	Z	Cim Mer	\sim		

Endpoint 1	74 ^{Value}	Cusum Chart Limits		Task Manager	Hiry youn
Survival - EC_{25}	H.T	Alog to 2.33	DOU	Project Manager	total
Reproduction - IC ₂₅	0.74	n 40 to 1.09	5/11	OA Officer	Ň~B
I I I I I I I I I I I I I I I I I I I		V. 10 10 1			



Ceriodaphnia dubia - Chronic (EPA Test Method 1002.0)

SODIUM CHLORIDE (g/L)

Endpoint: Chronic Reproduction

Stats Method: Linear Interpolation

Test Conditions: Recon MH, 25 oC

From EPA 833-R-00-003:

10th Quartile CV (control limit) = 0.08

25th Quartile CV (*warning limit*) = 0.17

75th Quartile CV (warning *limit*) = 0.45

90th Quartile CV (control limit) = 0.62

Intralab CV is compared to EPA Warning limits (25th and 75th CV's) and Control limits (10th and 90th CV's), If lab CV is outside EPA Control limits, the EPA Control limits are used to set Cusum chart limits.

	-,			1110, 1110 <u>11</u> 1	I Control H	minib are ubea	to bet Ousuitt	churt minus.
Event #	Cerio ID #	Test Start Date	IC25	Running Average	Running SD	Cusum Ch AVG-2SD	art Limits AVG+2SD	Intralab CV
386	3968	05/24/22	0.78	0.70	0.17	0.37	1.04	0.20
387	3974	06/14/22	0.71	0.70	0.17	0.37	1.03	0.20
388	3979	07/06/22	0.80	0.70	0.17	0.37	1.03	0.20
389	3998	08/09/22	0.58	0.70	0.16	0.37	1.02	0.20
390	4013	09/08/22	0.77	0.67	0.13	0.41	0.92	0.19
391	4028	10/13/22	0.84	0.67	0.13	0.42	0.92	0.20
392	4040	11/16/22	1.12	0.68	0.13	0.42	0.94	0.23
393	4050	12/13/2022	0.59	0.71	0.15	0.40	1.02	0.21
394	4057	1/12/2023	0.74	0.72	0.15	0.42	1.01	0.21
395	4068	2/9/2023	0.71	0.72	0.15	0.43	1.01	0.21
396	4084	3/16/2023	0.63	0.72	0.15	0.42	1.02	0.21
397	4096	4/27/2023	1.12	0.72	0.15	0.42	1.02	0.23
398	4099	5/4/2023	0.74	0.74	0.17	0.40	1.09	0.23



Ceriodaphnia dubia - Chronic (EPA Test Method 1002.0)

SODIUM CHLORIDE (g/L)

Endpoint: Chronic Survival

Stats Method: Linear Interpolation

Test Conditions: Recon MH, 25 oC

From EPA 833-R-00-003:

10th Quartile CV (control limit) = 0.07

25th Quartile CV (*warning limit*) = 0.11

- 75th Quartile CV (warning *limit*) = 0.41
- 90th Quartile CV (control limit) = 0.81

Intralab CV is compared to EPA Warning limits (25th and 75th CV's) and Control limits (10th and 90th CV's), If lab CV is outside EPA Control limits, the EPA Control limits are used to set Cusum chart limits.

	-, -, -, -, -, -, -, -, -, -, -, -, -, -							
Event #	Cerio ID #	Test Start Date	EC25	Running Average	Running SD	Cusum Ch AVG-2SD	art Limits AVG+2SD	Intralab CV
385	3947	04/05/22	1.44	1.37	0.46	0.45	2.29	0.34
386	3968	05/24/22	2.10	1.36	0.46	0.45	2.28	0.36
387	3974	06/14/22	1.58	1.43	0.47	0.49	2.36	0.36
388	3979	07/06/22	2.27	1.42	0.47	0.49	2.36	0.36
389	3998	08/09/22	1.59	1.44	0.50	0.45	2.43	0.35
390	4013	09/08/22	2.10	1.44	0.49	0.45	2.43	0.35
391	4028	10/13/22	1.62	1.46	0.51	0.44	2.49	0.34
392	4040	11/16/22	2.28	1.48	0.51	0.46	2.51	0.35
393	4050	12/13/2022	1.66	1.50	0.53	0.44	2.57	0.27
394	4057	1/12/2023	1.62	1.58	0.43	0.72	2.44	0.27
395	4068	2/9/2023	1.50	1.58	0.43	0.73	2.44	0.27
396	4084	3/16/2023	1.33	1.58	0.43	0.72	2.44	0.26
397	4096	4/27/2023	1.58	1.59	0.42	0.76	2.42	0.26
398	4099	5/4/2023	1.74	1.59	0.42	0.76	2.42	0.26

APPENDIX C

CHAIN OF CUSTODY



Sample Receipt Record

Batch Number: $BS_{2} = 0$		Date Received:	5.11	-23		
Client/Project: Jacobs Spokane		Received By:	KG			
Were custody seals intact?				Yes	No	N/A
Packing Material:				Ice	Blue Ice	Box
Temperature: Digital Therm ID: 294 - OR - IR Therm ID: (for solid samples) Corrected Samp	Expires: ^{c%} / ²⁸ /2023 Expires: / /20 IR Gun le Temperature (IR Observ	Observed: -0.5 Observed: Daily Offset: ed + IR Offset):	0° ' 0° 0° 0°	Ten (<u>≤</u> (ls ıp OK? ₅.0 ℃)	Yes
If sample is noted @ <	\leq 0.0 °C, is the sample froze	n or partially frozen?		Yes	🖄 No	N/A
Was a Chain of Custody (CoC) Provided?				Yes Yes	No No	N/A
Was the CoC correctly filled out? (If No, do	ocument below)			🗡 Yes	No	N/A
Were the sample containers in good condi	tion (not broken or leaking)?			🗹 Yes	No	N/A
Are all samples within 36 hours of collection	n?			Yes	No	N/A
Method of Shipment:	Delivered, FedEx,	UPS, 🗌 Other:		-	_	N/A
Sample Except	ion Report (The follow	ing exceptions we	ere no	oted)		
El 1 S C Q P L I Q D US	UROFINS TEST AMERICA 100 NE CIRCLE BLVD TE 310 DRVALLIS OR 97330 LOWER S: SHOP SREW — 1000 2940x50159209 3941 HBOFY 9731 HIP 23.3.0 2P4605	: A 900 2122 2029				
Client was notified on:	Client contact:					
Resolution to Exception:						

Environment Testing Northwest, LLC	to:	rofins Environment Testing NW	00 NE Circle Blvd. Suite 310	rvallis, OR 97330 one: 541-243-6137	Comments	Concentration and/or	Comments							New Sterring 1200	Date/Time	Date/Time	Shipping # CQC_Bioassay_as of 020522	Doc Control ID: ASL612-0222
Eurofins	Ship Samples	μ Α		Ъ С Ч	sis Required /	Chronic Chronic az Waste az Waste	MYS (Blgae SH AD H AW						<	hd print name/	nd print name)	nd print name)	ndOther	
🕯 eurofins		95 ml	120 m		Analy	Acute Chronic hronic Acute	MHS MB Ad MB C MB C	· · · · · · · · · · · · · · · · · · ·						hulf CUUS	/ (Please sign al	/ (Please sign ar	Fed-ExHa	
• •		ple Information		10 0839 10 0839 10 853		ad Chronic Acute Chronic nia Acute Acute	Fathe Cerio Daphi Daphi Trout	ХХ						Bulinguished B	Relinquished By	Relinquished By	Shipped Via UPSBus	
ICITY TESTIN adlity 1009331		Composite Sam	34 Tot	5/9 Tin 5/10 Tin		atuoA bs	Lab ID# Fathe	35626-01						Time 0753	/Time 123 0als	Time	Time	arks
C TOX				Date		jt iners) # 5. BinoO							5/10	Date/ S/N	Date/	Date/	Rema
FOR AQUATI	+ +			Ended:		Sample Type	Comp. Grab	X						() () () () () () () () () ()	l print name)	l print name)	l print name)	l print name)
NY RECORD - Ity Reg. (Ulg	Preva S	()a aa2.c		Idi Andre 3710			Time	5 0139-3					,	(Plase sign and	(Please sign and	(Please sign and	(Please sign and	(Please sign and
OF CUSTOF	004 N.	skanez		son: B/a/ 39-53 v -			Date	002 5/9-10/2						Andrews	K.	~		rized By
Client: Spok	Address: /	acobs -	Społ	Bontact Per Bontact Per Bhone:			Sample ID	B1023051	e 38 of 4	42				Sampled By Droudi	Received B)	Received b	Received By	Work Autho.

			<u> </u>	
e	U	ro		ns

Sample Receipt Record

Batch Number:	Date Received:	Slí	3123		
Client/Project: Jacobs Spoker	Received By:	67			
Were custody seals intact?			Yes] No [N/A
Packing Material:		[Ice 🗌 Bl	lue Ice	Box
Temperature: Digital Therm ID: 264 Expires: 08 - OR - IR Therm ID: Expires: (for solid samples) Corrected Sample Temperati	ls Temp O (≤6.0 ℃	ע אל? [ב) [Yes No N/A		
If sample is noted @ \leq 0.0 °C, is the	Yes	No	Y N/A		
Was a Chain of Custody (CoC) Provided?	VYes	No	N/A		
Was the CoC correctly filled out? (If No, document below)		Yes	No	N/A	
Were the sample containers in good condition (not broken		U Yes	No	N/A	
Are all samples within 36 hours of collection?			∠ Yes	No	N/A
Method of Shipment: Hand Delivered,				N/A	
Sample Exception Report	(The following exceptions wer	re no	ted)		
	AS3S A3-08 9719M PDX SAT/EAM AAD5612UPS 12940X504125433963				
Client was notified on: Client contact	:				
Resolution to Exception:	u				

s Environment Testing Northwest. II C		es to:	Eurofins Environment Testing NW	Alteriului. Aqualic Toxicology Laboratory 1100 NE Circle Blvd Suite 310	Corvallis, OR 97330	70006: 341-243-0137	/ Comments	Concentration and/or	Comments						u) Date/Time U) 5/12/23 120	Date/Time	Date/Time	Shipping # CQC_Bioassay_as of 020522	
🛃 eurofins 🛛 Eurofin		Ship Sample	tion 95 ml	e 4, 20 m/			Analysis Required	Acute Acute Acute Dhronic rute Acute Acute Cute Cute Acute	Trout V Trout V SHM & MB Ad MB Ad MP Cr MYS V MYS V MYS A Algae						d By (Please ign and primname)	d By (Please sign and print name)	od By (Please sign and print name)	a Fed-Ex Hand Other_	
TOXICITY TESTING	WA 0093317		Composite Sample Informa	rour 24 Volume/Samp	Date $\frac{5}{610}$ Time 0840	JCAU United Sollection		f ners ad Chronic Acute Chronic	# o Contai Lab Fathes Fathes Cerio / Cerio /	1 1 135626-01 X X					Date/Time of S Relinquishe	Date/Time Relinquishe $\leq l_{l} \gamma_{l} \gamma_{2} 0$ 95 $\&$	Date/Time Relinquishe	Date/Time Shipped Via	Male and a second se
DDY RECORD - FOR AQUATIC	4 Les Water Rec. Portes#	Priva St.	-20705		ndi Andrews Initiated:			Sample	e Time Comp.	123 0840- X					 (Please sign and print name)	(Please sign and print name) ปังเเร็า Yowเผา	(Please sign and print name)	(Please sign and print name)	
CHAIN OF CUSTC	Client: Syskane Count	Address: /0.04 //	gespokane, Wa	- Spo	Gontact Person: Blan	- ncc - hoc :euoug 26.pd	FO#		Sample ID Date	B102305208 5/11-121.	e 40 of	42			 Sampled By & Title Brandi Hndrus	Received By Jours Mouman C	Received By	Received By	



Sample Receipt Record

Batch Number: B5626-03	Date Received: 5	116/23
Client/Project: Jacobs Spokame	Received By:	TC
Were custody seals intact?	. E	Yes No N/A
Packing Material:		Ice Blue Ice Box
Temperature: Digital Therm ID: 204 Expires: 3 / 23 /207 - OR - IR Therm ID: Expires: / /20 (for solid samples) IR Gu Corrected Sample Temperature (IR Obse	Observed: 0 Observed: 0 Daily Offset: 0 rved + IB Offset): 0	C Is ∑-Yes — Temp OK? □ No C (≤6.0 °C) □ N/A
If sample is noted $@ \le 0.0$ °C, is the sample froz	en or partially frozen?	Yes X No N/A
Was a Chain of Custody (CoC) Provided?		Yes No N/A
Was the CoC correctly filled out? (If No, document below)		Yes No N/A
Were the sample containers in good condition (not broken or leaking)?		Tres No N/A
Are all samples within 36 hours of collection?		Vres No N/A
Method of Shipment: Hand Delivered, FedEx,	Dther:	N/A
Sample Exception Report (The follo	wing exceptions were r	noted)
2-PD Door-0301 <u>ALP21435UPS</u> 1/2940 X501525494081 0188931 May 15 22:38:22 2023 HIPPS 22.9.2 U	OR 973 1- 01 OR 97330- 4741	
Client was notified on: Client contact:		
Resolution to Exception:		

Eurofins Environment Testing Northwest, LLC	5	p Samples to: Eurofins Environment Testing NW	Attention: Aquatic Loxicology Laboratory 1100 NF Circle Rivd Suite 310	Corvallis, OR 97330 Phone: 541-243-6137	Required / Comments	az Waste az Waste az Waste and/or	Comments Comments						lint nature Date/Time 1200 1200	int name) Date/Time	int name) Date/Time	Shipping # Other COC Bioassay as of 020522	Doc Control ID: ASL612-0222
🛟 eurofins	- č	tion / CO	<u>9,400 ml</u>		Analysis	Acute Acute Chronic cute hronic Acute Acute	Trout MHS MHS A MB A MB C MB C MB C MYS						Androws More	d By (Please sign and p	d By (Please sign and p	a Lus Fed-Ex Hand	
OXICITY TESTING	JA093317	Composite Sample Informa	Volume/Sampl	bate <u>5/14/23</u> Time <u>094</u> Date <u>5/15/33</u> Time 1013 ng Collection <u> </u>		iners ad Acute Acute Chronic Chronic	Lab Tab Fathe Fathe Cerio Cerio	1 B96220-03 XX					5/15/23 1024 Belinquishe	ate/Thme Relinquishe りしくしょう 094ら)ate/Time Relinquishe	hate/Time Shipped Via	temarks
DY RECORD - FOR AQUATIC 1	thy Water Rec. Por NPDES# 1	17CYA 31. 1a 99202	Samples/Hc	<i>di Andruus</i> <i>ali Andruus</i> <i>alio</i> Ended: Chilled Duri		Sample	Time Comp. Grab	B 0942-3 X					(Please sign and print name)	(Please sign and print name)	(Please sign and print name)	(Please sign and print name)	(Please sign and print name)
CHAIN OF CUSTOD	Client: Spokane, Coun	Address: 1004 N.	- Spo	Gontact Person: <u>Blan</u> Banone: <u>509-534 -</u> d'97	PO#		Sample ID Date	\$1023051508 5114-1512	e 42 of 4	42			Sampled By & Title	Received By	Received By	Received By	Work Authorized By