



**Whole Effluent Toxicity Test Report:  
City of Snoqualmie**

March 2024 Chronic Testing

Report date: March 14, 2024

Submitted to:

**City of Snoqualmie**  
38190 SE Stearns Road  
Snoqualmie, WA 98065

*Rainier Environmental*  
5013 Pacific Hwy East  
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## 1.0 INTRODUCTION

A chronic toxicity test was conducted using effluent samples collected from the City of Snoqualmie in March 2024. The bioassay was conducted using the test organism *Ceriodaphnia dubia*. Testing was performed Rainier Environmental Laboratory located in Tacoma, Washington.

## 2.0 METHODS

### 2.1 Sample Collection and Transport

Three 24-hr. composite effluent samples were collected into 4-liter (L) LDPE cubitainers by City of Snoqualmie personnel. The samples were packed in coolers containing ice and transported to Rainier Environmental. Appropriate chain-of-custody procedures were employed during collection and transport.

### 2.2 Sample Receipt

Upon arrival at Rainier Environmental, the coolers were opened, samples inspected, and the contents verified against information provided on the chain-of-custody forms. Receipt temperature was measured and recorded on the chain-of-custody form for each sample. Standard water quality parameters were measured and recorded on a sample check-in sheet (Appendix C). Samples were stored at 4°C in the dark until used for testing.

### 2.3 Test Methods

A chronic toxicity test was conducted according to procedures presented by USEPA (2002). The method is summarized in Table 1. The procedure involved a 7-day static-renewal exposure to the effluent. The endpoints for this test were *Ceriodaphnia* survival and reproduction at the end of the 7-day exposure.

**Table 1. Summary of methods for the *Ceriodaphnia* 7-day survival and reproduction test.**

Test initiation date and time	3/5/2024; 1050h
Test termination date and time	3/12/2024; 1055h
Test organism	<i>Ceriodaphnia dubia</i>
Test organism source	In house cultures
Test organism age	< 24 hours
Test type	Static renewal
Endpoint	Survival, production of three broods in 60% of controls
Feeding	1:1 mixture YTC:algal suspension daily
Test chamber	30 mL plastic cup
Test solution volume	15 mL
Test temperature	25 ± 1°C
Dilution water	Diluted mineral water
Test concentrations (% sample)	100, 50, 25, 12.5, 2.81, laboratory control
Number of organisms/chamber	1
Number of replicates	10
Photoperiod	16 hours light/8 hours dark
Aeration	None
Test protocol	EPA-821-R-02-013
Test acceptability criteria for controls	≥ 80% survival; ≥15 neonates/survival adult
Reference toxicant	Sodium chloride

### 3.0 RESULTS

Details of standard water quality measurements conducted upon receipt of samples are provided in Table 2.

**Table 2. Sample information.**

Sample ID	3424	3624	3824
Log-in Number	24-043	24-046	24-050
Collection date and time	3/4/2024; 1200h	3/6/2024; 1000h	3/8/2024; 1130h
Receipt date and time	3/4/2024; 1300h	3/6/2024; 1245h	3/8/2024; 1445h
Receipt temperature (°C)	0.8	1.7	1.2
Dissolved oxygen (mg/L)	10.9	10.2	10.5
pH	7.17	7.22	7.20
Conductivity (µS/cm)	271	384	359
Hardness (mg/L CaCO <sub>3</sub> )	80	76	80
Alkalinity (mg/L CaCO <sub>3</sub> )	108	100	96
Total Chlorine (mg/L)	<0.03	<0.03	<0.03
Total Ammonia (mg/L)	<1.0	<1.0	<1.0

Results for the chronic toxicity test are summarized in Table 3. The highest concentration with no observed effect (NOEC) was 100 percent effluent for survival and reproduction. Statistical summaries for the test, copies of the laboratory bench sheets, control quality control plots, sample check-in sheets, and chain-of-custody forms, are provided in Appendices A through D.

**Table 3. Summary of chronic test results.**

Species	Endpoint	NOEC <sup>a</sup> (% effluent)	LOEC <sup>b</sup> (% effluent)
<i>Ceriodaphnia</i>	Survival	100	>100
	Reproduction	100	>100

<sup>a</sup> No Observed Effect Concentration, <sup>b</sup> Lowest Observed Effect Concentration

#### 4.0 QA/QC

Samples were received in good condition and within the temperature range specified by WDOE (2016). There were no deviations from the protocol and water quality parameters remained within the ranges specified in the test method throughout the test.

Results for the reference toxicant test used to monitor laboratory performance and test organism sensitivity are summarized in Table 4. The results for the reference toxicant test fell within the acceptable range of mean  $\pm$  two standard deviations of historical test results. The coefficient of variations (CVs) for the test is also shown in the table. Based on the reference toxicant test organisms appeared to be of an appropriate degree of sensitivity.

**Table 4. Reference toxicant test results.**

Species	Endpoint	Date initiated	EC <sub>50</sub>	Acceptable range (mean $\pm$ 2 SD)	CV (%)
<i>Ceriodaphnia</i>	7d survival	3/5/2024	1.41 g/L NaCl	1.12 - 2.35	20.4
	7d reproduction	3/5/2024	1.24 g/L NaCl	1.12 - 1.66	10.3

## REFERENCES

- Tidepool Scientific Software. 2001-2011. CETIS Comprehensive Environmental Toxicity Information System Software, Version 1.8.4.6.
- USEPA. 2002. Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Fourth Edition. EPA-821-R-02-013, pp. 141-196.
- WDOE. 2016. Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria. Washington State Department of Ecology. Water Quality Program. Publication number: WQ-R-95-80, Revised December 2016.

**Appendix A**  
***Ceriodaphnia* Chronic Toxicity Test**  
**Statistical Summaries and Raw Bench Sheets**

# CETIS Summary Report

Report Date: 14 Mar-24 12:10 (p 1 of 2)  
Test Code: 2403-009 | 16-5037-8195

## Ceriodaphnia 7-d Survival and Reproduction Test

Rainier Environmental Laboratory

Batch ID:	19-4818-7858	Test Type:	Reproduction-Survival (7d)	Analyst:	Eric Tollefson
Start Date:	05 Mar-24 10:50	Protocol:	EPA/821/R-02-013 (2002)	Diluent:	Perrier Water
Ending Date:	12 Mar-24 10:55	Species:	Ceriodaphnia dubia	Brine:	
Duration:	7d 0h	Source:	In-House Culture	Age:	<24h
Sample ID:	07-0493-7075	Code:	24-043	Client:	Snoqualmie
Sample Date:	04 Mar-24 12:00	Material:	POTW Effluent	Project:	
Receive Date:	04 Mar-24 13:00	Source:	Snoqualmie (WA0022403)		
Sample Age:	23h (0.8 °C)	Station:			

### Comparison Summary

Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
06-9428-7640	7d Survival Rate	100	>100	NA	NA	1	Fisher Exact/Bonferroni-Holm Test
12-0679-8766	Reproduction	100	>100	NA	26.3%	1	Dunnett Multiple Comparison Test

### Test Acceptability

Analysis ID	Endpoint	Attribute	Test Stat	TAC Limits	Overlap	Decision
06-9428-7640	7d Survival Rate	Control Resp	1	0.8 - NL	Yes	Passes Acceptability Criteria
12-0679-8766	Reproduction	Control Resp	20.9	15 - NL	Yes	Passes Acceptability Criteria
12-0679-8766	Reproduction	PMSD	0.2634	0.13 - 0.47	Yes	Passes Acceptability Criteria

### 7d Survival Rate Summary

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Dilution Water	10	1	1	1	1	1	0	0	0.0%	0.0%
2.81		10	1	1	1	1	1	0	0	0.0%	0.0%
12.5		10	1	1	1	1	1	0	0	0.0%	0.0%
25		10	1	1	1	1	1	0	0	0.0%	0.0%
50		10	1	1	1	1	1	0	0	0.0%	0.0%
100		10	1	1	1	1	1	0	0	0.0%	0.0%

### Reproduction Summary

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Dilution Water	10	20.9	18.94	22.86	13	28	1.656	5.238	25.06%	0.0%
2.81		10	22.9	21.2	24.6	15	28	1.441	4.557	19.9%	-9.57%
12.5		10	25.1	23.74	26.46	19	31	1.149	3.635	14.48%	-20.1%
25		10	24.1	22.52	25.68	13	27	1.337	4.228	17.54%	-15.31%
50		10	24.2	21.66	26.74	9	34	2.149	6.795	28.08%	-15.79%
100		10	23.7	21.11	26.29	13	33	2.191	6.929	29.24%	-13.4%

### 7d Survival Rate Detail

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	Dilution Water	1	1	1	1	1	1	1	1	1	1
2.81		1	1	1	1	1	1	1	1	1	1
12.5		1	1	1	1	1	1	1	1	1	1
25		1	1	1	1	1	1	1	1	1	1
50		1	1	1	1	1	1	1	1	1	1
100		1	1	1	1	1	1	1	1	1	1

### Reproduction Detail

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	Dilution Water	13	16	28	28	20	18	27	19	22	18
2.81		15	25	28	26	15	21	25	25	26	23
12.5		22	26	30	31	19	25	26	26	24	22
25		27	27	27	25	25	13	24	27	23	23
50		26	23	34	31	23	23	9	29	23	21
100		13	33	26	30	20	17	32	27	22	17

CETIS Summary Report

Report Date: 14 Mar-24 12:10 (p 2 of 2)  
Test Code: 2403-009 | 16-5037-8195

Ceriodaphnia 7-d Survival and Reproduction Test Rainier Environmental Laboratory

7d Survival Rate Binomials											
C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	Dilution Water	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
2.81		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	1/1	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



Rainier Environmental  
Washington Laboratory

Client: Shoquallmie  
Sample ID: 3424  
Test No: 2403-009  
Log-In#: 24-043 24-046

Initial and Final Chemistries

Seven Day Chronic Freshwater Bioassay

Start Date & Time: 3/5/2024 1050  
Stop Date & Time: 3/12/2024 1055  
Test Species: Ceriodaphnia dubia  
24-050

Conc. or % CON	Days													
	0		1		2		3		4		5		6	
	init.	final	init.	final	init.	final	init.	final	init.	final	init.	final	init.	final
pH	8.15	8.12	8.21	8.08	8.14	7.98	8.12	7.95	8.07	8.01	8.09	7.98	8.02	7.87
DO (mg/l)	8.6	8.5	8.6	8.4	7.8	8.1	7.8	8.0	7.9	7.8	7.9	7.8	7.8	8.0
Cond. (µmhos-cm)	182	197	178	187	184	197	178	192	181	197	178	198	178	187
Temperature (°C)	25.1	25.2	25.3	25.1	25.0	25.1	25.3	25.1	25.2	25.1	25.4	25.1	25.2	25.1
2.81	Days													
	0		1		2		3		4		5		6	
	init.	final	init.	final	init.	final	init.	final	init.	final	init.	final	init.	final
	8.11	8.05	8.15	8.10	8.12	7.97	8.05	7.97	8.02	8.04	7.95	7.97	8.01	7.88
	8.5	8.2	8.6	8.2	7.7	8.0	7.7	7.9	7.9	7.7	7.8	8.0	7.9	7.8
	193	202	182	194	189	203	189	195	187	195	184	192	197	192
12.5	Days													
	0		1		2		3		4		5		6	
	init.	final	init.	final	init.	final	init.	final	init.	final	init.	final	init.	final
	8.02	8.04	8.08	8.02	8.07	7.99	8.05	7.92	7.98	8.01	7.87	7.94	8.00	7.91
	8.3	8.4	8.4	8.1	7.8	8.2	7.9	8.0	8.0	7.8	7.8	8.1	7.8	8.0
	187	198	189	204	192	204	195	207	193	202	193	195	192	198
25	Days													
	0		1		2		3		4		5		6	
	init.	final	init.	final	init.	final	init.	final	init.	final	init.	final	init.	final
	7.88	7.98	7.91	7.97	7.93	8.02	8.02	7.94	7.97	7.92	7.91	7.95	7.92	7.88
	8.2	8.7	8.2	8.0	8.1	8.0	7.8	8.1	8.1	8.0	7.6	8.0	7.9	8.1
	212	218	211	218	213	224	211	219	214	218	211	218	213	215
41.7	Days													
	0		1		2		3		4		5		6	
	init.	final	init.	final	init.	final	init.	final	init.	final	init.	final	init.	final
	7.71	7.95	7.72	7.91	7.77	8.03	7.82	7.91	7.91	7.97	7.82	7.88	7.84	7.91
	8.0	8.6	8.4	8.2	8.0	7.9	7.8	8.1	8.0	8.1	7.8	8.1	7.8	8.2
	242	251	237	247	238	242	240	248	237	243	234	245	242	255
100	Days													
	0		1		2		3		4		5		6	
	init.	final	init.	final	init.	final	init.	final	init.	final	init.	final	init.	final
	7.33	7.82	7.34	7.65	7.41	7.79	7.37	7.83	7.44	7.84	7.49	7.82	7.38	7.83
	8.2	8.5	8.2	8.1	8.1	8.0	7.9	8.0	8.0	8.0	8.1	8.0	7.9	8.1
	342	355	339	349	343	355	338	342	334	344	327	322	329	333
Tech. Initials														

Dilution Water Batch #: 8:2 003  
Test Chamber: VWR

QA Check: ET

Sample Description:

Animal Source: IN HOUSE CULTURE

Date Received: — Date of Hatch: —

Comments:

# Ceriodaphnia 7-Day Chronic Survival and Reproduction

Client/Sample ID: Shoquawmie  
 Test Number: At03-009

Start Date and Time: 3/5/2024 1050  
 Stop Date and Time: 3/12/2024 1055

Rep	Conc.	Cont	Daily Reproduction								Day 6 Total	Third Brood
			1	2	3	4	5	6	7	8		
1	CON	22	—	—	—	—	4	—	9	—	4	13
2		34	—	—	—	3	—	6	7	—	9	16
3		15	—	—	—	5	—	11	13	—	16	28
4		52	—	—	—	5	—	10	13	—	15	28
5		21	—	—	—	3	—	7	10	—	10	20
6		43	—	—	—	4	—	—	8	—	10	13
7		1	—	—	—	5	—	10	16	—	15	27
8		24	—	—	—	3	—	7	9	—	10	19
9		50	—	—	—	5	—	8	9	—	13	22
10		5	—	—	—	4	—	7	7	—	11	18

Rep	Conc.	Cont	Daily Reproduction								Day 6 Total	Third Brood
			1	2	3	4	5	6	7	8		
1	25	14	—	—	—	5	—	10	12	—	15	27
2		33	—	—	—	3	—	11	13	—	14	27
3		51	—	—	—	5	—	11	11	—	16	27
4		2	—	—	—	5	—	9	10	—	15	25
5		23	—	—	—	4	—	10	11	—	14	25
6		20	—	—	—	5	—	—	8	—	5	13
7		49	—	—	—	4	—	8	12	—	13	24
8		42	—	—	—	4	—	12	11	—	16	27
9		4	—	—	—	4	—	10	10	—	13	23
10		28	—	—	—	5	—	9	9	—	14	23

Analyst	et	et	et	et	et	et	et	et	et			
Time	1050	0900	0845	0745	1100	1230	0920	1055				
Selec #	002	002	002	002	002	002	002	002				
Rep	Conc.	Cont	1	2	3	4	5	6	7	8	Day 6 Total	Third Brood
1	2.81	44	—	—	—	—	5	10	—		15	15
2		12	—	—	—	—	—	8	12		13	25
3		35	—	—	—	—	—	10	11		17	29
4		52	—	—	—	—	—	10	10		16	26
5		17	—	—	—	—	—	5	9		9	15
6		4	—	—	—	—	—	8	10		12	21
7		32	—	—	—	—	—	9	10		15	25
8		21	—	—	—	—	—	9	11		14	25
9		13	—	—	—	—	—	10	11		15	26
10		41	—	—	—	—	—	9	11		12	23

Rep	Conc.	Cont	1	2	3	4	5	6	7	8	Day 6 Total	Third Brood
1	41	30	—	—	—	4	—	10	12		14	26
2		18	—	—	—	5	—	13	15		18	29
3		46	—	—	—	6	—	13	15		19	34
4		3	—	—	—	6	—	13	12		19	31
5		30	—	—	—	5	—	7	11		12	23
6		10	—	—	—	4	—	9	10		13	23
7		55	—	—	—	4	—	—	5		4	9
8		39	—	—	—	4	—	11	14		15	29
9		24	—	—	—	4	—	9	10		13	23
10		60	—	—	—	3	—	9	9		12	21

Rep	Conc.	Cont	1	2	3	4	5	6	7	8	Day 6 Total	Third Brood
1	12.5	45	—	—	—	3	—	7	12		10	22
2		6	—	—	—	5	—	9	12		14	26
3		54	—	—	—	6	—	—	13		17	30
4		59	—	—	—	6	—	11	14		17	31
5		11	—	—	—	3	—	7	9		10	19
6		26	—	—	—	5	—	10	10		15	25
7		21	—	—	—	5	—	10	11		15	26
8		19	—	—	—	5	—	10	11		15	26
9		48	—	—	—	4	—	9	11		13	24
10		56	—	—	—	4	—	8	10		12	22

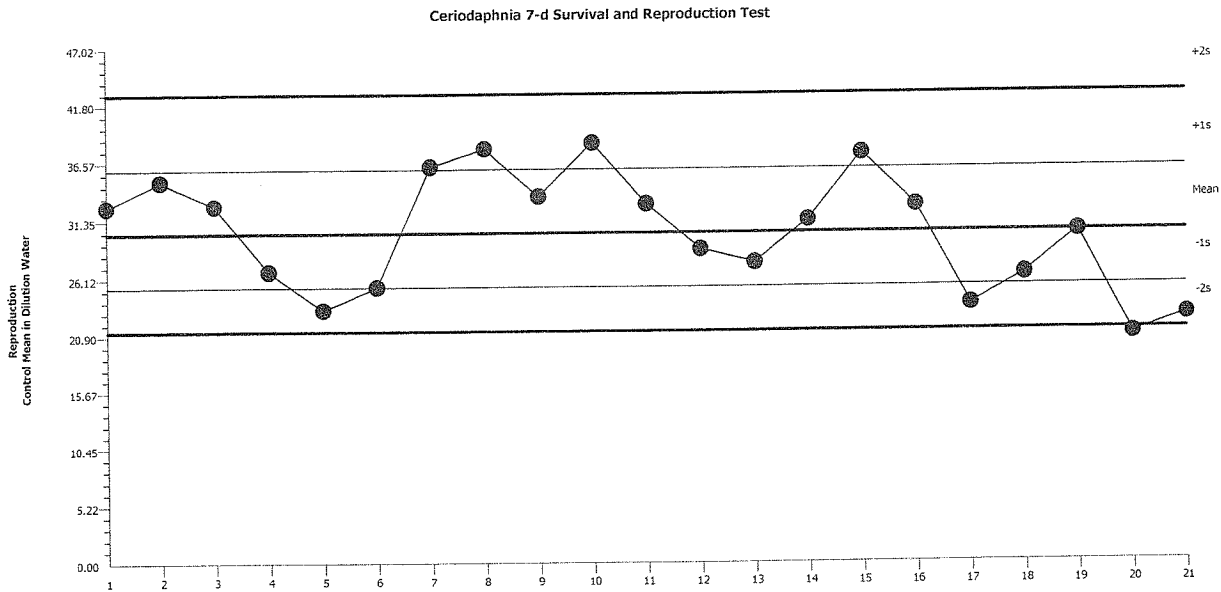
Rep	Conc.	Cont	1	2	3	4	5	6	7	8	Day 6 Total	Third Brood
1	100	31	—	—	—	—	4	9	—		13	13
2		40	—	—	—	6	—	13	14		19	33
3		16	—	—	—	4	—	10	12		14	26
4		47	—	—	—	5	—	12	13		17	30
5		7	—	—	—	3	—	8	9		11	20
6		38	—	—	—	7	—	—	10		7	17
7		25	—	—	—	6	—	12	14		18	32
8		57	—	—	—	5	—	10	12		15	27
9		8	—	—	—	4	—	9	9		13	22
10		58	—	—	—	5	—	5	7		10	17

Comments: X=mortality

QA et

**Appendix B**  
**Control Quality Assurance Plots**

Ceriodaphnia 7-d Survival and Reproduction Test			Rainier Environmental Laboratory	
Test Type: Reproduction-Survival (7d)	Organism: Ceriodaphnia dubia (Water Flea)	Material: All Materials		
Protocol: EPA/821/R-02-013 (2002)	Endpoint: Reproduction	Source: All SampleID Sources		

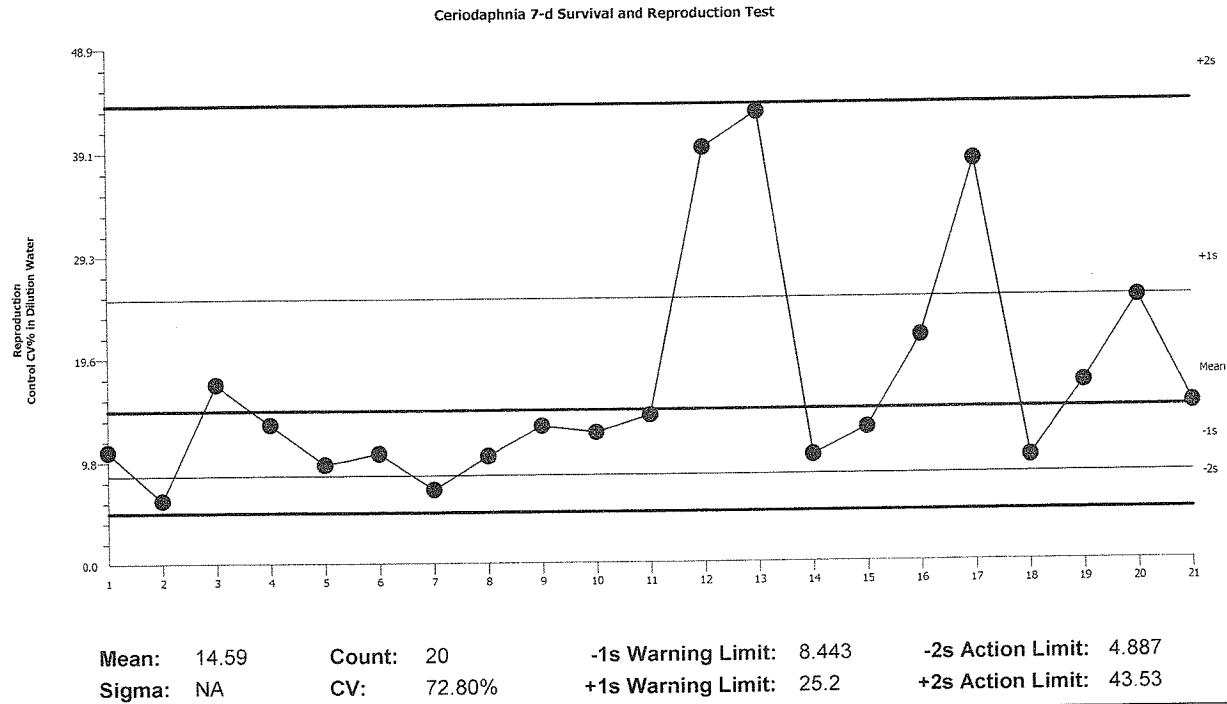


Mean: 30.2	Count: 20	-1s Warning Limit: 25.37	-2s Action Limit: 21.31
Sigma: NA	CV: 19.00%	+1s Warning Limit: 35.96	+2s Action Limit: 42.8

Quality Control Data

Point	Year	Month	Day	QC Data	Delta	Sigma	Warning	Action	Test ID	Analysis ID
1	2023	Mar	28	32.6	2.395	0.4378			08-6112-7701	
2			28	34.9	4.695	0.829			12-1613-0413	
3			28	32.7	2.495	0.4554			04-0199-7873	
4		May	16	26.8	-3.405	-0.6862			13-8129-3160	
5		Jul	18	23.3	-6.905	-1.489	(-)		14-6082-0511	
6			18	25.4	-4.805	-0.994			19-8415-9254	
7		Aug	8	36.2	5.995	1.039	(+)		12-9170-9622	
8			8	37.8	7.595	1.287	(+)		01-9261-6977	
9			15	33.5	3.295	0.5941			05-0789-7359	
10			15	38.3	8.095	1.362	(+)		01-8551-4720	
11			15	32.8	2.595	0.4729			07-7017-2430	
12		Oct	3	28.7	-1.505	-0.2932			11-5346-9317	
13			3	27.5	-2.705	-0.5382			09-1500-0673	
14			3	31.3	1.095	0.2043			16-9072-1994	
15		Nov	9	37.3	7.095	1.211	(+)		03-2131-2600	
16			9	32.6	2.395	0.4378			13-5957-2552	
17	2024	Jan	9	23.7	-6.505	-1.391	(-)		03-7391-6355	
18			16	26.4	-3.805	-0.7724			13-6235-6574	
19			30	30.2	-0.004774	-0.000907			19-4425-7224	
20		Mar	5	20.9	-9.305	-2.113	(-)	(-)	16-5037-8195	
21			5	22.6	-7.605	-1.664	(-)		12-5086-5116	

Ceriodaphnia 7-d Survival and Reproduction Test				Rainier Environmental Laboratory
Test Type:	Reproduction-Survival (7d)	Organism:	Ceriodaphnia dubia (Water Flea)	Material: All Materials
Protocol:	EPA/821/R-02-013 (2002)	Endpoint:	Reproduction	Source: All SampleID Sources



Quality Control Data										
Point	Year	Month	Day	QC Data	Delta	Sigma	Warning	Action	Test ID	Analysis ID
1	2023	Mar	28	10.74	-3.845	-0.5598			08-6112-7701	
2			28	6.108	-8.477	-1.592	(-)		12-1613-0413	
3			28	17.12	2.535	0.2931			04-0199-7873	
4		May	16	13.26	-1.325	-0.1742			13-8129-3160	
5		Jul	18	9.5	-5.085	-0.7842			14-6082-0511	
6			18	10.53	-4.055	-0.5959			19-8415-9254	
7		Aug	8	7.109	-7.476	-1.315	(-)		12-9170-9622	
8			8	10.27	-4.315	-0.6416			01-9261-6977	
9			15	13.07	-1.515	-0.2006			05-0789-7359	
10			15	12.43	-2.155	-0.2925			01-8551-4720	
11			15	14.07	-0.5151	-0.06577			07-7017-2430	
12	2024	Oct	3	39.42	24.83	1.819	(+)		11-5346-9317	
13			3	42.76	28.17	1.967	(+)		09-1500-0673	
14			3	10.22	-4.365	-0.6505			16-9072-1994	
15		Nov	9	12.77	-1.815	-0.2431			03-2131-2600	
16			9	21.46	6.875	0.7064			13-5957-2552	
17		Jan	9	38.16	23.57	1.759	(+)		03-7391-6355	
18			16	9.974	-4.611	-0.6951			13-6235-6574	
19			30	17.01	2.425	0.2813			19-4425-7224	
20		Mar	5	25.06	10.47	0.9901			16-5037-8195	
21			5	14.93	0.3449	0.04275			12-5086-5116	

**Appendix C**  
**Sample Check-In Sheet**

Rainier Environmental  
5013 Pacific Hwy East, Ste. 20  
Tacoma, WA 98424

Sample Check-In Information

Client: CITY OF SNOHOMISH

Tests Performed: cd-c  
Test ID No(s): 2403-009

Sample ID:	<u>3424</u>	<u>3624</u>	<u>3824</u>	
Log-in No. (20-xxxx):	<u>24-043</u>	<u>24-046</u>	<u>24-050</u>	
Sample Collection Date & Time:	<u>3/4/24 1200</u>	<u>3/6/24 1000</u>	<u>3/8/24 1130</u>	
Sample Receipt Date & Time:	<u>3/4/24 1300</u>	<u>3/6/24 1245</u>	<u>3/8/24 1445</u>	
Check-in Temperature (°C)	<u>0.8</u>	<u>1.7</u>	<u>1.2</u>	
Temperature OK?	<u>Y</u> N	<u>Y</u> N	<u>Y</u> N	
DO (mg/L)	<u>10.9</u>	<u>10.2</u>	<u>10.5</u>	
pH (units)	<u>7.17</u>	<u>7.22</u>	<u>7.20</u>	
Conductivity (µS/cm)	<u>271</u>	<u>384</u>	<u>359</u>	
Salinity (ppt)	<u>—</u>	<u>—</u>	<u>—</u>	
Tit. Vol / Sam. Vol. / Alkalinity (mg/L)*	<u>2.71 25.108</u>	<u>2.5 125 1100</u>	<u>2.4 125 196</u>	<u>1 1</u>
Tit. Vol. / Sam. Vol. / Hardness (mg/L)* <sup>2</sup>	<u>2.0 125 180</u>	<u>1.9 125 176</u>	<u>2.0 125 180</u>	<u>1 1</u>
Total Chlorine (mg/L)	<u>&lt;0.03</u>	<u>&lt;0.03</u>	<u>&lt;0.03</u>	
Total Ammonia Nitrogen (mg/L)	<u>&lt;1.0</u>	<u>&lt;1.0</u>	<u>&lt;1.0</u>	
Technician Initials	<u>gf</u>	<u>gf</u>	<u>gf</u>	

\* = mg/L as CaCO<sub>3</sub>, <sup>2</sup> = Measured for freshwater samples only, NA = Not Applicable.

NM = Not Measured

Freshwater Tests:

Control/Dilution Water Source: test type: cd-c 8.2 (DMW) MHW Other: 003  
Control/Dilution Water Source: test type: 8.2 (DMW) MHW Other: —  
Additional Control? Y N = —

Marine Tests:

Control/Dilution Water Source: test type: — ART SW NAT SW  
Control/Dilution Water Source: test type: — ART SW NAT SW  
Additional Control? Y N = —  
Sample Salted w/ artificial salt? Y N If yes, what ppt? — test type: —  
Sample salted w/brine? Y N If yes, what ppt? — test type: —

Comments: Temperature for grab sample must be 0-20°C if received within 1 hour of collection time, 0-12°C if effluent received within 4 hours of collection time, and 0-6°C for all other samples.

Sample Description:

COC Complete? Y or N —  
1 Y 2 Y 3 Y

Filtration? Y N  
Pore Size: —  
Organisms or Debris —

Aeration? Y N  
Length of Time: —  
Final DO: —  
Final pH: —

Hardness Adjustment? Y N  
If adjusted, please see worksheet for details.

Sub-samples for additional chemistry:

QC Check: gf

**Appendix D**  
**Chain-of-Custody Forms**



**Washington**  
5013 Pacific Highway East, Suite 20  
Fife, WA 98424  
Phone: 253.922.8898

Date \_\_\_\_\_ Page \_\_\_\_\_ of \_\_\_\_\_

[illegible]

# Rainier ENVIRONMENTAL

Washington  
5013 Pacific Highway East, Suite 20  
Fife, WA 98424  
Phone 253.922.8898

Chain of Custody

Date \_\_\_\_\_ Page \_\_\_\_\_ of \_\_\_\_\_

Sample Collection By:

Report to:

Company City of Snoqualmie  
Address 38190 SE STEVENS ROAD  
City/State/Zip Snoqualmie, WA 98065  
Contact Lyle Beach  
Phone 425-766-2550  
Email lbeach@snoqualmie.wa.gov

Invoice To:

Company City of Snoqualmie  
Address P.O. Box 987  
City/State/Zip Snoqualmie, WA 98065  
Contact Tom Holmes  
Phone 425-766-1240  
Email tholmes@snoqualmie.wa.gov

ANALYSES REQUIRED

Receipt Temperature (°C)

SAMPLE ID

DATE

TIME

MATRIX

CONTAINER TYPE

NO. OF CONTAINERS

COMMENTS

3624

3-6-24

10:00a

Wd

Coke

1

✓ Chronic Toxicity

1.7

PROJECT INFORMATION

SAMPLE RECEIPT

Client:

Total No. of Containers

PO No.:

Received Good Condition?

Shipped Via:

Matches Test Schedule?

SPECIAL INSTRUCTIONS/COMMENTS:

RELINQUISHED BY (CLIENT)

RELINQUISHED BY (COURIER)

RECEIVED BY (COURIER)

RECEIVED BY (LABORATORY)

(Signature)

(Time)

(Signature)

(Time)

(Printed Name)

(Date)

(Printed Name)

(Date)

(Company)

(Log in #)

City of Snoqualmie  
Lyle Beach  
3-6-24  
9  
FISC TOLLESON  
3/6/24  
24-046

Sample Collection By:

Report to:

Company City of Snoqualmie  
Address 38190 SE Stevens Road  
City/State/Zip Snoqualmie, WA 98065  
Contact Lyle Beach  
Phone 425-766-2590  
Email lbeach@snoqualmie.wa.gov

Invoice To:

Company City of Snoqualmie  
Address P.O. Box 987  
City/State/Zip Snoqualmie, WA 98065  
Contact Tom Holmes  
Phone 425-766-1210  
Email tholmes@snoqualmie.wa.gov

ANALYSES REQUIRED

Receipt Temperature (°C)

SAMPLE ID

DATE

TIME

MATRIX

CONTAINER  
TYPE

NO. OF  
CONTAINERS

COMMENTS

3824

3-8-24

11:30a

WA

Cube

1

✓ Chronic Toxicity

1.2

PROJECT INFORMATION

SAMPLE RECEIPT

Total No. of Containers

Received Good Condition?

Matches Test Schedule?

Shipped Via:

Carrier

SPECIAL INSTRUCTIONS/COMMENTS:

RELINQUISHED BY (CLIENT)

(Signature)

(Time)

(Printed Name)

(Date)

Lyle Beach

3-8-24

(Company)

City of Snoqualmie

RECEIVED BY (COURIER)

(Signature)

(Time)

(Printed Name)

(Date)

RECEIVED BY (LABORATORY)

(Signature)

(Time)

(Printed Name)

(Date)

Eve Tolleson

145 09150

FDIC TOLLESON

3/9/24

(Log in #)

24-050