



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

**April 2024**

Report date: April 18, 2024

Submitted to:

**City of Everett**  
3200 Cedar Street  
Everett, WA 98201

*Rainier Environmental*  
5013 Pacific Hwy East  
Suite 20  
Tacoma, WA 98424

## 1.0 INTRODUCTION

Acute toxicity tests were conducted using effluent samples collected from City of Everett's Port Gardner TF/SC System (SCE) and Lagoon System (FEN). Testing was conducted in April 2024 using the test organism *Daphnia pulex*. Testing was performed at Rainier Environmental Laboratory.

## 2.0 METHODS

### 2.1 Sample Collection and Transport

Effluent samples were collected into LDPE cubitainers by City of Everett personnel. The samples were packed in coolers containing ice and transported to Rainier Environmental the day of collection. Appropriate chain-of-custody procedures were employed during collection and transport.

### 2.2 Sample Receipt

Upon arrival at the laboratory, 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 B). Samples were stored at 4°C in the dark until used for testing.

### 2.3 Test Methods

Acute toxicity tests were conducted using *D. pulex* according to procedures presented by USEPA (2002) and summarized in Table 1.

**Table 1. Summary of conditions for the 48h *D. pulex* acute survival tests.**

|   |   |
|---|---|
| Test initiation date and time             | FEN: 4/10/2024; 1330h<br>SCE: 4/10/2024; 1450h  |
| Test termination date and time            | FEN: 4/12/2024; 1315h<br>SCE: 4/12/2024; 1425h  |
| Test organism                             | <i>Daphnia pulex</i>  |
| Test organism source                      | In-house cultures   |
| Test organism age                         | < 24 hours  |
| Test duration                             | 48 hours  |
| Feeding                                   | YTC: algal suspension during org. holding time. No feeding during test.                             |
| Test chamber and test solution volume     | 30 mL plastic cup, 25 mL  |
| Test temperature                          | 20 ± 1°C  |
| Dilution water                            | Moderately Hard Synthetic Water   |
| Test concentrations (% sample)            | FEN: 100, 50, 25, 15.6, 6.25, laboratory control<br>SCE: 100, 30, 10, 3.0, 0.64, laboratory control |
| Number of organisms/chamber               | 5   |
| Number of replicates                      | 4   |
| Photoperiod                               | 16 hours light/8 hours dark   |
| Aeration                                  | None  |
| Test protocol                             | EPA-821-R-02-012  |
| Test acceptability criterion for controls | ≥ 90% survival  |
| Reference toxicant                        | Copper sulfate  |

### 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                            | FEN              | SCE              |
|--------------------------------------|------------------|------------------|
| Rainier Log-In No.                   | 24-060           | 24-061           |
| Collection date and time             | 4/10/2024; 0700h | 4/10/2024; 0700h |
| Receipt date and time                | 4/10/2024; 1242h | 4/10/2024; 1242h |
| Receipt temperature (°C)             | 1.7              | 1.7              |
| Dissolved oxygen (mg/L)              | 9.3              | 8.9              |
| pH                                   | 7.59             | 7.33             |
| Conductivity (µS/cm)                 | 618              | 615              |
| Hardness (mg/L CaCO <sub>3</sub> )   | 84               | 92               |
| Alkalinity (mg/L CaCO <sub>3</sub> ) | 156              | 100              |
| Total Chlorine (mg/L)                | <0.03            | <0.03            |
| Total Ammonia (mg/L)                 | 27.3             | 20.1             |

Survival was evaluated in the acute toxicity tests after 48 hours of exposure. Results are summarized in Table 3. Mean survival in the 100 percent effluent concentration for sample FEN was 60 percent. Mean survival in the 100 percent effluent concentration for sample SCE was 100 percent. There was no significant difference between the controls and the acute critical effluent concentration (ACEC) of 15.6 percent effluent and 0.64 percent effluent for FEN and SCE, respectively.

**Table 3. Summary of results**

| Species                      | Concentration (%) | Survival (%) | NOEC <sup>a</sup> (% effluent) | LOEC <sup>b</sup> (% effluent) |
|------------------------------|-------------------|--------------|--------------------------------|--------------------------------|
| <b><u>Sample ID: FEN</u></b> |                   |              |                                |                                |
| <i>Daphnia pulex</i>         | 0.0               | 100          | 100                            | >100                           |
|                              | 6.25              | 100          |                                |                                |
|                              | 15.6              | 100          |                                |                                |
|                              | 25                | 100          |                                |                                |
|                              | 50                | 100          |                                |                                |
|                              | 100               | 60           |                                |                                |
| <b><u>Sample ID: SCE</u></b> |                   |              |                                |                                |
| <i>Daphnia pulex</i>         | 0.0               | 100          | 100                            | >100                           |
|                              | 0.64              | 100          |                                |                                |
|                              | 3.0               | 100          |                                |                                |
|                              | 10                | 100          |                                |                                |
|                              | 30                | 100          |                                |                                |
|                              | 100               | 100          |                                |                                |

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

Individual statistical summaries for all tests and copies of the laboratory bench sheets, sample check-in sheets and chain of custody forms are provided in Appendices A through C.

#### 4.0 QA/QC

All samples were received in good condition and within the temperature range specified by WDOE (2016). The toxicity tests met all acceptability criteria for performance of control organisms. All water quality parameters remained within the ranges specified in the corresponding test methods throughout the tests.

Results for the reference toxicant test used to monitor laboratory performance and test organism sensitivity are summarized in Table 4. Results for the reference toxicant test fell within the acceptable range of mean  $\pm$  two standard deviations of historical test results, indicating that the test organisms were of an appropriate degree of sensitivity. The coefficient of variation (CV) for the test is also shown in the table.

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

| Species              | Date initiated | Endpoint     | LC <sub>50</sub><br>(µg/L copper) | Acceptable Range<br>(µg/L copper) | CV<br>(%) |
|----------------------|----------------|--------------|-----------------------------------|-----------------------------------|-----------|
| <i>Daphnia pulex</i> | 4/12/2024      | 96h survival | 13.9                              | 8.19 – 28.0                       | 36.0      |

#### REFERENCES

- Tidepool Scientific Software. 2000-2011. CETIS Comprehensive Environmental Toxicity Information System Software, Version 1.8.4.6.
- USEPA. 2002. Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, Fifth Edition. EPA-821-R-02-012, pg. 53-54.
- 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 June 2016.

**Appendix A**  
***Daphnia pulex* Acute Toxicity Test**  
**Statistical Summaries and Raw Bench Sheets**

## **FEN - Lagoon System**

# CETIS Summary Report

Report Date: 18 Apr-24 09:46 (p 1 of 1)  
Test Code: 2404-022 | 17-5957-5770

## Daphnia pulex 48-h Acute Survival Test

Rainier Environmental Laboratory

Batch ID: 20-3658-6934  
Start Date: 10 Apr-24 13:30  
Ending Date: 12 Apr-24 13:15  
Duration: 48h  
Test Type: Survival (48h)  
Protocol: EPA/821/R-02-012 (2002)  
Species: Daphnia pulex  
Source: In-House Culture

Analyst: Eric Tollefson  
Diluent: Mod-Hard Synthetic Water  
Brine:  
Age: <24h

Sample ID: 19-0425-3716  
Sample Date: 10 Apr-24 07:00  
Receive Date: 10 Apr-24 12:42  
Sample Age: 7h (1.7 °C)  
Code: 24-060  
Material: POTW Effluent  
Source: Everett (WA0024490)  
Station: FEN Outfall 015

Client: Everett  
Project:

### Comparison Summary

| Analysis ID  | Endpoint          | NOEL | LOEL | TOEL | PMSD  | TU | Method                       |
|--------------|-------------------|------|------|------|-------|----|------------------------------|
| 09-1134-5548 | 48h Survival Rate | 100  | >100 | NA   | 32.4% | 1  | Steel Many-One Rank Sum Test |

### Test Acceptability

| Analysis ID  | Endpoint          | Attribute    | Test Stat | TAC Limits | Overlap | Decision                      |
|--------------|-------------------|--------------|-----------|------------|---------|-------------------------------|
| 09-1134-5548 | 48h Survival Rate | Control Resp | 1         | 0.9 - NL   | Yes     | Passes Acceptability Criteria |

### 48h Survival Rate Summary

| C-%  | Control Type   | Count | Mean | 95% LCL | 95% UCL | Min | Max | Std Err | Std Dev | CV%    | %Effect |
|------|----------------|-------|------|---------|---------|-----|-----|---------|---------|--------|---------|
| 0    | Dilution Water | 4     | 1    | 1       | 1       | 1   | 1   | 0       | 0       | 0.0%   | 0.0%    |
| 6.25 |                | 4     | 1    | 1       | 1       | 1   | 1   | 0       | 0       | 0.0%   | 0.0%    |
| 15.6 |                | 4     | 1    | 1       | 1       | 1   | 1   | 0       | 0       | 0.0%   | 0.0%    |
| 25   |                | 4     | 1    | 1       | 1       | 1   | 1   | 0       | 0       | 0.0%   | 0.0%    |
| 50   |                | 4     | 1    | 1       | 1       | 1   | 1   | 0       | 0       | 0.0%   | 0.0%    |
| 100  |                | 4     | 0.6  | 0.4171  | 0.7829  | 0   | 1   | 0.2449  | 0.4899  | 81.65% | 40.0%   |

### 48h Survival Rate Detail

| C-%  | Control Type   | Rep 1 | Rep 2 | Rep 3 | Rep 4 |
|------|----------------|-------|-------|-------|-------|
| 0    | Dilution Water | 1     | 1     | 1     | 1     |
| 6.25 |                | 1     | 1     | 1     | 1     |
| 15.6 |                | 1     | 1     | 1     | 1     |
| 25   |                | 1     | 1     | 1     | 1     |
| 50   |                | 1     | 1     | 1     | 1     |
| 100  |                | 0     | 1     | 1     | 0.4   |

### 48h Survival Rate Binomials

| C-%  | Control Type   | Rep 1 | Rep 2 | Rep 3 | Rep 4 |
|------|----------------|-------|-------|-------|-------|
| 0    | Dilution Water | 5/5   | 5/5   | 5/5   | 5/5   |
| 6.25 |                | 5/5   | 5/5   | 5/5   | 5/5   |
| 15.6 |                | 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  |                | 0/5   | 5/5   | 5/5   | 2/5   |



Freshwater Acute  
48 Hour Toxicity Test Data Sheet

Client: Everett  
 Sample ID: FEN  
 Test #: 2404-022  
 Log-In #: 24-060

Start Date & Time: 4/10/2024 1330  
 End Date & Time: 4/12/2024 1315  
 Test Organism: Daphnia pulex

| Rep. #              | Conc. or Cont. # | Number of Live Organisms |    |    | Dissolved Oxygen (mg/L) |     |     | pH (units) |      |      | Cond (uohm-cm) |     |     | Temperature (°C) |      |      | Mean Percent Survival |
|---------------------|------------------|--------------------------|----|----|-------------------------|-----|-----|------------|------|------|----------------|-----|-----|------------------|------|------|-----------------------|
|                     |                  | 0                        | 24 | 48 | 0                       | 24  | 48  | 0          | 24   | 48   | 0              | 24  | 48  | 0                | 24   | 48   |                       |
| 1                   | CON              | 5                        | 5  | 5  | 8.8                     | 8.2 | 8.5 | 8.04       | 8.01 | 7.92 | 309            | 311 | 311 | 20.5             | 19.9 | 19.9 |                       |
| 2                   |                  | 18                       | 5  | 5  |                         |     |     |            |      |      |                |     |     |                  |      |      |                       |
| 3                   |                  | 1                        | 5  | 5  |                         |     |     |            |      |      |                |     |     |                  |      |      |                       |
| 4                   |                  | 23                       | 5  | 5  |                         |     |     |            |      |      |                |     |     |                  |      |      |                       |
| 1                   | 10.25            | 16                       | 5  | 5  | 8.4                     | 8.2 | 8.6 | 7.85       | 7.94 | 7.93 | 385            | 327 | 323 | 20.5             | 20.1 | 19.9 |                       |
| 2                   |                  | 9                        | 5  | 5  |                         |     |     |            |      |      |                |     |     |                  |      |      |                       |
| 3                   |                  | 22                       | 5  | 5  |                         |     |     |            |      |      |                |     |     |                  |      |      |                       |
| 4                   |                  | 4                        | 5  | 5  |                         |     |     |            |      |      |                |     |     |                  |      |      |                       |
| 1                   | 15.6             | 10                       | 5  | 5  | 8.5                     | 8.0 | 8.6 | 7.88       | 7.90 | 7.87 | 350            | 354 | 261 | 20.4             | 20.2 | 19.9 |                       |
| 2                   |                  | 24                       | 5  | 5  |                         |     |     |            |      |      |                |     |     |                  |      |      |                       |
| 3                   |                  | 7                        | 5  | 5  |                         |     |     |            |      |      |                |     |     |                  |      |      |                       |
| 4                   |                  | 21                       | 5  | 5  |                         |     |     |            |      |      |                |     |     |                  |      |      |                       |
| 1                   | 25               | 12                       | 5  | 5  | 8.3                     | 1.8 | 8.4 | 7.83       | 1.86 | 7.90 | 393            | 386 | 375 | 20.4             | 20.2 | 19.9 |                       |
| 2                   |                  | 6                        | 5  | 5  |                         |     |     |            |      |      |                |     |     |                  |      |      |                       |
| 3                   |                  | 20                       | 5  | 5  |                         |     |     |            |      |      |                |     |     |                  |      |      |                       |
| 4                   |                  | 15                       | 5  | 5  |                         |     |     |            |      |      |                |     |     |                  |      |      |                       |
| 1                   | 50               | 2                        | 5  | 5  | 8.4                     | 1.8 | 8.5 | 7.75       | 1.80 | 7.85 | 456            | 469 | 467 | 20.3             | 20.2 | 19.9 |                       |
| 2                   |                  | 17                       | 5  | 5  |                         |     |     |            |      |      |                |     |     |                  |      |      |                       |
| 3                   |                  | 14                       | 5  | 5  |                         |     |     |            |      |      |                |     |     |                  |      |      |                       |
| 4                   |                  | 11                       | 5  | 5  |                         |     |     |            |      |      |                |     |     |                  |      |      |                       |
| 1                   | 100              | 19                       | 5  | 5  | 8.5                     | 1.8 | 8.4 | 7.54       | 1.14 | 7.61 | 633            | 637 | 633 | 19.9             | 20.0 | 19.9 |                       |
| 2                   |                  | 3                        | 5  | 5  |                         |     |     |            |      |      |                |     |     |                  |      |      |                       |
| 3                   |                  | 8                        | 5  | 5  |                         |     |     |            |      |      |                |     |     |                  |      |      |                       |
| 4                   |                  | 13                       | 5  | 5  |                         |     |     |            |      |      |                |     |     |                  |      |      |                       |
| Technician Initials |                  | gt                       | gt | gt | gt                      | gt  | gt  |            |      |      |                |     |     |                  |      |      |                       |

Dilution Water Batch #: M15W 040  
 Test Chamber: ROOM 2  
 Animal Source: In-house cultures  
 Date Received:         
 Sample Description:         
 QA Check: gt

Comments: 0 hrs.  
 24 hrs.  
 48 hrs.  
 Rainier Environmental  
 Washington Laboratory  
 5013 Pacific Hwy. E. Suite 20  
 Tacoma, WA 98424

**SCE - TE/SC System**

## CETIS Summary Report

Report Date: 18 Apr-24 09:52 (p 1 of 1)

Test Code: 2404-023 | 14-2731-6763

## Daphnia pulex 48-h Acute Survival Test

Rainier Environmental Laboratory

Batch ID: 20-1269-3548      Test Type: Survival (48h)  
Start Date: 10 Apr-24 14:50      Protocol: EPA/821/R-02-012 (2002)  
Ending Date: 12 Apr-24 14:25      Species: Daphnia pulex  
Duration: 48h      Source: In-House Culture

Analyst: Eric Tollefson  
Diluent: Mod-Hard Synthetic Water  
Brine:  
Age: <24h

Sample ID: 05-0837-0875      Code: 24-061  
Sample Date: 10 Apr-24 07:00      Material: POTW Effluent  
Receive Date: 10 Apr-24 12:42      Source: Everett (WA0024490)  
Sample Age: 8h (1.7 °C)      Station: SCE Outfall 100

Client: Everett  
Project:

## Comparison Summary

| Analysis ID  | Endpoint          | NOEL | LOEL | TOEL | PMSD | TU | Method                       |
|--------------|-------------------|------|------|------|------|----|------------------------------|
| 10-8311-5889 | 48h Survival Rate | 100  | >100 | NA   | 5.0% | 1  | Steel Many-One Rank Sum Test |

## Test Acceptability

| Analysis ID  | Endpoint          | Attribute    | Test Stat | TAC Limits | Overlap | Decision                      |
|--------------|-------------------|--------------|-----------|------------|---------|-------------------------------|
| 10-8311-5889 | 48h Survival Rate | Control Resp | 1         | 0.9 - NL   | Yes     | Passes Acceptability Criteria |

## 48h Survival Rate Summary

| C-%  | Control Type   | Count | Mean | 95% LCL | 95% UCL | Min | Max | Std Err | Std Dev | CV%  | %Effect |
|------|----------------|-------|------|---------|---------|-----|-----|---------|---------|------|---------|
| 0    | Dilution Water | 4     | 1    | 1       | 1       | 1   | 1   | 0       | 0       | 0.0% | 0.0%    |
| 0.64 |                | 4     | 1    | 1       | 1       | 1   | 1   | 0       | 0       | 0.0% | 0.0%    |
| 3    |                | 4     | 1    | 1       | 1       | 1   | 1   | 0       | 0       | 0.0% | 0.0%    |
| 10   |                | 4     | 1    | 1       | 1       | 1   | 1   | 0       | 0       | 0.0% | 0.0%    |
| 30   |                | 4     | 1    | 1       | 1       | 1   | 1   | 0       | 0       | 0.0% | 0.0%    |
| 100  |                | 4     | 1    | 1       | 1       | 1   | 1   | 0       | 0       | 0.0% | 0.0%    |

## 48h Survival Rate Detail

| C-%  | Control Type   | Rep 1 | Rep 2 | Rep 3 | Rep 4 |
|------|----------------|-------|-------|-------|-------|
| 0    | Dilution Water | 1     | 1     | 1     | 1     |
| 0.64 |                | 1     | 1     | 1     | 1     |
| 3    |                | 1     | 1     | 1     | 1     |
| 10   |                | 1     | 1     | 1     | 1     |
| 30   |                | 1     | 1     | 1     | 1     |
| 100  |                | 1     | 1     | 1     | 1     |

## 48h Survival Rate Binomials

| C-%  | Control Type   | Rep 1 | Rep 2 | Rep 3 | Rep 4 |
|------|----------------|-------|-------|-------|-------|
| 0    | Dilution Water | 5/5   | 5/5   | 5/5   | 5/5   |
| 0.64 |                | 5/5   | 5/5   | 5/5   | 5/5   |
| 3    |                | 5/5   | 5/5   | 5/5   | 5/5   |
| 10   |                | 5/5   | 5/5   | 5/5   | 5/5   |
| 30   |                | 5/5   | 5/5   | 5/5   | 5/5   |
| 100  |                | 5/5   | 5/5   | 5/5   | 5/5   |

# Freshwater Acute 48 Hour Toxicity Test Data Sheet

Client: Everett  
Sample ID: SCE  
Test #: 2404-023  
Log-In #: 24-061

Start Date & Time: 4/10/2024 1450  
End Date & Time: 4/12/2024 1425  
Test Organism: Daphnia pulex

| Rep. #              | Conc. or Cont. # | Number of Live Organisms |    |    | Dissolved Oxygen (mg/L) |     |     | pH (units) |      |      | Cond (uohm-cm) |     |     | Temperature (°C) |      |      | Mean Percent Survival |
|---------------------|------------------|--------------------------|----|----|-------------------------|-----|-----|------------|------|------|----------------|-----|-----|------------------|------|------|-----------------------|
|                     |                  | 0                        | 24 | 48 | 0                       | 24  | 48  | 0          | 24   | 48   | 0              | 24  | 48  | 0                | 24   | 48   |                       |
| 1                   | CON              | 19                       | 5  | 5  | 8.6                     | 8.0 | 8.2 | 8.04       | 8.00 | 7.95 | 311            | 319 | 320 | 20.4             | 19.9 | 19.9 |                       |
| 2                   |                  | 7                        | 5  | 5  |                         |     |     |            |      |      |                |     |     |                  |      |      |                       |
| 3                   |                  | 17                       | 5  | 5  |                         |     |     |            |      |      |                |     |     |                  |      |      |                       |
| 4                   |                  | 12                       | 5  | 5  |                         |     |     |            |      |      |                |     |     |                  |      |      |                       |
| 1                   | 0.64             | 20                       | 5  | 5  | 8.4                     | 8.1 | 8.4 | 7.94       | 7.98 | 7.95 | 305            | 304 | 310 | 20.4             | 20.1 | 19.9 |                       |
| 2                   |                  | 3                        | 5  | 5  |                         |     |     |            |      |      |                |     |     |                  |      |      |                       |
| 3                   |                  | 14                       | 5  | 5  |                         |     |     |            |      |      |                |     |     |                  |      |      |                       |
| 4                   |                  | 6                        | 5  | 5  |                         |     |     |            |      |      |                |     |     |                  |      |      |                       |
| 1                   | 3.0              | 8                        | 5  | 5  | 8.3                     | 8.1 | 8.4 | 7.96       | 7.97 | 7.92 | 307            | 306 | 308 | 20.6             | 20.1 | 19.9 |                       |
| 2                   |                  | 2                        | 5  | 5  |                         |     |     |            |      |      |                |     |     |                  |      |      |                       |
| 3                   |                  | 21                       | 5  | 5  |                         |     |     |            |      |      |                |     |     |                  |      |      |                       |
| 4                   |                  | 15                       | 5  | 5  |                         |     |     |            |      |      |                |     |     |                  |      |      |                       |
| 1                   | 10               | 10                       | 5  | 5  | 8.2                     | 8.1 | 8.3 | 7.97       | 7.95 | 7.91 | 330            | 334 | 332 | 20.6             | 20.0 | 19.9 |                       |
| 2                   |                  | 12                       | 5  | 5  |                         |     |     |            |      |      |                |     |     |                  |      |      |                       |
| 3                   |                  | 4                        | 5  | 5  |                         |     |     |            |      |      |                |     |     |                  |      |      |                       |
| 4                   |                  | 13                       | 5  | 5  |                         |     |     |            |      |      |                |     |     |                  |      |      |                       |
| 1                   | 30               | 9                        | 5  | 5  | 8.3                     | 7.8 | 8.0 | 7.89       | 7.82 | 7.87 | 397            | 394 | 396 | 20.2             | 20.0 | 19.9 |                       |
| 2                   |                  | 23                       | 5  | 5  |                         |     |     |            |      |      |                |     |     |                  |      |      |                       |
| 3                   |                  | 1                        | 5  | 5  |                         |     |     |            |      |      |                |     |     |                  |      |      |                       |
| 4                   |                  | 16                       | 5  | 5  |                         |     |     |            |      |      |                |     |     |                  |      |      |                       |
| 1                   | 100              | 18                       | 5  | 5  | 8.4                     | 7.7 | 7.9 | 7.38       | 7.54 | 7.71 | 634            | 627 | 625 | 19.9             | 19.9 | 19.9 |                       |
| 2                   |                  | 5                        | 5  | 5  |                         |     |     |            |      |      |                |     |     |                  |      |      |                       |
| 3                   |                  | 24                       | 5  | 5  |                         |     |     |            |      |      |                |     |     |                  |      |      |                       |
| 4                   |                  | 11                       | 5  | 5  |                         |     |     |            |      |      |                |     |     |                  |      |      |                       |
| Technician Initials |                  | 4                        | 4  | 4  | 4                       | 4   | 4   |            |      |      |                |     |     |                  |      |      |                       |

Dilution Water Batch #: M5W 048  
Test Chamber: P00M2

Animal Source: h-house cultures  
Date Received: 4

Sample Description: QA Check: 4

Comments: 0 hrs:  
24 hrs:  
48 hrs:

Rainier Environmental  
Washington Laboratory  
5013 Pacific Hwy. E. Suite 20  
Tacoma, WA 98424

**Appendix B**  
**Sample Check-In Sheets**

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

Sample Check-In Information

Client: CITY OF EVERETT

Tests Performed: DP-a X2  
Test ID No(s): 2404-023; 2404-023

Sample Description:

Sample ID:

Log-in No. (20-xxxx):

Sample Collection Date & Time:

Sample Receipt Date & Time:

Check-in Temperature (°C)

Temperature OK?

DO (mg/L)

pH (units)

Conductivity (µS/cm)

Salinity (ppt)

Tit. Vol / Sam. Vol. / Alkalinity (mg/L)\*

Tit. Vol. / Sam. Vol. / Hardness (mg/L)\*<sup>a</sup>

Total Chlorine (mg/L)

Total Ammonia Nitrogen (mg/L)

Technician Initials

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

NM = Not Measured

Freshwater Tests:

Control/Dilution Water Source: test type: DP-a 8.2 (DMW) WHW Other: -040

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.

COC Complete? Y or N

1 2 3

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: U

**Appendix C**  
**Chain-of-Custody Form**

Sample Collection By:

Report to:

Company

Address

City/State/Zip

Contact

Phone

Email

City of Everett  
3200 Cedar St  
Everett, WA 98201  
Derek Kerlee  
425-257-9220  
Derek@EverettWA.gov

Invoice To:

Company

Address

City/State/Zip

Contact

Phone

Email

Sawee

ANALYSES REQUIRED

Receipt Temperature (°C)

| SAMPLE ID | DATE    | TIME | MATRIX | CONTAINER TYPE | NO. OF CONTAINERS | COMMENTS |
|-----------|---------|------|--------|----------------|-------------------|----------|
| 1         | 4/10/24 | 0700 | WW     | 10L            | 1                 |          |
| 2         | 4/10/24 | 0700 | WW     | 10L            | 1                 |          |
| 3         |         |      |        |                |                   |          |
| 4         |         |      |        |                |                   |          |
| 5         |         |      |        |                |                   |          |
| 6         |         |      |        |                |                   |          |
| 7         |         |      |        |                |                   |          |
| 8         |         |      |        |                |                   |          |
| 9         |         |      |        |                |                   |          |
| 10        |         |      |        |                |                   |          |

  

| PROJECT INFORMATION            |      | SAMPLE RECEIPT           |   | RELINQUISHED BY (CLIENT) |  | RELINQUISHED BY (COURIER) |  |
|--------------------------------|------|--------------------------|---|--------------------------|--|---------------------------|--|
| Client:                        |      | Total No. of Containers  | 2 | (Signature)              |  | (Signature)               |  |
| PO No.:                        |      | Received Good Condition? | Y | (Printed Name)           |  | (Printed Name)            |  |
| Shipped Via:                   | Unit | Matches Test Schedule?   | Y | (Company)                |  | (Company)                 |  |
| SPECIAL INSTRUCTIONS/COMMENTS: |      |                          |   | RECEIVED BY (COURIER)    |  | RECEIVED BY (LABORATORY)  |  |
|                                |      |                          |   | (Signature)              |  | (Signature)               |  |
|                                |      |                          |   | (Time)                   |  | (Time)                    |  |
|                                |      |                          |   | (Date)                   |  | (Date)                    |  |
|                                |      |                          |   | (Printed Name)           |  | (Printed Name)            |  |
|                                |      |                          |   | (Date)                   |  | (Date)                    |  |
|                                |      |                          |   | (Company)                |  | (Company)                 |  |
|                                |      |                          |   | (Log in #)               |  | (Log in #)                |  |

Acute Daphnia Pulex

24-080

24-061

1.7

RECEIVED BY (LABORATORY)

(Signature)

(Time)

(Date)

4/10/24

RECEIVED BY (LABORATORY)

(Signature)

(Time)

(Date)

12/2