



GRAYMONT

May 30, 2025

Azis Mahar
Industrial Facility Manager
Department of Ecology
Southwest Regional Office
PO Box 47775
Olympia, Wa 98504-7775

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JUN 05 2025

WA State Department
of Ecology (SWRO)

RE: 700100 Renewal of NPDES Waste Discharge Permit No. WA 0001007 for Discharge to the Blair Waterway

Dear Mr. Mahar:

Enclosed is Graymont Western US Inc. (Graymont) Tacoma facility NPDES permit renewal application (Permit No. WA 0001007). This submittal is provided to the Department of Ecology (Ecology) in accordance with Condition S10 of the current permit which expires on September 31, 2026 and consists of the following:

- Attachment A – A completed NPDES Application Form 1 – General Information
- Attachment B – A completed NPDES Application Form 2C – Application for Permit to Discharge Wastewater
 - Attachment B-1 Toxicity Effluent Test Results
 - Attachment B-2 Effluent Characterization for Pollutants Laboratory Analytical Results

We believe this submittal contains the required forms, data and facility operation descriptions necessary for the permit renewal application. Please contact me at (253) 428-6544 if you have any questions during your review.

Sincerely,

Keith R. Wiggs
Graymont Tacoma Terminal Supervisor

Enclosures

C: Jonathan Anderson/Graymont

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WA State Department
of Ecology (SWRO)

Attachment A
NPDES Application Form 1 – General Information




Application Form 1

General Information

NPDES Permitting Program

Note: All applicants to the National Pollutant Discharge Elimination System (NPDES) permits program, with the exception of publicly owned treatment works and other treatment works treating domestic sewage, must complete Form 1. Additionally, all applicants must complete one or more of the following forms: 2B, 2C, 2D, 2E, or 2F. To determine the specific forms you must complete, consult the “General Instructions” for this form.

EPA Identification Number		NPDES Permit Number WA0001007		Facility Name Graymont Western US, Inc.		OMB No. 2040-0004 Expires 07/31/2026	
Form 1 NPDES		U.S. Environmental Protection Agency Application for NPDES Permit to Discharge Wastewater GENERAL INFORMATION					
SECTION 1. ACTIVITIES REQUIRING AN NPDES PERMIT (40 CFR 122.21(F) AND (F)(1))							
Activities Requiring an NPDES Permit	1.1 Applicants Not Required to Submit Form 1						
	1.1.1	Is the facility a new or existing publicly owned treatment works or has your permitting authority directed you to submit Form 2A? If yes, STOP. Do NOT complete Form 1. Complete Form 2A. If the facility is also a treatment works treating domestic sewage , you must also complete Form 2S.	1.1.2	Is the facility a sludge-only facility (i.e., a facility that does not discharge wastewater to surface waters)? If yes, STOP. Do NOT complete Form 1. Complete Form 2S.			
	1.2 Applicants Required to Submit Form 1						
	1.2.1	Is the facility a concentrated animal feeding operation or a concentrated aquatic animal production facility ? <input type="checkbox"/> Yes → Complete Form 1 and Form 2B. <input checked="" type="checkbox"/> No	1.2.2	Is the facility an existing manufacturing, commercial, mining, or silvicultural facility that is currently discharging process wastewater ? <input checked="" type="checkbox"/> Yes → Complete Form 1 and Form 2C. <input type="checkbox"/> No			
	1.2.3	Is the facility a new manufacturing, commercial, mining, or silvicultural facility that has not yet commenced to discharge ? <input type="checkbox"/> Yes → Complete Form 1 and Form 2D. <input checked="" type="checkbox"/> No	1.2.4	Is the facility a new or existing manufacturing, commercial, mining, or silvicultural facility that discharges only nonprocess wastewater ? <input type="checkbox"/> Yes → Complete Form 1 and Form 2E. <input checked="" type="checkbox"/> No			
	1.2.5	Is the facility a new or existing facility whose discharge is composed entirely of stormwater associated with industrial activity or whose discharge is composed of both stormwater and non-stormwater ? <input type="checkbox"/> Yes → Complete Form 1 and Form 2F unless exempted by 40 CFR 122.26(b)(14)(x) or (b)(15). <input checked="" type="checkbox"/> No	1.2.6	Is the facility a new or existing treatment works treating domestic sewage that discharges wastewater to surface waters? <input type="checkbox"/> Yes → Complete Form 1, Form 2S, and any other applicable forms, as directed by your permitting authority. <input checked="" type="checkbox"/> No			
	SECTION 2. NAME, MAILING ADDRESS, AND LOCATION (40 CFR 122.21(F)(2))						
Name, Mailing Address, and Location	2.1 Facility Name						
	Graymont Western Inc., Tacoma Terminal						
	2.2 EPA Identification Number						
	WA 0001007						
	2.3 Facility Contact						
Name (first and last)			Title		Phone number		
Keith Wiggs			Plant Operator		(253) 428-6544		
Email address							
kwiggs@graymont.com							

EPA Identification Number	NPDES Permit Number WA0001007	Facility Name Graymont Western US, Inc.
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Name, Mailing Address, and Location Continued	2.4	Facility Mailing Address		
		Street or P.O. box 1220 E. Alexander Avenue		
		City or town Tacoma	State Washington	ZIP code 98421
	2.5	Facility Location		
		Street, route number, or other specific identifier 1220 E. Alexander Avenue		
		County name Pierce	County code (if known)	
		City or town Tacoma	State Washington	ZIP code 98421

SECTION 3. SIC AND NAICS CODES (40 CFR 122.21(F)(3))

SIC and NAICS Codes	3.1	SIC Code(s)	Description (optional)
		3274	Lime
		2816	Precipitated Calcium Carbonate
	3.2	NAICS Code(s)	Description (optional)
		327410	Lime Manufacturing
		325130	Synthetic Dye and Pigment Manufacturing

SECTION 4. OPERATOR INFORMATION (40 CFR 122.21(F)(4))

Operator Information	4.1	Name of Operator
		Graymont Western US, Inc.
	4.2	Is the name you listed in Item 4.1 also the owner? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
	4.3	Operator Status <input type="checkbox"/> Public—federal <input type="checkbox"/> Public—state <input type="checkbox"/> Other public (specify) _____ <input checked="" type="checkbox"/> Private <input type="checkbox"/> Other (specify) _____
	4.4	Phone Number of Operator (801) 716-2621

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Operator Information Continued	4.5	Operator Address					
		Street or P.O. Box 585 West Southridge Way					
		City or town Sandy	State Utah		ZIP code 84070		
		Email address of operator jcanderson@graymont.com					
SECTION 5. INDIAN LAND (40 CFR 122.21(F)(5))							
Indian Land	5.1	Is the facility located on Indian Land? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No					
SECTION 6. EXISTING ENVIRONMENTAL PERMITS (40 CFR 122.21(F)(6))							
Existing Environmental Permits	6.1	Existing Environmental Permits (check all that apply and print or type the corresponding permit number for each)					
		<input checked="" type="checkbox"/> NPDES (discharges to surface water)	<input type="checkbox"/> RCRA (hazardous wastes)		<input type="checkbox"/> UIC (underground injection of fluids)		
		<input type="checkbox"/> PSD (air emissions)	<input type="checkbox"/> Nonattainment program (CAA)		<input type="checkbox"/> NESHAPs (CAA)		
		<input type="checkbox"/> Ocean dumping (MPRSA)	<input type="checkbox"/> Dredge or fill (CWA Section 404)		<input type="checkbox"/> Other (specify)		
SECTION 7. MAP (40 CFR 122.21(F)(7))							
Map	7.1	Have you attached a topographic map containing all required information to this application? (See instructions for specific requirements.) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> CAFO—Not Applicable (See requirements in Form 2B.)					
SECTION 8. NATURE OF BUSINESS (40 CFR 122.21(F)(8))							
Nature of Business	8.1	<p>Describe the nature of your business.</p> <p>The facility produces lime and lime related products. Hydrated lime, a dry powder, is produced by adding water to quicklime. Precipitated calcium carbonate is produced by introducing CO₂ into hydrated lime slurry. The facility processes quicklime and produces hydrated lime products in both bags and bulk. Bagging facilities, bin-bag loading and bulk storage are available for both quicklime and hydrated lime products. These products can be loaded into trucks, rail cars or sea-born shipping containers at the plant. Finished lime products can be shipped by truck, rail or barge.</p> <p>The facility has the capability to produce quicklime (CaO), hydrated lime (Ca(OH)₂), and precipitated calcium carbonate (PCC). The PCC facility and the quicklime production areas have been mothballed, but could be operated again in the future.</p> <p>No mining of raw materials occurs at the facility.</p>					
SECTION 9. COOLING WATER INTAKE STRUCTURES (40 CFR 122.21(F)(9))							
Cooling Water Intake Structures	9.1	Does your facility use cooling water? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No → SKIP to Item 10.1.					
	9.2	Identify the source of cooling water. (Note that facilities that use a cooling water intake structure as described at 40 CFR 125, Subparts I and J may have additional application requirements at 40 CFR 122.21(r). Consult with your NPDES permitting authority to determine what specific information needs to be submitted and when.)					


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SECTION 10. VARIANCE REQUESTS (40 CFR 122.21(F)(10))

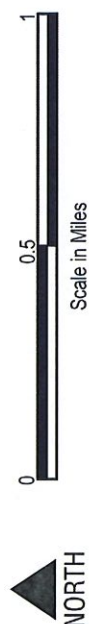
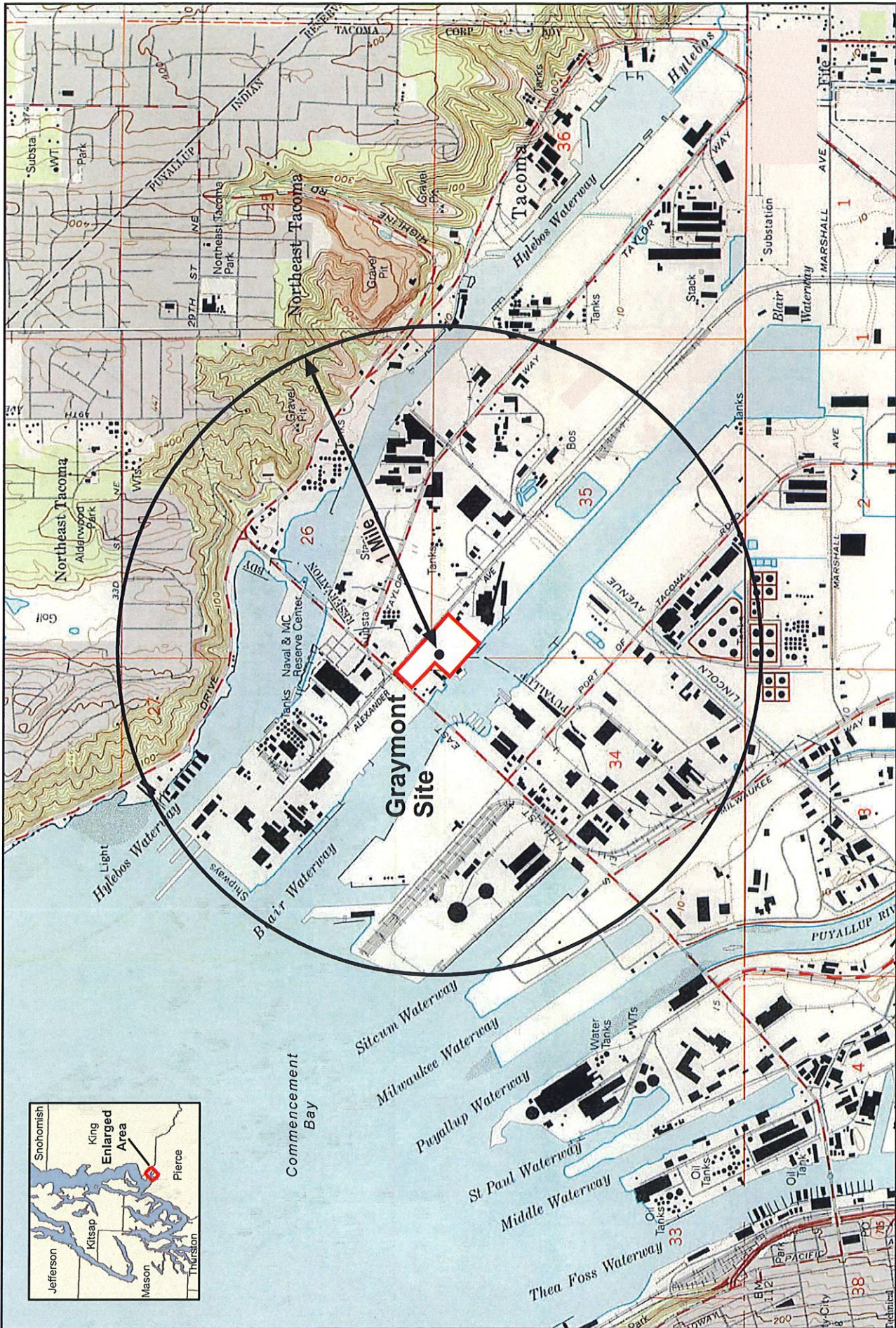
Variance Requests	10.1	Do you intend to request or renew one or more of the variances authorized at 40 CFR 122.21(m)? (Check all that apply. Consult with your NPDES permitting authority to determine what information needs to be submitted and when.)
	<input type="checkbox"/>	Fundamentally different factors (CWA Section 301(n))
	<input type="checkbox"/>	Water quality related effluent limitations (CWA Section 302(b)(2))
	<input type="checkbox"/>	Thermal discharges (CWA Section 316(a))
	<input type="checkbox"/>	Non-conventional pollutants (CWA Section 301(c) and (g))
	<input checked="" type="checkbox"/>	Not applicable

SECTION 11. CHECKLIST AND CERTIFICATION STATEMENT (40 CFR 122.22(A) AND (D))

Checklist and Certification Statement	11.1	In Column 1 below, mark the sections of Form 1 that you have completed and are submitting with your application. For each section, specify in Column 2 any attachments that you are enclosing to alert the permitting authority. Note that not all applicants are required to provide attachments.	
		Column 1	Column 2
	<input checked="" type="checkbox"/>	Section 1: Activities Requiring an NPDES Permit	<input type="checkbox"/> w/ attachments
	<input checked="" type="checkbox"/>	Section 2: Name, Mailing Address, and Location	<input type="checkbox"/> w/ attachments
	<input checked="" type="checkbox"/>	Section 3: SIC Codes	<input type="checkbox"/> w/ attachments
	<input checked="" type="checkbox"/>	Section 4: Operator Information	<input type="checkbox"/> w/ attachments
	<input checked="" type="checkbox"/>	Section 5: Indian Land	<input type="checkbox"/> w/ attachments
	<input checked="" type="checkbox"/>	Section 6: Existing Environmental Permits	<input type="checkbox"/> w/ attachments
	<input checked="" type="checkbox"/>	Section 7: Map	<input checked="" type="checkbox"/> w/ topographic map <input type="checkbox"/> w/ additional attachments
	<input checked="" type="checkbox"/>	Section 8: Nature of Business	<input type="checkbox"/> w/ attachments
	<input type="checkbox"/>	Section 9: Cooling Water Intake Structures	<input type="checkbox"/> w/ attachments
	<input type="checkbox"/>	Section 10.: Variance Requests	<input type="checkbox"/> w/ attachments
	<input checked="" type="checkbox"/>	Section 11: Checklist and Certification Statement	<input type="checkbox"/> w/ attachments
	11.2	Provide the following certification. (See instructions to determine the appropriate person to sign the application.)	
	<p>Certification Statement</p> <p><i>I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.</i></p>		
	Name (print or type first and last name)	Official title	
	Keith Wiggs	Terminal Supervisor	
	Signature	Date signed	
		05/30/2025	



Graymont Western US Inc., Tacoma, Washington



Source : USGS, Tacoma North 7.5 Quadrangle, Washington
1:24,000-Scale Series (Topographic) 1994
Latitude: 47°16' 16" N
Longitude: 122° 23' 48" W

Figure A-2
Site Location Map
Graymont Western US Inc., Tacoma Washington

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Attachment B
NPDES Application Form 2C, Application for Permit
to Discharge Wastewater

Water Permits Division




Application Form 2C

Existing Manufacturing, Commercial, Mining, and Silvicultural Operations

NPDES Permitting Program

Note: Complete this form *and* Form 1 if your facility is an existing manufacturing, commercial, mining, or silvicultural facility that currently discharges process wastewater.

EPA Identification Number		NPDES Permit Number WA0001007		Facility Name Graymont Western US, Inc.		OMB No. 2040-0004 Expires 07/31/2026	
Form 2C NPDES		U.S. Environmental Protection Agency Application for NPDES Permit to Discharge Wastewater EXISTING MANUFACTURING, COMMERCIAL, MINING, AND SILVICULTURE OPERATIONS					
SECTION 1. OUTFALL LOCATION (40 CFR 122.21(G)(1))							
Outfall Location	<u>1.1</u>	Provide information on each of the facility's outfalls in the table below.					
		Outfall Number	Receiving Water Name	Latitude		Longitude	
		001	Blair Waterway	47.271110534668		-122.396667480469	
SECTION 2. LINE DRAWING (40 CFR 122.21(G)(2))							
Line Drawing	<u>2.1</u>	Have you attached a line drawing to this application that shows the water flow through your facility with a water balance? (See instructions for drawing requirements. See Exhibit 2C-1 at end of instructions for example.) <input checked="" type="checkbox"/> Yes					
SECTION 3. AVERAGE FLOWS AND TREATMENT (40 CFR 122.21(G)(3))							
Average Flows and Treatment	<u>3.1</u>	For each outfall identified under Item 1.1, provide average flow and treatment information. Add additional sheets if necessary.					
		Outfall Number 001					
		Operations Contributing to Flow					
		Operation	Average Flow				
		Truck Wash	0.000878 mgd				
		PLS Wheel Wash	1.0000032 mgd				
		Truck Scale Wheel Wash	0.000878 mgd				
		Stormwater Runoff	0.012411 mgd				
		Treatment Units					
		Description (include size, flow rate through each treatment unit, retention time, etc.)	Code from Exhibit 2C-2	Final Disposal of Solid or Liquid Wastes Other Than by Discharge			
		Settling Basins (21,570 gallons per day)	1-U	N/A			
		pH Reduction (21,570 gallons per day)	2-K	N/A			

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Average Flows and Treatment Continued	3.1 cont.	**Outfall Number** _____					
		Operations Contributing to Flow					
		Operation			Average Flow		
		Extracted Groundwater			0.000720 mgd		
					mgd		
					mgd		
					mgd		
		Treatment Units					
		Description (include size, flow rate through each treatment unit, retention time, etc.)		Code from Exhibit 2C-2		Final Disposal of Solid or Liquid Wastes Other Than by Discharge	
		Outfall Number _____					
		Operations Contributing to Flow					
		Operation			Average Flow		
					mgd		
					mgd		
					mgd		
					mgd		
		Treatment Units					
		Description (include size, flow rate through each treatment unit, retention time, etc.)		Code from Exhibit 2C-2		Final Disposal of Solid or Liquid Wastes Other Than by Discharge	
System Users	3.2	Are you applying for an NPDES permit to operate a privately owned treatment works? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No → SKIP to Section 4.					
	3.3	Have you attached a list that identifies each user of the treatment works? <input type="checkbox"/> Yes					

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SECTION 4. INTERMITTENT FLOWS (40 CFR 122.21(G)(4))

Intermittent Flows	4.1	Except for storm runoff, leaks, or spills, are any discharges described in Sections 1 and 3 intermittent or seasonal? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No → SKIP to Section 5.						
	4.2	Provide information on intermittent or seasonal flows for each applicable outfall. Attach additional pages, if necessary.						
		Outfall Number	Operation (list)	Frequency		Flow Rate		Duration
				Average Days/Week	Average Months/Year	Long-Term Average	Maximum Daily	
				days/week	months/year	mgd	mgd	days
				days/week	months/year	mgd	mgd	days
				days/week	months/year	mgd	mgd	days
				days/week	months/year	mgd	mgd	days
				days/week	months/year	mgd	mgd	days
				days/week	months/year	mgd	mgd	days
				days/week	months/year	mgd	mgd	days
				days/week	months/year	mgd	mgd	days

SECTION 5. PRODUCTION (40 CFR 122.21(G)(5))

Applicable ELGs	5.1	Do any effluent limitation guidelines (ELGs) promulgated by EPA under Section 304 of the CWA apply to your facility? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No → SKIP to Section 6.			
	5.2	Provide the following information on applicable ELGs.			
		ELG Category	ELG Subcategory	Regulatory Citation	
		Organic Chemicals Manufacturing	Calcium Carbonate Production Subcategory	40 CFR 415 Subpart AD	
Production-Based Limitations	5.3	Are any of the applicable ELGs expressed in terms of production (or other measure of operation)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No → SKIP to Section 6.			
	5.4	Provide an actual measure of daily production expressed in terms and units of applicable ELGs.			
		Outfall Number	Operation, Product, or Material	Quantity per Day	Unit of Measure
		001	Quick Lime	82,540	pounds
		001	Hydrated Lime	27,640	pounds

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	5.5	Are you requesting alternative limits based on an anticipated increase in the actual production during the next permit term? (Consult with your NPDES permitting authority to determine what information needs to be submitted and when.)
		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

SECTION 6. IMPROVEMENTS (40 CFR 122.21(G)(6))

Upgrades and Improvements	6.1	Are you presently required by any federal, state, or local authority to meet an implementation schedule for constructing, upgrading, or operating wastewater treatment equipment or practices or any other environmental programs that could affect the discharges described in this application?																						
		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No → SKIP to Item 6.3.																						
	6.2	Briefly identify each applicable project in the table below.																						
	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th rowspan="2" style="width: 45%;">Brief Identification and Description of Project</th> <th rowspan="2" style="width: 15%;">Affected Outfalls (list outfall number)</th> <th rowspan="2" style="width: 20%;">Source(s) of Discharge</th> <th colspan="2" style="width: 20%;">Final Compliance Dates</th> </tr> <tr> <th style="width: 10%;">Required</th> <th style="width: 10%;">Projected</th> </tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </table>		Brief Identification and Description of Project	Affected Outfalls (list outfall number)	Source(s) of Discharge	Final Compliance Dates		Required	Projected															
	Brief Identification and Description of Project	Affected Outfalls (list outfall number)				Source(s) of Discharge	Final Compliance Dates																	
			Required	Projected																				
6.3	Have you attached sheets describing any additional water pollution control programs (or other environmental projects that may affect your discharges) that you now have underway or planned? (<i>optional item</i>)																							
	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not applicable																							

SECTION 7. EFFLUENT AND INTAKE CHARACTERISTICS (40 CFR 122.21(G)(7))

Effluent and Intake Characteristics	See the instructions to determine the pollutants and parameters you are required to monitor and, in turn, the tables you must complete. Not all applicants need to complete each table.	
	Table A. Conventional and Non-Conventional Pollutants	
	7.1	Are you requesting a waiver from your NPDES permitting authority for any Table A pollutants for any of your outfalls?
		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No → SKIP to Item 7.3.
	7.2	If yes, indicate the applicable outfalls below or check the appropriate box to indicate that you are requesting a waiver for all outfalls. Attach waiver request and other required information to the application. <div style="display: flex; justify-content: space-around;"> Outfall number _____ Outfall number _____ Outfall number _____ </div> <input type="checkbox"/> I am requesting a waiver for some pollutants at all outfalls. <input type="checkbox"/> I am requesting a waiver for all pollutants at all outfalls → SKIP to Item 7.4.
	7.3	Have you completed monitoring for all Table A pollutants at each of your outfalls for which a waiver has not been requested and attached the results to this application package?
		<input checked="" type="checkbox"/> Yes
	Table B. Toxic Metals, Cyanide, Total Phenols, and Organic Toxic Pollutants	
7.4	Do any of the facility's processes that contribute wastewater fall into one or more of the primary industry categories listed in Exhibit 2C-3? (See end of instructions for exhibit.)	
	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No → SKIP to Item 7.8.	
7.5	Have you checked "Testing Required" for all toxic metals, cyanide, and total phenols in Section 1 of Table B?	
	<input checked="" type="checkbox"/> Yes	

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Effluent and Intake Characteristics Continued	7.6	List the applicable primary industry categories and check the boxes indicating the required GC/MS fraction(s) identified in Exhibit 2C-3.																				
		<table border="1"> <thead> <tr> <th>Primary Industry Category</th> <th colspan="4">Required GC/MS Fraction(s) (check applicable boxes)</th> </tr> </thead> <tbody> <tr> <td>Inorganic chemicals manufacturing</td> <td><input checked="" type="checkbox"/> Volatile</td> <td><input checked="" type="checkbox"/> Acid</td> <td><input checked="" type="checkbox"/> Base/neutral</td> <td><input type="checkbox"/> Pesticide</td> </tr> <tr> <td></td> <td><input type="checkbox"/> Volatile</td> <td><input type="checkbox"/> Acid</td> <td><input type="checkbox"/> Base/neutral</td> <td><input type="checkbox"/> Pesticide</td> </tr> <tr> <td></td> <td><input type="checkbox"/> Volatile</td> <td><input type="checkbox"/> Acid</td> <td><input type="checkbox"/> Base/neutral</td> <td><input type="checkbox"/> Pesticide</td> </tr> </tbody> </table>	Primary Industry Category	Required GC/MS Fraction(s) (check applicable boxes)				Inorganic chemicals manufacturing	<input checked="" type="checkbox"/> Volatile	<input checked="" type="checkbox"/> Acid	<input checked="" type="checkbox"/> Base/neutral	<input type="checkbox"/> Pesticide		<input type="checkbox"/> Volatile	<input type="checkbox"/> Acid	<input type="checkbox"/> Base/neutral	<input type="checkbox"/> Pesticide		<input type="checkbox"/> Volatile	<input type="checkbox"/> Acid	<input type="checkbox"/> Base/neutral	<input type="checkbox"/> Pesticide
	Primary Industry Category	Required GC/MS Fraction(s) (check applicable boxes)																				
	Inorganic chemicals manufacturing	<input checked="" type="checkbox"/> Volatile	<input checked="" type="checkbox"/> Acid	<input checked="" type="checkbox"/> Base/neutral	<input type="checkbox"/> Pesticide																	
		<input type="checkbox"/> Volatile	<input type="checkbox"/> Acid	<input type="checkbox"/> Base/neutral	<input type="checkbox"/> Pesticide																	
		<input type="checkbox"/> Volatile	<input type="checkbox"/> Acid	<input type="checkbox"/> Base/neutral	<input type="checkbox"/> Pesticide																	
	7.7	Have you checked "Testing Required" for all required pollutants in Sections 2 through 5 of Table B for each of the GC/MS fractions checked in Item 7.6? <input checked="" type="checkbox"/> Yes																				
	7.8	Have you checked "Believed Present" or "Believed Absent" for all pollutants listed in Sections 1 through 5 of Table B where testing is not required? <input checked="" type="checkbox"/> Yes																				
	7.9	Have you provided (1) quantitative data for those Section 1, Table B, pollutants for which you have indicated testing is required or (2) quantitative data or other required information for those Section 1, Table B, pollutants that you have indicated are "Believed Present" in your discharge? <input checked="" type="checkbox"/> Yes																				
	7.10	Does the applicant qualify for a small business exemption under the criteria specified in the instructions? <input type="checkbox"/> Yes → Note that you qualify at the top of Table B, then SKIP to Item 7.12. <input checked="" type="checkbox"/> No																				
7.11	Have you provided (1) quantitative data for those Sections 2 through 5, Table B, pollutants for which you have determined testing is required or (2) quantitative data or an explanation for those Sections 2 through 5, Table B, pollutants you have indicated are "Believed Present" in your discharge? <input checked="" type="checkbox"/> Yes																					
Table C. Certain Conventional and Non-Conventional Pollutants																						
7.12	Have you indicated whether pollutants are "Believed Present" or "Believed Absent" for all pollutants listed in Table C for all outfalls? <input checked="" type="checkbox"/> Yes																					
7.13	Have you completed Table C by providing quantitative data for those pollutants that are limited either directly or indirectly in an ELG? You must provide quantitative data even if the pollutant is "Believed Absent." <input checked="" type="checkbox"/> Yes <input type="checkbox"/> Not applicable																					
7.14	Have you completed Table C by providing quantitative data or an explanation for those pollutants for which you have indicated "Believed Present"? <input checked="" type="checkbox"/> Yes																					
Table D. Certain Hazardous Substances and Asbestos																						
7.15	Have you indicated whether pollutants are "Believed Present" or "Believed Absent" for all pollutants listed in Table D for all outfalls? <input checked="" type="checkbox"/> Yes																					
7.16	Have you completed Table D by (1) describing the reasons the applicable pollutants are expected to be discharged and (2) providing quantitative data, if available? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No																					
Table E. 2,3,7,8-Tetrachlorodibenzo-p-Dioxin (2,3,7,8-TCDD)																						
7.17	Does the facility use or manufacture one or more of the 2,3,7,8-TCDD congeners listed in the instructions, or do you know or have reason to believe that TCDD is or may be present in the effluent? <input type="checkbox"/> Yes → Complete Table E. <input checked="" type="checkbox"/> No → SKIP to Section 8.																					
7.18	Have you completed Table E by reporting <i>qualitative</i> data for TCDD? <input type="checkbox"/> Yes																					

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SECTION 8. USED OR MANUFACTURED TOXICS (40 CFR 122.21(G)(9))

Used or Manufactured Toxics	<u>8.1</u>	Is any pollutant listed in Table B a substance or a component of a substance used or manufactured at your facility as an intermediate or final product or byproduct? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No → SKIP to Section 9.		
	<u>8.2</u>	List the pollutants below. Attach additional sheets, if necessary.		
	1.	4.	7.	
	2.	5.	8.	
	3.	6.	9.	

SECTION 9. BIOLOGICAL TOXICITY TESTS (40 CFR 122.21(G)(11))

Biological Toxicity Tests	<u>9.1</u>	Do you have any knowledge or reason to believe that any biological test for acute or chronic toxicity has been made within the last three years on (1) any of your discharges or (2) a receiving water in relation to your discharge? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No → SKIP to Section 10.			
	<u>9.2</u>	Identify the tests and their purposes below.			
		Test(s)	Purpose of Test(s)	Submitted to NPDES Permitting Authority?	Date Submitted
		Fathead minnow 96-hour static-renewal test and	Compliance Test	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	12/03/2024
		Fathead minnow 96-hour static-renewal test and	Compliance Test	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	04/23/2025
			<input type="checkbox"/> Yes <input type="checkbox"/> No		

SECTION 10. CONTRACT ANALYSES (40 CFR 122.21(G)(12))

Contract Analyses	<u>10.1</u>	Were any of the analyses reported in Section 7 performed by a contract laboratory or consulting firm? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No → SKIP to Section 11.		
	<u>10.2</u>	Provide information for each contract laboratory or consulting firm below.		
		Laboratory Number 1	Laboratory Number 2	Laboratory Number 3
	Name of laboratory/firm	EUROFINS	Onsite Environmental	EcoAnalysts, Inc.
	Laboratory address	5755 8th Street East Fife, WA 98424	14648 NE 95th Street, Redmond, WA 98052	4770 NE View Drive PO Box 216 Port Gamble, WA 98364
	Phone number	(253) 922-2310	(425) 883-3881	(360) 297-6040
	Pollutant(s) analyzed	Total Mercury	Conventional and Non Conventional Pollutants, metals, cyanide, total phenols, volatile, acid, base/neutral, oil and grease, and sulfate	Bioassay Analyses, acute toxicity

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SECTION 11. ADDITIONAL INFORMATION (40 CFR 122.21(G)(13))

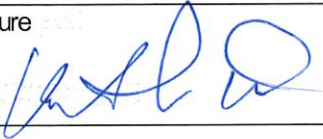
Additional Information	11.1	Has the NPDES permitting authority requested additional information? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No → SKIP to Section 12.
	11.2	List the information requested and attach it to this application.
	1.	4.
	2.	5.
	3.	6.

SECTION 12. CHECKLIST AND CERTIFICATION STATEMENT (40 CFR 122.22(A) AND (D))

Checklist and Certification Statement	12.1	In Column 1 below, mark the sections of Form 2C that you have completed and are submitting with your application. For each section, specify in Column 2 any attachments that you are enclosing to alert the permitting authority. Note that not all applicants are required to complete all sections or provide attachments.	
		Column 1	Column 2
		<input checked="" type="checkbox"/> Section 1: Outfall Location	<input type="checkbox"/> w/ attachments
		<input checked="" type="checkbox"/> Section 2: Line Drawing	<input checked="" type="checkbox"/> w/ line drawing <input type="checkbox"/> w/ additional attachments
		<input checked="" type="checkbox"/> Section 3: Average Flows and Treatment	<input type="checkbox"/> w/ attachments <input type="checkbox"/> w/ list of each user of privately owned treatment works
		<input type="checkbox"/> Section 4: Intermittent Flows	<input type="checkbox"/> w/ attachments
		<input checked="" type="checkbox"/> Section 5: Production	<input type="checkbox"/> w/ attachments
		<input type="checkbox"/> Section 6: Improvements	<input type="checkbox"/> w/ attachments <input type="checkbox"/> w/ optional additional sheets describing any additional pollution control plans
		<input checked="" type="checkbox"/> Section 7: Effluent and Intake Characteristics	<input type="checkbox"/> w/ request for a waiver and supporting information <input type="checkbox"/> w/ small business exemption request <input checked="" type="checkbox"/> w/ Table A <input checked="" type="checkbox"/> w/ Table C <input type="checkbox"/> w/ Table E <input type="checkbox"/> w/ explanation for identical outfalls <input type="checkbox"/> w/ other attachments <input checked="" type="checkbox"/> w/ Table B <input checked="" type="checkbox"/> w/ Table D <input checked="" type="checkbox"/> w/ analytical results as an attachment
		<input type="checkbox"/> Section 8: Used or Manufactured Toxics	<input type="checkbox"/> w/ attachments
		<input checked="" type="checkbox"/> Section 9: Biological Toxicity Tests	<input checked="" type="checkbox"/> w/ attachments
		<input checked="" type="checkbox"/> Section 10: Contract Analyses	<input type="checkbox"/> w/ attachments
		<input type="checkbox"/> Section 11: Additional Information	<input type="checkbox"/> w/ attachments
		<input checked="" type="checkbox"/> Section 12: Checklist and Certification Statement	<input type="checkbox"/> w/ attachments

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SECTION 12 CHECKLIST AND CERTIFICATION STATEMENT (40 CFR 122.22(a) and (d)) (Continued)		
Checklist and Certification Statement	<u>12.2</u>	Provide the following certification. (See instructions to determine the appropriate person to sign the application.)
		Certification Statement <i>I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.</i>
	Name (print or type first and last name)	Official title
	Keith Wiggs	Terminal Supervisor
	Signature	Date signed
		05/30/2025

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TABLE A. CONVENTIONAL AND NON CONVENTIONAL POLLUTANTS (40 CFR 122.21(g)(7)(iii))¹

Pollutant	Waiver Requested (if applicable)	Units (specify)	Effluent				Intake (optional)	
			Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average Value	Number of Analyses
<input type="checkbox"/> Check here if you have applied to your NPDES permitting authority for a waiver for <i>all</i> of the pollutants listed on this table for the noted outfall.								
1. Biochemical oxygen demand (BOD ₅)	<input type="checkbox"/>	Concentration	mg/L	<5.0	-	-	1	
		Mass	lbs/day	0.550			-	
2. Chemical oxygen demand (COD)	<input type="checkbox"/>	Concentration	mg/L	<15.0			1	
		Mass	lbs/day	1.65			-	
3. Total organic carbon (TOC)	<input type="checkbox"/>	Concentration	mg/L	2.6			1	
		Mass	lbs/day	0.286			-	
4. Total suspended solids (TSS)	<input type="checkbox"/>	Concentration	mg/L	24.40		5.89	20	
		Mass	lbs/day	2.684				
5. Ammonia (as N)	<input type="checkbox"/>	Concentration	mg/l	0.22	-	-	1	
		Mass	lbs/day	0.02	-	-	-	
6. Flow	<input type="checkbox"/>	Rate	gpd	656,550	-	13,181	est.	
7. Temperature (winter)	<input type="checkbox"/>	°C	°C	20.30	-	10.38	21	
Temperature (summer)	<input type="checkbox"/>	°C	°C	-	-	-	-	
pH (minimum)	<input type="checkbox"/>	Standard units	s.u.	7.0	-	-	20	
pH (maximum)	<input type="checkbox"/>	Standard units	s.u.	8.66	-	-	20	

¹ Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR Chapter I, Subchapter N or O. See instructions and 40 CFR 122.21(e)(3).

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TABLE B. TOXIC METALS, CYANIDE, TOTAL PHENOLS, AND ORGANIC TOXIC POLLUTANTS (40 CFR 122.21(g)(7)(v))¹

Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)	Effluent			Intake (optional)		
		Believed Present	Believed Absent		Maximum Daily Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long- Term Average Value	Number of Analyses	
<input type="checkbox"/> Check here if you qualify as a small business per the instructions to Form 20C and, therefore, do not need to submit quantitative data for any of the organic toxic pollutants in Sections 2 through 5 of this table. Note, however, that you must still indicate in the appropriate column of this table if you believe any of the pollutants listed are present in your discharge.										
Section 1. Toxic Metals, Cyanide, and Total Phenols										
1.1 Antimony, total (7440-36-0)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration Mass	ug/L lb/day	<1.0 0.00011			1 -	
1.2 Arsenic, total (7440-38-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration Mass	ug/L lb/day	<0.5 0.000055			1 -	
1.3 Beryllium, total (7440-41-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration Mass	ug/L lb/day	<0.5 0.000055			1 -	
1.4 Cadmium, total (7440-43-9)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration Mass	ug/L lb/day	<0.25 0.0000275			1 -	
1.5 Chromium, total (7440-47-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration Mass	ug/L lb/day	1.2 0.000132			1 -	
1.6 Copper, total (7440-50-8)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration Mass	ug/L lb/day	<2.0 0.00022			1 -	
1.7 Lead, total (7439-92-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration Mass	ug/L lb/day	<0.5 0.000055			1 -	
1.8 Mercury, total (7439-97-6)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration Mass	ug/L lb/day	0.0917 0.00010087			1 -	
1.9 Nickel, total (7440-02-0)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration Mass	ug/L lb/day	<0.50 0.000055			1 -	
1.10 Selenium, total (7782-49-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration Mass	ug/L lb/day	1.3 0.000143			1 -	
1.11 Silver, total (7440-22-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration Mass	ug/L lb/day	<0.2 0.000022			1 -	

TABLE B: TOXIC METALS, CYANIDE, TOTAL PHENOLS, AND ORGANIC TOXIC POLLUTANTS (40 CFR 122.21(g)(7)(v))¹

Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)	
		Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long- Term Average Value	Number of Analyses
1.12 Thallium, total (7440-28-0)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration Mass	ug/L lbs/day	<0.36 0.0000396		1 -		
1.13 Zinc, total (7440-66-6)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration Mass	ug/L lbs/day	<2.5 0.000275002		1 -		
1.14 Cyanide, total (57-12-5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration Mass	ug/L lbs/day	N/A		1 -		
1.15 Phenols, total	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration Mass	mg/L lbs/day	0.02 0.0000022		1 -		

Section 2. Organic Toxic Pollutants (GC/MS Fraction—Volatile Compounds)										
2.1 Acrolein (107-02-8)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration Mass	ug/L lbs/day	<0.5 0.000055		1 -		
2.2 Acrylonitrile (107-13-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration Mass	ug/L lbs/day	<0.5 0.000055		1 -		
2.3 Benzene (71-43-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration Mass	ug/L lbs/day	<0.2 0.000022		1 -		
2.4 Bromoform (75-25-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration Mass	ug/L lbs/day	<1.0 0.00011		1 -		
2.5 Carbon tetrachloride (56-23-5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration Mass	ug/L lbs/day	<0.2 0.000022		1 -		
2.6 Chlorobenzene (108-90-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration Mass	ug/L lbs/day	<0.2 0.000022		1 -		
2.7 Chlorodibromomethane (124-48-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration Mass	ug/L lbs/day	<0.2 0.000022		1 -		
2.8 Chloroethane (75-00-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration Mass	ug/L lbs/day	<1.0 0.00011		1 -		

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TABLE B. TOXIC METALS, CYANIDE, TOTAL PHENOLS, AND ORGANIC TOXIC POLLUTANTS (40 CFR 122.21(g)(7)(v))¹

Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)	
		Believed Present	Believed Absent							
2.9 2-chloroethylvinyl ether (110-75-8)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration ug/L	Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long- Term Average Value	Number of Analyses
		<input type="checkbox"/>	<input type="checkbox"/>	Mass lbs/day	<0.2			1		
2.10 Chloroform (67-66-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration ug/L	<0.2			1		
		<input type="checkbox"/>	<input type="checkbox"/>	Mass lbs/day	0.000022			-		
2.11 Dichlorobromomethane (75-27-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration ug/L	<0.20			1		
		<input type="checkbox"/>	<input type="checkbox"/>	Mass lbs/day	0.000022			-		
2.12 1,1-dichloroethane (75-34-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration ug/L	<0.20			1		
		<input type="checkbox"/>	<input type="checkbox"/>	Mass lbs/day	0.000022			-		
2.13 1,2-dichloroethane (107-06-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration ug/L	<0.20			1		
		<input type="checkbox"/>	<input type="checkbox"/>	Mass lbs/day	0.000022			-		
2.14 1,1-dichloroethylene (75-35-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration ug/L	<0.20			1		
		<input type="checkbox"/>	<input type="checkbox"/>	Mass lbs/day	0.000022			-		
2.15 1,2-dichloropropane (78-87-5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration ug/L	<0.20			1		
		<input type="checkbox"/>	<input type="checkbox"/>	Mass lbs/day	0.000022			-		
2.16 1,3-dichloropropylene (542-75-6)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration ug/L	<0.20			1		
		<input type="checkbox"/>	<input type="checkbox"/>	Mass lbs/day	0.000022			-		
2.17 Ethylbenzene (100-41-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration ug/L	<0.20			1		
		<input type="checkbox"/>	<input type="checkbox"/>	Mass lbs/day	0.000022			-		
2.18 Methyl bromide (74-83-9)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration ug/L	<2.0			1		
		<input type="checkbox"/>	<input type="checkbox"/>	Mass lbs/day	0.00022			-		
2.19 Methyl chloride (74-87-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration ug/L	<1.0			1		
		<input type="checkbox"/>	<input type="checkbox"/>	Mass lbs/day	0.000011			-		
2.20 Methylene chloride (75-09-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration ug/L	<2.0			1		
		<input type="checkbox"/>	<input type="checkbox"/>	Mass lbs/day	0.000022			-		
2.21 1,1,2,2-tetrachloroethane (79-34-5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration ug/L	<0.20			1		
		<input type="checkbox"/>	<input type="checkbox"/>	Mass lbs/day	0.000022			-		

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TABLE B. TOXIC METALS, CYANIDE, TOTAL PHENOLS, AND ORGANIC TOXIC POLLUTANTS (40 CFR 122.21(g)(7)(v))¹

Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)	
		Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long- Term Average Value	Number of Analyses
2.22 Tetrachloroethylene (127-18-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration Mass	ug/L lbs/day	<0.20 0.000022		1 -		
2.23 Toluene (108-88-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration Mass	ug/L lbs/day	<1.0 0.0001		1 -		
2.24 1,2-trans-dichloroethylene (156-60-5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration Mass	ug/L lbs/day	<0.20 0.000022		1 -		
2.25 1,1,1-trichloroethane (71-55-6)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration Mass	ug/L lbs/day	<0.20 0.000022		1 -		
2.26 1,1,2-trichloroethane (79-00-5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration Mass	ug/L lbs/day	<0.20 0.000022		1 -		
2.27 Trichloroethylene (79-01-6)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration Mass	ug/L lbs/day	<0.20 0.000022		1 -		
2.28 Vinyl chloride (75-01-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration Mass	ug/L lbs/day	<0.20 0.000025		1 -		
Section 3. Organic Toxic Pollutants (GC/MS Fraction—Acid Compounds)										
3.1 2-chlorophenol (95-57-8)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration Mass	ug/L lbs/day	<0.95 0.0001045		1 -		
3.2 2,4-dichlorophenol (120-83-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration Mass	ug/L lbs/day	<1.9 0.000209		1 -		
3.3 2,4-dimethylphenol (105-67-9)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration Mass	ug/L lbs/day	<0.95 0.0001045		1 -		
3.4 4,6-dinitro-o-cresol (534-52-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration Mass	ug/L lbs/day	<4.8 0.000528		1 -		
3.5 2,4-dinitrophenol (51-28-5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration Mass	ug/L lbs/day	<4.8 0.000528		1 -		

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TABLE B. TOXIC METALS, CYANIDE, TOTAL PHENOLS, AND ORGANIC TOXIC POLLUTANTS (40 CFR 122.21(g)(7)(v))¹

Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)	
		Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long- Term Average Value	Number of Analyses
3.6 2-nitrophenol (88-75-5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration Mass	ug/L lbs/day	<0.95 0.0001045		1		
3.7 4-nitrophenol (100-02-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration Mass	ug/L lbs/day	<1.9 0.000209		1		
3.8 p-chloro-m-cresol (59-50-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration Mass	ug/L lbs/day	<0.95 0.0001045		1		
3.9 Pentachlorophenol (87-86-5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration Mass	ug/L lbs/day	<4.8		1		
3.10 Phenol (108-95-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration Mass	ug/L lbs/day	<1.1 0.000121		1		
3.11 2,4,6-trichlorophenol (88-05-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration Mass	ug/L lbs/day	<0.95 0.0001045		1		

Section 4. Organic Toxic Pollutants (GC/MS Fraction — Base /Neutral Compounds)

4.1 Acenaphthene (83-32-9)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration Mass	ug/L lbs/day	<0.95 0.001045		1		
4.2 Acenaphthylene (208-96-8)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration Mass	ug/L lbs/day	<0.95 0.0001045		1		
4.3 Anthracene (120-12-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration Mass	ug/L lbs/day	<0.95 0.0001045		1		
4.4 Benzidine (92-87-5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration Mass	ug/L lbs/day	<4.8 0.000528		1		
4.5 Benzo (a) anthracene (56-55-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration Mass	ug/L lbs/day	<0.95 0.0001045		1		
4.6 Benzo (a) pyrene (50-32-8)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration Mass	ug/L lbs/day	<0.95 0.0001045		1		

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TABLE B. TOXIC METALS, CYANIDE, TOTAL PHENOLS, AND ORGANIC TOXIC POLLUTANTS (40 CFR 122.21(g)(7)(v))¹

Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)	
		Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long- Term Average Value	Number of Analyses
4.7 3,4-benzofluoranthene (205-99-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration Mass	ug/L lbs/day	<0.95 0.0001045		1 -		
4.8 Benzo (ghi) perylene (191-24-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration Mass	ug/L lbs/day	<0.95 0.0001045		1 -		
4.9 Benzo (k) fluoranthene (207-08-9)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration Mass	ug/L lbs/day	<0.95 0.0001045		1 -		
4.10 Bis (2-chloroethoxy) methane (111-91-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration Mass	ug/L lbs/day	<0.95 0.0001045		1 -		
4.11 Bis (2-chloroethyl) ether (111-44-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration Mass	ug/L lbs/day	<0.95 0.0001045		1 -		
4.12 Bis (2-chloroisopropyl) ether (102-80-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration Mass	ug/L lbs/day	<0.95 0.0001045		1 -		
4.13 Bis (2-ethylhexyl) phthalate (117-81-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration Mass	ug/L lbs/day	<4.8 0.000528		1 -		
4.14 4-bromophenyl phenyl ether (101-55-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration Mass	ug/L lbs/day	<0.95 0.0001045		1 -		
4.15 Butyl benzyl phthalate (85-68-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration Mass	ug/L lbs/day	<0.95 0.0001045		1 -		
4.16 2-chloronaphthalene (91-58-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration Mass	ug/L lbs/day	<0.95 0.0001045		1 -		
4.17 4-chlorophenyl phenyl ether (7005-72-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration Mass	ug/L lbs/day	<0.95 0.0001045		1 -		
4.18 Chrysene (218-01-9)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration Mass	ug/L lbs/day	<0.95 0.0001045		1 -		
4.19 Dibenzo (a,h) anthracene (53-70-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration Mass	ug/L lbs/day	<0.95 0.0001045		1 -		

TABLE B. TOXIC METALS, CYANIDE, TOTAL PHENOLS, AND ORGANIC TOXIC POLLUTANTS (40 CFR 122.21(g)(7)(v)) ¹										
Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)	
		Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long- Term Average Value	Number of Analyses
4.20 1,2-dichlorobenzene (95-50-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration ug/L	<0.2			1		
4.21 1,3-dichlorobenzene (541-73-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration lbs/day	0.000022			-		
4.22 1,4-dichlorobenzene (106-46-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration ug/L	<0.2			1		
4.23 3,3-dichlorobenzidine (91-94-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration lbs/day	0.000022			-		
4.24 Diethyl phthalate (84-66-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration ug/L	<0.2			1		
4.25 Dimethyl phthalate (131-11-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration lbs/day	0.000022			-		
4.26 Di-n-butyl phthalate (84-74-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration ug/L	<0.95			1		
4.27 2,4-dinitrotoluene (121-14-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration lbs/day	0.0001045			-		
4.28 2,6-dinitrotoluene (606-20-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration ug/L	<4.8			1		
4.29 Di-n-octyl phthalate (117-84-0)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration lbs/day	0.000528			-		
4.30 1,2-Diphenylhydrazine (as azobenzene) (122-66-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration ug/L	<0.95			1		
4.31 Fluoranthene (206-44-0)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration lbs/day	0.0001045			-		
4.32 Fluorene (86-73-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration ug/L	<0.95			1		

TABLE B. TOXIC METALS, CYANIDE, TOTAL PHENOLS, AND ORGANIC TOXIC POLLUTANTS (40 CFR 122.21(g)(7)(v))¹

Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)	
		Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long- Term Average Value	Number of Analyses
4.33 Hexachlorobenzene (118-74-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration Mass	ug/L lbs/day	<0.95 0.0001045		1 -		
4.34 Hexachlorobutadiene (87-68-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration Mass	ug/L lbs/day	<0.95 0.0001045		1 -		
4.35 Hexachlorocyclopentadiene (77-47-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration Mass	ug/L lbs/day	<4.5 0.000528		1 -		
4.36 Hexachloroethane (67-72-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration Mass	ug/L lbs/day	<0.95 0.00001045		1 -		
4.37 Indeno (1,2,3-cd) pyrene (193-39-5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration Mass	ug/L lbs/day	<0.95 0.00001045		1 -		
4.38 Isophorone (78-59-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration Mass	ug/L lbs/day	<0.95 0.00001045		1 -		
4.39 Naphthalene (91-20-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration Mass	ug/L lbs/day	<0.95 0.00001045		1 -		
4.40 Nitrobenzene (98-95-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration Mass	ug/L lbs/day	<0.95 0.0001045		1 -		
4.41 N-nitrosodimethylamine (62-75-9)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration Mass	ug/L lbs/day	<0.95 0.0001045		1 -		
4.42 N-nitrosodi-n-propylamine (621-64-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration Mass	ug/L lbs/day	<0.95 0.0001045		1 -		
4.43 N-nitrosodiphenylamine (86-30-6)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration Mass	ug/L lbs/day	<0.95 0.0001045		1 -		
4.44 Phenanthrene (85-01-8)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration Mass	ug/L lbs/day	<0.95 0.0001045		1 -		
4.45 Pyrene (129-00-0)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration Mass	ug/L lbs/day	<0.95 0.0001045		1 -		

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TABLE B. TOXIC METALS, CYANIDE, TOTAL PHENOLS, AND ORGANIC TOXIC POLLUTANTS (40 CFR 122.21(g)(7)(v))¹

Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)	
		Believed Present	Believed Absent							
4.46 1,2,4-trichlorobenzene (120-82-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concentration Mass	ug/L lbs/day	<0.95 0.0001045			1 -	
Section 5. Organic Toxic Pollutants (GC/MS Fraction—Pesticides)										
5.1 Aldrin (309-00-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration Mass						
5.2 α -BHC (319-84-6)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration Mass						
5.3 β -BHC (319-85-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration Mass						
5.4 γ -BHC (58-89-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration Mass						
5.5 δ -BHC (319-86-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration Mass						
5.6 Chlordane (57-74-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration Mass						
5.7 4,4'-DDT (50-29-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration Mass						
5.8 4,4'-DDE (72-55-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration Mass						
5.9 4,4'-DDD (72-54-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration Mass						
5.10 Dieldrin (60-57-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration Mass						
5.11 α -endosulfan (115-29-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration Mass						

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TABLE B. TOXIC METALS, CYANIDE, TOTAL PHENOLS, AND ORGANIC TOXIC POLLUTANTS (40 CFR 122.21(g)(7)(v))¹

Pollutant/Parameter (and CAS Number, if available)	Testing Required	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)	
		Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long- Term Average Value	Number of Analyses
5.12 β-endosulfan (115-29-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration Mass						
5.13 Endosulfan sulfate (1031-07-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration Mass						
5.14 Endrin (72-20-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration Mass						
5.15 Endrin aldehyde (7421-93-4)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration Mass						
5.16 Heptachlor (76-44-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration Mass						
5.17 Heptachlor epoxide (1024-57-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration Mass						
5.18 PCB-1242 (53469-21-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration Mass						
5.19 PCB-1254 (11097-69-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration Mass						
5.20 PCB-1221 (11104-28-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration Mass						
5.21 PCB-1232 (11141-16-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration Mass						
5.22 PCB-1248 (12672-29-6)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration Mass						
5.23 PCB-1260 (11096-82-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration Mass						
5.24 PCB-1016 (12674-11-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration Mass						

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TABLE B. TOXIC METALS, CYANIDE, TOTAL PHENOLS, AND ORGANIC-TOXIC POLLUTANTS (40 CFR 122.21(g)(7)(v)) ¹									
Pollutant/Parameter (and CAS Number, if available)	Presence or Absence (check one)		Units (specify)	Effluent			Intake (optional)		
	Testing Required	Believed Present	Believed Absent	Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long- Term Average Value	Number of Analyses
5.25 Toxaphene (8001-35-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>						

¹ Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR Chapter I, Subchapter N or O. See instructions and 40 CFR 122.21(e)(3).

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TABLE C. CERTAIN CONVENTIONAL AND NON CONVENTIONAL POLLUTANTS (40 CFR 122.21(g)(7)(vi)) ¹										
Pollutant	Presence or Absence (check one)		Units (specify)	Effluent			Intake (optional)			
	Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Long-Term Average Value	Number of Analyses		
<div><input type="checkbox"/> Check here if you believe all pollutants in Table C to be present in your discharge from the noted outfall. You need <i>not</i> complete the "Presence or Absence" column of Table C for each pollutant.</div> <div><input type="checkbox"/> Check here if you believe all pollutants in Table C to be absent in your discharge from the noted outfall. You need <i>not</i> complete the "Presence or Absence" column of Table C for each pollutant.</div>										
1. Bromide (24959-67-9)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration Mass							
2. Chlorine, total residual	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration Mass							
3. Color	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration Mass							
4. Fecal coliform	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration Mass							
5. Fluoride (16984-48-8)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration Mass							
6 Nitrate-nitrite	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration Mass							
7. Nitrogen, total organic (as N)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration Mass							
8. Oil and grease	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Concentration Mass	ug/L	<5400					
9. Phosphorus (as P), total (7723-14-0)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration Mass	lbs/day	0.594					
10. Sulfate (as SO ₄) (14808-79-8)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Concentration Mass	mg/L	520					
11. Sulfide (as S)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration Mass	lbs/day	0.0572					

TABLE C. CERTAIN CONVENTIONAL AND NON CONVENTIONAL POLLUTANTS (40 CFR 122.21(g)(7)(vi)) ¹									
Pollutant	Presence or Absence (check one)		Units (specify)	Effluent				Intake (optional)	
	Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Number of Analyses	Long-Term Average Value	Number of Analyses
12. Sulfite (as SO ₃) (14265-45-3)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration Mass						
13. Surfactants	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration Mass						
14. Aluminum, total (7429-90-5)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration Mass						
15. Barium, total (7440-39-3)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration Mass						
16. Boron, total (7440-42-8)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration Mass						
17. Cobalt, total (7440-48-4)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration Mass						
18. Iron, total (7439-89-6)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration Mass						
19. Magnesium, total (7439-95-4)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration Mass						
20. Molybdenum, total (7439-98-7)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration Mass						
21. Manganese, total (7439-96-5)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration Mass						
22. Tin, total (7440-31-5)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration Mass						
23. Titanium, total (7440-32-6)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration Mass						

TABLE C. CERTAIN CONVENTIONAL AND NON CONVENTIONAL POLLUTANTS (40 CFR 122.21(g)(7)(vi)) ¹									
Pollutant	Presence or Absence (check one)		Units (specify)	Effluent			Intake (optional)		
	Believed Present	Believed Absent		Maximum Daily Discharge (required)	Maximum Monthly Discharge (if available)	Long-Term Average Daily Discharge (if available)	Long-Term Average Value	Number of Analyses	
24. Radioactivity									
	Alpha, total	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration					
				Mass					
	Beta, total	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration					
				Mass					
	Radium, total	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration					
				Mass					
	Radium 226, total	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Concentration					
				Mass					

¹ Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR Chapter I, Subchapter N or O. See instructions and 40 CFR 122.21(e)(3).

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TABLE D. CERTAIN HAZARDOUS SUBSTANCES AND ASBESTOS (40 CFR 122.21(g)(7)(vii))

Pollutant	Presence or Absence (check one)		Reason Pollutant Believed Present in Discharge	Available Quantitative Data (specify units)
	Believed Present	Believed Absent		
1. Asbestos	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
2. Acetaldehyde	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
3. Allyl alcohol	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
4. Allyl chloride	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
5. Amyl acetate	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
6. Aniline	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
7. Benzotrile	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
8. Benzyl chloride	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
9. Butyl acetate	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
10. Butylamine	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
11. Captan	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
12. Carbaryl	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
13. Carbofuran	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
14. Carbon disulfide	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
15. Chlorpyrifos	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
16. Coumaphos	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
17. Cresol	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
18. Crotonaldehyde	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
19. Cyclohexane	<input type="checkbox"/>	<input checked="" type="checkbox"/>		

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TABLE D. CERTAIN HAZARDOUS SUBSTANCES AND ASBESTOS (40 CFR 122.21 (g)(7)(vii))¹

Pollutant	Presence or Absence (check one)		Reason Pollutant Believed Present in Discharge	Available Quantitative Data (specify units)
	Believed Present	Believed Absent		
20. 2,4-D (2,4-dichlorophenoxyacetic acid)	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
21. Diazinon	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
22. Dicamba	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
23. Dichlobenil	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
24. Diclone	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
25. 2,2-dichloropropionic acid	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
26. Dichlorvos	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
27. Diethyl amine	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
28. Dimethyl amine	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
29. Dinitrobenzene	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
30. Diquat	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
31. Disulfoton	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
32. Diuron	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
33. Epichlorohydrin	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
34. Ethion	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
35. Ethylene diamine	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
36. Ethylene dibromide	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
37. Formaldehyde	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
38. Furfural	<input type="checkbox"/>	<input checked="" type="checkbox"/>		

TABLE D. CERTAIN HAZARDOUS SUBSTANCES AND ASBESTOS (40 CFR 122.21(g)(7)(vii)) ¹						
Pollutant	Presence or Absence (check one)		Reason Pollutant Believed Present in Discharge		Available Quantitative Data (specify units)	
	Believed Present	Believed Absent				
39. Guthion	<input type="checkbox"/>	<input checked="" type="checkbox"/>				
40. Isoprene	<input type="checkbox"/>	<input checked="" type="checkbox"/>				
41. Isopropanolamine	<input type="checkbox"/>	<input checked="" type="checkbox"/>				
42. Kelthane	<input type="checkbox"/>	<input checked="" type="checkbox"/>				
43. Kepone	<input type="checkbox"/>	<input checked="" type="checkbox"/>				
44. Malathion	<input type="checkbox"/>	<input checked="" type="checkbox"/>				
45. Mercaptodimethur	<input type="checkbox"/>	<input checked="" type="checkbox"/>				
46. Methoxychlor	<input type="checkbox"/>	<input checked="" type="checkbox"/>				
47. Methyl mercaptan	<input type="checkbox"/>	<input checked="" type="checkbox"/>				
48. Methyl methacrylate	<input type="checkbox"/>	<input checked="" type="checkbox"/>				
49. Methyl parathion	<input type="checkbox"/>	<input checked="" type="checkbox"/>				
50. Mevinphos	<input type="checkbox"/>	<input checked="" type="checkbox"/>				
51. Mexacarbate	<input type="checkbox"/>	<input checked="" type="checkbox"/>				
52. Monoethyl amine	<input type="checkbox"/>	<input checked="" type="checkbox"/>				
53. Monomethyl amine	<input type="checkbox"/>	<input checked="" type="checkbox"/>				
54. Naled	<input type="checkbox"/>	<input checked="" type="checkbox"/>				
55. Naphthenic acid	<input type="checkbox"/>	<input checked="" type="checkbox"/>				
56. Nitrotoluene	<input type="checkbox"/>	<input checked="" type="checkbox"/>				
57. Parathion	<input type="checkbox"/>	<input type="checkbox"/>				

EPA Identification Number	NPDES Permit Number WA0000107	Facility Name Graymont Western US, Inc.	Outfall Number 001
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TABLE D. CERTAIN HAZARDOUS SUBSTANCES AND ASBESTOS (40 CFR 122.21(g)(7)(vii))¹

Pollutant	Presence or Absence (check one)		Reason Pollutant Believed Present in Discharge	Available Quantitative Data (specify units)
	Believed Present	Believed Absent		
58. Phenolsulfonate	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
59. Phosgene	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
60. Propargite	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
61. Propylene oxide	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
62. Pyrethrins	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
63. Quinoline	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
64. Resorcinol	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
65. Strontium	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
66. Strychnine	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
67. Styrene	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
68. 2,4,5-T (2,4,5-trichlorophenoxyacetic acid)	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
69. TDE (tetrachlorodiphenyl ethane)	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
70. 2,4,5-TP [2-(2,4,5-trichlorophenoxy) propanoic acid]	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
71. Trichlorofon	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
72. Triethanolamine	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
73. Triethylamine	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
74. Trimethylamine	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
75. Uranium	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
76. Vanadium	<input type="checkbox"/>	<input checked="" type="checkbox"/>		

EPA Identification Number	NPDES Permit Number WA000107	Facility Name Graymont Western US, Inc.	Outfall Number 001
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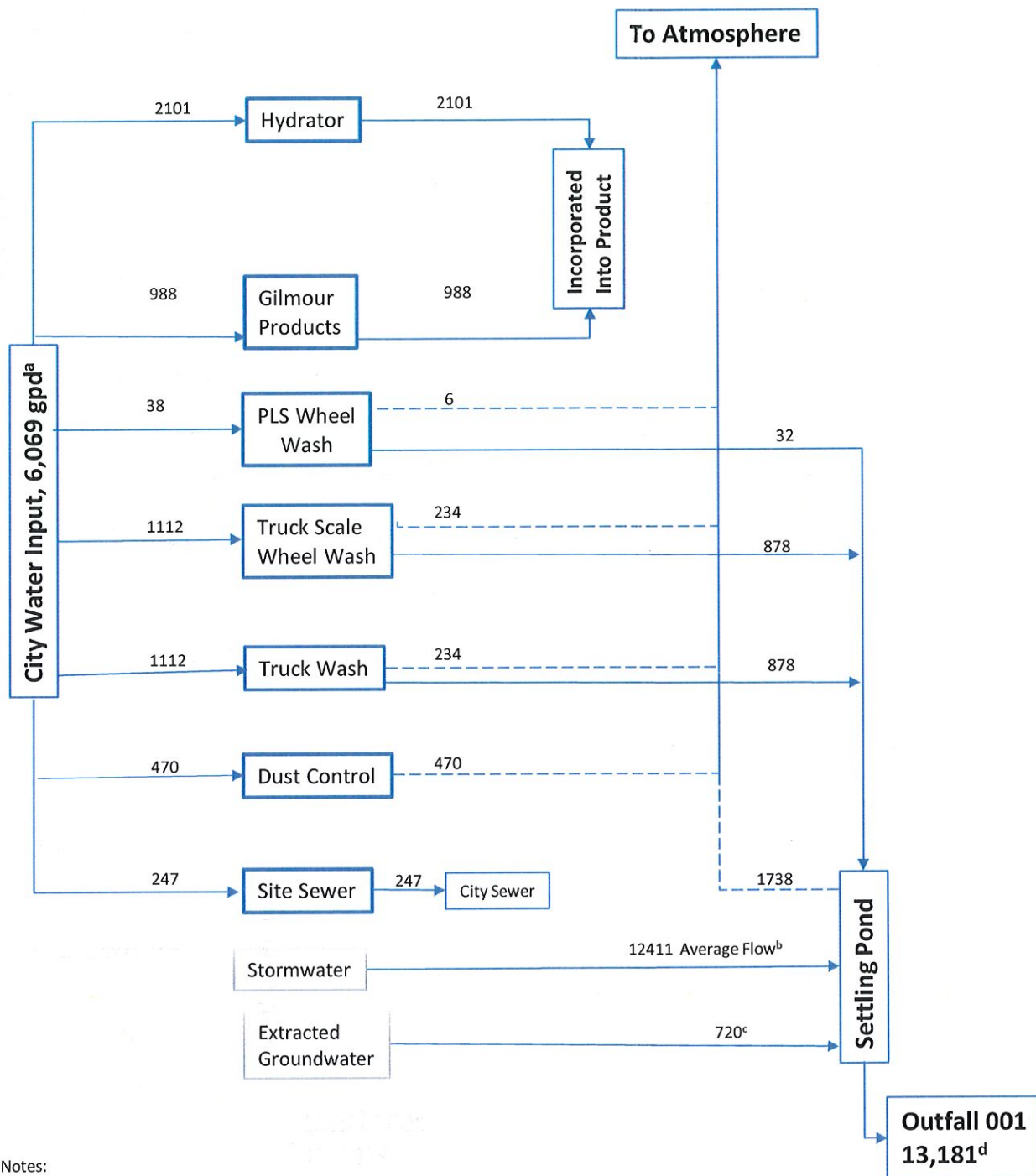
TABLE D: CERTAIN HAZARDOUS SUBSTANCES AND ASBESTOS (40 CFR 122.21(g)(7)(vii)) ¹				
Pollutant	Presence or Absence (check one)		Reason Pollutant Believed Present in Discharge	Available Quantitative Data (specify units)
	Believed Present	Believed Absent		
77. Vinyl acetate	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
78. Xylene	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
79. Xylenol	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
80. Zirconium	<input type="checkbox"/>	<input checked="" type="checkbox"/>		

¹ Sampling shall be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR 136 for the analysis of pollutants or pollutant parameters or required under 40 CFR Chapter I, Subchapter N or O. See instructions and 40 CFR 122.21(e)(3).

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EPA Identification Number	NPDES Permit Number WA0000107	Facility Name Graymont Western US, Inc.	Outfall Number 001
---------------------------	----------------------------------	--	-----------------------

TABLE E. 2,3,7,8 TETRACHLORODIBENZO P DIOXIN (2,3,7,8 TCDD) (40 CFR 122.21(g)(7)(viii))				
Pollutant	TCDD Congeners Used or Manufactured	Presence or Absence (check one)		Results of Screening Procedure
		Believed Present	Believed Absent	
2,3,7,8-TCDD	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	



Notes:

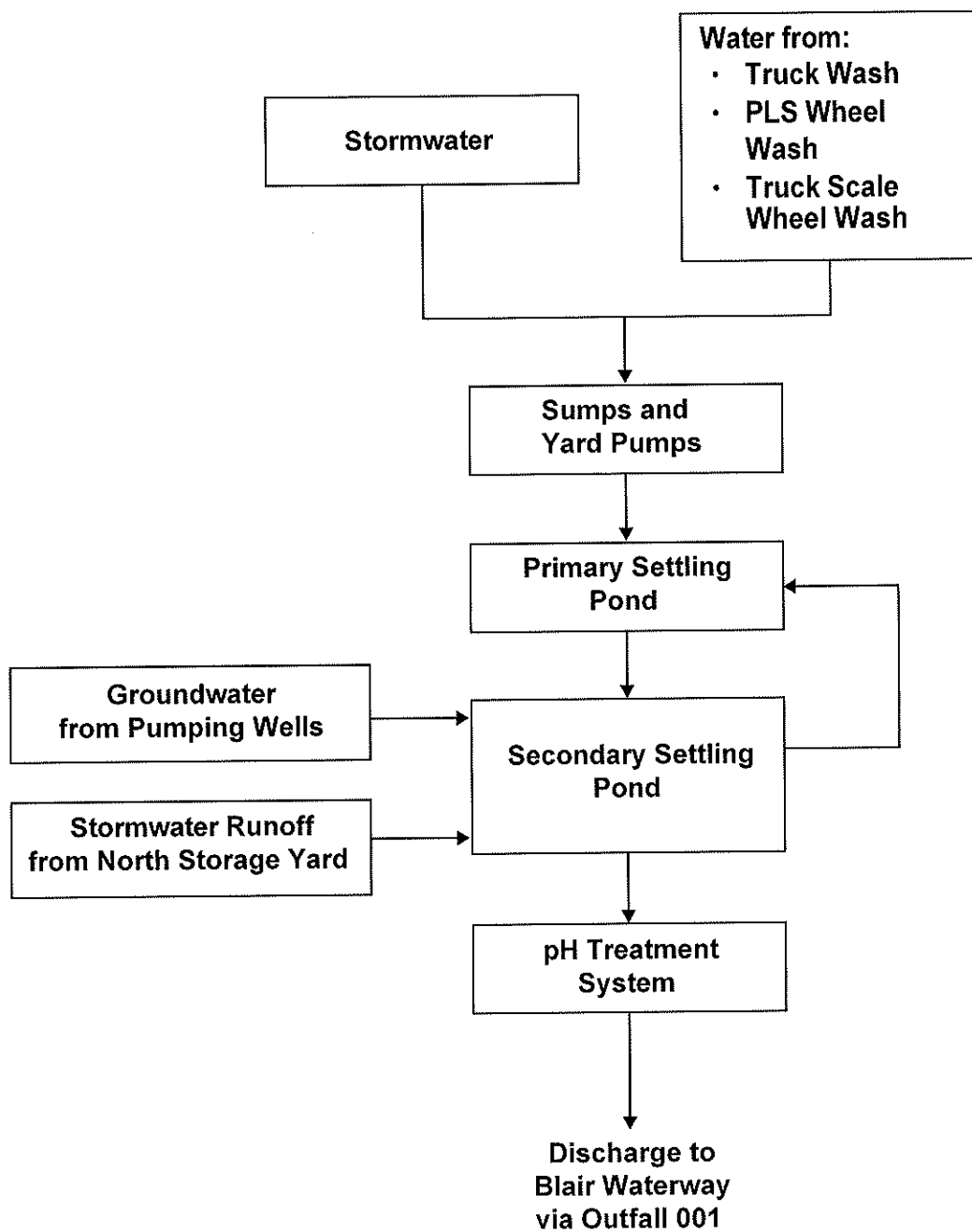
All flows in Gallons per Day (GPD).

^a City Water Input based on average water purchase for period between January 2022 and December 2024.

^b Stormwater average flow based on rain precipitation between January 2022 and December 2024. Assuming all rain that falls at the yard is collected and processed through the system minus 15% evaporation

^c Anticipated flow of 0.5 gallons per minute.

^d Estimated average daily discharge flow based on DMR reporting on period between January 2022 through December 2024.



NPDES Form 2C, Section 2
Treatment System Process Flow Diagram

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**Attachment B-1
Acute Toxicity Effluent Characterization**

TOXICITY TESTING RESULTS

WYCKOFF/EAGLE HARBOR SUPERFUND SITE GROUNDWATER TREATMENT PLANT BAINBRIDGE ISLAND, WA

NPDES TOXICITY TESTING: 4TH QUARTER 2024

Prepared for

Jacobs
1100 112th Avenue NE, Suite 400
Bellevue, WA 98004

Prepared by

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PO Box 216
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Port Gamble, WA 98364

EcoAnalysts Report ID: PG2096.01

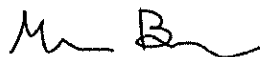
Submittal Date: December 17, 2024



Accredited in accordance with
NELAP, ORELAP ID: A165

All testing reported herein was performed consistent with our laboratory's quality assurance program. All results are intended to be considered in their entirety, and EcoAnalysts is not responsible for use of less than the complete report. The test results summarized in this report apply only to the sample(s) evaluated. This document is uncontrolled when printed or accessed from electronic distribution.

APPROVED BY



Michelle Bennett

Project Manager

Author(s):

Michelle Bennett

QA Review:

Dani Mulligan

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APPENDICES

- Appendix A: Statistical Comparison and Laboratory Documents
Appendix B: Chain-of-Custody and Sample Receipt Forms

ACRONYMS AND ABBREVIATIONS

ABS	Aquatic BioSystems, Inc.
EPA	Environmental Protection Agency
EC ₅₀ /LC ₅₀	Effect/Lethal Concentration to 50% of Test Population
LOEC	Lowest Observed Effect Concentration
mg/L	Milligrams per Liter
NOEC	No Observed Effect Concentration
NPDES	National Pollutant Discharge Elimination System
QM	Quality Manual
SOP	Standard Operating Practices
WDOE	Washington Department of Ecology
WET	Whole Effluent Toxicity

1. EXECUTIVE SUMMARY

EcoAnalysts conducted Whole Effluent Toxicity (WET) testing as part of the biological compliance monitoring for Wyckoff/Eagle Harbor Superfund Site, in Bainbridge Island, Washington. The objective of this program was to assess the potential toxicity of discharge water to selected aquatic organisms following procedures defined under the scope of work provided by Jacobs. The results of the toxicity testing are contained in this report.

A statistically significant biological response of the test organisms was not detected for the acute or chronic test endpoint (Table 1-1).

Table 1-1. Toxicity Test Results Summary.

Test		NOEC (%)	LOEC (%)	EC ₅₀ /LC ₅₀ (%)
Acute	<i>Menidia beryllina</i> 96-Hour Survival	100	>100	>100
Chronic	<i>Mytilus galloprovincialis</i> 48-Hour Proportion Survived	100	>100	>100
	<i>Mytilus galloprovincialis</i> 48-Hour Proportion Normal	100	>100	>100

NOEC = No Observed Effect Concentration

LOEC = Lowest Observed Effect Concentration

LC₅₀/EC₅₀ = Lethal/Effect Concentration to 50% of test population

2. METHODS

The sample was analyzed for toxicity using criteria outlined in the Washington Department of Ecology's (WDOE) Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria (WDOE WQ-R-95-80). These criteria are further defined through the Environmental Protection Agency's (EPA) and American Society for Testing and Materials (ASTM) most recently promulgated effluent guidance documents outlined in Section 4.

2.1 Bioassay Testing

Bioassay testing for this project consisted of one acute and one chronic bioassay. The test conducted in support of this project is summarized in Table 2-1.

Table 2-1. Biological Testing Performed

Test Type	Test Descriptor	Species	Method
Acute	96-Hour Survival	<i>Menidia beryllina</i> Inland Silverside	WDOE WQ-R-95-80; EPA-821-R-02-012; Test Method 2006.0; EPA/600/4-90/027F; SOP TOX013.08
Chronic	48-Hour Survival and Development	<i>Mytilus galloprovincialis</i> Mussel	WDOE WQ-R-95-80; EPA/600/R-95-136 Method 1005.0; ASTM E724-89; SOP TOX042.12

2.2 Sample Collection and Storage

Jacobs personnel collected a composite sample on November 19, 2024. The sample was transported by EcoAnalysts personnel and received at the laboratory on the same day as collection. The sample temperature upon receipt was within the recommended range of 0 – 6°C. Additional sample conditions are summarized in Table 2-2. The samples were held in a walk-in cold room at 4 ± 2 °C in the dark until utilized for testing.

Table 2-2. Sample Conditions upon Receipt

Sample	111924
Laboratory ID	P241119.04
Date/Time sampled	11/19/24; 0827
Date/Time received	11/19/24; 1140
Dissolved Oxygen (mg/L) Recommended: >4.0 mg/L	7.8
Temperature (°C) Recommended: 0 – 6°C	3.4
pH (units) Recommended: 6 – 9	7.5
Conductivity (µS/cm)	876
Salinity (ppt)	0.48
Total Chlorine (mg/L)	<0.02
Total Ammonia (mg/L)	0.244

2.3 Organisms for Testing

Adult mussels (*Mytilus galloprovincialis*) were obtained from Taylor Shellfish in Shelton, Washington on September 30, 2024. They were delivered via Taylor Shellfish personnel, and the overall health of the organisms was visually confirmed by a laboratory technician. The organisms were maintained under ambient seawater flow-through conditions at 12 ± 3 °C until utilized for testing. *Menidia beryllina* (inland silversides) were purchased from Aquatic BioSystems Inc. (ABS) in Fort Collins, Colorado. ABS is a commercial supplier of test organisms that are used routinely for toxicity testing. Water quality measurements were collected from transport containers and the overall health of the organisms was visually confirmed by a laboratory technician.

2.4 Water for Bioassay Testing

Seawater diluent used in this study came from the northern Hood Canal at Port Gamble, Washington. This water source has been used successfully on similar bioassay testing programs. Extensive testing on a variety of test species has shown that there is no significant potential for toxicity or bioaccumulation from this water supply. Chemical analysis of each water source is conducted and reviewed on an annual basis.

2.5 Sample Adjustment

The effluent sample 111924 was received at a salinity of 0.48 ppt. The salinity of the effluent sample was increased by the addition of Crystal Sea® MarineMix bioassay grade artificial salt.

An artificial salt control sample was created to evaluate any potential negative impacts to the test organisms from the salinity adjustment alone. This sample was designated "Salt Control".

Table 2-3. Salinity Adjustment of Project Samples

Sample ID	Sample Salinity Upon Receipt	Sample Salinity Adjustment (ppt)
111924: Collected 11/19/24	0.48 ppt	30 ± 2

2.6 Data Management and Analysis

Endpoint data was calculated for each replicate, and the mean value and standard deviation were determined for each sample concentration. All hand-entered data was reviewed for data entry errors, which were corrected prior to summary calculations. A minimum of 10% of all calculations and data sorting was reviewed for errors. Review counts were conducted on any apparent outliers.

Statistical comparisons were made according to the EPA guidance. Statistical comparisons were performed using CETIS™ software.

2.7 Quality Assurance/Quality Control

The quality assurance objectives for toxicity testing conducted by the testing laboratory are detailed in the method specific guidance documents and the laboratory's quality manual (QM). These objectives for accuracy and precision involve all aspects of the testing process, including the following:

- Source and Condition of Test Organisms
- Condition of Equipment
- Test Conditions
- Instrument Calibration
- Use of Reference Toxicants
- Record Keeping
- Data Evaluation

The batch of test organisms obtained was evaluated in a reference toxicant test that was run concurrently with the test period to establish the sensitivity of the test organisms. The reference toxicant LC₅₀ or EC₅₀ should fall within two standard deviations of the historical laboratory mean. Water quality measurements were monitored to ensure that they fell within prescribed limits.

The methods employed in every phase of the toxicity testing program are detailed in the EcoAnalysts Standard Operating Procedures (SOP). All EcoAnalysts staff members receive regular, documented training in all SOPs and test methods. Finally, all data collected and produced because of these analyses were recorded on approved data sheets. If an aspect of a test deviated from protocol, the test was evaluated to determine whether it was valid according to the regulatory agencies responsible for approval of the proposed permitting action.

3. RESULTS

The results of the effluent testing are presented in this section. Statistical comparisons and laboratory documents are provided in Appendix A. Chain-of-custody and sample receipt logs are provided in Appendix B.

3.1 Inland Silverside (*Menidia beryllina*) Acute Test Results

The chronic toxicity test with *M. beryllina* was initiated on November 20, 2024. The test met the control acceptability criteria listed in Table 3-2. Mean survival for all treatments is summarized in Table 3-1. The test conditions are summarized in Table 3-2.

The salinity of the 100% concentration fell outside of the recommended 30 ± 2 ppt on Days 1 through 3. The test was in progress and the salinity could not be adjusted mid-test. All other water quality parameters were within the acceptable limits throughout the duration of the 96-hour static-renewal test.

There was no significant difference observed between the laboratory control and the salt control indicating that artificial salts should not have contributed to any negative biological effects, if observed.

The reference toxicant test results were not within two standard deviations of the laboratory mean (Table 3-2). The results fell below two standard deviations which indicates that the organisms obtained from this supplier were potentially overly sensitive to those previously tested at the EcoAnalysts laboratory. In this case, client test results that demonstrate no toxicity at the levels of regulatory concern using potentially overly sensitive test organisms should result in the test results being accepted.

Table 3-1. Endpoint Summary for the *Menidia beryllina* Acute Test

Conc. (%)	111924				
	Mean Survival (%)	Standard Deviation	NOEC (%)	LOEC (%)	EC ₅₀ /LC ₅₀ Value (%)
Control (0)	97.5	5.0	100	>100	>100
Salt Control	95.0	5.8			
6.25	100	0.0			
12.5	97.5	5.0			
25	97.5	5.0			
50	100	0.0			
100	97.5	5.0			

NOEC = No Observed Effect Concentration

LOEC = Lowest Observed Effect Concentration

EC₅₀/LC₅₀ = Effect/Lethal Concentration to 50% of test population

Table 3-2. Test Condition Summary for *Menidia beryllina* Acute Test

Test Duration / Type		96-hour / Static-Renewal
Species		<i>Menidia beryllina</i>
Supplier		Aquatic Biosystems
Date acquired		11/19/24
Test Dates		11/20/24 – 11/24/24
Age at test initiation (Recommended: 9 - 14 days)		12 Days
Samples used:		111924; P241119.04
Sample Holding Time at Initiation: Recommended: <36 hours; Not to exceed 72 hours		31 hours
Test Procedures		EPA-821-R-02-012, Test Method 2006.0; EPA/600/4-90/027F; SOP TOX013.08
Test location		EcoAnalysts Port Gamble Laboratory
Control water / Diluent		0.45 µm-filtered, North Hood Canal seawater
Test Lighting		16-hour light / 8-hour dark
Test Chamber		12 oz. Plastic Chamber
Exposure volume		250 mL
Replicates/treatment		4
Concentration/treatment		6.25, 12.5, 25, 50, 100%
Organisms/replicate		10
Feeding		0.1 mL concentrated <i>Artemia</i> nauplii daily
Test solution renewal		Day 2
Test Dissolved Oxygen (Recommended: ≥4.0 mg/L)		5.8 – 9.1 mg/L
Test Temperature (Recommended: 20 ± 1°C)		19.2 – 20.3°C
Test Salinity (Recommended: 30 ± 2 ppt)		27 – 32 ppt
Test pH (Range not specified) Targeted Range: 6 – 9 units		7.6 – 8.3 units
Quality Assurance		
Control performance standards Survival (Recommended): ≥ 90%		97.5%; meets acceptability criterion
Reference Toxicant Date		11/21/24
Survival	Reference Toxicant LC ₅₀	114.7 µg/L copper
	Laboratory Mean LC ₅₀ ; Range LC ₅₀ (±2 SD)	229.3 (134 – 394 µg/L copper)
Deviations from Test Protocol		Salinity, Reference toxicant sensitivity

3.2 *Mytilus galloprovincialis* (Mussel) Chronic Test Results

The chronic toxicity test with *M. galloprovincialis* was conducted on November 19, 2024. The test met the acceptability criteria listed in Table 3-4. Mean survival and proportion normal are summarized in Table 3-3. The test conditions are summarized in Table 3-4.

There was a significant difference between the laboratory (dilution water) control and salt control for the proportion normal endpoint, but not for the proportion survived. With no observed toxicity in the client sample, it is believed that the artificial salt did not contribute to any negative biological effects.

The reference toxicant test results were within two standard deviations of the laboratory mean at the time of testing (Table 3-4). This indicates that the organisms are of a similar sensitivity to those previously tested at the EcoAnalysts laboratory.

Table 3-3. Results Summary for *Mytilus galloprovincialis* Larval Development Test

Conc. (%)	Mean Proportion Survived (%)	Standard Deviation	NOEC (%)	LOEC (%)	EC ₅₀ Value (%)
Control	94.6	4.4	100	>100	>100
Salt Control	100	0.0			
6.25	87.2	4.5			
12.5	88.6	4.8			
25	92.8	6.8			
50	91.7	4.6			
57.55	90.7	2.6			
100	96.6	4.3			
Conc. (%)	Mean Proportion Normal (%)	Standard Deviation	NOEC (%)	LOEC (%)	EC ₅₀ Value (%)
Control	93.7	0.74	100	>100	>100
Salt Control	9.5	2.3			
6.25	73.0	41.0			
12.5	94.3	2.0			
25	91.2	2.1			
50	90.1	3.3			
57.55	88.1	1.8			
100	84.4	2.7			

NOEC = No Observed Effect Concentration

LOEC = Lowest Observed Effect Concentration

LC₅₀/EC₅₀ = Lethal/Effect Concentration to 50% of test population

Proportion survived = total counted / stocking density

Proportion normal = number normal/total counted

Table 3-4. Test Condition Summary for *Mytilus galloprovincialis* Larval Development Test.

Test Duration / Type	48-Hour; Static
Species	<i>Mytilus galloprovincialis</i>
Supplier	Taylor Shellfish
Date acquired	09/30/24
Test Dates	11/19/24 – 11/21/24
Age at test initiation Recommended: <4-hour embryos	<4 hours
Sample(s) used:	111924; P241119.04
Holding Time at Initiation: Recommended: < 36 hours	8 hours
Test Procedures	EPA/600/R-95-136, Method 1005.0; SOP: TOX042.12
Test location	EcoAnalysts, Port Gamble, WA
Control water / Diluent	0.45 µm-filtered, North Hood Canal seawater
Test Lighting	16-hour light / 8-hour dark
Test Chamber	30-mL Chamber
Exposure volume	10 mL
Organisms/replicate (Recommended: 150 –300)	287
Replicates/treatment	4
Concentration/treatment	6.25, 12.5, 25, 50, 57.55 and 100%
Feeding	None
Test solution renewal	None
Test Water Quality	
Test Dissolved Oxygen (Recommended: > 4.0 mg/L)	7.7 – 8.5 mg/L
Test Temperature (Recommended: 16 ± 1°C)	15.7 – 17.4 °C
Test pH (Recommended: 7 – 9)	7.5 – 8.3
Test Salinity (Recommended: 30 ± 2 ppt)	28 – 30 ppt
Control performance standard Recommended: ≥50% survival, ≥90% normal development, <25% PMSD	94.6% survival; meets criterion 93.7% normal development; meets criterion 24.9% PMSD; meets criterion
Reference Toxicant Date	11/19/24
Reference Toxicant EC ₅₀	5.23 mg/L total ammonia
Laboratory Mean EC ₅₀ (Acceptable Range EC ₅₀ (± 2 SD))	8.06 mg/L (5.18 – 12.6 mg/L) total ammonia
Deviations from Test Protocol	Salt control

4. REFERENCES

- ASTM. 1989. Standard Guide for Conducting Static Acute Toxicity Tests Starting with Embryos of Saltwater Bivalve Molluscs, E724-89. ASTM International, West Conshohocken, PA.
- CETIS. 2022. CETIS™ Comprehensive Environmental Toxicity Information System User's Guide. Tidepool Scientific Software. McKinleyville, CA.
- USEPA. 1995. Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine Organisms and Estuarine Organisms, First Edition. EPA-600-R-95-136.
- 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.
- 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

STATISTICAL COMPARISONS AND LABORATORY DOCUMENTS

DATASHEETS ERROR CODES

CA	Called away; task completed by another tech
DC	Test solution too turbid or too dark to count organisms
FB	Found body – animal found that was previously noted as missing
IE	Incorrect Entry
IW	Illegible writing
MC	Miscount
MR	Meter reading changed; Meter no ready
NB	No body (no organism found)
SM	Stray Mark
WC	Wrong Cell (incorrect data box used)
WD	Wrong Date (incorrect date entered)
WN	Wrong number (incorrect number entered)
WP	Wrong page (incorrect data sheet)
WT	Wrong Time (incorrect time entered)

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APPENDIX A.1

INLAND SILVERSIDE 96-HOUR SURVIVAL TEST

STATISTICAL COMPARISON AND LABORATORY DATA SHEETS

CETIS Summary Report

Report Date: 10 Dec-24 13:20 (p 1 of 2)
Test Code/ID: P241119.04 / 19-0099-3523

Inland Silverside 96-h Acute Survival Test

EcoAnalysts

Batch ID: 08-1907-5131	Test Type: Survival (96h)	Analyst: Michelle Bennett
Start Date: 20 Nov-24 15:05	Protocol: EPA/821/R-02-012 (2002)	Diluent: Laboratory Seawater
Ending Date: 24 Nov-24 13:35	Species: Menidia beryllina	Brine: Crystal Sea Marine Mix
Test Length: 94h	Taxon: Actinopterygii	Source: Aquatic Biosystems, CO Age: 12D
Sample ID: 11-9259-1824	Code: P241119.04	Project: WEH-035B
Sample Date: 19 Nov-24 08:27	Material: Effluent Sample	Source: Jacobs Wyckoff
Receipt Date: 19 Nov-24 11:40	CAS (PC):	Station: 111924
Sample Age: 31h (3.4 °C)	Client: Jacobs	

Single Comparison Summary

Analysis ID	Endpoint	Comparison Method	P-Value	Comparison Result
19-2803-2654	96h Proportion Survived	Equal Variance t Two-Sample Test	0.2685	Salt Control passed 96h proportion survive

Multiple Comparison Summary

Analysis ID	Endpoint	Comparison Method	✓ NOEL	LOEL	TOEL	PMSD	TU
06-5419-9043	96h Proportion Survived	Steel Many-One Rank Sum Test	100	>100	---	7.15%	1

Point Estimate Summary

Analysis ID	Endpoint	Point Estimate Method	✓ Level	%	95% LCL	95% UCL	TU
17-6284-4198	96h Proportion Survived	Linear Interpolation (ICPIN)	EC50	>100	---	---	<1

Test Acceptability

Analysis ID	Endpoint	Attribute	Test Stat	TAC Limits		Overlap	Decision
				Lower	Upper		
06-5419-9043	96h Proportion Survived	Control Resp	0.975	0.9	>>	Yes	Passes Criteria
17-6284-4198	96h Proportion Survived	Control Resp	0.975	0.9	>>	Yes	Passes Criteria
19-2803-2654	96h Proportion Survived	Control Resp	0.975	0.9	>>	Yes	Passes Criteria

96h Proportion Survived Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	D	4	0.9750	0.8954	1.0550	0.9000	1.0000	0.0250	0.0500	5.13%	0.00%
0	SC	4	0.9500	0.8581	1.0420	0.9000	1.0000	0.0289	0.0577	6.08%	2.56%
6.25		4	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	-2.56%
12.5		4	0.9750	0.8954	1.0550	0.9000	1.0000	0.0250	0.0500	5.13%	0.00%
25		4	0.9750	0.8954	1.0550	0.9000	1.0000	0.0250	0.0500	5.13%	0.00%
50		4	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	-2.56%
100		4	0.9750	0.8954	1.0550	0.9000	1.0000	0.0250	0.0500	5.13%	0.00%

96h Proportion Survived Detail

MD5: 9A6BEC9B85F9601AB78A6D74512668E1

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	0.9000	1.0000	1.0000	1.0000
0	SC	1.0000	0.9000	1.0000	0.9000
6.25		1.0000	1.0000	1.0000	1.0000
12.5		1.0000	1.0000	1.0000	0.9000
25		1.0000	1.0000	0.9000	1.0000
50		1.0000	1.0000	1.0000	1.0000
100		1.0000	1.0000	1.0000	0.9000

96h Proportion Survived Binomials

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	9/10	10/10	10/10	10/10
0	SC	10/10	9/10	10/10	9/10
6.25		10/10	10/10	10/10	10/10
12.5		10/10	10/10	10/10	9/10
25		10/10	10/10	9/10	10/10
50		10/10	10/10	10/10	10/10
100		10/10	10/10	10/10	9/10

CETIS Test Data Worksheet

Report Date: 10 Dec-24 13:19 (p 1 of 1)
 Test Code/ID: P241119.04 / 19-0099-3523

Inland Silverside 96-h Acute Survival Test

EcoAnalysts

Start Date: 20 Nov-24 15:05 Species: Menidia beryllina Sample Code: P241119.04
 End Date: 24 Nov-24 13:35 Protocol: EPA/821/R-02-012 (2002) Sample Source: Jacobs Wyckoff
 Sample Date: 19 Nov-24 08:27 Material: Effluent Sample Sample Station: 111924

Conc-%	Code	Rep	Pos	# Exposed	Survival 24h	Survival 48h	Survival 72h	Survival 96h	Notes
0	D	1	10	10				9	
0	D	2	23	10				10	
0	D	3	16	10				10	
0	D	4	26	10				10	
0	SC	1	14	10				10	
0	SC	2	22	10				9	
0	SC	3	5	10				10	
0	SC	4	15	10				9	
6.25		1	4	10				10	
6.25		2	2	10				10	
6.25		3	1	10				10	
6.25		4	21	10				10	
12.5		1	19	10				10	
12.5		2	9	10				10	
12.5		3	20	10				10	
12.5		4	6	10				9	
25		1	3	10				10	
25		2	8	10				10	
25		3	12	10				9	
25		4	27	10				10	
50		1	25	10				10	
50		2	7	10				10	
50		3	13	10				10	
50		4	28	10				10	
100		1	11	10				10	
100		2	18	10				10	
100		3	17	10				10	
100		4	24	10				9	

Client	Jacobs Wyckoff
Project	WEH-035-B
Project Number	PG2096
Project Manager	M. Bennett
Date Sample Received	11/19/2024
Test type	96-Hour Acute Toxicity with Menidia
Matrix	Liquid
Test Acceptability	≥ 90% average survival of control
Test Start Date	11/20/24
Test Species	<i>Menidia beryllina</i>
Organism Batch	ABS111924.01
Organism Acquired	11/19/2024
Organism Acclimation	1
Organism Age	12 days
Test Protocol	TOX 013
Test Location	Bath 4
Light Intensity	50-100 foot candles
Light Cycle	16L:8D
Water Description	0.45 um filtered seawater
Organisms per Replicate	10
Test Chamber Size	12 oz
Exposure Volume	250 mL
Feeding Information	0.1 mL Artemia daily
Test Dissolved Oxygen	> 4
Test Temperature	20 ± 1
Test Salinity	30 ± 2
Test pH	7.5 ± 1.5

Note: Input lowest and highest decimal for temp

Test Parameters		
	Min	Max
DO	4	
Temp	18.5	21.4
Salinity	28	32
pH	6	9

TEST START TIME/INIT:	1505 MS (TVL)
TEST END TIME/INIT:	1335 KD

CLIENT SAMPLE ID	LAB ID
111924	P241119.04

Concentrations	
1	Control
2	Salt control
3	6.25%
4	12.5%
5	25%
6	50%
7	100%
8	.
9	.

Food Batch ID
491842

CSMM Batch #
082024

Treatment	Rep	Chamber
Control	1	4
Control	2	13
Control	3	7
Control	4	21
Salt control	1	27
Salt control	2	8
Salt control	3	26
Salt control	4	18
6.25%	1	10
6.25%	2	2
6.25%	3	5
6.25%	4	17
12.5%	1	9
12.5%	2	25
12.5%	3	1
12.5%	4	3
25%	1	16
25%	2	14
25%	3	28
25%	4	20
50%	1	22
50%	2	19
50%	3	24
50%	4	11
100%	1	6
100%	2	15
100%	3	23
100%	4	12
.	1	
.	2	
.	3	
.	4	
.	1	
.	2	
.	3	
.	4	

V5

CLIENT	Jacobs Wyckoff	DATE RECEIVED	11/19/24	PROTOCOL	TOX 013
PROJECT	WEH-035-B	TEST START DATE	11/20/24	PROJECT MANAGER	M. Bennett
CLIENT SAMPLE ID	111924	TEST END DATE	11/24/24	SPECIES	Menidia beryllina
LAB SAMPLE ID	P241119.04	MATRIX	Liquid	NO. OF ORGANISMS	10

96-Hour Acute Toxicity with Menidia

Test Parameters	
Salinity of Sample	0.485
Test Salinity	28

CSMM Batch Number	82024
-------------------	-------

Salinity Adjustment Multiplier	27.515
--------------------------------	--------

Coarse salinity adjustment	
mLs. Sample*	9000.0
Grams CSMM	247.6

* Adjust volume so that it equals total volume of sample needed for all dilutions

Fine Salinity Adjustment	
Salinity of coarse-adjusted Sample	22.4
Test Salinity	28
Ratio	1.25
Grams additional CSMM needed to reach target salinity	63

Final salinity	28
----------------	----

Salinity Adjustment Date / Initials	11/19/2024 TVL
-------------------------------------	----------------

VS	CLIENT	Jacobs Wyckoff	DATE RECEIVED	11/19/24	PROTOCOL	TOX 013
	PROJECT	WEH-035-B	TEST START DATE	11/20/24	PROJECT MANAGER	M. Bennett
	CLIENT SAMPLE ID	111924	TEST END DATE	11/24/24	SPECIES	Menidia beryllina
	LAB SAMPLE ID	P241119.04	MATRIX	Liquid	NO. OF ORGANISMS	10

96-Hour Acute Toxicity with Menidia

Day of Test	Concentration	Vol. Effluent Sample Added (mL)	Vol. Diluent Added (mL)	Total Volume (mL)	Diluent Type	FSW
0	0%	0	1000	1000		
	Salt control	#VALUE!	#VALUE!	1000		
	6.25%	62.5	937.5	1000		
	12.5%	125	875	1000		
	25%	250	750	1000		
	50%	500	500	1000		
	100%	1000	0	1000		

Day of Test	Concentration	Vol. Effluent Sample Added (mL)	Vol. Diluent Added (mL)	Total Volume (mL)
2	0%	0	800	800
	Salt control	#VALUE!	#VALUE!	800
	6.25%	50	750	800
	12.5%	100	700	800
	25%	200	600	800
	50%	400	400	800
	100%	800	0	800

Test Dilution Prep

Date	Balance ID	Sample ID (P#)	Water Batch ID	Initials
11/20/2024	7	P241119.04	FSW111624.01	MS
11/22/2024	7	P241119.04	FSW111624.01	TVL

Comments

vs

CLIENT	Jacobs Wyckoff	DATE RECEIVED	11/19/24	PROTOCOL	TOX 013
PROJECT	WEH-035-B	TEST START DATE	11/20/24	PROJECT MANAGER	M. Bennett
CLIENT SAMPLE ID	111924	TEST END DATE	11/24/24	SPECIES	Menidia beryllina
LAB SAMPLE ID	P241119.04	MATRIX	Liquor	NO. OF ORGANISMS	10

96-Hour Acute Toxicity with Menidia

Abbreviation Key:

NB = No Body

FB = Found Body

ST = Stranded

NB = No Body FB = Found Body ST = Stranded		Day 1			Day 2			Day 3			Day 4			
		Date	11/21/24		Date	11/22/24		Date	11/23/24		Date	11/24/24		
		Time	1249		Time	947		Time	1329		Time	1335		
		Tech	CS/KD		Tech	AR		Tech	NL		Tech	KD		
Concentration (%)	Rep	Alive	Dead	Obs	Alive	Dead	Obs	Alive	Dead	Obs	Alive	Dead	Obs	Comments
Control	1	10	0		9	1		9	0		9	0		
	2	10	0		10	0		10	0		10	0		
	3	10	0		10	0		10	0		10	0		
	4	10	0		10	0		10	0		10	0		
Salt control	1	10	0		10	0		10	0		10	0		
	2	10	0		10	0		10	0		9	1		
	3	10	0		10	0		10	0		10	0		
	4	9	1		9	1	1FB	9	0		9	0		
6.25%	1	10	0		10	0		10	0		10	0		
	2	10	0		10	0		10	0		10	0		
	3	10	0		10	0		10	0		10	0		
	4	10	0		10	0		10	0		10	0		
12.5%	1	10	0		10	0		10	0		10	0		
	2	10	0		10	0		10	0		10	0		
	3	10	0		10	0		10	0		10	0		
	4	10	0		9	1		9	0		9	0		
25%	1	10	0		10	0		10	0		10	0		
	2	10	0		10	0		10	0		10	0		
	3	9	1		9	0		9	0		9	0		
	4	10	0		10	0		10	0		10	0		Day 4: one fish injured via pipette, tech error - KD
50%	1	10	0		10	0		10	0		10	0		
	2	10	0		10	0		10	0		10	0		
	3	10	0		10	0		10	0		10	0		
	4	10	0		10	0		10	0		10	0		
100%	1	10	0		10	0		10	0		10	0		
	2	10	0		10	0		10	0		10	0		
	3	10	0		10	0		10	0		10	0		
	4	9	1		9	0		9	0		9	0		
Feed (Init.)	AM	EM			MM			MM			KD			
0.1 ml Artemia daily	PM													

CLIENT	Jacobs Wyckoff	DATE RECEIVED	11/19/24	PROTOCOL	TOX 013
PROJECT	WEH-035-B	TEST START DATE	11/20/24	PROJECT MANAGER	M. Bennett
CLIENT SAMPLE ID	111924	TEST END DATE	11/24/24	SPECIES	<i>Menidia beryllina</i>
LAB SAMPLE ID	P241119.04	MATRIX	Liquid	NO. OF ORGANISMS	10

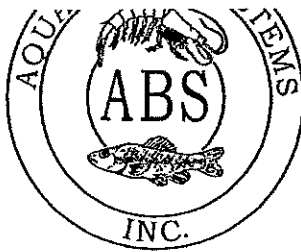
96-Hour Acute Toxicity with Menidia

		Concentration (%)	DO (mg/L)	TEMP (°C)	SALINITY (ppt)	pH	Comments
Day 0		Control	7.4	19.3	32	8.0	
Stock		Salt control	7.5	20.1	30	8.0	
Date	11/20/2024	6.25%	7.6	19.3	32	7.9	
Time	1432	12.5%	7.7	19.5	31	7.9	
Tech	TVL	25%	7.9	19.2	31	7.8	
Meter #	10	50%	8.0	19.5	30	7.7	
		100%	8.5	19.7	28	7.6	
Day 1		Control	6.2	19.8	31	7.8	
Rep 1		Salt control	6.7	19.8	29	7.9	
Date	11/21/2024	6.25%	6.3	19.8	31	7.9	
Time	1022	12.5%	6.5	19.9	31	7.9	
Tech	MM	25%	6.3	19.9	30	8.0	
Meter #	8	50%	6.7	19.8	29	8.1	
		100%	6.7	19.8	27	8.1	
Day 2		Control	6.2	20.1	31	7.7	
Rep 2		Salt control	6.2	20.0	29	7.8	
Date	11/22/2024	6.25%	5.9	20.0	31	7.8	
Time	926	12.5%	5.9	20.2	31	7.9	
Tech	AR	25%	6.0	20.0	30	8.0	
Meter #	8	50%	5.8	20.1	29	8.1	
		100%	5.8	20.0	27	8.3	
Day 2		Control	7.5	20.2	30	8.0	
Renewal Stock		Salt control	7.6	19.7	28	8.1	
Date	11/22/2024	6.25%	7.6	19.8	30	8.0	
Time	910	12.5%	7.7	19.5	30	7.9	
Tech	AR	25%	8.0	19.8	29	7.9	
Meter #	7	50%	8.2	19.9	29	7.8	
		100%	9.1	19.4	27	7.8	
Day 3		Control	5.9	19.9	32	7.7	
Rep 3		Salt control	6.0	20.1	29	7.9	
Date	11/23/2024	6.25%	6.0	20.0	31	7.9	
Time	1320	12.5%	6.1	20.0	31	8.0	
Tech	NL	25%	6.2	20.1	30	8.0	
Meter #	8	50%	6.2	20.1	29	8.1	
		100%	6.3	20.1	27	8.2	
Day 4		Control	5.8	20.3	32	7.6	
Rep 4		Salt control	6.6	20.2	30	7.8	
Date	11/24/2024	6.25%	6.1	20.2	32	7.8	
Time	1123	12.5%	6.4	20.0	32	7.9	
Tech	KD	25%	6.4	20.0	31	8.0	
Meter #	10	50%	5.9	20.1	30	8.2	
		100%	6.2	20.1	28	8.2	

ORGANISM RECEIPT LOG

Date: 11/19/24		Time: 1000		Batch No. AB5111924.01			
Organism: Menidia beryllina							
Source / Supplier: ABS							
No. Ordered: 610		No. Received: 670		Source Batch: Collection date, <u>hatch date</u> , etc.): 11/8/24			
Condition of Organisms:				Approximate Size or Age: (Days from hatch, life stage, size class, etc.): 11 days			
Shipper: Fedex				B of L (Tracking No.): 6674 4611 2587			
Condition of Container: Good				Received By: LG			
Container	D.O. (mg/L)	Temp. (°C)	Cond. or <u>Sal.</u> (Include Units)	pH (Units)	# Dead	% Dead*	Tech. (Initials)
A	20.0	19.8	25	7.5	18	2.2%	LG
B	17.1	19.8	25	7.3	7	1.0%	LG
C	21.3	19.9	25	7.3	3	0.4%	LG
D	21.8	19.9	25	7.3	14	2.1%	LG
E	22.1	19.9	25	7.2	10	1.5%	LG
<small>*if >10% contact lab manager</small>							
Notes:							

1300 Blue Spruce Drive, Suite C
Fort Collins, Colorado 80524



Toll Free: 800/331-5916
Tel: 970/484-5091 Fax: 970/484-2514

ORGANISM HISTORY

DATE: 11/18/2024

SPECIES: Menidia beryllina

AGE: 10 day

LIFE STAGE: Larvae

HATCH DATE: 11/8/2024

BEGAN FEEDING: Immediately

FOOD: Rotifers, Artemia sp.

Water Chemistry Record:

	Current	Range
TEMPERATURE:	<u>24°C</u>	<u>23-26 °C</u>
SALINITY/CONDUCTIVITY:	<u>25 ppt**</u>	<u>23-27 ppt</u>
TOTAL HARDNESS (as CaCO ₃):	<u>--</u>	<u>--</u>
TOTAL ALKALINITY (as CaCO ₃):	<u>165 mg/l</u>	<u>160-200 mg/l</u>
pH:	<u>7.95</u>	<u>7.60-8.00</u>

Comments:


Facility Supervisor

APPENDIX A.1.1

INLAND SILVERSIDE 96-HOUR SURVIVAL TEST

REFERENCE TOXICANT DATA SHEETS

Reference Toxicant 96-h Acute Survival Test

All Matching Labs

Test Type: Survival

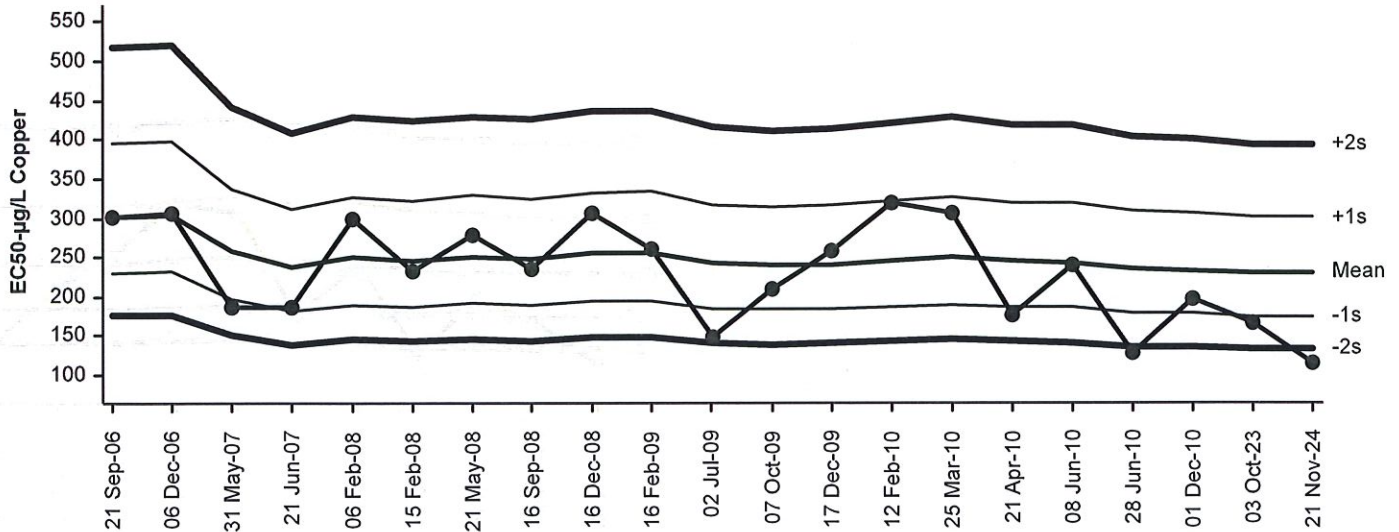
Organism: Menidia beryllina

Material: Copper

Protocol: EPA/821/R-02-012 (2002)

Endpoint: Proportion Survived

Source: Reference Toxicant-REF

Reference Toxicant 96-h Acute Survival Test
Proportion Survived Endpoint

Lognormal Cumulative Mean Plot

Mean: 229.3 Count: 20 -1s Warning Limit: 175 -2s Action Limit: 134
Sigma: NA CV: 27.50% +1s Warning Limit: 300 +2s Action Limit: 394

Quality Control Data

Point	Year	Month	Day	Time	QC Data	Delta	Sigma	Warning	Action	Test ID	Analysis ID	Laboratory
1	2006	Sep	21	17:00	301.5	72.2	1.014	(+)		13-2437-4560	13-4184-0272	NewFields
2		Dec	6	15:30	306.3	77.02	1.073	(+)		13-1351-8433	14-1844-9693	NewFields
3	2007	May	31	18:00	185.8	-43.48	-0.779			15-1085-6486	07-8998-8487	NewFields
4		Jun	21	17:00	187.9	-41.43	-0.7383			11-4444-5191	09-2989-1578	NewFields
5	2008	Feb	6	16:00	298.9	69.58	0.9819			09-0873-1841	02-2843-3056	NewFields
6			15	16:30	232.3	3.02	0.04848			02-3273-3535	02-4532-0088	NewFields
7		May	21	13:00	277.7	48.43	0.71			09-4275-9770	06-5552-2016	NewFields
8		Sep	16	14:00	234.5	5.158	0.08242			15-9104-3417	05-6930-9029	NewFields
9		Dec	16	0:00	306.7	77.42	1.078	(+)		14-9978-8744	16-1416-6951	NewFields
10	2009	Feb	16	17:50	259.8	30.46	0.4622			04-7138-1635	03-2527-8796	NewFields
11		Jul	2	15:30	148.7	-80.59	-1.605	(-)		17-6566-4048	02-5341-7743	NewFields
12		Oct	7	16:00	209.6	-19.7	-0.3329			09-2813-8584	10-4729-1377	NewFields
13		Dec	17	17:00	258.8	29.5	0.4484			08-9947-0669	06-8788-0639	NewFields
14	2010	Feb	12	15:50	319.7	90.37	1.231	(+)		16-3220-3330	11-4810-9360	NewFields
15		Mar	25	15:40	305.4	76.14	1.062	(+)		01-9529-2111	16-5352-1628	NewFields
16		Apr	21	14:30	175.7	-53.55	-0.9855			11-3599-7700	11-8587-2436	NewFields
17		Jun	8	15:00	239.1	9.842	0.1557			18-8197-0368	01-7499-5876	NewFields
18			28	18:35	128.9	-100.4	-2.134	(-)	(-)	12-9890-0591	14-9318-8371	NewFields
19		Dec	1	17:00	198.2	-31.14	-0.5407			19-6200-1517	14-1520-5779	NewFields
20	2023	Oct	3	17:05	165.7	-63.58	-1.203	(-)		08-1424-5683	14-5140-9073	EcoAnalysts
21	2024	Nov	21	15:56	114.7	-114.6	-2.567	(-)	(-)	08-0141-6495	18-8606-1212	EcoAnalysts

CETIS Summary Report

Report Date: 26 Nov-24 09:47 (p 1 of 1)
 Test Code/ID: R240207.27 / 08-0141-6495

Reference Toxicant 96-h Acute Survival Test

EcoAnalysts

Batch ID: 17-8310-1690	Test Type: Survival	Analyst: Michelle Bennett
Start Date: 21 Nov-24 15:56	Protocol: EPA/821/R-02-012 (2002)	Diluent: Laboratory Seawater
Ending Date: 25 Nov-24 14:00	Species: Menidia beryllina	Brine: Not Applicable
Test Length: 94h	Taxon: Actinopterygii	Source: Aquatic Biosystems, CO Age: 13D

Sample ID: 13-6491-9479	Code: R240207.27	Project:
Sample Date: 07 Feb-24	Material: Copper	Source: Reference Toxicant
Receipt Date: 07 Feb-24	CAS (PC):	Station: R240207.27
Sample Age: 288d 16h	Client: Internal Lab	

Multiple Comparison Summary

Analysis ID	Endpoint	Comparison Method	✓ NOEL	LOEL	TOEL	PMSD
21-0044-3084	Proportion Survived	Dunnett Multiple Comparison Test	62.5	125	88.39	24.1%

Point Estimate Summary

Analysis ID	Endpoint	Point Estimate Method	✓ Level	µg/L	95% LCL	95% UCL
18-8606-1212	Proportion Survived	Trimmed Spearman-Kärber	EC50	114.7	100	131.5

Proportion Survived Summary

Conc-µg/L	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	D	4	0.9500	0.7909	1.1090	0.8000	1.0000	0.0500	0.1000	10.53%	0.00%
31.25		4	0.9250	0.7727	1.0770	0.8000	1.0000	0.0479	0.0957	10.35%	2.63%
62.5		4	0.8500	0.6446	1.0550	0.7000	1.0000	0.0646	0.1291	15.19%	10.53%
125		4	0.4500	0.0290	0.8710	0.2000	0.8000	0.1323	0.2646	58.79%	52.63%
250		4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	---	100.00%
500		4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	---	100.00%

Proportion Survived Detail

MD5: A2FF3133A8D3A2946B47FD30CD8B3AEF

Conc-µg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	1.0000	0.8000	1.0000	1.0000
31.25		1.0000	0.8000	1.0000	0.9000
62.5		1.0000	0.7000	0.8000	0.9000
125		0.8000	0.5000	0.2000	0.3000
250		0.0000	0.0000	0.0000	0.0000
500		0.0000	0.0000	0.0000	0.0000

Proportion Survived Binomials

Conc-µg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	10/10	8/10	10/10	10/10
31.25		10/10	8/10	10/10	9/10
62.5		10/10	7/10	8/10	9/10
125		8/10	5/10	2/10	3/10
250		0/10	0/10	0/10	0/10
500		0/10	0/10	0/10	0/10

CETIS Test Data Worksheet

Report Date: 26 Nov-24 09:47 (p 1 of 1)
 Test Code/ID: R240207.27 / 08-0141-6495

Reference Toxicant 96-h Acute Survival Test

EcoAnalysts

Start Date: 21 Nov-24 15:56 Species: Menidia beryllina Sample Code: R240207.27
 End Date: 25 Nov-24 14:00 Protocol: EPA/821/R-02-012 (2002) Sample Source: Reference Toxicant
 Sample Date: 07 Feb-24 Material: Copper Sample Station: R240207.27

Conc-µg/L	Code	Rep	Pos	# Exposed	# Survived	Notes
0	D	1	2	10	10	
0	D	2	4	10	8	
0	D	3	24	10	10	
0	D	4	5	10	10	
31.25		1	12	10	10	
31.25		2	3	10	8	
31.25		3	10	10	10	
31.25		4	18	10	9	
62.5		1	17	10	10	
62.5		2	14	10	7	
62.5		3	11	10	8	
62.5		4	16	10	9	
125		1	19	10	8	
125		2	7	10	5	
125		3	15	10	2	
125		4	23	10	3	
250		1	8	10	0	
250		2	6	10	0	
250		3	1	10	0	
250		4	20	10	0	
500		1	13	10	0	
500		2	21	10	0	
500		3	22	10	0	
500		4	9	10	0	

Client	Internal
Associated Test	Various
Compound	Copper Chloride
Toxicant	Copper
Test Type	Reference Toxicant
Test type	96-Hour Acute Copper Ref Tox with Menidia
Matrix	Liquid
Test Acceptability	≥ 90% average survival of control
Test Start Date	11/21/24
Test Species	<i>Menidia beryllina</i>
Organism Batch	ABS111924.01
Organism Acquired	11/19/2024
Organism Acclimation	2
Organism Age	13 days
Test Protocol	TOX 013 / TOX 099
Test Location	Bath 3
Light Intensity	50-100 foot candles
Light Cycle	16L:8D
Water Description	0.45 um filtered seawater
Organisms per Replicate	10
Test Chamber Size	12 oz
Exposure Volume	250 mL
Feeding Information	0.1 mL Artemia daily
Test Dissolved Oxygen	> 4
Test Temperature	20 ± 1
Test Salinity	30 ± 2
Test pH	7.5 ± 1.5

Note: Input lowest and highest decimal for temp

Test Parameters		
	Min	Max
DO	4	
Temp	18.5	21.4
Salinity	28	32
pH	6	9

TEST START TIME/INIT: 1556 CS (MS)

TEST END TIME/INIT: 1400 CS

REFERENCE TOXICANT TEST ID

LOT #

R240207.27	BCCH9104
------------	----------

Concentrations (µg/L)

1	Control
2	31.25
3	62.5
4	125
5	250
6	500

Food Batch ID
491842.00

CSMM Batch #
082024

Treatment	Rep	Chamber
Control	1	2
Control	2	10
Control	3	22
Control	4	13
31.25	1	15
31.25	2	19
31.25	3	9
31.25	4	24
62.50	1	6
62.50	2	1
62.50	3	23
62.50	4	14
125.00	1	12
125.00	2	21
125.00	3	18
125.00	4	4
250.00	1	11
250.00	2	5
250.00	3	17
250.00	4	8
500.00	1	16
500.00	2	7
500.00	3	20
500.00	4	3

v1 CLIENT	Internal	TEST TYPE	Reference Toxicant	PROTOCOL	TOX 013 / TOX 099
ASSOCIATED TEST	Various	TEST START DATE	11/21/24	TOXICANT	Copper
REF TOX ID	R240207.27	TEST END DATE	11/25/24	SPECIES	<i>Menidia beryllina</i>
LOT #	BCCH9104	MATRIX	Liquid	NO. OF ORGANISMS	10

96-Hour Acute Copper Ref Tox with Menidia

Dilution Preparation (Serial dilute by 50%)

CuCl ₂ *2H ₂ O Stock Solution (µg/L)	Target Stock Solution Conc. (µg/L)	Volume of Diluent (mLs)	Amt. of Toxicant (mL)
400,000	500	2000	2.500
400,000	250	2000	1.250
400,000	125	2000	0.625

Test Dilution Prep

Date	Balance ID	Water Batch ID	Initials	Highest Concentration Prepared	Comments
11/21/2024	7	FSW111624.02	KD	500	
11/23/2024	7	FSW111624.02	MM	125	

Water Quality

	Concentration (µg/L)	DO (mg/L)	TEMP (°C)	SALINITY (ppt)	pH
		> 4	20 ± 1	30 ± 2	7.5 ± 1.5
Day 0 (Stock)	Control	7.5	19.5	32	7.8
Date 11/21/2024	31	7.6	19.4	32	7.9
Time 1531	63	7.5	19.5	32	7.9
Tech CS	125	7.6	19.5	32	8.0
Meter # 10	250	7.5	19.5	32	8.0
	500	7.5	19.6	32	8.0
Daily WQ	Day 1	Day 2	Day 3	Day 4	
Meter #	T17	T17	T17		
Temp. Old	19.7	19.7	19.7		
Temp. New		20.4			
Day 4	Control	5.9	19.4	31	7.7
Replicate # 4	31	6.4	19.8	31	7.8
Date 11/25/2024	63	6.3	19.7	31	7.7
Time 948	125	6.9	19.6	31	7.9
Tech LG	250				
Meter # 8	500				

Comments

CLIENT	Internal	TEST TYPE	Reference Toxicant	PROTOCOL	TOX 013 / TOX 099
ASSOCIATED TEST	Various	TEST START DATE	11/21/24	TOXICANT	Copper
REF TOX ID	R240207.27	TEST END DATE	11/25/24	SPECIES	<i>Menidia beryllina</i>
LOT #	BCCH9104	MATRIX	Liquid	NO. OF ORGANISMS	10

Abbreviation Key:

NB = No Body

FB = Found Body

ST = Stranded

96-Hour Acute Copper Ref Tox with Menidia

NB = No Body
FB = Found Body
ST = Stranded

		Day 1			Day 2			Day 3			Day 4			Comments
		Date	11/22/24		Date	11/23/24		Date	11/24/24		Date	11/25/24		
		Time	1053		Time	1055		Time	1126		Time	1400		
		Tech	AR		Tech	MM		Tech	KD		Tech	CS		
Concentration (µg/L)	REP	Alive	Dead	Obs	Alive	Dead	Obs	Alive	Dead	Obs	Alive	Dead	Obs	
Control	1	10	0		10	0		10	0		10	0		
	2	9	1		8	1		8	0		8	0		
	3	10	0		10	0		10	0		10	0		
	4	10	0		10	0		10	0		10	0		
31.25	1	10	0		10	0		10	0		10	0		
	2	8	2		8	0		8	0		8	0		
	3	10	0		10	0		10	0		10	0		
	4	9	1		9	0		9	0		9	0		
62.5	1	10	0		10	0		10	0		10	0		
	2	7	3		7	0		7	0		7	0		
	3	9	1		8	1		8	0		8	0		
	4	9	1		9	0		9	0		9	0		
125	1	8	2		8	0		8	0		8	0		
	2	5	5		5	0		5	0		5	0		
	3	2	8		2	0		2	0		2	0		
	4	3	7		3	0		3	0		3	0		
250	1	0	10											
	2	1	9		0	1								
	3	0	10											
	4	0	10											
500	1	0	10											
	2	0	10											
	3	0	10											
	4	0	10											
Feed (Init.)	AM	MM			MM			KD			TVL			
0.1 mL Artemia daily	PM													

RECEIVED

JUN 05 2025

WA State Department
of Ecology (SWRO)

APPENDIX A.2

***MYTILUS GALLOPROVINCIALIS* 48-HOUR SURVIVAL AND DEVELOPMENT TEST**

STATISTICAL COMPARISON AND LABORATORY DATA SHEETS

CETIS Summary Report

Report Date: 12 Dec-24 10:13 (p 1 of 2)

Test Code/ID: P241119.04Msp / 06-1997-5302

Bivalve Larval Survival and Development Test

EcoAnalysts

Batch ID: 18-8182-5830	Test Type: Development-Survival	Analyst: Danielle Mulligan
Start Date: 19 Nov-24 16:20	Protocol: EPA/600/R-95/136 (1995)	Diluent: Laboratory Seawater
Ending Date: 21 Nov-24 14:42	Species: Crassostrea gigas	Brine: Crystal Sea Marine Mix
Test Length: 46h	Taxon: Bivalvia	Source: Taylor Shellfish
		Age: <4h
Sample ID: 19-4407-4233	Code: P241119.04Msp	Project: WEH-035B
Sample Date: 19 Nov-24 08:27	Material: Treated Groundwater	Source: Jacobs Wyckoff
Receipt Date: 19 Nov-24 11:40	CAS (PC):	Station: 111924
Sample Age: 8h (3.4 °C)	Client: Jacobs	

Single Comparison Summary

Analysis ID	Endpoint	Comparison Method	P-Value	Comparison Result
01-7000-9211	Proportion Normal	Equal Variance t Two-Sample Test	<1.0E-05	Salt Control failed proportion normal
13-7220-2176	Proportion Survived	Unequal Variance t Two-Sample Test	0.9803	Salt Control passed proportion survived

Multiple Comparison Summary

Analysis ID	Endpoint	Comparison Method	✓	NOEL	LOEL	TOEL	PMSD	TU
10-6848-3674	Proportion Normal	Dunnett Multiple Comparison Test	✓	100	>100	---	24.9%	1
19-0037-9946	Proportion Survived	Dunnett Multiple Comparison Test	✓	100	>100	---	10.3%	1

Point Estimate Summary

Analysis ID	Endpoint	Point Estimate Method	✓	Level	%	95% LCL	95% UCL	TU
01-0049-7824	Proportion Normal	Linear Interpolation (ICPIN)	✓	EC50	>100	---	---	<1
06-9580-9845	Proportion Survived	Linear Interpolation (ICPIN)	✓	EC50	>100	---	---	<1

Test Acceptability

Analysis ID	Endpoint	Attribute	Test Stat	TAC Limits		Overlap	Decision
				Lower	Upper		
01-0049-7824	Proportion Normal	Control Resp	0.9365	0.9	>>	Yes	Passes Criteria
01-7000-9211	Proportion Normal	Control Resp	0.9365	0.9	>>	Yes	Passes Criteria
10-6848-3674	Proportion Normal	Control Resp	0.9365	0.9	>>	Yes	Passes Criteria
06-9580-9845	Proportion Survived	Control Resp	0.946	0.7	>>	Yes	Passes Criteria
13-7220-2176	Proportion Survived	Control Resp	0.946	0.7	>>	Yes	Passes Criteria
19-0037-9946	Proportion Survived	Control Resp	0.946	0.7	>>	Yes	Passes Criteria

Proportion Normal Summary

Conc.-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	D	4	0.9365	0.9246	0.9483	0.9275	0.9439	0.0037	0.0074	0.80%	0.00%
0	SC	4	0.0952	0.0586	0.1317	0.0732	0.1237	0.0115	0.0230	24.15%	89.84%
6.25		4	0.7302	0.0786	1.3820	0.1160	0.9412	0.2048	0.4095	56.08%	22.02%
12.5		4	0.9432	0.9120	0.9744	0.9173	0.9640	0.0098	0.0196	2.08%	-0.72%
25		4	0.9119	0.8787	0.9452	0.8926	0.9416	0.0105	0.0209	2.29%	2.62%
50		4	0.9013	0.8483	0.9543	0.8530	0.9277	0.0167	0.0333	3.70%	3.75%
57.55		4	0.8812	0.8519	0.9105	0.8689	0.9080	0.0092	0.0184	2.09%	5.90%
100		4	0.8442	0.8006	0.8878	0.8135	0.8796	0.0137	0.0274	3.24%	9.85%

Proportion Survived Summary

Conc.-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	D	4	0.9460	0.8761	1.0160	0.8885	0.9930	0.0220	0.0439	4.64%	0.00%
0	SC	4	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	-5.71%
6.25		4	0.8720	0.8009	0.9430	0.8293	0.9338	0.0223	0.0447	5.12%	7.83%
12.5		4	0.8859	0.8093	0.9625	0.8362	0.9512	0.0241	0.0481	5.43%	6.35%
25		4	0.9277	0.8190	1.0360	0.8432	1.0000	0.0342	0.0683	7.36%	1.93%
50		4	0.9172	0.8448	0.9897	0.8676	0.9721	0.0228	0.0456	4.97%	3.04%
57.55		4	0.9068	0.8657	0.9479	0.8711	0.9303	0.0129	0.0258	2.85%	4.14%
100		4	0.9660	0.8970	1.0350	0.9094	1.0000	0.0217	0.0434	4.49%	-2.12%

CETIS Summary Report

Report Date: 12 Dec-24 10:13 (p 2 of 2)
 Test Code/ID: P241119.04Msp / 06-1997-5302

Bivalve Larval Survival and Development Test

EcoAnalysts

Proportion Normal Detail

MD5: 2CBABF1309A760BDF4CE7F5D01A7FD9D

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	0.9439	0.9333	0.9275	0.9412
0	SC	0.1033	0.1237	0.0804	0.0732
6.25		0.9347	0.1160	0.9291	0.9412
12.5		0.9500	0.9414	0.9173	0.9640
25		0.9058	0.9077	0.8926	0.9416
50		0.9066	0.9179	0.8530	0.9277
57.55		0.8689	0.8692	0.8788	0.9080
100		0.8467	0.8371	0.8135	0.8796

Proportion Survived Detail

MD5: 4974658D47814B67961CE26EE4E75BE4

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	0.9930	0.9408	0.9617	0.8885
0	SC	1.0000	1.0000	1.0000	1.0000
6.25		0.8537	0.8711	0.9338	0.8293
12.5		0.8362	0.9512	0.8850	0.8711
25		0.9617	0.9059	0.8432	1.0000
50		0.8955	0.9338	0.9721	0.8676
57.55		0.9303	0.9059	0.9199	0.8711
100		0.9094	1.0000	1.0000	0.9547

Proportion Normal Binomials

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	269/285	252/270	256/276	240/255
0	SC	31/300	36/291	25/311	21/287
6.25		229/245	29/250	249/268	224/238
12.5		228/240	257/273	233/254	241/250
25		250/276	236/260	216/242	274/291
50		233/257	246/268	238/279	231/249
57.55		232/267	226/260	232/264	227/250
100		221/261	262/313	253/311	241/274

Proportion Survived Binomials

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	285/287	270/287	276/287	255/287
0	SC	287/287	287/287	287/287	287/287
6.25		245/287	250/287	268/287	238/287
12.5		240/287	273/287	254/287	250/287
25		276/287	260/287	242/287	287/287
50		257/287	268/287	279/287	249/287
57.55		267/287	260/287	264/287	250/287
100		261/287	287/287	287/287	274/287

CETIS Test Data Worksheet

Report Date: 10 Dec-24 11:32 (p 1 of 1)
Test Code/ID: P241119.04Msp / 06-1997-5302

Bivalve Larval Survival and Development Test

EcoAnalysts

Start Date: 19 Nov-24 16:20
End Date: 21 Nov-24 14:42
Sample Date: 19 Nov-24 08:27

Species: Crassostrea gigas
Protocol: EPA/600/R-95/136 (1995)
Material: Treated Groundwater

Sample Code: P241119.04Msp
Sample Source: Jacobs Wyckoff
Sample Station: 111924

Conc-%	Code	Rep	Pos	Initial Density	Final Density	# Counted	# Normal	Notes
0	D	1	12	287	285	285	269	
0	D	2	11	287	270	270	252	
0	D	3	27	287	276	276	256	
0	D	4	4	287	255	255	240	
0	SC	1	25	287	300	300	31	
0	SC	2	26	287	291	291	36	
0	SC	3	8	287	311	311	25	
0	SC	4	30	287	287	287	21	
6.25		1	24	287	245	245	229	
6.25		2	22	287	250	250	29	
6.25		3	20	287	268	268	249	
6.25		4	7	287	238	238	224	
12.5		1	32	287	240	240	228	
12.5		2	2	287	273	273	257	
12.5		3	5	287	254	254	233	
12.5		4	3	287	250	250	241	
25		1	15	287	276	276	250	
25		2	13	287	260	260	236	
25		3	18	287	242	242	216	
25		4	9	287	291	291	274	
50		1	29	287	257	257	233	
50		2	31	287	268	268	246	
50		3	1	287	279	279	238	
50		4	6	287	249	249	231	
57.55		1	17	287	267	267	232	
57.55		2	21	287	260	260	226	
57.55		3	14	287	264	264	232	
57.55		4	23	287	250	250	227	
100		1	19	287	261	261	221	
100		2	10	287	313	313	262	
100		3	16	287	311	311	253	
100		4	28	287	274	274	241	

Client	Jacobs Wyckoff
Project	WEH-035B
Project Number	PG2096
Project Manager	M. Bennett
Date Sample Received	11/19/2024
Test type	48-Hour Chronic Toxicity Using Bivalve Larvae
Matrix	Liquid
Test Acceptability	≥90% normal shell development, ≥50% survival (mussels) or ≥70% survival (oysters), MSD <25%
Test Start Date	11/19/24
Test Species	Mytilus spp.
Organism Batch	TF093024.01
Organism Acquired	9/30/2024
Organism Acclimation	50
Organism Age	<4 hr old embryos
Test Protocol	TOX 042
Test Location	Incubator 1
Light Intensity	50-100 foot candles
Light Cycle	16L:8D
Water Description	0.45 um filtered seawater
Organisms per Replicate	150 - 300
Test Chamber Size	30 mL
Exposure Volume	10 mL
Test Dissolved Oxygen	> 4
Test Temperature	16 ± 1
Test Salinity	30 ± 2
Test pH	8 ± 1

Note: Input lowest and highest decimal for temp

Test Parameters		
	Min	Max
DO	4.0	
Temp	14.5	17.4
Salinity	28	32
pH	7	9

TEST START TIME/INIT:	1620 MS (LG)
TEST END TIME/INIT:	1442 MM/AR

CLIENT SAMPLE ID	LAB ID
111924	P241119.04

Concentrations

1	Control
2	Salt Control
3	6.25%
4	12.5%
5	25%
6	50%
7	57.55%
8	100%
9	.

Salinity Adjustment CSMM Batch #
82024

Formalin Lot #
230724-07

Rose Bangel Batch #
5135

Treatment	Rep	Chamber
Control	1	
Control	2	
Control	3	
Control	4	
Salt Control	1	
Salt Control	2	
Salt Control	3	
Salt Control	4	
6.25%	1	
6.25%	2	
6.25%	3	
6.25%	4	
12.5%	1	
12.5%	2	
12.5%	3	
12.5%	4	
25%	1	
25%	2	
25%	3	
25%	4	
50%	1	
50%	2	
50%	3	
50%	4	
58%	1	
58%	2	
58%	3	
58%	4	
100%	1	
100%	2	
100%	3	
100%	4	
.	1	
.	2	
.	3	
.	4	

v.3

CLIENT	Jacobs Wyckoff	DATE RECEIVED	11/19/24	PROTOCOL	TOX 042
PROJECT	WEH-035B	TEST START DATE	11/19/24	PROJECT MANAGER	M. Bennett
CLIENT SAMPLE ID	111924	TEST END DATE	11/21/24	SPECIES	<i>Mytilus spp.</i>
LAB SAMPLE ID	P241119.04	MATRIX	Liquid	NO. OF ORGANISMS	150 - 300

48-Hour Chronic Toxicity Using Bivalve Larvae

Test Parameters	
Salinity of Sample	0.485
Test Salinity	28

CSMM Batch Number	82024
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Salinity Adjustment Multiplier	27.515
--------------------------------	--------

Coarse salinity adjustment	
mLs. Sample*	9000.0
Grams CSMM	247.6

* Adjust volume so that it equals total volume of sample needed for all dilutions

Fine Salinity Adjustment	
Salinity of coarse-adjusted Sample	22.4
Test Salinity	28
Ratio	1.25
Grams additional CSMM needed to reach target salinity	63

Final salinity	28
----------------	----

Salinity Adjustment Date / Initials	
11/19/2024	TVL

Comments

48-Hour Chronic WET Test

v.3

CLIENT	Jacobs Wyckoff	DATE RECEIVED	11/19/24	PROTOCOL	TOX 042
PROJECT	WEH-035B	TEST START DATE	11/19/24	PROJECT MANAGER	M. Bennett
CLIENT SAMPLE ID	111924	TEST END DATE	11/21/24	SPECIES	<i>Mytilus spp.</i>
LAB SAMPLE ID	P241119.04	MATRIX	Liquid	NO. OF ORGANISMS	150 - 300

48-Hour Chronic Toxicity Using Bivalve Larvae

SPAWNING METHOD	Heat Shock	INITIAL SPAWNING TIME	1225	FINAL SPAWNING TIME	1327
MALES	2	FEMALES	8	SPERM VIABILITY	Good
BEGIN FERTILIZATION	1327	END FERTILIZATION	1457	CONDITION OF EMBRYOS	Good

TIME OF INITIATION	INITIALS	COMMENTS
16:20	LG/MS	

EMBRYO DENSITY CALCULATIONS

# of embryos in 1 mL of 100X diluted embryo stock			# embryos in original stock = # of embryos in diluted stock x 100
Count 1	Count 2	Mean	
208	196	202	20200
Percentage of embryo stock needed = 2700 embryos per 1 mL/# embryos in original stock			
0.13			
mL of egg stock to add to FSW to achieve total volume = percentage of embro stock needed * 40 mL (or desired volume of embryo stock)			
5.346534653 Add this volume to beaker and dilute to 40 mL (or desired volume of embryo stock) with FSW = final embryo stock			
Add 0.1 mL of final embryo stock to test chambers			

CLIENT	Jacobs Wyckoff	DATE RECEIVED	11/19/24	PROTOCOL	TOX 042
PROJECT	WEH-035B	TEST START DATE	11/19/24	PROJECT MANAGER	M. Bennett
CLIENT SAMPLE ID	111924	TEST END DATE	11/21/24	SPECIES	<i>Mytilus spp.</i>
LAB SAMPLE ID	P241119.04	MATRIX	Liquid	NO. OF ORGANISMS	150 - 300

48-Hour Chronic Toxicity Using Bivalve Larvae

			DO (mg/L)	TEMP (°C)	SALINITY (ppt)	pH	COMMENTS
		Concentration (%)	> 4	15 - 17	28 - 32	7 - 9	
Day 0		Control	7.7	17.1	30.0	7.9	
Stock		Salt Control	7.8	15.7	29.0	7.6	
Date	11/19/2024	6.25%	7.8	16.4	30.0	7.9	
Time	1600	12.5%	7.8	17.2	30.0	7.8	
Tech	MS	25%	7.8	16.9	29.0	7.8	
Meter #	8	50%	7.9	17.4	29.0	7.8	
		58%	7.8	16.3	28.0	7.7	
		100%	8.0	16.4	28.0	7.7	
Day 1		Control		15.8			
Surrogate		Salt Control		15.8			
Date	11/20/2024	6.25%		15.8			
Time	1435	12.5%		15.8			
Tech	KD	25%		15.8			
Meter #	33	50%		15.8			
		58%		15.8			
		100%		15.8			
Day 2		Control	7.8	17.3	30	7.7	
Surrogate		Salt Control	7.9	16.8	30	7.5	
Date	11/21/2024	6.25%	7.9	17.1	30	7.8	
Time	1345	12.5%	7.8	16.9	30	7.9	
Tech	MM	25%	7.9	17.1	30	8.0	
Meter #	10	50%	8.0	17.0	29	8.1	
		58%	8.0	17.1	28	8.2	
		100%	8.5	17	28.0	8.3	

v.3

CLIENT	Jacobs Wyckoff	DATE RECEIVED	11/19/24	PROTOCOL	TOX 042
PROJECT	WEH-035B	TEST START DATE	11/19/24	PROJECT MANAGER	M. Bennett
CLIENT SAMPLE ID	111924	TEST END DATE	11/21/24	SPECIES	Mytilus spp.
LAB SAMPLE ID	P241119.04	MATRIX	Liquid	NO. OF ORGANISMS	150 - 300

48-Hour Chronic Toxicity Using Bivalve Larvae

Concentration (%)	Rep	Normal	Abnormal	Date	Tech	Comments
Stocking Density	1	299		11/27/2024	TVL	
	2	285		11/27/2024	TVL	
	3	295		11/27/2024	TVL	
	4	0		11/27/2024	TVL	/Vial was not stocked-TVL 11/27/24
	5	283		11/27/2024	TVL	
	6	271		11/27/2024	TVL	
Control	1	269	16	11/23/2024	NL	
	2	252	18	11/23/2024	NL	
	3	256	20	11/26/2024	LG	
	4	240	15	11/30/2024	NL	
Salt Control	1	31	269	11/23/2024	NL	
	2	36	255	11/26/2024	LG	
	3	25	286	11/26/2024	LG	
	4	21	266	11/30/2024	NL	
6.25%	1	229	16	11/23/2024	NL	
	2	29	221	11/26/2024	LG	
	3	249	19	11/26/2024	LG	
	4	224	14	11/30/2024	NL	
12.5%	1	228	12	11/23/2024	NL	
	2	257	16	11/26/2024	LG	
	3	233	21	11/26/2024	LG	
	4	241	9	11/30/2024	NL	
25%	1	250	26	11/23/2024	NL	
	2	236	24	11/26/2024	LG	
	3	216	26	11/26/2024	LG	
	4	274	17	11/30/2024	NL	
50%	1	233	24	11/23/2024	NL	
	2	246	22	11/26/2024	LG	
	3	238	41	11/26/2024	LG	
	4	231	18	11/30/2024	NL	
58%	1	232	35	11/23/2024	NL	
	2	226	34	11/26/2024	LG	
	3	232	32	11/26/2024	LG	
	4	227	23	11/30/2024	NL	

V.3

CLIENT	Jacobs Wyckoff	DATE RECEIVED	11/19/24	PROTOCOL	TOX 042
PROJECT	WEH-035B	TEST START DATE	11/19/24	PROJECT MANAGER	M. Bennett
CLIENT SAMPLE ID	111924	TEST END DATE	11/21/24	SPECIES	Mytilus spp.
LAB SAMPLE ID	P241119.04	MATRIX	Liquid	NO. OF ORGANISMS	150 - 300

48-Hour Chronic Toxicity Using Bivalve Larvae

Concentration (%)	Rep	Normal	Abnormal	Date	Tech	Comments
100%	1	221	40	11/23/2024	NL	
	2	262	51	11/26/2024	LG	
	3	253	58	11/26/2024	LG	
	4	241	33	11/30/2024	NL	

QA Counts

Concentration (%)	Rep	Normal	Abnormal	Date	Tech	% Difference from Original Proportion Normal
Control	3	252	22	11/30/2024	NL	1
6.25	2	19	232	11/30/2024	NL	3
25	3	217	19	11/30/2024	NL	3
58	2	224	27	11/30/2024	NL	2

Average Difference < 5%?

Yes

ORGANISM RECEIPT LOG

Date: 9/30/24		Time: 1650		Batch No. T5093024.01			
Organism: Mytilus spp.							
Source / Supplier: Taylor Shellfish							
No. Ordered: 20 lbs		No. Received: 20 lbs		Source Batch: Collection date, hatch date, etc.): Harvested 9/30/24			
Condition of Organisms: good				Approximate Size or Age: (Days from hatch, life stage, size class, etc.): mixed age adults			
Shipper: courier				B of L (Tracking No.) NA			
Condition of Container: NONE (1)				Received By: DM			
Container	D.O. (mg/L)	Temp. (°C)	Cond. or Sal. (include Units)	pH (Units)	# Dead	% Dead*	Tech. (Initials)
(1)							
*if >10% contact lab manager							
Notes: (1) received dry - DM - 9/30/24							

SE 130 LYNCH RD, SHELTON WA 98584
PHONE # : (360) 426-6178
WASHINGTON STATE DEPT OF AG

HARVEST DATE:

9/30/24

HARVEST
AREA:

Totten Tule

HARVEST
ITEM:

Mussels Gulls

Dept ID

FARM CODE:

M127 Dwl

QUANTITY:

20

☐ Dozens
☒ Pounds

☐ Tubs
☐ Sacks

All Shellstock containers in this lot have the same harvest data and area of harvest.

TS093024.01

Harvest

Harvest
Month

Refer
Date

Refer
Hour

Refer
Minute

12
30

APPENDIX A.2.1

***MYTILUS GALLOPROVINCIALIS* 48-HOUR SURVIVAL AND DEVELOPMENT TEST**

REFERENCE TOXICANT DATA SHEETS

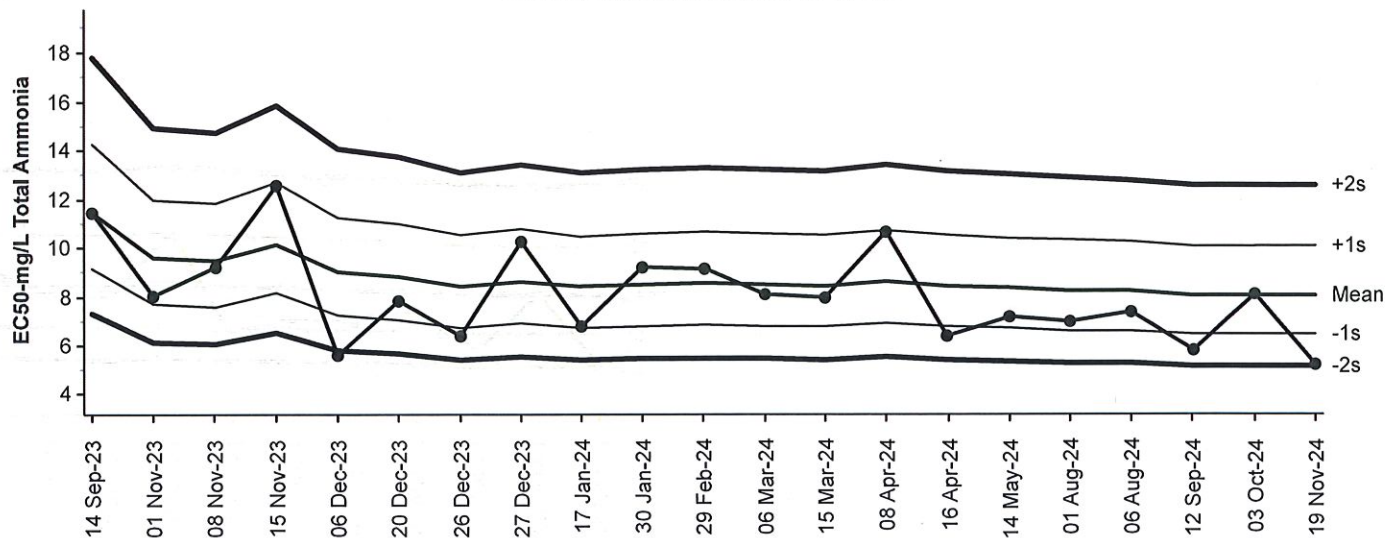
Bivalve Larval Survival and Development Test

All Matching Labs

Test Type: Development-Survival
Protocol: EPA/600/R-95/136 (1995)

Organism: Mytilus galloprovincialis
Endpoint: Combined Proportion Normal

Material: Total Ammonia
Source: Reference Toxicant-REF

Bivalve Larval Survival and Development Test
Combined Proportion Normal Endpoint

Quality Control Data

Point	Year	Month	Day	Time	QC Data	Delta	Sigma	Warning	Action	Test ID	Analysis ID	Laboratory
1	2023	Sep	14	13:50	11.43	3.368	1.577	(+)		10-9810-7803	01-3503-3195	EcoAnalysts
2		Nov	1	17:40	8.055	-0.00588	-0.00329			08-2875-4322	08-8063-5388	EcoAnalysts
3			8	15:55	9.251	1.191	0.6222			13-4824-7359	00-4887-4658	EcoAnalysts
4			15	14:38	12.55	4.491	2	(+)	(+)	04-7650-2671	01-5035-4681	EcoAnalysts
5		Dec	6	17:35	5.604	-2.456	-1.642	(-)		07-4908-4729	09-1248-2427	EcoAnalysts
6			20	15:50	7.826	-0.2346	-0.1334			21-3057-6259	03-0359-1538	EcoAnalysts
7			26	17:01	6.393	-1.668	-1.047	(-)		09-3076-3716	00-6627-3829	EcoAnalysts
8			27	16:43	10.27	2.212	1.095	(+)		05-3736-4406	14-3667-2208	EcoAnalysts
9	2024	Jan	17	15:15	6.76	-1.3	-0.7946			06-5202-1140	06-9659-2949	EcoAnalysts
10			30	16:45	9.227	1.166	0.6104			00-0328-6111	17-2839-1252	EcoAnalysts
11		Feb	29	16:10	9.166	1.105	0.5805			11-3381-6441	12-8703-1430	EcoAnalysts
12		Mar	6	15:31	8.112	0.05117	0.02858			06-3359-5243	09-6537-8157	EcoAnalysts
13			15	17:03	7.968	-0.09282	-0.05231			06-5685-3013	05-8374-8533	EcoAnalysts
14		Apr	8	17:18	10.69	2.634	1.277	(+)		16-7676-7519	00-4054-4328	EcoAnalysts
15			16	16:40	6.425	-1.635	-1.024	(-)		04-9604-7497	18-3623-5759	EcoAnalysts
16		May	14	16:34	7.177	-0.8833	-0.5242			21-4519-8060	12-9914-4968	EcoAnalysts
17		Aug	1	16:24	6.958	-1.102	-0.6643			13-0697-3395	03-2832-5816	EcoAnalysts
18			6	16:38	7.365	-0.6955	-0.4076			03-6564-1184	00-8126-3354	EcoAnalysts
19		Sep	12	14:52	5.799	-2.262	-1.488	(-)		19-9772-0136	15-6422-1672	EcoAnalysts
20		Oct	3	14:18	8.072	0.01115	0.006244			11-1887-7607	01-7467-5230	EcoAnalysts
21		Nov	19	16:16	5.231	-2.83	-1.953	(-)		03-8352-5566	16-9011-4270	EcoAnalysts

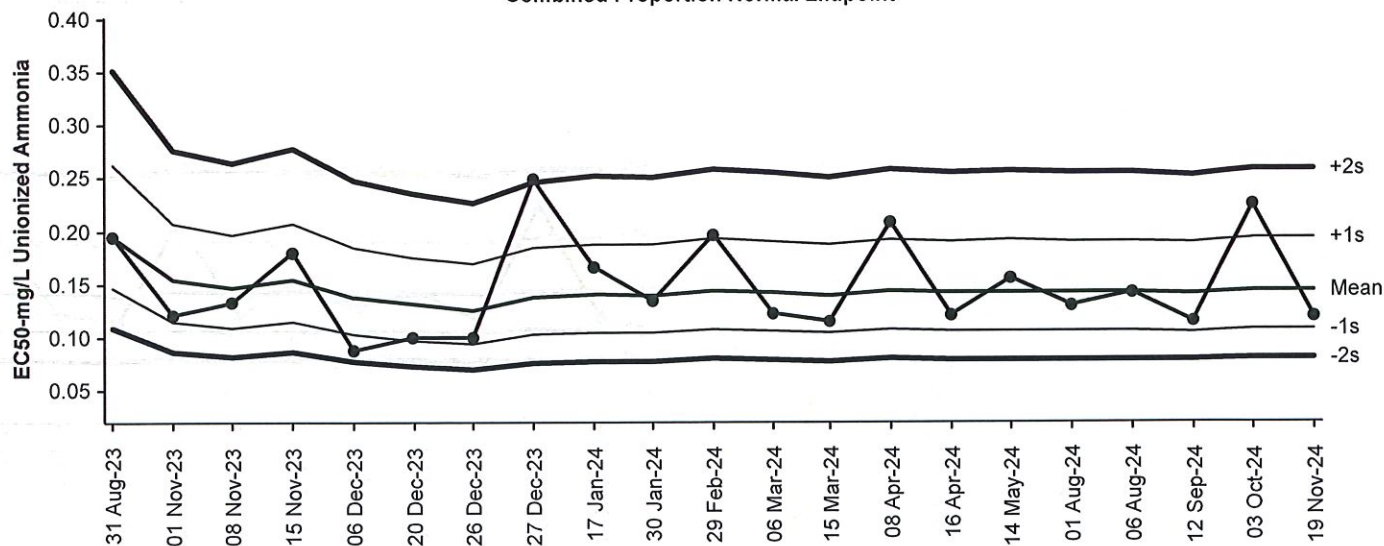
Bivalve Larval Survival and Development Test

All Matching Labs

Test Type: Development-Survival
Protocol: EPA/600/R-95/136 (1995)

Organism: Mytilus galloprovincialis
Endpoint: Combined Proportion Normal

Material: Unionized Ammonia
Source: Reference Toxicant-REF

Bivalve Larval Survival and Development Test
Combined Proportion Normal Endpoint

Lognormal Cumulative Mean Plot

Mean: 0.1438

Count: 20

-1s Warning Limit: 0.107

-2s Action Limit: 0.0801

Sigma: NA

CV: 29.90%

+1s Warning Limit: 0.193

+2s Action Limit: 0.258

Quality Control Data

Point	Year	Month	Day	Time	QC Data	Delta	Sigma	Warning	Action	Test ID	Analysis ID	Laboratory
1	2023	Aug	31	16:54	0.1956	0.05175	1.049	(+)		07-4158-0358	11-0996-2376	EcoAnalysts
2		Nov	1	17:40	0.1213	-0.0225	-0.581			06-2464-1457	05-4038-7195	EcoAnalysts
3			8	15:55	0.1338	-0.01009	-0.2483			13-8700-3666	02-0586-1811	EcoAnalysts
4			15	14:38	0.1802	0.03631	0.7687			19-3724-7711	00-4487-8422	EcoAnalysts
5		Dec	6	17:35	0.08732	-0.05653	-1.705	(-)		11-7639-2844	02-1522-3004	EcoAnalysts
6			20	15:50	0.1006	-0.04327	-1.222	(-)		09-2413-6838	00-3830-4602	EcoAnalysts
7			26	17:01	0.09993	-0.04392	-1.244	(-)		07-1075-7212	13-4227-6824	EcoAnalysts
8			27	16:43	0.2498	0.1059	1.885	(+)		21-2709-9990	17-0965-3961	EcoAnalysts
9	2024	Jan	17	15:15	0.1665	0.02265	0.4995			15-5848-1090	20-9766-0257	EcoAnalysts
10			30	16:45	0.134	-0.00986	-0.2424			12-6773-1386	01-4900-2989	EcoAnalysts
11		Feb	29	16:10	0.1971	0.05322	1.075	(+)		13-3303-1935	02-6389-9378	EcoAnalysts
12		Mar	6	15:31	0.1223	-0.02157	-0.5547			17-0621-0144	14-8112-7594	EcoAnalysts
13			15	17:03	0.1145	-0.0293	-0.7779			01-3031-4193	06-2698-4373	EcoAnalysts
14		Apr	8	17:18	0.2079	0.06402	1.257	(+)		04-4451-4007	17-2379-4285	EcoAnalysts
15			16	16:40	0.121	-0.02284	-0.5905			03-1250-7032	03-5786-4929	EcoAnalysts
16		May	14	16:34	0.1554	0.01156	0.2639			19-1158-6953	20-4021-2088	EcoAnalysts
17		Aug	1	16:24	0.13	-0.01387	-0.3463			08-6483-0652	10-7757-1262	EcoAnalysts
18			6	16:38	0.1421	-0.00179	-0.04283			18-7052-8380	00-7946-2632	EcoAnalysts
19		Sep	12	14:52	0.1155	-0.0283	-0.7483			10-6088-5448	03-3796-3340	EcoAnalysts
20		Oct	3	14:18	0.2253	0.08144	1.532	(+)		02-1123-2241	05-7563-2730	EcoAnalysts
21		Nov	19	16:16	0.1188	-0.025	-0.652			20-5027-4543	19-6771-2125	EcoAnalysts

CETIS Summary Report

Report Date: 05 Dec-24 16:04 (p 1 of 1)
Test Code/ID: R240501.12 / 03-8352-5566

Bivalve Larval Survival and Development Test

EcoAnalysts

Batch ID: 06-0197-6587	Test Type: Development-Survival	Analyst: Michelle Bennett
Start Date: 19 Nov-24 16:16	Protocol: EPA/600/R-95/136 (1995)	Diluent: Laboratory Seawater
Ending Date: 21 Nov-24 14:34	Species: Mytilus galloprovincialis	Brine:
Test Length: 46h	Taxon: Bivalvia	Source: Taylor Shellfish Age: <4H
Sample ID: 07-7265-7028	Code: R240501.12	Project: Reference Toxicant
Sample Date: 01 May-24	Material: Total Ammonia	Source: Reference Toxicant
Receipt Date: 01 May-24	CAS (PC):	Station: R240501.12
Sample Age: 202d 16h	Client: Internal Lab	

Multiple Comparison Summary

Analysis ID	Endpoint	Comparison Method	✓ NOEL	LOEL	TOEL	PMSD
13-1639-0025	Combined Proportion Normal Dunnett Multiple Comparison Test		3.92	6.21	4.934	12.2%

Point Estimate Summary

Analysis ID	Endpoint	Point Estimate Method	✓ Level	mg/L	95% LCL	95% UCL
16-9011-4270	Combined Proportion Normal Linear Interpolation (ICPIN)		EC50	5.231	4.92	5.535

Test Acceptability

Analysis ID	Endpoint	Attribute	Test Stat	TAC Limits		Overlap	Decision
				Lower	Upper		
13-1639-0025	Combined Proportion Normal PMSD		0.1218	<<	0.25	Yes	Passes Criteria

Combined Proportion Normal Summary

Conc-mg/L	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	D	4	0.8214	0.7752	0.8677	0.7944	0.8571	0.0145	0.0291	3.54%	0.00%
1.21		4	0.7605	0.5974	0.9235	0.6341	0.8815	0.0512	0.1025	13.48%	7.42%
3.92		4	0.7369	0.6728	0.8010	0.7073	0.7944	0.0201	0.0403	5.47%	10.29%
6.21		4	0.2091	0.0899	0.3282	0.1010	0.2613	0.0375	0.0749	35.82%	74.55%
12.6		4	0.0453	0.0278	0.0628	0.0314	0.0558	0.0055	0.0110	24.33%	94.49%
20.5		4	0.0166	0.0071	0.0260	0.0105	0.0244	0.0030	0.0060	35.95%	97.99%

Combined Proportion Normal Detail

MD5: 075B489B906A1EB9548D5FF70604CC8D

Conc-mg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	0.8328	0.7944	0.8014	0.8571
1.21		0.8815	0.7422	0.6341	0.7840
3.92		0.7073	0.7108	0.7352	0.7944
6.21		0.1010	0.2613	0.2160	0.2578
12.6		0.0523	0.0314	0.0418	0.0558
20.5		0.0174	0.0244	0.0105	0.0139

Combined Proportion Normal Binomials

Conc-mg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	239/287	228/287	230/287	246/287
1.21		253/287	213/287	182/287	225/287
3.92		203/287	204/287	211/287	228/287
6.21		29/287	75/287	62/287	74/287
12.6		15/287	9/287	12/287	16/287
20.5		5/287	7/287	3/287	4/287

CETIS Summary Report

Report Date: 05 Dec-24 16:14 (p 1 of 1)

Test Code/ID: R240501.12UIA / 20-5027-4543

Bivalve Larval Survival and Development Test

EcoAnalysts

Batch ID: 02-1250-0212	Test Type: Development-Survival	Analyst: Michelle Bennett
Start Date: 19 Nov-24 16:16	Protocol: EPA/600/R-95/136 (1995)	Diluent: Laboratory Seawater
Ending Date: 21 Nov-24 14:34	Species: Mytilus galloprovincialis	Brine:
Test Length: 46h	Taxon: Bivalvia	Source: Taylor Shellfish Age: <4H

Sample ID: 17-7487-7777	Code: R240501.12UIA	Project: Reference Toxicant
Sample Date: 01 May-24	Material: Unionized Ammonia	Source: Reference Toxicant
Receipt Date: 01 May-24	CAS (PC):	Station: R240501.12
Sample Age: 202d 16h	Client: Internal Lab	

Multiple Comparison Summary

Analysis ID	Endpoint	Comparison Method	✓ NOEL	LOEL	TOEL	PMSD
13-7910-4785	Combined Proportion Normal	Dunnett Multiple Comparison Test	0.087	0.139	0.11	12.2%

Point Estimate Summary

Analysis ID	Endpoint	Point Estimate Method	✓ Level	mg/L	95% LCL	95% UCL
19-6771-2125	Combined Proportion Normal	Linear Interpolation (ICPIN)	EC50	0.1188	0.1124	0.1255

Test Acceptability

Analysis ID	Endpoint	Attribute	Test Stat	TAC Limits		Overlap	Decision
				Lower	Upper		
13-7910-4785	Combined Proportion Normal	PMSD	0.1218	<<	0.25	Yes	Passes Criteria

Combined Proportion Normal Summary

Conc-mg/L	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	D	4	0.8214	0.7752	0.8677	0.7944	0.8571	0.0145	0.0291	3.54%	0.00%
0.027		4	0.7605	0.5974	0.9235	0.6341	0.8815	0.0512	0.1025	13.48%	7.42%
0.087		4	0.7369	0.6728	0.8010	0.7073	0.7944	0.0201	0.0403	5.47%	10.29%
0.139		4	0.2091	0.0899	0.3282	0.1010	0.2613	0.0375	0.0749	35.82%	74.55%
0.219		4	0.0453	0.0278	0.0628	0.0314	0.0558	0.0055	0.0110	24.33%	94.49%
0.367		4	0.0166	0.0071	0.0260	0.0105	0.0244	0.0030	0.0060	35.95%	97.99%

Combined Proportion Normal Detail

MD5: FCADFD6E08EA2F43AD894FA78A5323F5

Conc-mg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	0.8328	0.7944	0.8014	0.8571
0.027		0.8815	0.7422	0.6341	0.7840
0.087		0.7073	0.7108	0.7352	0.7944
0.139		0.1010	0.2613	0.2160	0.2578
0.219		0.0523	0.0314	0.0418	0.0558
0.367		0.0174	0.0244	0.0105	0.0139

Combined Proportion Normal Binomials

Conc-mg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	239/287	228/287	230/287	246/287
0.027		253/287	213/287	182/287	225/287
0.087		203/287	204/287	211/287	228/287
0.139		29/287	75/287	62/287	74/287
0.219		15/287	9/287	12/287	16/287
0.367		5/287	7/287	3/287	4/287

CETIS Test Data Worksheet

Report Date: 05 Dec-24 16:03 (p 1 of 1)
Test Code/ID: R240501.12 / 03-8352-5566

Bivalve Larval Survival and Development Test

EcoAnalysts

Start Date: 19 Nov-24 16:16 Species: Mytilus galloprovincialis Sample Code: R240501.12
End Date: 21 Nov-24 14:34 Protocol: EPA/600/R-95/136 (1995) Sample Source: Reference Toxicant
Sample Date: 01 May-24 Material: Total Ammonia Sample Station: R240501.12

Conc-mg/L	Code	Rep	Pos	Initial Density	Final Density	# Counted	# Normal	Notes
0	D	1	20	287	252	252	239	
0	D	2	19	287	257	257	228	
0	D	3	6	287	254	254	230	
0	D	4	15	287	269	269	246	
1.21		1	10	287	280	280	253	
1.21		2	9	287	242	242	213	
1.21		3	11	287	222	222	182	
1.21		4	3	287	258	258	225	
3.92		1	8	287	250	250	203	
3.92		2	12	287	272	272	204	
3.92		3	24	287	266	266	211	
3.92		4	17	287	279	279	228	
6.21		1	22	287	271	271	29	
6.21		2	23	287	254	254	75	
6.21		3	14	287	271	271	62	
6.21		4	16	287	257	257	74	
12.6		1	2	287	182	182	15	
12.6		2	13	287	212	212	9	
12.6		3	4	287	213	213	12	
12.6		4	21	287	224	224	16	
20.5		1	1	287	236	236	5	
20.5		2	18	287	224	224	7	
20.5		3	5	287	224	224	3	
20.5		4	7	287	224	224	4	

CETIS Test Data Worksheet

Report Date: 05 Dec-24 16:12 (p 1 of 1)

Test Code/ID: R240501.12UIA / 20-5027-4543

Bivalve Larval Survival and Development Test

EcoAnalysts

Start Date: 19 Nov-24 16:16

Species: Mytilus galloprovincialis

Sample Code: R240501.12UIA

End Date: 21 Nov-24 14:34

Protocol: EPA/600/R-95/136 (1995)

Sample Source: Reference Toxicant

Sample Date: 01 May-24

Material: Unionized Ammonia

Sample Station: R240501.12

Conc-mg/L	Code	Rep	Pos	Initial Density	Final Density	# Counted	# Normal	Notes
0	D	1	13	287	252	252	239	
0	D	2	16	287	257	257	228	
0	D	3	17	287	254	254	230	
0	D	4	24	287	269	269	246	
0.027		1	6	287	280	280	253	
0.027		2	1	287	242	242	213	
0.027		3	4	287	222	222	182	
0.027		4	21	287	258	258	225	
0.087		1	2	287	250	250	203	
0.087		2	20	287	272	272	204	
0.087		3	22	287	266	266	211	
0.087		4	7	287	279	279	228	
0.139		1	12	287	271	271	29	
0.139		2	11	287	254	254	75	
0.139		3	8	287	271	271	62	
0.139		4	9	287	257	257	74	
0.219		1	18	287	182	182	15	
0.219		2	10	287	212	212	9	
0.219		3	5	287	213	213	12	
0.219		4	14	287	224	224	16	
0.367		1	19	287	236	236	5	
0.367		2	15	287	224	224	7	
0.367		3	3	287	224	224	3	
0.367		4	23	287	224	224	4	

[illegible]

48 Hour Bivalve Development Reference Toxicant Test

Test ID: R240501.12	Replicates: 4	Study Director: M. Bennett	Location: Incubator 1
Dilution Water Batch: FSW 11/8 24.01	Organism Batch: TF013024.01	Associated Test(s): Jacobs w yckoff	Organism: M.sp
Chamber Size/Type: 30 ml shell vial	Exposure Volume: 10 ml		
Toxicant: Ammonium Chloride		Date Prepared: 11/19/24	Initials: AR
Target Concentrations: See spiking worksheet		Quantity of Stock: Target: See spiking worksheet	Quantity of Diluent: Target: 250 mL
See spiking worksheet		Actual: See spiking worksheet	Actual: 200mL

SPAWNING DATA

Initial Spawning Time: 1225	Final Spawning Time: 1327	Fertilization Time: 1327	No. of Females: 8	No. of Males: 2
Embryo Density (count/mL):	1. 208	2. 196	3. —	Mean: 202
Stocking Volume Calculation: 2700 / 20200 = 0.13 mL 0.13 mL x 40 mL ASW = 5.35 mL				

0 Hours	Date: 11/19/24	WQ Time: 1402 AR	Start Time: 1616	Initials: UG/MS
----------------	-----------------------	-------------------------	-------------------------	------------------------

STOCK

	Control	1.5	3	6	12	18
D.O. (%) (>4.0 mg/L)	7.8	8.0	8.0	8.0	8.0	8.0
Temperature (16 ± 1°C)	16.3	16.1	16.0	16.1	15.7	16.1
Salinity (30 ± 2 ppt)	29	29	29	29	29	29
pH (6-9)	7.8	7.9	7.9	7.9	7.8	7.8
Meter #	7	7	7	7	7	7

Day 1	Temperature (16 ± 1°C)	15.8 ①	Meter #	T33	Initials: KD
Day 2	Date: 11/21/24	WQ Time: 953 KD	End Time: 1434	Initials: MM/AR	
Formalin Lot #: 230724-07		Rose Bengal Lot #: 5135			

STOCK

	Control	1.5	3	6	12	18
D.O. (%) (>4.0 mg/L)	7.6	8.0	8.0	8.0	7.8	7.9
Temperature (16 ± 1°C)	16.9	16.7	16.7	16.8	16.7	16.8
Salinity (30 ± 2 ppt)	30	31	30	30	31	30
pH (6-9)	7.7	7.7	7.8	7.8	7.8	7.8
Meter #	10	10	10	10	10	10

① Incubator temp increased to 16.0°C from 15.0°C to bring sample to temp range - KD 11/20

48 Hour Bivalve Development Reference Toxicant Test

Conc.	Rep	Number Normal	Number Abnormal	Date	Initials
Control	1	239	13	11/27/24	TVL
	2	228	29	11/27	TVL
	3	230	24	11/27	TVL
	4	246	23	11/27	TVL
1.5	1	253	27	11/27	TVL
	2	213	29	11/27	TVL
	3	182	40	11/27	TVL
	4	225	33	11/27	TVL
3	1	263	47	11/27	TVL
	2	264	68	11/27	TVL
	3	211	55	11/27	TVL
	4	228	51	11/27	TVL
6	1	① 242	242	11/27	TVL
	2	③ ① 2375	228 179 ①	11/27	TVL
	3	① 3062	234 209 ①	11/27	TVL
	4	① 2374	220 183 ①	11/27	TVL
12	1	15	167	11/27	TVL
	2	9	203	11/27	TVL
	3	12	201	11/27	TVL
	4	16	208	11/27	TVL
18	1	5	231	11/27	TVL
	2	7	217	11/27	TVL
	3	3	221	11/27	TVL
	4	4	220	11/27	TVL
Stocking Density					
Rep		Count		Init.	
1		299		TVL	
2		285		TVL	
3		295		TVL	
4		0 ②		TVL	
5		283		TVL	
6		271		TVL	
Mean:		287		TVL	

QA = 262/272 = 96%
 Org: 239/252 = 95%
 $\Delta = 1\%$
 -NL 11/30/24

QA: 253/269 = 94%
 Or 253/280 = 90%
 $\Delta = 4\%$
 -NL 11/30/24

QA: 242/272 = 89%
 Org: 29/271 = 11%
 $\Delta = 11\%$
 -NL 11/30/24

QA: 4/212 = 2%
 Or: 12/213 = 6%
 $\Delta = 5\%$
 -NL 11/30/24

① IE-TVL 11/27/24, NL 11/30/24, TVL 12/2/24

② Vile was not stocked - TVL 11/27/28

③ QA: 84/287 = 29.3%
 Org: 75/254 = 29.5%
 $\Delta = 0.2\%$ ✓ DM - 12/2/24

Spiking Worksheet

Reference Toxicant ID: R 240501.12
 Date Prepared: 11/19/24
 Technician Initials: AR

Biv / Echino NH₃ RT

Assumptions in Model
 Stock ammonia concentration is 9,000 mg/L = 9 mg/mL

Date: 11/15/2024
 Measurement: 6080

Test Solutions			Volume of stock to reach desired concentration	
Measured Concentration	Desired Concentration	Volume	mL stock to increase	
mg/L	mg/L	mL	SALT WATER	
1.21	1.5	200		0.074
3.92	3	200		0.148
6.21	6	200		0.296
12.6	12	200		0.592
20.5	18	200		0.888

Daily Quality Assurance Checks

Project name:

Jacobs Wyckoff

Test:

Bivalve 48 Hr. NH₃ RT

Lab ID:

R240501.12

Day of Test		Initials	Date	Comments
0	Test datasheets checked for completeness and legibility	UG	11/19	
	Headers/ footers filled in, visual check of test chambers, cover test, ensure proper lighting	↓	↓	
	Test data within acceptable ranges			
1	Test datasheets checked for completeness and legibility	EM	11/20	
	Test data within acceptable ranges	↓	↓	
2	Test datasheets checked for completeness and legibility	UG	11/21	
	Test data within acceptable ranges	↓	↓	
		↓	↓	

Toxicity Testing Results
Wyckoff/Eagle Harbor Superfund Site Groundwater
Treatment Plant
NPDES Toxicity testing: 4th Quarter 2024

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APPENDIX B

CHAIN OF CUSTODY & SAMPLE RECEIPT FORMS

SAMPLE RECEIPT

Client:	Client ID:	Lab ID:	Renewals:
Jacobs: Wyckoff	111924	P241119.04	
Project:			
WEH-035B			
Date/Time Received:	11/19/24 1140		
Airbill #:	NA		
Shipper Tracking Information Kept for Records: (Y/N/NA)	NA		
Collection Date/Time:	11/19/24 8:27		
Sample Holding Time (must be ≤36 hours at test initiation)	X		
Condition of Shipping Container:	Good		
Type and Capacity of Sample Container:	10L cubi		
Total Sample Volume (L):	10L		
Condition of Sampling Container:	Good		
Sample Container Appropriate: (Y/N)	Y		
Custody Seals Intact: (Intact/Broken/Not Present)	NP		
Frozen Wet or Blue Ice Present During Shipment/Transport: (Y/N)	Ice		
Sampler's Name Present on COC Form: (Print Name/Not Present)	A. Yarnell		
Color:	Clear		

TAKE THE FOLLOWING MEASUREMENTS UPON ARRIVAL

LAB ID	Meter #	Temp. (°C) * (0-6°C) *	Meter #	Dissolved Oxygen (mg/L)	Meter #	pH	Meter #	Cond. (µS/cm)	Meter #	Sal. (ppt)	Hardness (mg CaCO ₃ /L)	Alkalinity (mg CaCO ₃ /L)	Total Chlorine (mg/L)	Total NH ₃ (mg/L)	Tech
P241119.04	22	3.4	10	7.8	10	7.5	10	876	10	0.481	—	—	0.00	0.244	TVL

*Notify project manager or study director of temperatures above 6°C or ≥36 hours holding time. Client must be notified ASAP.

If there are sample receipt problems, complete the following:	
Reason for unacceptability:	
Name of Client Contact:	Contacted by:
Client Response and/or Action to be Taken:	Date Action Taken:

① NH₃ preserved - TVL 11/19/24 ② ammonia run on 11/21/24, EML

ECO ANALYST COC (REGION COPY)

DateShipped: 11/19/2024

CarrierName: EcoAnalysts Pick up

Airbill No.:

CHAIN OF CUSTODY RECORD

Wyckoff Eagle Harbor GWTP 2024WA

Project Code: WEH-035B

Cooler #: "2 of 2"

No: 10-111924-084509-0001

Acct No. 2025T10P000FD210W2LA00

Contact Name: Kodey Eley

Contact Phone: 253-334-6968



[illegible]

Special Instructions:

Shipment for Case Complete? N

Samples Transferred From Chain of Custody

Analysis Key: ACTOX-CHRTOX=Acute Toxicity, Chronic Toxicity

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	 Jacobs	10:43 11/19/24	 E. Jacobs	11/19/24 10:43	
			Tristan Van Kempen EcoAnalysis	11/19/24 1140	3.4° C (724/119.04)

TOXICITY TESTING RESULTS

GRAYMONT WESTERN US, INC.

TACOMA, WASHINGTON

WHOLE EFFLUENT TOXICITY TESTING: Q1 2025

Prepared for

Jacobs Engineering Group
1100 112th Ave NE, Suite 500
Bellevue, WA 98004

Prepared by

EcoAnalysts, Inc.
4770 NE View Drive
PO Box 216
Port Gamble, WA 98364

NPDES Permit #

WA001007

EcoAnalysts Report ID

PG2051Q1.01

Submittal Date: March 31, 2025



Accredited in accordance with
NELAP, ORELAP ID 4165

All testing reported herein was performed consistent with our laboratory's quality assurance program. All results are intended to be considered in their entirety, and EcoAnalysts is not responsible for use of less than the complete report. The test results summarized in this report apply only to the sample(s) evaluated. This document is uncontrolled when printed or accessed from electronic distribution.

APPROVED BY



Michelle Bennett

Project Manager

Author:

Michelle Bennett

QA Review:

Dani Mulligan

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APPENDICES

- Appendix A: Statistical Comparisons and Laboratory Documents
Appendix B: Chain of Custody and Sample Receipt Forms

ACRONYMS AND ABBREVIATIONS

ACEC	Acute critical effluent concentration
CCEC	Chronic critical effluent concentration
EPA	Environmental Protection Agency
EC ₂₅ /IC ₂₅	Effect/Inhibition Concentration to 25% of test population
LOEC	Lowest Observed Effect Concentration
mg/L	Milligrams per liter
NPDES	National Pollutant Discharge Elimination System
NOEC	No Observed Effect Concentration
PMSD	Percent Minimum Significant Difference
QM	Quality manual
SOP	Standard operation procedure
WDOE	Washington Department of Ecology
WET	Whole Effluent Toxicity
WWTP	Waste Water Treatment Plant

1. EXECUTIVE SUMMARY

EcoAnalysts conducted Whole Effluent Toxicity (WET) testing on an effluent sample collected by Jacobs Engineering Group personnel as part of the effluent characterization. The objective of this program is to assess the potential toxicity of the effluent to aquatic organisms following procedures defined under the facility's National Pollutant Discharge Elimination System (NPDES) permit. The results of the toxicity testing are contained in this report.

Statistically significant biological effects were not detected between the control and any test concentrations for all endpoints. The endpoints for all chronic endpoints tested are summarized in Table 1-1.

Table 1-1. Toxicity Test Results Summary.

Test Endpoint		NOEC (%)	LOEC (%)	LC ₅₀ (%)
Acute	Water Flea (<i>Ceriodaphnia dubia</i>) 48-hour Survival	100	>100	>100
	Fathead Minnow (<i>Pimephales promelas</i>) 96-hour Survival	100	>100	>100

NOEC = No Observed Effect Concentration

LOEC = Lowest Observed Effect Concentration

LC₅₀ = Lethal Concentration to 50% of test population

Table 1-2. Permit Compliance Results.

Permit Requirement	Conduct acute toxicity testing on final effluent during September 2024 (summer test event) and January 2025 (winter test event).
	Conduct acute toxicity testing on a series of at least five concentrations of effluent, including 100 percent effluent and a control.
Result	Statistically significant biological effects were not detected between the control and any test concentrations for all endpoints.

2. METHODS

The sample analyzed for toxicity was tested using criteria outlined in the Washington Department of Ecology's (WDOE) Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria (WDOE WQ-R-95-80 (2016)). These criteria are further defined through the Environmental Protection Agency's (EPA) most recently promulgated effluent guidance documents outlined in Section 4.

2.1 Bioassay Testing

Bioassay testing for this project consisted of two acute bioassays. The tests conducted in support of this project are summarized in Table 2-1.

Table 2-1. Biological Testing Performed.

Test Descriptor	Species	Method
48-hour Survival	<i>Ceriodaphnia dubia</i> Water Flea	WDOE WQ-R-95-80 (2016); EPA-821-R-02-012 Method 2002.0; SOP TOX004.11
96-hour Survival	<i>Pimephales promelas</i> Fathead Minnow	WDOE WQ-R-95-80 (2016); EPA-821-R-02-012 Method 2000.0; SOP TOX017.10

2.2 Sample Collection & Receipt

Jacobs Engineering Group personnel collected grab samples on March 4, 2025. Samples were delivered by overnight courier and received at the EcoAnalysts Port Gamble laboratory on the day following collection. Temperatures upon receipt were within the recommended temperature range of 0 – 6°C. Additional sample conditions are summarized in Table 2-2. The effluent samples were held in a walk-in cold room at 4 ± 2 °C in the dark until utilized for testing.

Table 2-2. Sample Conditions Upon Receipt.

Sample	GR-NPDES-01-03042025
Laboratory ID	P250305.02
Date/Time Sampled	03/04/25; 1200
Date/Time Received	03/05/25; 1200
Dissolved Oxygen (mg/L) Recommended: >4.0 mg/L	9.9
Temperature (°C) Upon Receipt Ideal: 4°C or ≥4 hours from sample: 0 – 6°C	0.0
pH (units) Recommended: 6 – 9	8.8
Conductivity (µS/cm)	520
Hardness (mg/L CaCO ₃)	153
Alkalinity (mg/L CaCO ₃)	22
Total Chlorine (mg/L)	<0.02
Total Ammonia (mg/L)	0.050

2.3 Water for Bioassay Testing

Freshwater diluent used in this study was prepared using the EPA method for standard, synthetic moderately hard, reconstituted water, using the reagent grade chemicals (USEPA 2002a). Extensive testing on a variety of test species has shown that there is no significant potential for toxicity or bioaccumulation of contaminants from this water supply. Chemical analysis of this water source is conducted and reviewed on an annual basis.

2.4 Sample Adjustment

The sample used in these tests did not require adjustments prior to analysis.

2.5 Data Management and Analysis

Endpoint data were calculated for each replicate and the mean value and standard deviation were determined for each test treatment. All hand-entered data were reviewed for data entry errors, which were corrected prior to summary calculations. A minimum of 10% of all calculations and data sorting were reviewed for errors. Review counts were conducted on any apparent outliers.

Statistical comparisons were made according to the EPA guidance. Statistical comparisons were performed using CETIS™ software (CETIS 2022).

2.6 Quality Assurance/Quality Control

The quality assurance objectives for toxicity testing conducted by the testing laboratory are detailed in the method specific guidance documents and the laboratory's quality manual (QM). These objectives for accuracy and precision involve all aspects of the testing process, including the following:

- Source and Condition of Test Organisms
- Condition of Equipment
- Test Conditions
- Instrument Calibration
- Use of Reference Toxicants
- Record Keeping
- Data Evaluation

The batches of test organisms obtained were evaluated in a reference toxicant test that was run within a month of the testing period to establish the sensitivity of the test organisms. The reference toxicant LC₅₀ or EC₅₀ should fall within two standard deviations of the historical laboratory mean. Water quality measurements were monitored to ensure that they fell within prescribed limits.

The methods employed in every phase of the toxicity testing program are detailed in the EcoAnalysts Standard Operating Practices (SOP). All EcoAnalysts staff members receive regular, documented training in all SOPs and test methods. Finally, all data collected and produced as a result of these analyses were recorded on approved data sheets. If an aspect of a test deviated from protocol, the test was evaluated to determine whether it was valid according to the regulatory agencies responsible for approval of the proposed permitting action.

3. RESULTS

The results of the effluent testing are presented in this section. Statistical comparisons and laboratory documents are provided in Appendix A. Chain-of-custody and sample receipt logs are provided in Appendix B.

3.1 Water Flea (*Ceriodaphnia dubia*) Acute Test Results

The acute toxicity test with *C. dubia* was initiated on March 5, 2025. Mean survival and statistical results are summarized in Table 3-1. The test met the survival acceptability criterion listed in Table 3-2. The test conditions are summarized in Table 3-2.

Water quality parameters were within the acceptable limits throughout the duration of the 48-hour static-renewal test.

The reference toxicant test results were within two standard deviations of the laboratory mean for survival (Table 3-2). This indicates that the organisms obtained from this supplier were of similar sensitivity to those previously tested at the EcoAnalysts laboratory.

Table 3-1. Endpoint Summary for the *Ceriodaphnia dubia* Acute Test

Conc. (%)	GR-NPDES-01-03042025				
	Mean Survival (%)	Standard Deviation (%)	NOEC (%)	LOEC (%)	LC ₅₀ Value(%)
Control (0)	100	0	100	>100	>100
6.25	100	0			
12.5	100	0			
25	100	0			
50	100	0			
100	100	0			

LOEC = Lowest Observed Effect Concentration

LC₅₀ = Lethal Concentration to 50% of test population

NOEC = No Observed Effect Concentration

3.1.1 Water Flea (*Ceriodaphnia dubia*) Permit Compliance

- No statistically significant difference between control and 100% was shown.

Table 3-2. Test Condition Summary for *Ceriodaphnia dubia* Acute Test

Test Duration / Type		48-hour / Static
Species		<i>Ceriodaphnia dubia</i>
Supplier		In-House Culture
Test Dates		03/05/25 – 03/07/25
Age at test initiation (Recommended: < 24 hours)		< 24 hours
Samples used:		P250305.02
Sample Holding Time at Initiation: Recommended: <36 hours; Not to exceed 72 hours		27 hours
Test Procedures		WDOE WQ-R-95-80 (2016); EPA-821-R-02-012 Method 2000.0; SOP TOX004.11
Test location		EcoAnalysts; Port Gamble, WA
Control water / Diluent		Cerio Reconstituted Freshwater (CRFW)
Test Lighting		16-hour light / 8-hour dark
Test Chamber		50-mL Plastic Chamber
Exposure volume		25 mL
Replicates/treatment		4
Concentration/treatment		6.25, 12.5, 25, 50, and 100%
Organisms/replicate		5
Feeding		None
Test solution renewal		None
Test Dissolved Oxygen (Recommended: ≥ 2.0 mg/L)		8.5 – 9.5 mg/L
Test Temperature (Recommended: $20 \pm 1^\circ\text{C}$)		18.5 – 20.6 $^\circ\text{C}$
Test Conductivity		323 – 482 $\mu\text{S}/\text{cm}$
Test pH (Range not specified) Targeted Range: 6 – 9 units		7.5 – 8.2 units
Quality Assurance		
Control performance standards Survival (Recommended): $\geq 90\%$		100%; meets acceptability criterion
Power Standard: $\leq 29\%$ (Survival)		0%; meets criterion
Reference Toxicant Date		02/13/25
Survival	Reference Toxicant LC_{50}	13.8 $\mu\text{g Cu}/\text{L}$
	Laboratory Mean LC_{50} ; Range LC_{50} (± 2 SD)	13.9 $\mu\text{g Cu}/\text{L}$ (5.79 – 33.3 $\mu\text{g Cu}/\text{L}$)
Deviations from Test Protocol		None

3.2 Fathead Minnow (*Pimephales promelas*) Acute Test Results

The acute toxicity test with *P. promelas* was initiated on March 5, 2025. Mean survival and statistical results are summarized in Table 3-3. The test met the survival acceptability criterion listed in Table 3-4. The test conditions are summarized in Table 3-4.

Water quality parameters were within the acceptable limits throughout the duration of the 96-hour static-renewal test.

The reference toxicant test results were within two standard deviations of the laboratory mean for survival. (Table 3-4). This indicates that the organisms obtained from this supplier were of similar sensitivity to those previously tested at the EcoAnalysts laboratory.

Table 3-3. Endpoint Summary for the *Pimephales promelas* Acute Test

Conc. (%)	GR-NPDES-01-03042025				
	Mean Survival (%)	Standard Deviation (%)	NOEC (%)	LOEC (%)	LC ₅₀ Value(%)
Control (0)	100	0.0	100	>100	>100
6.25	100	5.0			
12.5	100	0.0			
25	100	0.0			
50	97.5	5.0			
100	100	0.0			

LOEC = Lowest Observed Effect Concentration

LC₅₀ = Lethal Concentration to 50% of test population

NOEC = No Observed Effect Concentration

3.2.1 Fathead Minnow (*Pimephales promelas*) Permit Compliance

No statistically significant difference between control and 100% was shown.

Table 3-4. Test Condition Summary for *Pimephales promelas* Acute Test

Test Duration / Type		96-hour / Static
Species		<i>Pimephales promelas</i>
Supplier		Aquatic Biosystems
Test Dates		03/05/25 – 03/09/25
Age at test initiation (Recommended: 1-14 Days)		6 days
Samples used:		P241031.03
Sample Holding Time at Initiation: Recommended: <36 hours; Not to exceed 72 hours		28 hours
Test Procedures		WDOE WQ-R-95-80; EPA-821-R-02-012, Test Method 2000.0; SOP TOX017.10
Test location		EcoAnalysts; Port Gamble, WA
Control water / Diluent		Reconstituted Fresh Water (RFW)
Test Lighting		16-hour light / 8-hour dark
Test Chamber		12 oz. Plastic Chamber
Exposure volume		250 mL
Replicates/treatment		4
Concentration/treatment		6.25, 12.5, 25, 50, 100%
Organisms/replicate		10
Feeding		Fed 0.2 mL concentrated <i>Artemia</i> nauplii on day 2, at least two hours prior to renewal
Test solution renewal		Day 2
Test Dissolved Oxygen (Recommended: ≥ 2.0 mg/L)		7.8 – 9.8 mg/L
Test Temperature (Recommended: $20 \pm 1^\circ\text{C}$)		18.9 – 20.3 $^\circ\text{C}$
Test Conductivity		324 – 520 $\mu\text{S}/\text{cm}$
Test pH (Range not specified) Targeted Range: 6 – 9 units		7.4 – 8.3 units
Quality Assurance		
Control performance standards Survival (Recommended): $\geq 90\%$		100%; meets acceptability criterion
Power Standard: $\leq 29\%$ (Survival)		0%; meets criterion
Reference Toxicant Date		03/12/25
Survival	Reference Toxicant LC ₅₀	75.1 $\mu\text{g Cu}/\text{L}$
	Laboratory Mean LC ₅₀ ; Range LC ₅₀ (± 2 SD)	106.3 $\mu\text{g Cu}/\text{L}$ (27.9 – 404 $\mu\text{g Cu}/\text{L}$)
Deviations from Test Protocol		None

4. REFERENCES

CETIS. 2022 CETIS™ Comprehensive Environmental Toxicity Information System User's Guide. Tidepool Scientific Software. McKinleyville, CA.

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.

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

LABORATORY DOCUMENTS

ERROR CODES FOR DATASHEETS

CA	Called away; task completed by another tech
DC	Test solution too turbid or too dark to count organisms
FB	Found body – animal found that was previously noted as missing
IE	Incorrect Entry
IW	Illegible writing
MC	Miscount
MR	Meter reading changed; Meter no ready
NB	No body (no organism found)
SM	Stray Mark
WC	Wrong Cell (incorrect data box used)
WD	Wrong Date (incorrect date entered)
WN	Wrong number (incorrect number entered)
WP	Wrong page (incorrect data sheet)
WT	Wrong Time (incorrect time entered)

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APPENDIX A.1

***CERIODAPHNIA DUBIA* (WATER FLEA) 48-HOUR SURVIVAL TEST**

STATISTICAL COMPARISONS AND LABORATORY DATA SHEETS

CETIS Summary Report

Report Date: 28 Mar-25 11:42 (p 1 of 1)
Test Code/ID: P250305.02 / 04-6489-2506

Ceriodaphnia 48-h Acute Survival Test

EcoAnalysts

Batch ID: 20-3069-8326	Test Type: Survival (48h)	Analyst: Michelle Bennett
Start Date: 05 Mar-25 14:37	Protocol: EPA/821/R-02-012 (2002)	Diluent: Cerio Reconstituted Fresh Water
Ending Date: 07 Mar-25 13:18	Species: Ceriodaphnia dubia	Brine:
Test Length: 47h	Taxon: Branchiopoda	Source: In-House Culture Age: <1D
Sample ID: 04-2879-3293	Code: P250305.02	Project: Graymont Western States Inc. - Tacom
Sample Date: 04 Mar-25 12:00	Material: Effluent Sample	Source: Graymont Western (WA0001007)
Receipt Date: 05 Mar-25 12:00	CAS (PC):	Station: GR-NPDES01-03042025
Sample Age: 27h (0 °C)	Client: Jacobs	

Multiple Comparison Summary

Analysis ID	Endpoint	Comparison Method	✓ NOEL	LOEL	TOEL	PMSD	TU	S
18-1294-4833	48h Proportion Survived	Steel Many-One Rank Sum Test	100	>100	---	5.31%	1	1

Point Estimate Summary

Analysis ID	Endpoint	Point Estimate Method	✓ Level	%	95% LCL	95% UCL	TU	S
04-8122-3677	48h Proportion Survived	Linear Interpolation (ICPIN)	EC50	>100	---	---	<1	1

Test Acceptability

Analysis ID	Endpoint	Attribute	Test Stat	TAC Limits		Overlap	Decision
				Lower	Upper		
04-8122-3677	48h Proportion Survived	Control Resp	1	0.9	<<	Yes	Passes Criteria
18-1294-4833	48h Proportion Survived	Control Resp	1	0.9	<<	Yes	Passes Criteria

48h Proportion Survived Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	D	4	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%
6.25		4	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%
12.5		4	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%
25		4	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%
50		4	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%
100		4	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%

48h Proportion Survived Detail

MD5: 68E117461239090AA7E1427F0F536296

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	1.0000	1.0000	1.0000	1.0000
6.25		1.0000	1.0000	1.0000	1.0000
12.5		1.0000	1.0000	1.0000	1.0000
25		1.0000	1.0000	1.0000	1.0000
50		1.0000	1.0000	1.0000	1.0000
100		1.0000	1.0000	1.0000	1.0000

48h Proportion Survived Binomials

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	5/5	5/5	5/5	5/5
6.25		5/5	5/5	5/5	5/5
12.5		5/5	5/5	5/5	5/5
25		6/6	5/5	5/5	5/5
50		5/5	5/5	5/5	5/5
100		5/5	5/5	5/5	5/5

CETIS Test Data Worksheet

Report Date: 28 Mar-25 11:40 (p 1 of 1)
Test Code/ID: P250305.02 / 04-6489-2506

Ceriodaphnia 48-h Acute Survival Test

EcoAnalysts

Start Date: 05 Mar-25 14:37 Species: Ceriodaphnia dubia Sample Code: P250305.02
End Date: 07 Mar-25 13:18 Protocol: EPA/821/R-02-012 (2002) Sample Source: Graymont Western
Sample Date: 04 Mar-25 12:00 Material: Effluent Sample Sample Station: GR-NPDES01-03042025

Conc-%	Code	Rep	Pos	# Exposed	Survival 24h	Survival 48h	Notes
0	D	1	8	5		5	
0	D	2	14	5		5	
0	D	3	5	5		5	
0	D	4	17	5		5	
6.25		1	3	5		5	
6.25		2	15	5		5	
6.25		3	23	5		5	
6.25		4	20	5		5	
12.5		1	11	5		5	
12.5		2	21	5		5	
12.5		3	2	5		5	
12.5		4	19	5		5	
25		1	18	6		6	
25		2	7	5		5	
25		3	1	5		5	
25		4	22	5		5	
50		1	9	5		5	
50		2	6	5		5	
50		3	24	5		5	
50		4	16	5		5	
100		1	4	5		5	
100		2	12	5		5	
100		3	13	5		5	
100		4	10	5		5	

POWER STANDARD CALCULATIONS

Ceriodaphnia Acute Survival
Acute Power Standard Calculation

	Number Surviving				
Replicate	1	2	3	4	Mean
ACEC (100)	5	5	5	5	5
Control	5	5	5	5	5

Control Mean - ACEC Mean
0
Difference Divided by Control Mean
0
Express as %
0%
≤29% meets the power standard
Pass

Version V.3

GENERAL

Client	Jacobs Graymont
Project	Graymont Western States Tacoma NPDES
Project Number	PG2051
Project Manager	M. Bennett
Date Sample Received	3/5/2025
Test type	48-Hour Acute Toxicity with Cerio
Matrix	Liquid
Test Acceptability	≥ 90% average survival in control
Test Start Date	03/05/25
Test Species	<i>Ceriodaphnia dubia</i>
Organism Batch (Brood Board #)	Mass Culture Q
Organism Acquired	In House Culture
Organism Acclimation	NA
Organism Age	< 24 hours
Test Protocol	TOX 004
Light Intensity	50-100 foot candles
Light Cycle	16L:8D
Test Location	Bath 2
Water Description	cerio reconstituted freshwater
Organisms per Replicate	5
Test Chamber Size	1 oz
Exposure Volume	15 mL
Feeding Information	None
Test Dissolved Oxygen	> 2
Test Temperature	20 ± 1
Conductivity	
Test pH	7.5 ± 1.5

Note: input lowest and highest decimal for temp

Test Parameters		
	Min	Max
DO	2	
Temp	18.5	21.4
Conductivity		
pH	6	9

TEST START TIME/INIT: 1437 TVL (NL)

TEST END TIME/INIT: 1318 CS

CLIENT SAMPLE ID

LAB ID

GR-NPDES 01-03042025

P250305.02

Concentrations

1	Control
2	6.25%
3	12.5%
4	25%
5	50%
6	100%
7	.
8	.
9	.

48-Hour Acute WET Test

v.3	CLIENT	Jacobs Graymont	DATE RECEIVED	3/5/25	PROTOCOL	TOX 004
	PROJECT	Graymont Western States Tacoma NPDES	TEST START DATE	3/5/25	PROJECT MANAGER	M. Bennett
	CLIENT SAMPLE ID	GR-NPDES 01-03042025	TEST END DATE	3/7/25	SPECIES	<i>Ceriodaphnia dubia</i>
	LAB SAMPLE ID	P250305.02	MATRIX	Liquid	NO. OF ORGANISMS	5

48-Hour Acute Toxicity with Cerio

Day of Test	Concentration	Vol. Effluent Sample Added (mL)	Vol. Diluent Added (mL)	Total Volume (mL)	Diluent Type	CRFW
0	0%	0	250.0	250		
	6.25%	15.625	234.4	250		
	12.5%	31.25	218.8	250		
	25%	62.5	187.5	250		
	50%	125	125.0	250		
	100%	250	0.0	250		

Test Dilution Prep

Date	Balance ID	Sample ID (P#)	Water Batch ID	Initials
3/5/2025	7	P250305.02	CRFW022725.02	SN

CLIENT	Jacobs Graymont	DATE RECEIVED	3/5/25	PROTOCOL	TOX 004
PROJECT	nt Western States Tacoma NPDES	TEST START DATE	3/5/25	PROJECT MANAGER	M. Bennett
CLIENT SAMPLE ID	GR-NPDES 01-03042025	TEST END DATE	3/7/25	SPECIES	<i>Ceriodaphnia dubia</i>
LAB SAMPLE ID	P250305.02	MATRIX	Liquid	NO. OF ORGANISMS	5

48-Hour Acute Toxicity with Cerio

			DO (mg/L)	TEMP (°C)	CONDUCTIVITY	pH	Comments
		Concentration (%)	> 2	19 - 21	(µS/cm)	6 - 9	
Day 0		Control	8.5	20.6	323.0	7.8	
Stock		6.25%	8.5	20.2	327.0	7.8	
Date	03/05/25	12.5%	8.6	19.7	333.0	7.8	
Time	1425	25%	8.7	19.0	355.0	7.8	
Tech	KD	50%	8.9	18.5	397.0	7.9	
Meter #	8	100%	9.5	18.5	481.0	8.2	
Day 1		Control	8.5	20.6	337.0	7.9	
Old		6.25%	8.6	20.3	327.0	8.0	
Date	03/06/25	12.5%	8.6	20.3	333.0	8.0	
Time	10:03	25%	8.7	20.2	355.0	8.0	
Tech	TVL	50%	8.8	20.1	397.0	7.9	
Meter #	10	100%	8.8	20.1	481.0	7.8	
Day 2		Control	8.8	19.9	362.0	8.0	
Old		6.25%	8.8	19.9	331.0	8.0	
Date	03/07/25	12.5%	8.8	19.9	335.0	8.1	
Time	9:21	25%	8.8	19.8	357.0	8.0	
Tech	NL	50%	8.8	19.9	399.0	7.9	
Meter #	8	100%	8.7	19.9	482.0	7.5	

v.3

CLIENT	Jacobs Graymont	DATE RECEIVED	3/5/25
PROJECT	aymont Western States Tacoma NPDES	TEST START DATE	3/5/25
CLIENT SAMPLE ID	GR-NPDES 01-03042025	TEST END DATE	3/7/25
LAB SAMPLE ID	P250305.02	MATRIX	Liquid
PROTOCOL	TOX 004	SPECIES	<i>Ceriodaphnia dubia</i>
PROJECT MANAGER	M. Bennett	NO. OF ORGANISMS	5

Abbreviation Key:

NB = No Body

FB = Found Body

ST = Stranded

48-Hour Acute Toxicity with Cerio

Day 1		Day 2	
Date	03/06/25	Date	03/07/25
Time	9:54	Time	1318
Tech	TVL	Tech	CS

Concentration (%)	Rep	Alive	Dead	Obs	Alive	Dead	Obs	Comments
Control	1	5	0		5	0		
	2	5	0		5	0		
	3	5	0		5	0		
	4	5	0		5	0		
6.25%	1	5	0		5	0		
	2	5	0		5	0		
	3	5	0		5	0		
	4	5	0		5	0		
12.5%	1	5	0		5	0		
	2	5	0		5	0		
	3	5	0		5	0		
	4	5	0		5	0		
25%	1	5	0		6	0	1 FB	
	2	5	0		5	0		
	3	5	0		5	0		
	4	5	0		5	0		
50%	1	5	0		5	0		
	2	5	0		5	0		
	3	5	0		5	0		
	4	5	0		5	0		
100%	1	5	0		5	0		
	2	5	0		5	0		
	3	5	0		5	0		
	4	5	0		5	0		

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WA State Department
of Ecology (SWRO)

APPENDIX A.1.1

***CERIODAPHNIA DUBIA* (WATER FLEA) 48-HOUR SURVIVAL TEST**

REFERENCE TOXICANT DATA SHEETS

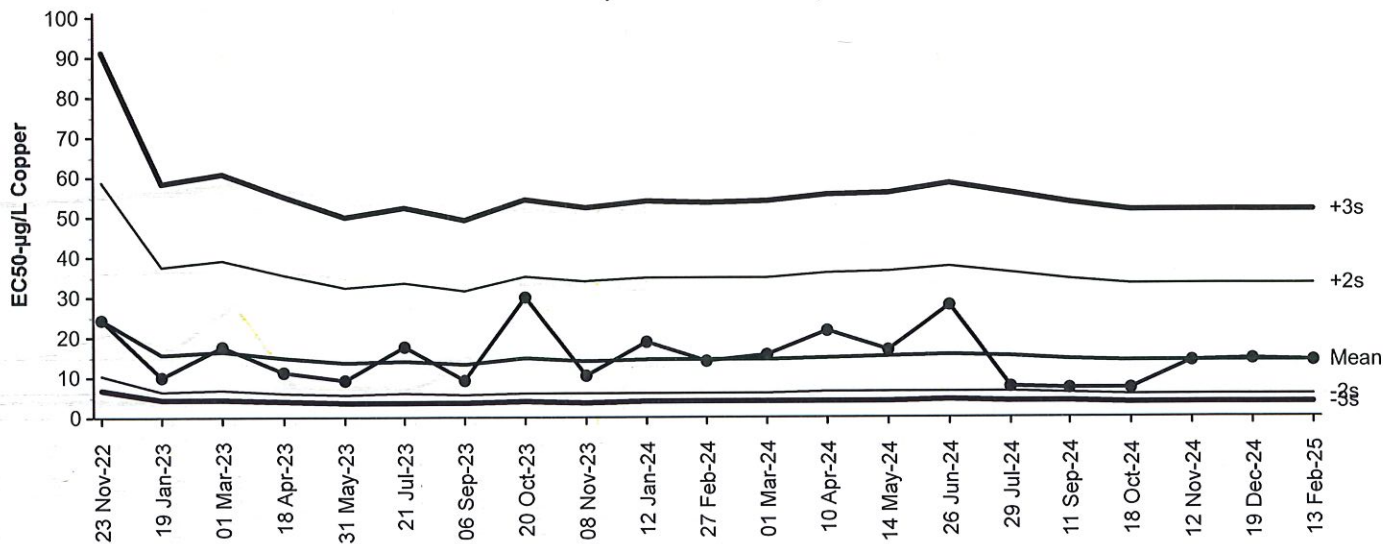
Reference Toxicant 96-h Acute Survival Test

All Matching Labs

Test Type: Survival (96h)
Protocol: EPA/821/R-02-012 (2002)

Organism: Ceriodaphnia dubia
Endpoint: 48h Proportion Survived

Material: Copper
Source: Reference Toxicant-REF

Reference Toxicant 96-h Acute Survival Test
48h Proportion Survived Endpoint

Lognormal Cumulative Mean Plot

Mean: 13.89

Count: 20

-2s Warning Limit: 5.79

-3s Action Limit: 3.74

Sigma: NA

CV: 45.90%

+2s Warning Limit: 33.3

+3s Action Limit: 51.6

Quality Control Data

Point	Year	Month	Day	Time	QC Data	Delta	Sigma	Warning	Action	Test ID	Analysis ID	Laboratory
1	2022	Nov	23	12:55	24.51	10.62	1.298			15-9762-0016	10-4592-3835	EcoAnalysts
2	2023	Jan	19	16:29	10.09	-3.797	-0.73			13-5960-2628	20-1620-3751	EcoAnalysts
3		Mar	1	14:04	17.51	3.624	0.53			00-8438-6701	09-7672-3683	EcoAnalysts
4		Apr	18	13:22	11.24	-2.652	-0.4843			02-7026-4991	14-9856-8438	EcoAnalysts
5		May	31	12:02	9.043	-4.845	-0.9807			18-4592-8734	05-9583-5084	EcoAnalysts
6		Jul	21	12:40	17.57	3.681	0.5375			07-9537-4421	04-3808-5603	EcoAnalysts
7		Sep	6	14:30	9.094	-4.793	-0.9677			15-6638-1111	03-7989-0521	EcoAnalysts
8		Oct	20	16:02	29.96	16.07	1.757			19-0887-6353	06-4184-1225	EcoAnalysts
9		Nov	8	9:21	10.43	-3.461	-0.6551			18-3891-8742	01-7885-8441	EcoAnalysts
10	2024	Jan	12	11:55	18.78	4.888	0.6893			00-1050-4717	11-9394-8617	EcoAnalysts
11		Feb	27	13:40	13.78	-0.1033	-0.01706			09-6460-3372	20-8117-5787	EcoAnalysts
12		Mar	1	16:00	15.42	1.532	0.2392			17-3940-7409	09-7835-0088	EcoAnalysts
13		Apr	10	14:45	21.63	7.742	1.013			20-2667-7453	06-2510-3256	EcoAnalysts
14		May	14	14:47	16.87	2.984	0.4448			14-2237-9807	03-0444-1632	EcoAnalysts
15		Jun	26	13:45	28.03	14.15	1.605			01-8169-8643	09-2173-6240	EcoAnalysts
16		Jul	29	12:50	7.693	-6.194	-1.35			18-2381-5094	16-7973-8262	EcoAnalysts
17		Sep	11	13:24	7.135	-6.752	-1.522			16-4851-8218	21-2373-5786	EcoAnalysts
18		Oct	18	12:48	7.387	-6.501	-1.443			10-3555-0061	19-2596-5304	EcoAnalysts
19		Nov	12	14:48	13.78	-0.1033	-0.01706			13-9790-1804	15-3826-6854	EcoAnalysts
20		Dec	19	13:25	14.31	0.4212	0.06829			19-6949-3132	17-4878-3018	EcoAnalysts
21	2025	Feb	13	13:09	13.78	-0.1033	-0.01706			14-8631-6179	16-7557-4985	EcoAnalysts

CETIS Summary Report

Report Date: 03 Mar-25 20:52 (p 1 of 1)

Test Code/ID: R240207.49 / 14-8631-6179

Reference Toxicant 96-h Acute Survival Test

EcoAnalysts

Batch ID: 18-7464-1882	Test Type: Survival (96h)	Analyst: Michelle Bennett
Start Date: 13 Feb-25 13:09	Protocol: EPA/821/R-02-012 (2002)	Diluent: Cerio Reconstituted Fresh Water
Ending Date: 15 Feb-25 12:10	Species: Ceriodaphnia dubia	Brine: Not Applicable
Test Length: 47h	Taxon: Branchiopoda	Source: In-House Culture Age: <1D
Sample ID: 12-9265-8309	Code: R240207.49	Project: Reference Toxicant
Sample Date: 07 Feb-24	Material: Copper	Source: Reference Toxicant
Receipt Date: 07 Feb-24	CAS (PC):	Station: R240207.49
Sample Age: 372d 13h	Client: Internal Lab	

Multiple Comparison Summary

Analysis ID	Endpoint	Comparison Method	✓ NOEL	LOEL	TOEL	PMSD	S
03-3891-5601	48h Proportion Survived	Steel Many-One Rank Sum Test	6	12	8.485	14.9%	1

Point Estimate Summary

Analysis ID	Endpoint	Point Estimate Method	✓ Level	µg/L	95% LCL	95% UCL	S
16-7557-4985	48h Proportion Survived	Spearman-Kärber	EC50	13.78	11.96	15.89	1

48h Proportion Survived Summary

Conc-µg/L	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	D	4	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%
3		4	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%
6		4	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%
12		4	0.7000	0.3818	1.0180	0.4000	0.8000	0.1000	0.2000	28.57%	30.00%
24		4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	---	100.00%
48		4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	---	100.00%

48h Proportion Survived Detail

MD5: 3CAC403EC3CD209314C9CE30EF16697A

Conc-µg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	1.0000	1.0000	1.0000	1.0000
3		1.0000	1.0000	1.0000	1.0000
6		1.0000	1.0000	1.0000	1.0000
12		0.8000	0.8000	0.8000	0.4000
24		0.0000	0.0000	0.0000	0.0000
48		0.0000	0.0000	0.0000	0.0000

48h Proportion Survived Binomials

Conc-µg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	5/5	5/5	5/5	5/5
3		5/5	5/5	5/5	5/5
6		5/5	5/5	5/5	5/5
12		4/5	4/5	4/5	2/5
24		0/5	0/5	0/5	0/5
48		0/5	0/5	0/5	0/5

CETIS Test Data Worksheet

Report Date: 03 Mar-25 20:52 (p 1 of 1)
Test Code/ID: R240207.49 / 14-8631-6179

Reference Toxicant 96-h Acute Survival Test

EcoAnalysts

Start Date: 13 Feb-25 13:09 Species: Ceriodaphnia dubia Sample Code: R240207.49
End Date: 15 Feb-25 12:10 Protocol: EPA/821/R-02-012 (2002) Sample Source: Reference Toxicant
Sample Date: 07 Feb-24 Material: Copper Sample Station: R240207.49

Conc-µg/L	Code	Rep	Pos	# Exposed	Survival 24h	Survival 48h	Survival 72h	Survival 96h	Notes
0	D	1	10	5		5			
0	D	2	2	5		5			
0	D	3	8	5		5			
0	D	4	24	5		5			
3		1	5	5		5			
3		2	12	5		5			
3		3	13	5		5			
3		4	17	5		5			
6		1	9	5		5			
6		2	20	5		5			
6		3	11	5		5			
6		4	21	5		5			
12		1	23	5		4			
12		2	14	5		4			
12		3	7	5		4			
12		4	4	5		2			
24		1	22	5		0			
24		2	18	5		0			
24		3	19	5		0			
24		4	3	5		0			
48		1	15	5		0			
48		2	6	5		0			
48		3	16	5		0			
48		4	1	5		0			

Version V.1

GENERAL

Client	Internal
Associated Test	Various
Compound	Copper Chloride
Toxicant	Copper
Test Type	Reference Toxicant
Test type	48-Hour Acute Copper Ref Tox with Cerio
Matrix	Liquid
Test Acceptability	≥ 90% average survival in control
Test Start Date	02/13/25
Test Species	<i>Ceriodaphnia dubia</i>
Organism Batch (Brood Board #)	Mass Cultures P and Q
Organism Acquired	In House Culture
Organism Acclimation	NA
Organism Age	<24 hours
Test Protocol	TOX 004, TOX 099
Light Intensity	50-100 foot candles
Light Cycle	16L:8D
Test Location	Bath 5
Water Description	cerio reconstituted freshwater
Organisms per Replicate	5
Test Chamber Size	1 oz
Exposure Volume	15 mL
Feeding Information	None
Test Dissolved Oxygen	> 2
Test Temperature	20 ± 1
Conductivity	
Test pH	7.5 ± 1.5

Note: input lowest and highest decimal for temp

Test Parameters		
	Min	Max
DO	2	
Temp	18.5	21.4
Conductivity		
pH	6	9

TEST START TIME/INIT: 1309 LG (TW)

TEST END TIME/INIT: 1210 SN

REFERENCE TOXICANT TEST ID LOT #

R240207.49	BCCH9104
------------	----------

Concentrations (µg/L)

1	Control
2	3
3	6
4	12
5	24
6	48

v.1	CLIENT	Internal	TEST TYPE	Reference Toxicant	PROTOCOL	TOX 004, TOX 099
	ASSOCIATED TEST	Various	TEST START DATE	2/13/25	TOXICANT	Copper
	REF TOX ID	R240207.49	TEST END DATE	2/15/25	SPECIES	<i>Ceriodaphnia dubia</i>
	LOT #	BCCH9104	MATRIX	Liquid	NO. OF ORGANISMS	5

48-Hour Acute Copper Ref Tox with Cerio

Dilution Preparation (Serial dilute by 50%)

CuCl ₂ *2H ₂ O Stock Solution (µg/L)	Target Stock Solution Conc. (µg/L)	Volume of Diluent (mLs)	Amt. of Toxicant (mL)
400,000	12	400	0.012
400,000	24	400	0.024
400,000	48	400	0.048

Test Dilution Prep

Date	Balance ID	Water Batch ID	Initials	Highest Concentration Prepared	Comments
2/13/2025	7	CRFW020925.01	MM	48	

Water Quality

	Concentration (µg/L)	DO (mg/L)	TEMP (°C)	CONDUCTIVITY (µS/cm)	pH
		> 2	20 ± 1		7.5 ± 1.5
Day 0 (Stock)	Control	8.4	19.6	348	8.0
Date 2/13/2025	3	8.5	20.1	350	8.0
Time 1247	6	8.4	20.5	348	8.0
Tech LG	12	8.4	20.4	349	8.0
Meter # 7	24	8.4	19.9	349	8.1
	48	8.4	19.9	349	8.1
Day 2	Control	9.0	19.6	353	8.2
Surrogate	3	9.1	19.6	353	8.2
Date 2/15/2025	6	9.1	19.7	351	8.2
Time 1031	12	9.0	19.8	351	8.2
Tech MM	24	9.1	19.7	357	8.2
Meter # 7	48	9.1	19.7	355	8.2

Comments

CLIENT	Internal	TEST TYPE	Reference Toxicant
ASSOCIATED TEST	Various	TEST START DATE	2/13/25
REF TOX ID	R240207.49	TEST END DATE	2/15/25
LOT #	BCCH9104	MATRIX	Liquid
PROTOCOL	TOX 004, TOX 099	SPECIES	Ceriodaphnia dubia
TOXICANT	Copper	NO. OF ORGANISMS	5

Abbreviation Key:

NB = No Body

FB = Found Body

ST = Stranded

48-Hour Acute Copper Ref Tox with Cerio

NB = No Body FB = Found Body ST = Stranded		Day 1			Day 2			
		Date	02/14/25		Date	02/15/25		
		Time	10:20		Time	1210		
		Tech	TVL		Tech	SN		
Concentration (µg/L)	REP.	Alive	Dead	Obs	Alive	Dead	Obs	Comments
Control	1	5	0		5	0		
	2	5	0		5	0		
	3	5	0		5	0		
	4	5	0		5	0		
3	1	5	0		5	0		
	2	5	0		5	0		
	3	5	0		5	0		
	4	5	0		5	0		
6	1	5	0		5	0		
	2	5	0		5	0		
	3	5	0		5	0		
	4	5	0		5	0		
12	1	5	0		4	1		
	2	4	1		4	0		
	3	5	0		4	1		
	4	4	1		2	2		
24	1	1	4		0	1		
	2	2	3		0	2		
	3	1	4		0	1		
	4	0	5					
48	1	1	4		0	1		
	2	1	4		0	1		
	3	1	4		0	1		
	4	0	5					

APPENDIX A.2

***PIMEPHALES PROMELAS* (FATHEAD MINNOW) 96-HOUR SURVIVAL TEST**

STATISTICAL COMPARISONS AND LABORATORY DATA SHEETS

CETIS Summary Report

Report Date: 28 Mar-25 12:29 (p 1 of 1)

Test Code/ID: P250305.02FHM / 20-8386-4884

Fathead Minnow 96-h Acute Survival Test

EcoAnalysts

Batch ID: 07-5109-3005	Test Type: Survival (96h)	Analyst: Michelle Bennett
Start Date: 05 Mar-25 16:01	Protocol: EPA/821/R-02-012 (2002)	Diluent: Mod-Hard Synthetic Water
Ending Date: 09 Mar-25 14:45	Species: Pimephales promelas	Brine:
Test Length: 95h	Taxon: Actinopterygii	Source: Aquatic Biosystems, CO Age: 6D
Sample ID: 04-2879-3293	Code: P250305.02	Project: Graymont Western States Inc. - Tacom
Sample Date: 04 Mar-25 12:00	Material: Effluent Sample	Source: Graymont Western (WA0001007)
Receipt Date: 05 Mar-25 12:00	CAS (PC):	Station: GR-NPDES01-03042025
Sample Age: 28h (0 °C)	Client: Jacobs	

Multiple Comparison Summary

Analysis ID	Endpoint	Comparison Method	✓ NOEL	LOEL	TOEL	PMSD	TU	S
16-4691-7606	96h Proportion Survived	Steel Many-One Rank Sum Test	100	>100	---	4.57%	1	1

Point Estimate Summary

Analysis ID	Endpoint	Point Estimate Method	✓ Level	%	95% LCL	95% UCL	TU	S
19-6352-5424	96h Proportion Survived	Linear Interpolation (ICPIN)	EC50	>100	---	---	<1	1

Test Acceptability

Analysis ID	Endpoint	Attribute	Test Stat	TAC Limits		Overlap	Decision
				Lower	Upper		
16-4691-7606	96h Proportion Survived	Control Resp	1	0.9	<<	Yes	Passes Criteria
19-6352-5424	96h Proportion Survived	Control Resp	1	0.9	<<	Yes	Passes Criteria

96h Proportion Survived Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	D	4	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%
6.25		4	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%
12.5		4	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%
25		4	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%
50		4	0.9750	0.8954	1.0550	0.9000	1.0000	0.0250	0.0500	5.13%	2.50%
100		4	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.00%

96h Proportion Survived Detail

MD5: E14882138D4B69827DBD8720EF96E868

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	1.0000	1.0000	1.0000	1.0000
6.25		1.0000	1.0000	1.0000	1.0000
12.5		1.0000	1.0000	1.0000	1.0000
25		1.0000	1.0000	1.0000	1.0000
50		1.0000	1.0000	1.0000	0.9000
100		1.0000	1.0000	1.0000	1.0000

96h Proportion Survived Binomials

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	10/10	10/10	10/10	10/10
6.25		10/10	10/10	10/10	10/10
12.5		10/10	10/10	10/10	10/10
25		10/10	10/10	10/10	10/10
50		10/10	10/10	10/10	9/10
100		11/11	10/10	10/10	10/10

CETIS Test Data Worksheet

Report Date: 28 Mar-25 12:28 (p 1 of 1)
 Test Code/ID: P250305.02FHM / 20-8386-4884

Fathead Minnow 96-h Acute Survival Test

EcoAnalysts

Start Date: 05 Mar-25 16:01 Species: Pimephales promelas Sample Code: P250305.02
 End Date: 09 Mar-25 14:45 Protocol: EPA/821/R-02-012 (2002) Sample Source: Graymont Western
 Sample Date: 04 Mar-25 12:00 Material: Effluent Sample Sample Station: GR-NPDES01-03042025

Conc-%	Code	Rep	Pos	# Exposed	Survival 24h	Survival 48h	Survival 72h	Survival 96h	Notes
0	D	1	23	10				10	
0	D	2	14	10				10	
0	D	3	20	10				10	
0	D	4	2	10				10	
6.25		1	18	10				10	
6.25		2	19	10				10	
6.25		3	16	10				10	
6.25		4	13	10				10	
12.5		1	11	10				10	
12.5		2	9	10				10	
12.5		3	21	10				10	
12.5		4	3	10				10	
25		1	1	10				10	
25		2	15	10				10	
25		3	8	10				10	
25		4	22	10				10	
50		1	7	10				10	
50		2	12	10				10	
50		3	10	10				10	
50		4	6	10				9	
100		1	5	11				11	
100		2	4	10				10	
100		3	17	10				10	
100		4	24	10				10	

POWER STANDARD CALCULATIONS

Fathead Minnow Acute Survival
Acute Power Standard Calculation

Replicate	Number Surviving				Mean
	1	2	3	4	
ACEC (100)	10	10	10	10	10
Control	10	10	10	10	10

Control Mean - ACEC Mean

0

Difference Divided by Control Mean

0

Express as %

0%

≤29% meets the power standard

Pass

GENERAL

Client	Jacobs Graymont
Project	Graymont Western States Tacoma NPDES
Project Number	PG2051
Project Manager	M. Bennett
Date Sample Received	3/5/2025
Test type	96-Hour Acute Toxicity with FHM
Matrix	Liquid
Test Acceptability	≥ 90% average survival of control
Test Start Date	03/05/25
Test Species	<i>Pimephales promelas</i>
Organism Batch	ABS030525.03
Organism Acquired	3/5/2025
Organism Acclimation	0
Organism Age	6 days
Test Protocol	Tox 017
Regional Protocol	WDOE WQ-R-95-80
Test Location	Bath 1
Light Intensity	50-100 foot candles
Light Cycle	16L:8D
Water Description	moderately hard fresh water
Organisms per Replicate	10
Test Chamber Size	12 oz
Exposure Volume	250 mL
Feeding Information	0.2 mL <i>Artemia nauplii</i> 2 hrs prior to renewal (96-hour test)
Test Dissolved Oxygen	> 4
Test Temperature	20 ± 1
Conductivity	
Test pH	7.5 ± 1.5

Note: input lowest and highest decimal for temp

Test Parameters		
	Min	Max
DO	4	
Temp	18.5	21.4
Conductivity		
pH	6	9

TEST START TIME/INIT:	1601 SN (NL)
TEST END TIME/INIT:	1445 TW

CLIENT SAMPLE ID	LAB ID
GR-NPDES01-03042025	P25030525.02

Concentrations	
1	Control
2	6.25%
3	12.5%
4	25%
5	50%
6	100%
7	.
8	.
9	.

Food Batch ID
491842

Copy and Past VALUES from

Treatment	Rep	Chamber
Control	1	21
Control	2	24
Control	3	14
Control	4	4
6.25%	1	9
6.25%	2	12
6.25%	3	17
6.25%	4	1
12.5%	1	6
12.5%	2	2
12.5%	3	13
12.5%	4	20
25%	1	5
25%	2	11
25%	3	3
25%	4	7
50%	1	18
50%	2	10
50%	3	15
50%	4	23
100%	1	16
100%	2	8
100%	3	19
100%	4	22
.	1	
.	2	
.	3	
.	4	
.	1	
.	2	
.	3	

96-Hour Acute WET Test

V.4

CLIENT	Jacobs Graymont	DATE RECEIVED	3/5/25	PROTOCOL	Tox 017
PROJECT	Graymont Western States Tacoma NPDES	TEST START DATE	3/5/25	PROJECT MANAGER	M. Bennett
CLIENT SAMPLE ID	GR-NPDES01-03042025	TEST END DATE	3/9/25	SPECIES	<i>Pimephales promelas</i>
LAB SAMPLE ID	P25030525.02	MATRIX	Liquid	NO. OF ORGANISMS	10

96-Hour Acute Toxicity with FHM

Day of Test	Concentration	Vol. Effluent Sample Added (mL)	Vol. Diluent Added (mL)	Total Volume (mL)	Diluent Type	RFW
0	0%	0	1000.0	1000		
	6.25%	62.5	937.5	1000		
	12.5%	125	875.0	1000		
	25%	250	750.0	1000		
	50%	500	500.0	1000		
	100%	1000	0.0	1000		

Day of Test	Concentration	Vol. Effluent Sample Added (mL)	Vol. Diluent Added (mL)	Total Volume (mL)
2	0%	0	1000.0	1000
	6.25%	62.5	937.5	1000
	12.5%	125	875.0	1000
	25%	250	750.0	1000
	50%	500	500.0	1000
	100%	1000	0.0	1000

Test Dilution Prep

Date	Balance ID	Sample ID (P#)	Water Batch ID	Initials
3/5/2025	7	P250305.02	RFW030525.02	NL
3/7/2025	7	P250305.02	RFW030525.01	TVL

CLIENT	Jacobs Graymont	DATE RECEIVED	3/5/25	PROTOCOL	Tox 017
PROJECT	nt Western States Tacoma NPDES	TEST START DATE	3/5/25	PROJECT MANAGER	M. Bennett
CLIENT SAMPLE ID	GR-NPDES01-03042025	TEST END DATE	3/9/25	SPECIES	<i>Pimephales promelas</i>
LAB SAMPLE ID	P25030525.02	MATRIX	Liquid	NO. OF ORGANISMS	10

96-Hour Acute Toxicity with FHM

		Concentration (%)	DO (mg/L)	TEMP (°C)	CONDUCTIVITY (µS/cm)	pH	Comments
Day 0		Control	9.3	19.8	328	8.0	
Stock		6.25%	9.4	19.7	330	8.1	
Date	03/05/25	12.5%	9.4	19.6	348	8.1	
Time	1506	25%	9.4	19.5	363	8.1	
Tech	NL	50%	9.5	20.2	402	8.1	
Meter #	8	100%	9.7	19.9	481	8.3	
Day 1		Control	8.4	20.2	330	8.0	
Rep 1		6.25%	8.1	20.0	337	7.9	
Date	03/06/25	12.5%	7.8	19.8	358	7.8	
Time	1025	25%	8.0	19.8	367	7.8	
Tech	TVL	50%	8.2	19.8	405	7.8	
Meter #	9	100%	8.2	19.9	484	7.5	
Day 2		Control	8.4	19.6	340	7.9	
Rep 2		6.25%	8.3	19.5	348	7.9	
Date	03/07/25	12.5%	8.2	19.3	368	7.8	
Time	834	25%	8.1	19.4	376	7.8	
Tech	NL	50%	8.3	19.3	412	7.7	
Meter #	8	100%	8.2	19.6	493	7.4	
Day 2		Control	9.0	20.3	324	8.1	
Renewal Stock		6.25%	8.8	20.0	331	8.2	
Date	03/07/25	12.5%	8.8	19.7	341	8.2	
Time	811	25%	9.0	18.9	362	8.2	
Tech	NL	50%	9.2	19.0	403	8.1	
Meter #	8	100%	9.8	19.0	482	8.2	
Day 3		Control	8.2	19.6	330	7.8	
Rep 3		6.25%	8.2	19.5	336	7.8	
Date	03/08/25	12.5%	8.1	19.5	347	7.8	
Time	1008	25%	8.3	19.6	366	7.8	
Tech	SN	50%	8.3	19.5	405	7.7	
Meter #	9	100%	8.3	19.5	486	7.4	
Day 4		Control	8.2	19.8	331	7.9	
Rep 4		6.25%	8.4	19.6	338	7.9	
Date	03/09/25	12.5%	8.4	19.8	345	8.0	
Time	1141	25%	8.5	19.7	365	7.9	
Tech	KD	50%	8.2	19.6	407	7.7	
Meter #	7	100%	8.4	19.6	520	7.4	

V.4

CLIENT	Jacobs Graymont	DATE RECEIVED	3/5/25	PROTOCOL	Tox 017
PROJECT	ern States Tacoma NPDES	TEST START DATE	3/5/25	PROJECT MANAGER	M. Bennett
CLIENT SAMPLE ID	GR-NPDES01-03042025	TEST END DATE	3/9/25	SPECIES	<i>Pimephales promelas</i>
LAB SAMPLE ID	P25030525.02	MATRIX	Liquid	NO. OF ORGANISMS	10

96-Hour Acute Toxicity with FHM

Abbreviation Key:

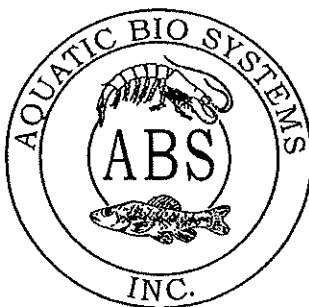
NB = No Body
FB = Found Body
ST = Stranded

NB = No Body FB = Found Body ST = Stranded		Day 1			Day 2			Day 3			Day 4			
		Date	03/06/25		Date	03/07/25		Date	03/08/25		Date	03/09/25		
		Time	10:36		Time	10:40		Time	1022		Time	1445		
		Tech	TVL		Tech	NL		Tech	SN		Tech	TW		
Concentration (%)	REP	Alive	Dead	Obs	Alive	Dead	Obs	Alive	Dead	Obs	Alive	Dead	Obs	Comments
Control	1	10	0		10	0		10	0		10	0		
	2	10	0		10	0		10	0		10	0		
	3	10	0		10	0		10	0		10	0		
	4	10	0		10	0		10	0		10	0		
6.25%	1	10	0		10	0		10	0		10	0		
	2	10	0		10	0		10	0		10	0		
	3	10	0		10	0		10	0		10	0		
	4	10	0		10	0		10	0		10	0		
12.5%	1	10	0		10	0		10	0		10	0		
	2	10	0		10	0		10	0		10	0		
	3	10	0		10	0		10	0		10	0		
	4	10	0		10	0		10	0		10	0		
25%	1	10	0		10	0		10	0		10	0		
	2	10	0		10	0		10	0		10	0		
	3	10	0		10	0		10	0		10	0		
	4	10	0		10	0		10	0		10	0		
50%	1	10	0		10	0		10	0		10	0		
	2	10	0		10	0		10	0		10	0		
	3	10	0		10	0		10	0		10	0		
	4	10	0		10	0		9	1		9	0		
100%	1	10	0		10	0		11	0	1FB	11	0		
	2	10	0		10	0		10	0		10	0		
	3	10	0		10	0		10	0		10	0		
	4	10	0		10	0		10	0		10	0		
Feed (Time/Init.)														
0.2 mL Artemia nauplii 2 hrs prior to renewal (96-hour test)					MM									

ORGANISM RECEIPT LOG

Date: 3/5/25		Time: 1200		Batch No. ABS030525.03			
Organism: Pimephales promelas (FHM)							
Source / Supplier: Aquatic Biosystems							
No. Ordered: 290		No. Received: 815		Source Batch: Collection date, <u>hatch date</u> , etc.): 2/27/25			
Condition of Organisms: Good				Approximate Size or Age: (Days from hatch, life stage, size class, etc.): 5 day			
Shipper: Fed Ex				B of L (Tracking No.): 4357 9735 2470			
Condition of Container: Good				Received By: TVL			
Container	D.O. (mg/L)	Temp. (°C)	Cond or Sal. (Include Units)	pH (Units)	# Dead	% Dead*	Tech. (Initials)
1	15.1	19.8	567	7.5	2	0.6%	TVL
*if >10% contact lab manager							
Notes:							

1300 Blue Spruce Drive, Suite C
Fort Collins, Colorado 80524



Toll Free: 800/331-5916
Tel: 970/484-5091 Fax: 970/484-2514

ORGANISM HISTORY

DATE: 3/4/2025

SPECIES: *Pimephales promelas*

AGE: 5 day

LIFE STAGE: Larvae

HATCH DATE: 2/27/2025

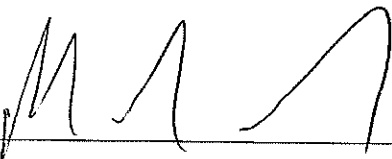
BEGAN FEEDING: 2/28/2025

FOOD: *Artemia* sp.

Water Chemistry Record:

	Current	Range
TEMPERATURE:	<u>22°C</u>	<u>22-25°C</u>
SALINITY/CONDUCTIVITY:	<u>--</u>	<u>--</u>
TOTAL HARDNESS (as CaCO ₃):	<u>107 mg/l</u>	<u>80-120 mg/l</u>
TOTAL ALKALINITY (as CaCO ₃):	<u>85 mg/l</u>	<u>80-100 mg/l</u>
pH:	<u>8.20</u>	<u>7.20-8.20</u>

Comments:



Facility Supervisor

RECEIVED

JUN 05 2025

WA State Department
of Ecology (SWRO)

APPENDIX A.2.1

***PIMEPHALES PROMELAS* (FATHEAD MINNOW) 96-HOUR SURVIVAL TEST**

REFERENCE TOXICANT DATA SHEETS

CETIS QC Plot

Report Date: 28 Mar-25 13:04 (1 of 1)

Reference Toxicant 96-h Acute Survival Test

EcoAnalysts

Test Type: Survival

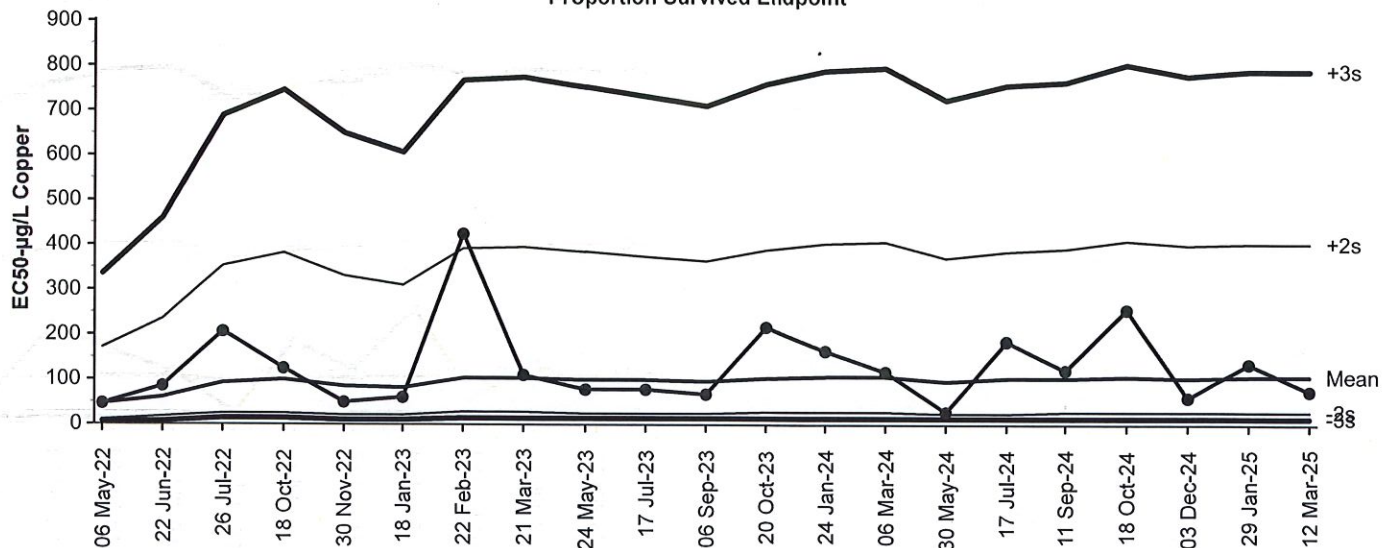
Organism: Pimephales promelas

Material: Copper

Protocol: EPA/821/R-02-012 (2002)

Endpoint: Proportion Survived

Source: Reference Toxicant-REF

Reference Toxicant 96-h Acute Survival Test
Proportion Survived Endpoint

Lognormal Cumulative Mean Plot

Mean: 106.3

Count: 20

-2s Warning Limit: 27.9

-3s Action Limit: 14.3

Sigma: NA

CV: 75.00%

+2s Warning Limit: 404

+3s Action Limit: 788

Quality Control Data

Point	Year	Month	Day	Time	QC Data	Delta	Sigma	Warning	Action	Test ID	Analysis ID
1	2022	May	6	15:10	45.34	-60.93	-1.275			15-4436-5345	06-4737-7601
2		Jun	22	14:00	85.27	-21.01	-0.3297			09-2484-6701	03-6339-0355
3		Jul	26	16:15	207.9	101.6	1.004			19-9606-8541	14-4105-6380
4		Oct	18	15:33	126.6	20.29	0.2616			00-1244-9651	13-0675-8972
5		Nov	30	17:05	50.09	-56.18	-1.126			05-6217-6706	05-6087-1351
6	2023	Jan	18	15:48	59.46	-46.81	-0.8693			17-0281-5837	00-7848-0629
7		Feb	22	14:21	423.7	317.4	2.07	(+)		19-9432-7182	17-7365-6004
8		Mar	21	14:05	110	3.696	0.05119			04-0968-3570	09-3250-3169
9		May	24	14:19	79.72	-26.55	-0.4303			20-8461-2086	00-7824-5483
10		Jul	17	16:28	78.89	-27.38	-0.446			18-7140-7619	00-8079-6291
11		Sep	6	15:55	68.38	-37.9	-0.6602			10-4912-0113	18-0428-8216
12		Oct	20	18:22	218.1	111.9	1.076			07-3619-2172	09-4739-7103
13	2024	Jan	24	15:45	164.4	58.12	0.6531			00-7739-2786	15-8834-9791
14		Mar	6	15:20	118.7	12.41	0.1654			11-6990-9224	11-8218-3094
15		May	30	17:58	27.48	-78.79	-2.025	(-)		11-2670-8770	03-9667-1395
16		Jul	17	15:49	185.6	79.31	0.8346			17-4003-3041	20-4812-4543
17		Sep	11	16:50	122.5	16.18	0.2122			18-4320-0845	00-6696-7108
18		Oct	18	13:10	256.2	149.9	1.317			19-3181-7814	10-5107-4387
19		Dec	3	14:48	59.96	-46.31	-0.8567			03-9001-6808	19-9463-1325
20	2025	Jan	29	14:33	135.7	29.4	0.3657			01-4802-7696	05-7735-2275
21		Mar	12	14:04	75.06	-31.22	-0.5206			16-4733-4883	12-2190-5381

CETIS Summary Report

Report Date: 28 Mar-25 12:54 (p 1 of 1)
Test Code/ID: R240207.58 / 16-4733-4883

Reference Toxicant 96-h Acute Survival Test

EcoAnalysts

Batch ID: 18-2137-8820	Test Type: Survival	Analyst: Michelle Bennett
Start Date: 12 Mar-25 14:04	Protocol: EPA/821/R-02-012 (2002)	Diluent: Reconstituted Water
Ending Date: 16 Mar-25 13:32	Species: Pimephales promelas	Brine: Not Applicable
Test Length: 95h	Taxon: Actinopterygii	Source: Aquatic Biosystems, CO Age: 8D
Sample ID: 17-9978-8243	Code: R240207.58	Project: Reference Toxicant
Sample Date: 07 Feb-24	Material: Copper	Source: Reference Toxicant
Receipt Date: 07 Feb-24	CAS (PC):	Station: R240207.58
Sample Age: 399d 14h	Client: Internal Lab	

Multiple Comparison Summary

Analysis ID	Endpoint	Comparison Method	✓ NOEL	LOEL	TOEL	PMSD	S
02-3132-7507	Proportion Survived	Dunnett Multiple Comparison Test	25	50	35.36	11.2%	1

Point Estimate Summary

Analysis ID	Endpoint	Point Estimate Method	✓ Level	µg/L	95% LCL	95% UCL	S
12-2190-5381	Proportion Survived	Trimmed Spearman-Kärber	EC50	75.06	61.34	91.84	1

Test Acceptability

Analysis ID	Endpoint	Attribute	Test Stat	TAC Limits		Overlap	Decision
				Lower	Upper		
02-3132-7507	Proportion Survived	Control Resp	0.975	0.9	<<	Yes	Passes Criteria
12-2190-5381	Proportion Survived	Control Resp	0.975	0.9	<<	Yes	Passes Criteria

Proportion Survived Summary

Conc-µg/L	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	D	4	0.9750	0.8954	1.0550	0.9000	1.0000	0.0250	0.0500	5.13%	0.00%
25		4	0.8750	0.7227	1.0270	0.8000	1.0000	0.0479	0.0957	10.94%	10.26%
50		4	0.7250	0.5727	0.8773	0.6000	0.8000	0.0479	0.0957	13.21%	25.64%
100		4	0.2750	0.1227	0.4273	0.2000	0.4000	0.0479	0.0957	34.82%	71.79%
200		4	0.1500	0.0581	0.2419	0.1000	0.2000	0.0289	0.0577	38.49%	84.62%
400		4	0.0750	-0.0046	0.1546	0.0000	0.1000	0.0250	0.0500	66.67%	92.31%

Proportion Survived Detail

MD5: 981D48062BE19AC6E3930EFD618F8266

Conc-µg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	0.9000	1.0000	1.0000	1.0000
25		0.8000	0.9000	0.8000	1.0000
50		0.6000	0.7000	0.8000	0.8000
100		0.3000	0.2000	0.2000	0.4000
200		0.1000	0.2000	0.2000	0.1000
400		0.0000	0.1000	0.1000	0.1000

Proportion Survived Binomials

Conc-µg/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	D	9/10	10/10	10/10	10/10
25		8/10	9/10	8/10	10/10
50		6/10	7/10	8/10	8/10
100		3/10	2/10	2/10	4/10
200		1/10	2/10	2/10	1/10
400		0/10	1/10	1/10	1/10

CETIS Test Data Worksheet

Report Date: 28 Mar-25 12:55 (p 1 of 1)
 Test Code/ID: R240207.58 / 16-4733-4883

Reference Toxicant 96-h Acute Survival Test

EcoAnalysts

Start Date: 12 Mar-25 14:04 Species: *Pimephales promelas* Sample Code: R240207.58
 End Date: 16 Mar-25 13:32 Protocol: EPA/821/R-02-012 (2002) Sample Source: Reference Toxicant
 Sample Date: 07 Feb-24 Material: Copper Sample Station: R240207.58

Conc-µg/L	Code	Rep	Pos	# Exposed	# Survived	Notes
0	D	1	10	10	9	
0	D	2	20	10	10	
0	D	3	2	10	10	
0	D	4	17	10	10	
25		1	11	10	8	
25		2	9	10	9	
25		3	23	10	8	
25		4	7	10	10	
50		1	12	10	6	
50		2	15	10	7	
50		3	16	10	8	
50		4	1	10	8	
100		1	21	10	3	
100		2	18	10	2	
100		3	6	10	2	
100		4	5	10	4	
200		1	3	10	1	
200		2	4	10	2	
200		3	19	10	2	
200		4	13	10	1	
400		1	14	10	0	
400		2	8	10	1	
400		3	24	10	1	
400		4	22	10	1	

GENERAL

Client	Internal
Associated Test	Various
Compound	Copper Chloride
Toxicant	Copper
Test Type	Reference Toxicant
Test type	96-Hour Acute Copper Ref Tox with FHM
Matrix	Liquid
Test Acceptability	≥ 90% average survival of control
Test Start Date	03/12/25
Test Species	<i>Pimephales promelas</i>
Organism Batch	ABS031225.01
Organism Acquired	3/12/2025
Organism Acclimation	0
Organism Age	8 days
Test Protocol	TOX 017 / TOX 099
Regional Protocol	USEPA EPA-821-R-02-012
Test Location	Bath 2
Light Intensity	50-100 foot candles
Light Cycle	16L:8D
Water Description	moderately hard fresh water
Organisms per Replicate	10
Test Chamber Size	12 oz
Exposure Volume	250 mL
Feeding Information	0.2 mL <i>Artemia nauplii</i> 2 hrs prior to renewal (96-hour test)
Test Dissolved Oxygen	> 4
Test Temperature	20 ± 1
Conductivity	
Test pH	7.5 ± 1.5

Note: input lowest and highest decimal for temp

Test Parameters		
	Min	Max
DO	4	
Temp	18.5	21.4
Conductivity		
pH	6	9

TEST START TIME/INIT:	1404 CS (MS)
TEST END TIME/INIT:	1332 KD

REFERENCE TOXICANT TEST ID	LOT #
R240207.58	BCCH9104

Concentrations (µg/L)	
1	Control
2	25
3	50
4	100
5	200
6	400

Food Batch ID
898437

v1	CLIENT	Internal	TEST TYPE	Reference Toxicant	PROTOCOL	TOX 017 / TOX 099
	ASSOCIATED TEST	Various	TEST START DATE	3/12/25	TOXICANT	Copper
	REF TOX ID	R240207.58	TEST END DATE	3/16/25	SPECIES	<i>Pimephales promelas</i>
	LOT #	BCCH9104	MATRIX	Liquid	NO. OF ORGANISMS	10

96-Hour Acute Copper Ref Tox with FHM

Dilution Preparation (Serial dilute by 50%)

CuCl ₂ *2H ₂ O Stock Solution (µg/L)	Target Stock Solution Conc. (µg/L)	Volume of Diluent (mLs)	Amt. of Toxicant (mL)
400,000	400	2000	2.00
400,000	200	2000	1.00
400,000	100	2000	0.50

Test Dilution Prep

Date	Balance ID	Water Batch ID	Initials	Highest Concentration Prepared	Comments
3/12/2025	7	RFW030525.01	KD	400	
3/14/2025	7	RFW031125.01	EM	400	

Water Quality

		DO (mg/L)	TEMP (°C)	CONDUCTIVITY	pH
Concentration (µg/L)		> 4	20 ± 1	(µS/cm)	7.5 ± 1.5
Day 0 (Stock)	Control	8.8	19.2	338	8.2
	25	8.9	19.2	334	8.2
	50	8.8	19.3	334	8.2
	100	8.8	19.3	334	8.2
	200	8.8	19.7	334	8.1
	400	8.8	19.3	334	8.1
Daily WQ		Day 1	Day 2	Day 3	Day 4
Meter #		T16	T33	T33	
Temp. Old		19.2	19.1	19.0	
Temp. New		20.4			
Day 4	Control	7.9	18.9	336	7.9
	25	8.5	19.0	337	8.0
	50	8.5	19.0	337	8.0
	100	8.5	19.0	336	8.0
	200	8.6	18.9	348	8.0
	400	8.6	19.0	335	8.0

Comments

V.1

CLIENT	Internal	TEST TYPE	Reference Toxicant	PROTOCOL	TOX 017 / TOX 099
ASSOCIATED TEST	Various	TEST START DATE	3/12/25	TOXICANT	Copper
REF TOX ID	R240207.58	TEST END DATE	3/16/25	SPECIES	<i>Pimephales promelas</i>
LOT #	BCCH9104	MATRIX	Liquid	NO. OF ORGANISMS	10

Abbreviation Key:

NB = No Body

FB = Found Body

ST = Stranded

96-Hour Acute Copper Ref Tox with FHM

Abbreviation key:
NB = No Body
FB = Found Body
ST = Stranded

		Day 1			Day 2			Day 3			Day 4			
		Date	03/13/25		Date	03/14/25		Date	03/15/25		Date	03/16/25		
		Time	1137		Time	1045		Time	805		Time	1332		
		Tech	LG		Tech	MM		Tech	NL		Tech	KD		
Concentration (µg/L)	Rep	Alive	Dead	Obs	Alive	Dead	Obs	Alive	Dead	Obs	Alive	Dead	Obs	Comments
Control	1	10	0		10	0		10	0		9	1		
	2	10	0		10	0		10	0		10	0		
	3	10	0		10	0		10	0		10	0		
	4	10	0		10	0		10	0		10	0		
25	1	10	0		9	1		9	0		8	1		
	2	10	0		10	0		10	0		9	1		
	3	10	0		10	0		8	2		8	0		
	4	10	0		10	0		10	0		10	0		
50	1	10	0		9	1		7	2		6	1		
	2	9	1		8	1		8	0		7	1		
	3	10	0		9	1		9	0		8	1		
	4	10	0		9	1		8	1		8	0		
100	1	9	1		6	3		5	1		3	2		
	2	9	1		6	3		3	3		2	1		
	3	10	0		8	2		6	2		2	4		
	4	8	2		6	2		5	1		4	1		
200	1	5	5		3	2		2	1		1	1		
	2	8	2		5	3		2	3		2	0		
	3	9	1		5	4		4	1		2	2		
	4	10	0		5	5		3	2		1	2		
400	1	4	6		1	3		0	1					
	2	6	4		2	4		1	1		1	0		
	3	4	6		1	3		1	0		1	0		
	4	3	7		3	0		1	2		1	0		
Feed (Time/Init.)														
0.2 mL Artemia nauplii 2 hrs prior to renewal (96-hour test)		EM												

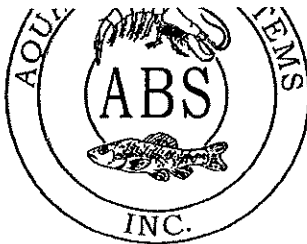
ORGANISM RECEIPT LOG

Date: 3/12/25		Time: 1050		Batch No. ABS031225.01			
Organism: Pimephales promelas							
Source / Supplier: Aquatic Biosystems							
No. Ordered: 295		No. Received: 315		Source Batch: Collection date, (hatch date, etc.): 3/4/25			
Condition of Organisms: Good				Approximate Size or Age: (Days from hatch, life stage, size class, etc.): N 8 days old			
Shipper: FedEx				B of L (Tracking No.) 435797352860			
Condition of Container: Good				Received By: MS/CS			
Container	D.O. (mg/L)	Temp. (°C)	Cond or Sal. (Include Units)	pH (Units)	# Dead	% Dead*	Tech. (Initials)
1	13	20.2	528	7.3	1	0.3%	CS

*if >10% contact lab manager

Notes:

1300 Blue Spruce Drive, Suite C
Fort Collins, Colorado 80524



Toll Free: 800/331-5916
Tel: 970/484-5091 Fax: 970/484-2514

ORGANISM HISTORY

DATE: 3/11/2025

SPECIES: *Pimephales promelas*

AGE: 7 day

LIFE STAGE: Larvae

HATCH DATE: 3/4/2025

BEGAN FEEDING: 3/5/2025

FOOD: *Artemia* sp.

Water Chemistry Record:

	Current	Range
TEMPERATURE:	<u>22°C</u>	<u>22-25°C</u>
SALINITY/CONDUCTIVITY:	<u>--</u>	<u>--</u>
TOTAL HARDNESS (as CaCO ₃):	<u>107 mg/l</u>	<u>80-120 mg/l</u>
TOTAL ALKALINITY (as CaCO ₃):	<u>85 mg/l</u>	<u>80-100 mg/l</u>
pH:	<u>8.20</u>	<u>7.20-8.20</u>

Comments:

Facility Supervisor

APPENDIX B

CHAIN-OF-CUSTODY AND SAMPLE RECEIPT FORMS

SAMPLE RECEIPT

Client:	Client ID:	Lab ID:	Renewals:
Jacobs Graymont	GR-NPDES01-03041205	P250305.02	
Project:			
Graymont Western States Tacoma NPDES			
Date/Time Received:	3/5/25	1200	
Airbill #:	2800	543777	
Shipper Tracking Information Kept for Records: (Y/N/NA)	N		
Collection Date/Time:	3/4/25	1200	
Sample Holding Time (must be ≤36 hours at test initiation)	✓		
Condition of Shipping Container:	Good		
Type and Capacity of Sample Container:	10L cubi		
Total Sample Volume (L):	10L		
Condition of Sampling Container:	Good		
Sample Container Appropriate: (Y/N)	✓		
Custody Seals Intact: (Intact/Broken/Not Present)	Intact		
Frozen Wet or Blue Ice Present During Shipment/Transport: (Y/N)	ice, ✓		
Sampler's Name Present on COC Form: (Print Name/Not Present)	Candice Schwartz		
Color:	pale yellow		

TAKE THE FOLLOWING MEASUREMENTS UPON ARRIVAL

LAB ID	Meter #	Temp. (°C) * (0-6°C) *	Meter #	Dissolved Oxygen (mg/L)	Meter #	pH	Meter #	Cond. (µS/cm)	Meter #	Sal. (ppt)	Hardness (mg CaCO ₃ /L)	Alkalinity (mg CaCO ₃ /L)	Total Chlorine (mg/L)	Total NH ₃ (mg/L)	Tech
P250305.02	12	0.0	7	9.9	7	8.8	7	508	1	—	153	22	0.00	0.050	NL

*Notify project manager or study director of temperatures above 6°C or ≥36 hours holding time. Client must be notified ASAP.

If there are sample receipt problems, complete the following:	
Reason for unacceptability:	
Name of Client Contact:	Contacted by:
Client Response and/or Action to be Taken:	Date Action Taken:

Om. R- Actual, 520-NL 3/5/25

CHAIN OF CUSTODY

ECO ANALYSTS, INC.

Destination: EcoAnalysts - Port Gamble WA		Sample Originator (Organization): JACOBS		Report Results To: Mario.lopezramos@jacobs.com		Ship Samples to: EcoAnalysts, Inc. 4770 NE View Drive Port Gamble, WA 98364	
Destination Contact: Michelle Bennett		Samplers Name: Candice Schwartz		Contact Name: MARIO LOPEZ RAMOS			
Date: 3/14/25		Address:		Address: 1100 112th Ave NE Suite 300 Bellevue WA 98004			
Project Name: Graymont western states Tacoma NPDES		Phone:		Phone: (425) 453-5000			
Contract/PO #: 148059191		Email:		Email:			

No.	Sample ID	Volume	Grab Sample		Composite Sample		Preservation	Analysis	Involving To:	Comments or Special Instructions:	Sample Temp Upon Receipt	Lab ID
			Date	Time	Start Date	Start Time						
1	GR-NPDES01-03042025	3/14/25 1200										
2	GR-NPDES01-03042025											
3	GR-NPDES01-030425											
4												
5	GR-NPDES01-03042025 1200											
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Requested by:		Received by:		Relinquished by:		Received by:	
Name:	Candice Schwartz	Name:	Nicole Lundgren	Name:		Name:	
Signature:	<i>[Signature]</i>	Signature:	<i>[Signature]</i>	Signature:		Signature:	
Print Name:	Candice Schwartz	Print Name:	Nicole Lundgren	Print Name:		Print Name:	
Affiliation:	JACOBS	Affiliation:	ECO ANALYSTS	Affiliation:		Affiliation:	
Date/Time:	3/14/25 1345	Date/Time:	3/5/25 1200	Date/Time:		Date/Time:	

Attachment B-2
Effluent Characterization for Pollutants
Laboratory Analytical Results

RECEIVED

JUN 05 2025

WA State Department
of Ecology (SWRO)



**OnSite
Environmental Inc.**

14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

May 30, 2025

Mario Lopez Ramos
Jacobs Engineering Group
1110 112th Avenue NE, Suite 500
Bellevue, WA 98004

Re: Analytical Data for Project Graymont NPDES
Laboratory Reference No. 2505-304

Dear Mario:

Enclosed are the analytical results and associated quality control data for samples submitted on May 21, 2025.

Please note that the data for the subcontracted analyses will follow in the final report.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: May 30, 2025
Samples Submitted: May 21, 2025
Laboratory Reference: 2505-304
Project: Graymont NPDES

Case Narrative

Samples were collected on May 21, 2025 and received by the laboratory on May 21, 2025. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below. However the soil results for the QA/QC samples are reported on a wet-weight basis.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Volatiles EPA 8260D Analysis

Client-requested QA/QC could not be performed due to an insufficient number of VOA vials.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.



Date of Report: May 30, 2025
Samples Submitted: May 21, 2025
Laboratory Reference: 2505-304
Project: Graymont NPDES

**HEXANE EXTRACTABLE MATERIAL
OIL AND GREASE
EPA 1664A**

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GR-NPDES-01-052125					
Laboratory ID:	05-304-01					
Hexane Extractable Material	ND	5.4	EPA 1664A	5-28-25	5-28-25	



Date of Report: May 30, 2025
 Samples Submitted: May 21, 2025
 Laboratory Reference: 2505-304
 Project: Graymont NPDES

**HEXANE EXTRACTABLE MATERIAL
 OIL AND GREASE
 EPA 1664A
 QUALITY CONTROL**

Matrix: Water
 Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0528W1					
Hexane Extractable Material	ND	5.0	EPA 1664A	5-28-25	5-28-25	

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0528W1									
	SB	SBD	SB	SBD	SB	SBD				
HEM	36.5	38.2	40.0	40.0	91	96	70-122	5	28	



Date of Report: May 30, 2025
 Samples Submitted: May 21, 2025
 Laboratory Reference: 2505-304
 Project: Graymont NPDES

VOLATILE ORGANICS EPA 624.1
 Page 1 of 2

Matrix: Water
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: GR-NPDES-01-052125						
Laboratory ID: 05-304-01						
Chloromethane	ND	1.0	EPA 624.1	5-23-25	5-23-25	
Vinyl Chloride	ND	0.20	EPA 624.1	5-23-25	5-23-25	
Bromomethane	ND	2.0	EPA 624.1	5-23-25	5-23-25	
Chloroethane	ND	1.0	EPA 624.1	5-23-25	5-23-25	
Trichlorofluoromethane	ND	0.20	EPA 624.1	5-23-25	5-23-25	
1,1-Dichloroethene	ND	0.20	EPA 624.1	5-23-25	5-23-25	
Acetone	10	5.0	EPA 624.1	5-23-25	5-23-25	Y
Iodomethane	ND	5.0	EPA 624.1	5-23-25	5-23-25	
Carbon Disulfide	ND	0.20	EPA 624.1	5-23-25	5-23-25	
Methylene Chloride	ND	2.0	EPA 624.1	5-23-25	5-23-25	
Acrylonitrile	ND	0.50	EPA 624.1	5-23-25	5-23-25	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 624.1	5-23-25	5-23-25	
Methyl t-Butyl Ether	ND	0.20	EPA 624.1	5-23-25	5-23-25	
1,1-Dichloroethane	ND	0.20	EPA 624.1	5-23-25	5-23-25	
Vinyl Acetate	ND	1.0	EPA 624.1	5-23-25	5-23-25	
2,2-Dichloropropane	ND	0.20	EPA 624.1	5-23-25	5-23-25	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 624.1	5-23-25	5-23-25	
2-Butanone	ND	5.0	EPA 624.1	5-23-25	5-23-25	
Bromochloromethane	ND	0.20	EPA 624.1	5-23-25	5-23-25	
Chloroform	0.60	0.20	EPA 624.1	5-23-25	5-23-25	
1,1,1-Trichloroethane	ND	0.20	EPA 624.1	5-23-25	5-23-25	
Carbon Tetrachloride	ND	0.20	EPA 624.1	5-23-25	5-23-25	
1,1-Dichloropropene	ND	0.20	EPA 624.1	5-23-25	5-23-25	
Benzene	ND	0.20	EPA 624.1	5-23-25	5-23-25	
1,2-Dichloroethane	ND	0.20	EPA 624.1	5-23-25	5-23-25	
Trichloroethene	ND	0.20	EPA 624.1	5-23-25	5-23-25	
1,2-Dichloropropane	ND	0.20	EPA 624.1	5-23-25	5-23-25	
Dibromomethane	ND	0.20	EPA 624.1	5-23-25	5-23-25	
Bromodichloromethane	ND	0.20	EPA 624.1	5-23-25	5-23-25	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 624.1	5-23-25	5-23-25	
Methyl Isobutyl Ketone	ND	2.0	EPA 624.1	5-23-25	5-23-25	
Toluene	ND	1.0	EPA 624.1	5-23-25	5-23-25	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 624.1	5-23-25	5-23-25	



Date of Report: May 30, 2025
 Samples Submitted: May 21, 2025
 Laboratory Reference: 2505-304
 Project: Graymont NPDES

VOLATILE ORGANICS EPA 624.1
 Page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: GR-NPDES-01-052125						
Laboratory ID: 05-304-01						
1,1,2-Trichloroethane	ND	0.20	EPA 624.1	5-23-25	5-23-25	
Tetrachloroethene	ND	0.20	EPA 624.1	5-23-25	5-23-25	
1,3-Dichloropropane	ND	0.20	EPA 624.1	5-23-25	5-23-25	
2-Hexanone	ND	2.0	EPA 624.1	5-23-25	5-23-25	
Dibromochloromethane	ND	0.20	EPA 624.1	5-23-25	5-23-25	
1,2-Dibromoethane	ND	0.20	EPA 624.1	5-23-25	5-23-25	
Chlorobenzene	ND	0.20	EPA 624.1	5-23-25	5-23-25	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 624.1	5-23-25	5-23-25	
Ethylbenzene	ND	0.20	EPA 624.1	5-23-25	5-23-25	
m,p-Xylene	ND	0.40	EPA 624.1	5-23-25	5-23-25	
o-Xylene	ND	0.20	EPA 624.1	5-23-25	5-23-25	
Styrene	ND	0.20	EPA 624.1	5-23-25	5-23-25	
Bromoform	ND	1.0	EPA 624.1	5-23-25	5-23-25	
Isopropylbenzene	ND	0.20	EPA 624.1	5-23-25	5-23-25	
Bromobenzene	ND	0.20	EPA 624.1	5-23-25	5-23-25	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 624.1	5-23-25	5-23-25	
1,2,3-Trichloropropane	ND	0.20	EPA 624.1	5-23-25	5-23-25	
n-Propylbenzene	ND	0.20	EPA 624.1	5-23-25	5-23-25	
2-Chlorotoluene	ND	0.20	EPA 624.1	5-23-25	5-23-25	
4-Chlorotoluene	ND	0.20	EPA 624.1	5-23-25	5-23-25	
1,3,5-Trimethylbenzene	ND	0.20	EPA 624.1	5-23-25	5-23-25	
tert-Butylbenzene	ND	0.20	EPA 624.1	5-23-25	5-23-25	
1,2,4-Trimethylbenzene	ND	0.20	EPA 624.1	5-23-25	5-23-25	
sec-Butylbenzene	ND	0.20	EPA 624.1	5-23-25	5-23-25	
1,3-Dichlorobenzene	ND	0.20	EPA 624.1	5-23-25	5-23-25	
p-Isopropyltoluene	ND	0.20	EPA 624.1	5-23-25	5-23-25	
1,4-Dichlorobenzene	ND	0.20	EPA 624.1	5-23-25	5-23-25	
1,2-Dichlorobenzene	ND	0.20	EPA 624.1	5-23-25	5-23-25	
n-Butylbenzene	ND	0.20	EPA 624.1	5-23-25	5-23-25	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 624.1	5-23-25	5-23-25	
Hexachlorobutadiene	ND	1.0	EPA 624.1	5-23-25	5-23-25	
1,2,3-Trichlorobenzene	ND	1.0	EPA 624.1	5-23-25	5-23-25	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>99</i>	<i>68-133</i>				
<i>Toluene-d8</i>	<i>100</i>	<i>79-123</i>				
<i>4-Bromofluorobenzene</i>	<i>100</i>	<i>78-117</i>				



Date of Report: May 30, 2025
 Samples Submitted: May 21, 2025
 Laboratory Reference: 2505-304
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Matrix: Water
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0523W1					
Chloromethane	ND	1.0	EPA 624.1	5-23-25	5-23-25	
Vinyl Chloride	ND	0.20	EPA 624.1	5-23-25	5-23-25	
Bromomethane	ND	2.0	EPA 624.1	5-23-25	5-23-25	
Chloroethane	ND	1.0	EPA 624.1	5-23-25	5-23-25	
Trichlorofluoromethane	ND	0.20	EPA 624.1	5-23-25	5-23-25	
1,1-Dichloroethene	ND	0.20	EPA 624.1	5-23-25	5-23-25	
Acetone	ND	5.0	EPA 624.1	5-23-25	5-23-25	
Iodomethane	ND	5.0	EPA 624.1	5-23-25	5-23-25	
Carbon Disulfide	ND	0.20	EPA 624.1	5-23-25	5-23-25	
Methylene Chloride	ND	2.0	EPA 624.1	5-23-25	5-23-25	
Acrylonitrile	ND	0.50	EPA 624.1	5-23-25	5-23-25	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 624.1	5-23-25	5-23-25	
Methyl t-Butyl Ether	ND	0.20	EPA 624.1	5-23-25	5-23-25	
1,1-Dichloroethane	ND	0.20	EPA 624.1	5-23-25	5-23-25	
Vinyl Acetate	ND	1.0	EPA 624.1	5-23-25	5-23-25	
2,2-Dichloropropane	ND	0.20	EPA 624.1	5-23-25	5-23-25	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 624.1	5-23-25	5-23-25	
2-Butanone	ND	5.0	EPA 624.1	5-23-25	5-23-25	
Bromochloromethane	ND	0.20	EPA 624.1	5-23-25	5-23-25	
Chloroform	ND	0.20	EPA 624.1	5-23-25	5-23-25	
1,1,1-Trichloroethane	ND	0.20	EPA 624.1	5-23-25	5-23-25	
Carbon Tetrachloride	ND	0.20	EPA 624.1	5-23-25	5-23-25	
1,1-Dichloropropene	ND	0.20	EPA 624.1	5-23-25	5-23-25	
Benzene	ND	0.20	EPA 624.1	5-23-25	5-23-25	
1,2-Dichloroethane	ND	0.20	EPA 624.1	5-23-25	5-23-25	
Trichloroethene	ND	0.20	EPA 624.1	5-23-25	5-23-25	
1,2-Dichloropropane	ND	0.20	EPA 624.1	5-23-25	5-23-25	
Dibromomethane	ND	0.20	EPA 624.1	5-23-25	5-23-25	
Bromodichloromethane	ND	0.20	EPA 624.1	5-23-25	5-23-25	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 624.1	5-23-25	5-23-25	
Methyl Isobutyl Ketone	ND	2.0	EPA 624.1	5-23-25	5-23-25	
Toluene	ND	1.0	EPA 624.1	5-23-25	5-23-25	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 624.1	5-23-25	5-23-25	



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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0523W1					
1,1,2-Trichloroethane	ND	0.20	EPA 624.1	5-23-25	5-23-25	
Tetrachloroethene	ND	0.20	EPA 624.1	5-23-25	5-23-25	
1,3-Dichloropropane	ND	0.20	EPA 624.1	5-23-25	5-23-25	
2-Hexanone	ND	2.0	EPA 624.1	5-23-25	5-23-25	
Dibromochloromethane	ND	0.20	EPA 624.1	5-23-25	5-23-25	
1,2-Dibromoethane	ND	0.20	EPA 624.1	5-23-25	5-23-25	
Chlorobenzene	ND	0.20	EPA 624.1	5-23-25	5-23-25	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 624.1	5-23-25	5-23-25	
Ethylbenzene	ND	0.20	EPA 624.1	5-23-25	5-23-25	
m,p-Xylene	ND	0.40	EPA 624.1	5-23-25	5-23-25	
o-Xylene	ND	0.20	EPA 624.1	5-23-25	5-23-25	
Styrene	ND	0.20	EPA 624.1	5-23-25	5-23-25	
Bromoform	ND	1.0	EPA 624.1	5-23-25	5-23-25	
Isopropylbenzene	ND	0.20	EPA 624.1	5-23-25	5-23-25	
Bromobenzene	ND	0.20	EPA 624.1	5-23-25	5-23-25	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 624.1	5-23-25	5-23-25	
1,2,3-Trichloropropane	ND	0.20	EPA 624.1	5-23-25	5-23-25	
n-Propylbenzene	ND	0.20	EPA 624.1	5-23-25	5-23-25	
2-Chlorotoluene	ND	0.20	EPA 624.1	5-23-25	5-23-25	
4-Chlorotoluene	ND	0.20	EPA 624.1	5-23-25	5-23-25	
1,3,5-Trimethylbenzene	ND	0.20	EPA 624.1	5-23-25	5-23-25	
tert-Butylbenzene	ND	0.20	EPA 624.1	5-23-25	5-23-25	
1,2,4-Trimethylbenzene	ND	0.20	EPA 624.1	5-23-25	5-23-25	
sec-Butylbenzene	ND	0.20	EPA 624.1	5-23-25	5-23-25	
1,3-Dichlorobenzene	ND	0.20	EPA 624.1	5-23-25	5-23-25	
p-Isopropyltoluene	ND	0.20	EPA 624.1	5-23-25	5-23-25	
1,4-Dichlorobenzene	ND	0.20	EPA 624.1	5-23-25	5-23-25	
1,2-Dichlorobenzene	ND	0.20	EPA 624.1	5-23-25	5-23-25	
n-Butylbenzene	ND	0.20	EPA 624.1	5-23-25	5-23-25	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 624.1	5-23-25	5-23-25	
Hexachlorobutadiene	ND	1.0	EPA 624.1	5-23-25	5-23-25	
1,2,3-Trichlorobenzene	ND	1.0	EPA 624.1	5-23-25	5-23-25	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	96	68-133				
Toluene-d8	101	79-123				
4-Bromofluorobenzene	99	78-117				



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Matrix: Water
 Units: ug/L

Analyte		Result		Spike Level		Percent Recovery		Recovery Limits		RPD	RPD Limit	Flags
SPIKE BLANKS												
Laboratory ID:		SB0523W2										
	SB	SBD	SB	SBD	SB	SBD						
Chloromethane	7.95	7.90	10.0	10.0	80	79	38-141	1	31			
Vinyl Chloride	7.81	7.96	10.0	10.0	78	80	67-131	2	16			
Bromomethane	10.2	10.4	10.0	10.0	102	104	30-155	2	34			
Chloroethane	9.42	9.57	10.0	10.0	94	96	63-130	2	18			
Trichlorofluoromethane	8.95	8.96	10.0	10.0	90	90	80-131	0	17			
1,1-Dichloroethene	10.7	10.8	10.0	10.0	107	108	77-125	1	15			
Acetone	12.2	9.93	10.0	10.0	122	99	45-135	21	24			
Iodomethane	9.55	9.84	10.0	10.0	96	98	27-146	3	33			
Carbon Disulfide	9.67	9.96	10.0	10.0	97	100	41-150	3	19			
Methylene Chloride	11.9	12.3	10.0	10.0	119	123	66-123	3	15			
(trans) 1,2-Dichloroethene	11.0	11.2	10.0	10.0	110	112	76-126	2	15			
Methyl t-Butyl Ether	10.3	10.5	10.0	10.0	103	105	73-129	2	15			
1,1-Dichloroethane	10.9	11.1	10.0	10.0	109	111	75-126	2	15			
Vinyl Acetate	10.7	10.5	10.0	10.0	107	105	57-139	2	15			
2,2-Dichloropropane	12.3	12.0	10.0	10.0	123	120	75-154	2	19			
(cis) 1,2-Dichloroethene	11.7	11.9	10.0	10.0	117	119	77-129	2	15			
2-Butanone	10.0	9.66	10.0	10.0	100	97	62-129	3	17			
Bromochloromethane	11.1	11.6	10.0	10.0	111	116	72-129	4	19			
Chloroform	10.7	11.1	10.0	10.0	107	111	72-125	4	15			
1,1,1-Trichloroethane	11.1	11.5	10.0	10.0	111	115	79-127	4	15			
Carbon Tetrachloride	10.7	10.9	10.0	10.0	107	109	78-130	2	15			
1,1-Dichloropropene	10.8	10.9	10.0	10.0	108	109	77-124	1	15			
Benzene	11.1	11.3	10.0	10.0	111	113	75-126	2	15			
1,2-Dichloroethane	11.5	11.7	10.0	10.0	115	117	74-128	2	15			
Trichloroethene	11.5	11.6	10.0	10.0	115	116	80-130	1	15			
1,2-Dichloropropane	11.2	11.5	10.0	10.0	112	115	80-124	3	15			
Dibromomethane	11.8	12.0	10.0	10.0	118	120	80-131	2	15			
Bromodichloromethane	12.1	12.3	10.0	10.0	121	123	81-131	2	15			
(cis) 1,3-Dichloropropene	10.7	10.9	10.0	10.0	107	109	74-136	2	15			
Methyl Isobutyl Ketone	9.97	10.1	10.0	10.0	100	101	67-132	1	15			
Toluene	10.7	10.9	10.0	10.0	107	109	75-127	2	15			
(trans) 1,3-Dichloropropene	10.2	10.1	10.0	10.0	102	101	69-137	1	15			



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Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0523W2									
	SB	SBD	SB	SBD	SB	SBD				
1,1,2-Trichloroethane	11.2	11.2	10.0	10.0	112	112	80-122	0	15	
Tetrachloroethene	11.1	11.0	10.0	10.0	111	110	80-130	1	20	
1,3-Dichloropropane	11.3	11.4	10.0	10.0	113	114	82-128	1	15	
2-Hexanone	9.52	9.23	10.0	10.0	95	92	67-130	3	19	
Dibromochloromethane	10.9	10.5	10.0	10.0	109	105	70-135	4	30	
1,2-Dibromoethane	11.2	11.2	10.0	10.0	112	112	82-127	0	15	
Chlorobenzene	10.9	11.0	10.0	10.0	109	110	80-120	1	15	
1,1,1,2-Tetrachloroethane	11.2	11.4	10.0	10.0	112	114	80-127	2	15	
Ethylbenzene	11.0	11.2	10.0	10.0	110	112	80-124	2	15	
m,p-Xylene	22.0	22.1	20.0	20.0	110	111	80-124	0	15	
o-Xylene	11.2	11.3	10.0	10.0	112	113	80-123	1	15	
Styrene	11.5	11.5	10.0	10.0	115	115	82-125	0	15	
Bromoform	10.3	10.2	10.0	10.0	103	102	70-130	1	15	
Isopropylbenzene	11.4	11.5	10.0	10.0	114	115	80-127	1	15	
Bromobenzene	10.3	10.3	10.0	10.0	103	103	82-123	0	15	
1,1,2,2-Tetrachloroethane	10.5	10.2	10.0	10.0	105	102	78-124	3	15	
1,2,3-Trichloropropane	9.36	9.18	10.0	10.0	94	92	67-123	2	15	
n-Propylbenzene	10.8	10.9	10.0	10.0	108	109	80-129	1	15	
2-Chlorotoluene	10.6	10.6	10.0	10.0	106	106	77-126	0	15	
4-Chlorotoluene	10.8	11.1	10.0	10.0	108	111	79-128	3	15	
1,3,5-Trimethylbenzene	10.7	11.0	10.0	10.0	107	110	79-128	3	15	
tert-Butylbenzene	10.7	10.9	10.0	10.0	107	109	80-127	2	15	
1,2,4-Trimethylbenzene	11.1	11.4	10.0	10.0	111	114	80-128	3	15	
sec-Butylbenzene	11.0	11.3	10.0	10.0	110	113	79-130	3	15	
1,3-Dichlorobenzene	10.6	10.7	10.0	10.0	106	107	79-125	1	15	
p-Isopropyltoluene	11.0	11.2	10.0	10.0	110	112	80-132	2	15	
1,4-Dichlorobenzene	10.4	10.6	10.0	10.0	104	106	78-123	2	15	
1,2-Dichlorobenzene	10.9	10.9	10.0	10.0	109	109	79-125	0	15	
n-Butylbenzene	11.4	11.4	10.0	10.0	114	114	78-138	0	16	
1,2-Dibromo-3-chloropropane	9.79	10.4	10.0	10.0	98	104	62-133	6	17	
Hexachlorobutadiene	11.1	11.3	10.0	10.0	111	113	76-144	2	22	
1,2,3-Trichlorobenzene	9.74	10.3	10.0	10.0	97	103	64-142	6	28	
Surrogate:										
Dibromofluoromethane					98	100	68-133			
Toluene-d8					101	101	79-123			
4-Bromofluorobenzene					103	102	78-117			



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 Laboratory Reference: 2505-304
 Project: Graymont NPDES

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Matrix: Water
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: GR-NPDES-01-052125						
Laboratory ID: 05-304-01						
n-Nitrosodimethylamine	ND	0.95	EPA 625.1	5-22-25	5-22-25	U1
Pyridine	ND	0.95	EPA 625.1	5-22-25	5-22-25	
Phenol	ND	1.1	EPA 625.1	5-22-25	5-22-25	
Aniline	ND	4.8	EPA 625.1	5-22-25	5-22-25	
bis(2-Chloroethyl)ether	ND	0.95	EPA 625.1	5-22-25	5-22-25	
2-Chlorophenol	ND	0.95	EPA 625.1	5-22-25	5-22-25	
n-Decane	ND	0.95	EPA 625.1	5-22-25	5-22-25	
Benzyl alcohol	2.1	0.95	EPA 625.1	5-22-25	5-22-25	
2-Methylphenol (o-Cresol)	ND	0.95	EPA 625.1	5-22-25	5-22-25	
bis(2-Chloroisopropyl)ether	ND	0.95	EPA 625.1	5-22-25	5-22-25	
(3+4)-Methylphenol (m,p-Cresol)	ND	0.95	EPA 625.1	5-22-25	5-22-25	
n-Nitroso-di-n-propylamine	ND	0.95	EPA 625.1	5-22-25	5-22-25	
Hexachloroethane	ND	0.95	EPA 625.1	5-22-25	5-22-25	
Nitrobenzene	ND	0.95	EPA 625.1	5-22-25	5-22-25	
Isophorone	ND	0.95	EPA 625.1	5-22-25	5-22-25	
2-Nitrophenol	ND	0.95	EPA 625.1	5-22-25	5-22-25	
2,4-Dimethylphenol	ND	0.95	EPA 625.1	5-22-25	5-22-25	
bis(2-Chloroethoxy)methane	ND	0.95	EPA 625.1	5-22-25	5-22-25	
2,4-Dichlorophenol	ND	1.9	EPA 625.1	5-22-25	5-22-25	
1,2,4-Trichlorobenzene	ND	0.95	EPA 625.1	5-22-25	5-22-25	
Naphthalene	ND	0.95	EPA 625.1	5-22-25	5-22-25	
4-Chloroaniline	ND	0.95	EPA 625.1	5-22-25	5-22-25	
Hexachlorobutadiene	ND	0.95	EPA 625.1	5-22-25	5-22-25	
4-Chloro-3-methylphenol	ND	0.95	EPA 625.1	5-22-25	5-22-25	
2-Methylnaphthalene	ND	0.95	EPA 625.1	5-22-25	5-22-25	
1-Methylnaphthalene	ND	0.95	EPA 625.1	5-22-25	5-22-25	
Hexachlorocyclopentadiene	ND	4.8	EPA 625.1	5-22-25	5-22-25	
2,4,6-Trichlorophenol	ND	0.95	EPA 625.1	5-22-25	5-22-25	
2,3-Dichloroaniline	ND	0.95	EPA 625.1	5-22-25	5-22-25	
2,4,5-Trichlorophenol	ND	0.95	EPA 625.1	5-22-25	5-22-25	
2-Chloronaphthalene	ND	0.95	EPA 625.1	5-22-25	5-22-25	
2-Nitroaniline	ND	0.95	EPA 625.1	5-22-25	5-22-25	
1,4-Dinitrobenzene	ND	0.95	EPA 625.1	5-22-25	5-22-25	
Dimethylphthalate	ND	4.8	EPA 625.1	5-22-25	5-22-25	
1,3-Dinitrobenzene	ND	0.95	EPA 625.1	5-22-25	5-22-25	
2,6-Dinitrotoluene	ND	0.95	EPA 625.1	5-22-25	5-22-25	
1,2-Dinitrobenzene	ND	0.95	EPA 625.1	5-22-25	5-22-25	
Acenaphthylene	ND	0.95	EPA 625.1	5-22-25	5-22-25	
3-Nitroaniline	ND	0.95	EPA 625.1	5-22-25	5-22-25	
2,4-Dinitrophenol	ND	4.8	EPA 625.1	5-22-25	5-22-25	
Acenaphthene	ND	0.95	EPA 625.1	5-22-25	5-22-25	



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: May 30, 2025
 Samples Submitted: May 21, 2025
 Laboratory Reference: 2505-304
 Project: Graymont NPDES

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: GR-NPDES-01-052125						
Laboratory ID: 05-304-01						
4-Nitrophenol	ND	1.9	EPA 625.1	5-22-25	5-22-25	
2,4-Dinitrotoluene	ND	0.95	EPA 625.1	5-22-25	5-22-25	
Dibenzofuran	ND	0.95	EPA 625.1	5-22-25	5-22-25	
2,3,5,6-Tetrachlorophenol	ND	1.9	EPA 625.1	5-22-25	5-22-25	
2,3,4,6-Tetrachlorophenol	ND	1.9	EPA 625.1	5-22-25	5-22-25	
Diethylphthalate	ND	0.95	EPA 625.1	5-22-25	5-22-25	
4-Chlorophenyl-phenylether	ND	0.95	EPA 625.1	5-22-25	5-22-25	
4-Nitroaniline	ND	0.95	EPA 625.1	5-22-25	5-22-25	
Fluorene	ND	0.95	EPA 625.1	5-22-25	5-22-25	
4,6-Dinitro-2-methylphenol	ND	4.8	EPA 625.1	5-22-25	5-22-25	
n-Nitrosodiphenylamine	ND	0.95	EPA 625.1	5-22-25	5-22-25	
1,2-Diphenylhydrazine	ND	0.95	EPA 625.1	5-22-25	5-22-25	
4-Bromophenyl-phenylether	ND	0.95	EPA 625.1	5-22-25	5-22-25	
Hexachlorobenzene	ND	0.95	EPA 625.1	5-22-25	5-22-25	
Pentachlorophenol	ND	4.8	EPA 625.1	5-22-25	5-22-25	
n-Octadecane	ND	0.95	EPA 625.1	5-22-25	5-22-25	
Phenanthrene	ND	0.95	EPA 625.1	5-22-25	5-22-25	
Anthracene	ND	0.95	EPA 625.1	5-22-25	5-22-25	
Carbazole	ND	0.95	EPA 625.1	5-22-25	5-22-25	
Di-n-butylphthalate	ND	4.8	EPA 625.1	5-22-25	5-22-25	
Fluoranthene	ND	0.95	EPA 625.1	5-22-25	5-22-25	
Pyrene	ND	0.95	EPA 625.1	5-22-25	5-22-25	
Butylbenzylphthalate	ND	0.95	EPA 625.1	5-22-25	5-22-25	
bis-2-Ethylhexyladipate	ND	4.8	EPA 625.1	5-22-25	5-22-25	
3,3'-Dichlorobenzidine	ND	4.8	EPA 625.1	5-22-25	5-22-25	
Benzo[a]anthracene	ND	0.95	EPA 625.1	5-22-25	5-22-25	
Chrysene	ND	0.95	EPA 625.1	5-22-25	5-22-25	
bis(2-Ethylhexyl)phthalate	ND	4.8	EPA 625.1	5-22-25	5-22-25	
Di-n-octylphthalate	ND	0.95	EPA 625.1	5-22-25	5-22-25	
Benzo[b]fluoranthene	ND	0.95	EPA 625.1	5-22-25	5-22-25	
Benzo(j,k)fluoranthene	ND	0.95	EPA 625.1	5-22-25	5-22-25	
Benzo[a]pyrene	ND	0.95	EPA 625.1	5-22-25	5-22-25	
Indeno[1,2,3-cd]pyrene	ND	0.95	EPA 625.1	5-22-25	5-22-25	
Dibenz[a,h]anthracene	ND	0.95	EPA 625.1	5-22-25	5-22-25	
Benzo[g,h,i]perylene	ND	0.95	EPA 625.1	5-22-25	5-22-25	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorophenol	60	14 - 80				
Phenol-d6	43	10 - 75				
Nitrobenzene-d5	90	46 - 108				
2-Fluorobiphenyl	90	37 - 103				
2,4,6-Tribromophenol	97	35 - 123				
Terphenyl-d14	99	47 - 115				



Date of Report: May 30, 2025
 Samples Submitted: May 21, 2025
 Laboratory Reference: 2505-304
 Project: Graymont NPDES

**SEMIVOLATILE ORGANICS EPA 625.1
 QUALITY CONTROL**

Page 1 of 2

Matrix: Water

Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0522W1					
n-Nitrosodimethylamine	ND	1.0	EPA 625.1	5-22-25	5-22-25	
Pyridine	ND	1.0	EPA 625.1	5-22-25	5-22-25	
Phenol	ND	1.0	EPA 625.1	5-22-25	5-22-25	
Aniline	ND	5.0	EPA 625.1	5-22-25	5-22-25	
bis(2-Chloroethyl)ether	ND	1.0	EPA 625.1	5-22-25	5-22-25	
2-Chlorophenol	ND	1.0	EPA 625.1	5-22-25	5-22-25	
n-Decane	ND	1.0	EPA 625.1	5-22-25	5-22-25	
Benzyl alcohol	ND	1.0	EPA 625.1	5-22-25	5-22-25	
2-Methylphenol (o-Cresol)	ND	1.0	EPA 625.1	5-22-25	5-22-25	
bis(2-Chloroisopropyl)ether	ND	1.0	EPA 625.1	5-22-25	5-22-25	
(3+4)-Methylphenol (m,p-Cresol)	ND	1.0	EPA 625.1	5-22-25	5-22-25	
n-Nitroso-di-n-propylamine	ND	1.0	EPA 625.1	5-22-25	5-22-25	
Hexachloroethane	ND	1.0	EPA 625.1	5-22-25	5-22-25	
Nitrobenzene	ND	1.0	EPA 625.1	5-22-25	5-22-25	
Isophorone	ND	1.0	EPA 625.1	5-22-25	5-22-25	
2-Nitrophenol	ND	1.0	EPA 625.1	5-22-25	5-22-25	
2,4-Dimethylphenol	ND	1.0	EPA 625.1	5-22-25	5-22-25	
bis(2-Chloroethoxy)methane	ND	1.0	EPA 625.1	5-22-25	5-22-25	
2,4-Dichlorophenol	ND	2.0	EPA 625.1	5-22-25	5-22-25	
1,2,4-Trichlorobenzene	ND	1.0	EPA 625.1	5-22-25	5-22-25	
Naphthalene	ND	1.0	EPA 625.1	5-22-25	5-22-25	
4-Chloroaniline	ND	1.0	EPA 625.1	5-22-25	5-22-25	
Hexachlorobutadiene	ND	1.0	EPA 625.1	5-22-25	5-22-25	
4-Chloro-3-methylphenol	ND	1.0	EPA 625.1	5-22-25	5-22-25	
2-Methylnaphthalene	ND	1.0	EPA 625.1	5-22-25	5-22-25	
1-Methylnaphthalene	ND	1.0	EPA 625.1	5-22-25	5-22-25	
Hexachlorocyclopentadiene	ND	5.0	EPA 625.1	5-22-25	5-22-25	
2,4,6-Trichlorophenol	ND	1.0	EPA 625.1	5-22-25	5-22-25	
2,3-Dichloroaniline	ND	1.0	EPA 625.1	5-22-25	5-22-25	
2,4,5-Trichlorophenol	ND	1.0	EPA 625.1	5-22-25	5-22-25	
2-Chloronaphthalene	ND	1.0	EPA 625.1	5-22-25	5-22-25	
2-Nitroaniline	ND	1.0	EPA 625.1	5-22-25	5-22-25	
1,4-Dinitrobenzene	ND	1.0	EPA 625.1	5-22-25	5-22-25	
Dimethylphthalate	ND	5.0	EPA 625.1	5-22-25	5-22-25	
1,3-Dinitrobenzene	ND	1.0	EPA 625.1	5-22-25	5-22-25	
2,6-Dinitrotoluene	ND	1.0	EPA 625.1	5-22-25	5-22-25	
1,2-Dinitrobenzene	ND	1.0	EPA 625.1	5-22-25	5-22-25	
Acenaphthylene	ND	1.0	EPA 625.1	5-22-25	5-22-25	
3-Nitroaniline	ND	1.0	EPA 625.1	5-22-25	5-22-25	
2,4-Dinitrophenol	ND	5.0	EPA 625.1	5-22-25	5-22-25	
Acenaphthene	ND	1.0	EPA 625.1	5-22-25	5-22-25	



Date of Report: May 30, 2025
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SEMIVOLATILE ORGANICS EPA 625.1
 QUALITY CONTROL

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0522W1					
4-Nitrophenol	ND	2.0	EPA 625.1	5-22-25	5-22-25	
2,4-Dinitrotoluene	ND	1.0	EPA 625.1	5-22-25	5-22-25	
Dibenzofuran	ND	1.0	EPA 625.1	5-22-25	5-22-25	
2,3,5,6-Tetrachlorophenol	ND	2.0	EPA 625.1	5-22-25	5-22-25	
2,3,4,6-Tetrachlorophenol	ND	2.0	EPA 625.1	5-22-25	5-22-25	
Diethylphthalate	ND	1.0	EPA 625.1	5-22-25	5-22-25	
4-Chlorophenyl-phenylether	ND	1.0	EPA 625.1	5-22-25	5-22-25	
4-Nitroaniline	ND	1.0	EPA 625.1	5-22-25	5-22-25	
Fluorene	ND	1.0	EPA 625.1	5-22-25	5-22-25	
4,6-Dinitro-2-methylphenol	ND	5.0	EPA 625.1	5-22-25	5-22-25	
n-Nitrosodiphenylamine	ND	1.0	EPA 625.1	5-22-25	5-22-25	
1,2-Diphenylhydrazine	ND	1.0	EPA 625.1	5-22-25	5-22-25	
4-Bromophenyl-phenylether	ND	1.0	EPA 625.1	5-22-25	5-22-25	
Hexachlorobenzene	ND	1.0	EPA 625.1	5-22-25	5-22-25	
Pentachlorophenol	ND	5.0	EPA 625.1	5-22-25	5-22-25	
n-Octadecane	ND	1.0	EPA 625.1	5-22-25	5-22-25	
Phenanthrene	ND	1.0	EPA 625.1	5-22-25	5-22-25	
Anthracene	ND	1.0	EPA 625.1	5-22-25	5-22-25	
Carbazole	ND	1.0	EPA 625.1	5-22-25	5-22-25	
Di-n-butylphthalate	ND	5.0	EPA 625.1	5-22-25	5-22-25	
Fluoranthene	ND	1.0	EPA 625.1	5-22-25	5-22-25	
Pyrene	ND	1.0	EPA 625.1	5-22-25	5-22-25	
Butylbenzylphthalate	ND	1.0	EPA 625.1	5-22-25	5-22-25	
bis-2-Ethylhexyladipate	ND	5.0	EPA 625.1	5-22-25	5-22-25	
3,3'-Dichlorobenzidine	ND	5.0	EPA 625.1	5-22-25	5-22-25	
Benzo[a]anthracene	ND	1.0	EPA 625.1	5-22-25	5-22-25	
Chrysene	ND	1.0	EPA 625.1	5-22-25	5-22-25	
bis(2-Ethylhexyl)phthalate	ND	5.0	EPA 625.1	5-22-25	5-22-25	
Di-n-octylphthalate	ND	1.0	EPA 625.1	5-22-25	5-22-25	
Benzo[b]fluoranthene	ND	1.0	EPA 625.1	5-22-25	5-22-25	
Benzo[j,k]fluoranthene	ND	1.0	EPA 625.1	5-22-25	5-22-25	
Benzo[a]pyrene	ND	1.0	EPA 625.1	5-22-25	5-22-25	
Indeno[1,2,3-cd]pyrene	ND	1.0	EPA 625.1	5-22-25	5-22-25	
Dibenz[a,h]anthracene	ND	1.0	EPA 625.1	5-22-25	5-22-25	
Benzo[g,h,i]perylene	ND	1.0	EPA 625.1	5-22-25	5-22-25	
Surrogate:	Percent Recovery	Control Limits				
2-Fluorophenol	44	14 - 80				
Phenol-d6	35	10 - 75				
Nitrobenzene-d5	66	46 - 108				
2-Fluorobiphenyl	74	37 - 103				
2,4,6-Tribromophenol	82	35 - 123				
Terphenyl-d14	91	47 - 115				



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: May 30, 2025
 Samples Submitted: May 21, 2025
 Laboratory Reference: 2505-304
 Project: Graymont NPDES

SEMIVOLATILE ORGANICS EPA 625.1
 QUALITY CONTROL

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Matrix: Water
 Units: ug/L

Analyte		Result		Spike Level		Percent Recovery		Recovery Limits		RPD	RPD Limit	Flags
SPIKE BLANKS												
Laboratory ID:		SB0522W1										
	SB	SBD	SB	SBD	SB	SBD						
n-Nitrosodimethylamine	10.5	12.0	20.0	20.0	53	60	20 - 94	13	40			
Pyridine	9.45	11.0	20.0	20.0	47	55	20 - 80	15	45			
Phenol	8.28	8.60	20.0	20.0	41	43	20 - 80	4	39			
Aniline	13.4	14.5	20.0	20.0	67	73	35 - 100	8	42			
bis(2-Chloroethyl)ether	15.0	16.7	20.0	20.0	75	84	43 - 106	11	40			
2-Chlorophenol	15.5	16.5	20.0	20.0	78	83	38 - 99	6	37			
n-Decane	9.59	12.1	20.0	20.0	48	61	20 - 85	23	45			
Benzyl alcohol	15.6	16.3	20.0	20.0	78	82	45 - 101	4	38			
2-Methylphenol (o-Cresol)	15.1	15.7	20.0	20.0	76	79	41 - 99	4	34			
bis(2-Chloroisopropyl)ether	15.5	16.8	20.0	20.0	78	84	63 - 112	8	40			
(3+4)-Methylphenol (m,p-Cresol)	14.6	15.4	20.0	20.0	73	77	40 - 96	5	38			
n-Nitroso-di-n-propylamine	16.5	17.1	20.0	20.0	83	86	45 - 112	4	32			
Hexachloroethane	11.0	12.6	20.0	20.0	55	63	55 - 90	14	32			
Nitrobenzene	16.0	16.6	20.0	20.0	80	83	54 - 108	4	37			
Isophorone	17.8	18.2	20.0	20.0	89	91	51 - 110	2	33			
2-Nitrophenol	16.5	17.2	20.0	20.0	83	86	45 - 108	4	33			
2,4-Dimethylphenol	16.8	17.0	20.0	20.0	84	85	43 - 113	1	35			
bis(2-Chloroethoxy)methane	17.2	17.4	20.0	20.0	86	87	49 - 105	1	32			
2,4-Dichlorophenol	17.1	17.4	20.0	20.0	86	87	53 - 103	2	30			
1,2,4-Trichlorobenzene	13.4	14.3	20.0	20.0	67	72	57 - 89	6	30			
Naphthalene	15.4	15.9	20.0	20.0	77	80	36 - 96	3	38			
4-Chloroaniline	16.5	16.7	20.0	20.0	83	84	45 - 110	1	35			
Hexachlorobutadiene	12.1	13.1	20.0	20.0	61	66	38 - 82	8	38			
4-Chloro-3-methylphenol	18.0	18.0	20.0	20.0	90	90	58 - 110	0	30			
2-Methylnaphthalene	16.1	16.9	20.0	20.0	81	85	32 - 100	5	33			
1-Methylnaphthalene	16.5	16.7	20.0	20.0	83	84	35 - 102	1	39			
Hexachlorocyclopentadiene	13.6	14.1	20.0	20.0	68	71	20 - 102	4	45			
2,4,6-Trichlorophenol	17.5	17.7	20.0	20.0	88	89	58 - 110	1	28			
2,3-Dichloroaniline	17.1	17.4	20.0	20.0	86	87	51 - 104	2	27			
2,4,5-Trichlorophenol	17.8	17.8	20.0	20.0	89	89	61 - 110	0	33			
2-Chloronaphthalene	16.6	16.5	20.0	20.0	83	83	65 - 103	1	15			
2-Nitroaniline	19.4	18.6	20.0	20.0	97	93	56 - 130	4	25			
1,4-Dinitrobenzene	19.9	19.0	20.0	20.0	100	95	56 - 112	5	26			
Dimethylphthalate	19.2	19.1	20.0	20.0	96	96	60 - 107	1	25			
1,3-Dinitrobenzene	19.6	19.3	20.0	20.0	98	97	59 - 119	2	25			
2,6-Dinitrotoluene	18.5	18.3	20.0	20.0	93	92	68 - 112	1	27			
1,2-Dinitrobenzene	19.1	18.4	20.0	20.0	96	92	59 - 114	4	24			
Acenaphthylene	17.0	17.0	20.0	20.0	85	85	54 - 109	0	26			
3-Nitroaniline	18.5	17.7	20.0	20.0	93	89	56 - 112	4	26			
2,4-Dinitrophenol	18.0	16.1	20.0	20.0	90	81	20 - 147	11	42			
Acenaphthene	17.1	17.0	20.0	20.0	86	85	60 - 106	1	25			



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Date of Report: May 30, 2025
 Samples Submitted: May 21, 2025
 Laboratory Reference: 2505-304
 Project: Graymont NPDES

SEMIVOLATILE ORGANICS EPA 625.1
 QUALITY CONTROL

Page 2 of 2

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0522W1									
	SB	SBD	SB	SBD	SB	SBD				
4-Nitrophenol	10.6	10.9	20.0	20.0	53	55	20 - 91	3	28	
2,4-Dinitrotoluene	19.6	19.3	20.0	20.0	98	97	61 - 115	2	23	
Dibenzofuran	17.6	17.6	20.0	20.0	88	88	54 - 103	0	33	
2,3,5,6-Tetrachlorophenol	17.6	16.9	20.0	20.0	88	85	62 - 112	4	29	
2,3,4,6-Tetrachlorophenol	18.8	18.2	20.0	20.0	94	91	60 - 116	3	28	
Diethylphthalate	19.1	18.6	20.0	20.0	96	93	61 - 111	3	23	
4-Chlorophenyl-phenylether	17.1	17.6	20.0	20.0	86	88	58 - 109	3	31	
4-Nitroaniline	17.2	17.2	20.0	20.0	86	86	54 - 112	0	21	
Fluorene	17.8	17.6	20.0	20.0	89	88	70 - 110	1	23	
4,6-Dinitro-2-methylphenol	18.1	17.3	20.0	20.0	91	87	53 - 129	5	31	
n-Nitrosodiphenylamine	19.3	18.4	20.0	20.0	97	92	58 - 106	5	24	
1,2-Diphenylhydrazine	18.4	17.8	20.0	20.0	92	89	58 - 106	3	25	
4-Bromophenyl-phenylether	19.2	18.9	20.0	20.0	96	95	65 - 106	2	24	
Hexachlorobenzene	18.8	17.7	20.0	20.0	94	89	58 - 106	6	23	
Pentachlorophenol	16.6	15.5	20.0	20.0	83	78	39 - 121	7	30	
n-Octadecane	19.1	19.0	20.0	20.0	96	95	47 - 126	1	35	
Phenanthrene	19.2	18.6	20.0	20.0	96	93	65 - 110	3	21	
Anthracene	19.6	18.7	20.0	20.0	98	94	61 - 110	5	21	
Carbazole	19.7	18.9	20.0	20.0	99	95	55 - 110	4	27	
Di-n-butylphthalate	20.8	20.0	20.0	20.0	104	100	58 - 119	4	21	
Fluoranthene	19.9	19.0	20.0	20.0	100	95	60 - 114	5	27	
Pyrene	19.3	18.4	20.0	20.0	97	92	70 - 112	5	22	
Butylbenzylphthalate	20.2	19.2	20.0	20.0	101	96	55 - 122	5	22	
bis-2-Ethylhexyladipate	20.6	20.0	20.0	20.0	103	100	55 - 125	3	22	
3,3'-Dichlorobenzidine	17.9	17.6	20.0	20.0	90	88	56 - 111	2	24	
Benzo[a]anthracene	19.0	18.1	20.0	20.0	95	91	60 - 110	5	21	
Chrysene	19.2	18.4	20.0	20.0	96	92	62 - 110	4	21	
bis(2-Ethylhexyl)phthalate	20.3	19.3	20.0	20.0	102	97	54 - 123	5	28	
Di-n-octylphthalate	20.8	20.1	20.0	20.0	104	101	55 - 126	3	22	
Benzo[b]fluoranthene	18.6	17.9	20.0	20.0	93	90	63 - 111	4	21	
Benzo(j,k)fluoranthene	19.0	18.0	20.0	20.0	95	90	62 - 111	5	24	
Benzo[a]pyrene	19.0	18.0	20.0	20.0	95	90	64 - 112	5	20	
Indeno[1,2,3-cd]pyrene	19.2	18.3	20.0	20.0	96	92	63 - 114	5	21	
Dibenz[a,h]anthracene	19.3	18.3	20.0	20.0	97	92	64 - 112	5	21	
Benzo[g,h,i]perylene	19.4	18.2	20.0	20.0	97	91	63 - 110	6	20	
Surrogate:										
2-Fluorophenol					50	56	14 - 80			
Phenol-d6					40	42	10 - 75			
Nitrobenzene-d5					76	81	46 - 108			
2-Fluorobiphenyl					80	83	37 - 103			
2,4,6-Tribromophenol					89	88	35 - 123			
Terphenyl-d14					95	91	47 - 115			



Date of Report: May 30, 2025
Samples Submitted: May 21, 2025
Laboratory Reference: 2505-304
Project: Graymont NPDES

SULFATE
ASTM D516-16

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GR-NPDES-01-052125					
Laboratory ID:	05-304-01					
Sulfate	520	250	ASTM D516-16	5-27-25	5-27-25	



Date of Report: May 30, 2025
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 Project: Graymont NPDES

**SULFATE
 ASTM D516-16
 QUALITY CONTROL**

Matrix: Water
 Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0527W1					
Sulfate	ND	5.0	ASTM D516-16	5-27-25	5-27-25	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	05-271-02							
	ORIG	DUP						
Sulfate	ND	ND	NA	NA	NA	NA	11	

MATRIX SPIKE

Laboratory ID:	05-271-02							
	MS	MS		MS				
Sulfate	11.5	10.0	ND	115	70-131	NA	NA	

SPIKE BLANK

Laboratory ID:	SB0527W1							
	SB	SB		SB				
Sulfate	9.22	10.0	NA	92	83-113	NA	NA	



Date of Report: May 30, 2025
 Samples Submitted: May 21, 2025
 Laboratory Reference: 2505-304
 Project: Graymont NPDES

TOTAL METALS
EPA 200.8

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: GR-NPDES-01-052125						
Laboratory ID: 05-304-01						
Antimony	ND	1.0	EPA 200.8	5-22-25	5-27-25 15:44	
Arsenic	ND	0.50	EPA 200.8	5-22-25	5-27-25 14:00	
Beryllium	ND	0.50	EPA 200.8	5-22-25	5-27-25 14:00	
Cadmium	ND	0.25	EPA 200.8	5-22-25	5-27-25 14:00	
Chromium	1.2	1.0	EPA 200.8	5-22-25	5-27-25 14:00	
Copper	ND	2.0	EPA 200.8	5-22-25	5-27-25 14:00	
Lead	ND	0.50	EPA 200.8	5-22-25	5-27-25 14:00	
Nickel	ND	0.50	EPA 200.8	5-22-25	5-27-25 14:00	
Selenium	1.3	1.0	EPA 200.8	5-22-25	5-27-25 14:00	
Silver	ND	0.20	EPA 200.8	5-22-25	5-27-25 15:44	
Thallium	ND	0.36	EPA 200.8	5-22-25	5-27-25 14:00	
Zinc	ND	2.5	EPA 200.8	5-22-25	5-27-25 14:00	



Date of Report: May 30, 2025
 Samples Submitted: May 21, 2025
 Laboratory Reference: 2505-304
 Project: Graymont NPDES

**TOTAL METALS
 EPA 200.8
 QUALITY CONTROL**

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0522WH1					
Antimony	ND	1.0	EPA 200.8	5-22-25	5-27-25	
Arsenic	ND	0.50	EPA 200.8	5-22-25	5-27-25	
Beryllium	ND	0.50	EPA 200.8	5-22-25	5-27-25	
Cadmium	ND	0.25	EPA 200.8	5-22-25	5-27-25	
Chromium	ND	1.0	EPA 200.8	5-22-25	5-27-25	
Copper	ND	2.0	EPA 200.8	5-22-25	5-27-25	
Lead	ND	0.50	EPA 200.8	5-22-25	5-27-25	
Nickel	ND	0.50	EPA 200.8	5-22-25	5-27-25	
Selenium	ND	1.0	EPA 200.8	5-22-25	5-27-25	
Silver	ND	0.20	EPA 200.8	5-22-25	5-27-25	
Thallium	ND	0.36	EPA 200.8	5-22-25	5-27-25	
Zinc	ND	2.5	EPA 200.8	5-22-25	5-27-25	



Date of Report: May 30, 2025
 Samples Submitted: May 21, 2025
 Laboratory Reference: 2505-304
 Project: Graymont NPDES

**TOTAL METALS
 EPA 200.8
 QUALITY CONTROL**

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	05-150-03							
	ORIG	DUP						
Antimony	ND	ND	NA	NA	NA	NA	NA	20
Arsenic	1.52	1.60	NA	NA	NA	NA	6	20
Beryllium	ND	ND	NA	NA	NA	NA	NA	20
Cadmium	ND	ND	NA	NA	NA	NA	NA	20
Chromium	1.43	1.44	NA	NA	NA	NA	1	20
Copper	ND	ND	NA	NA	NA	NA	NA	20
Lead	0.761	0.780	NA	NA	NA	NA	3	20
Nickel	ND	ND	NA	NA	NA	NA	NA	20
Selenium	ND	ND	NA	NA	NA	NA	NA	20
Silver	ND	ND	NA	NA	NA	NA	NA	20
Thallium	ND	ND	NA	NA	NA	NA	NA	20
Zinc	ND	ND	NA	NA	NA	NA	NA	20

MATRIX SPIKES

Laboratory ID:	05-150-03									
	MS	MSD	MS	MSD		MS	MSD			
Antimony	95.8	95.1	100	100	ND	96	95	75-125	1	20
Arsenic	104	102	100	100	1.52	103	101	75-125	2	20
Beryllium	93.1	91.0	100	100	ND	93	91	75-125	2	20
Cadmium	107	104	100	100	ND	107	104	75-125	3	20
Chromium	101	97.9	100	100	1.43	100	97	75-125	3	20
Copper	97.3	95.9	100	100	ND	97	96	75-125	1	20
Lead	108	106	100	100	0.761	107	106	75-125	2	20
Nickel	98.8	96.9	100	100	ND	99	97	75-125	2	20
Selenium	103	103	100	100	ND	103	103	75-125	0	20
Silver	101	100	100	100	ND	101	100	75-125	1	20
Thallium	111	110	100	100	ND	111	110	75-125	1	20
Zinc	106	106	100	100	ND	106	106	75-125	0	20



Date of Report: May 30, 2025
Samples Submitted: May 21, 2025
Laboratory Reference: 2505-304
Project: Graymont NPDES

**HEXAVALENT CHROMIUM
SM 3500-Cr B**

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GR-NPDES-01-052125					
Laboratory ID:	05-304-01					
Hexavalent Chromium	ND	10	SM 3500-Cr B	5-22-25	5-22-25	



Date of Report: May 30, 2025
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 Laboratory Reference: 2505-304
 Project: Graymont NPDES

**HEXAVALENT CHROMIUM
 SM 3500-Cr B
 QUALITY CONTROL**

Matrix: Water

Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0522F1					
Hexavalent Chromium	ND	10	SM 3500-Cr B	5-22-25	5-22-25	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	05-304-01							
	ORIG	DUP						
Hexavalent Chromium	ND	ND	NA	NA	NA	NA	20	

MATRIX SPIKES

Laboratory ID:	05-304-01									
	MS	MSD	MS	MSD	MS	MSD				
Hexavalent Chromium	98.3	103	100	100	ND	98	103	85-115	5	20

SPIKE BLANK

Laboratory ID:	SB0522F1									
	SB		SB		SB					
Hexavalent Chromium	97.5		100		NA	98		85-115	NA	NA



Date of Report: May 30, 2025
Samples Submitted: May 21, 2025
Laboratory Reference: 2505-304
Project: Graymont NPDES

TOTAL ORGANIC CARBON
SM 5310B

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GR-NPDES-01-052125					
Laboratory ID:	05-304-01					
Total Organic Carbon	2.6	1.0	SM 5310B	5-21-25	5-22-25	



Date of Report: May 30, 2025
 Samples Submitted: May 21, 2025
 Laboratory Reference: 2505-304
 Project: Graymont NPDES

**TOTAL ORGANIC CARBON
 SM 5310B
 QUALITY CONTROL**

Matrix: Water
 Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0521W1					
Total Organic Carbon	ND	1.0	SM 5310B	5-21-25	5-22-25	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	05-186-02							
	ORIG	DUP						
Total Organic Carbon	ND	ND	NA	NA	NA	NA	10	

MATRIX SPIKE

Laboratory ID:	05-186-02							
	MS	MS		MS				
Total Organic Carbon	11.5	10.0	ND	115	70-136	NA	NA	

SPIKE BLANK

Laboratory ID:	SB0521W1							
	SB	SB		SB				
Total Organic Carbon	10.8	10.0	NA	108	83-130	NA	NA	



Date of Report: May 30, 2025
Samples Submitted: May 21, 2025
Laboratory Reference: 2505-304
Project: Graymont NPDES

TOTAL SUSPENDED SOLIDS
SM 2540D

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GR-NPDES-01-052125					
Laboratory ID:	05-304-01					
Total Suspended Solids	ND	4.0	SM 2540D	5-23-25	5-23-25	



Date of Report: May 30, 2025
 Samples Submitted: May 21, 2025
 Laboratory Reference: 2505-304
 Project: Graymont NPDES

**TOTAL SUSPENDED SOLIDS
 SM 2540D
 QUALITY CONTROL**

Matrix: Water
 Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0523W1					
Total Suspended Solids	ND	4.0	SM 2540D	5-23-25	5-23-25	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	05-304-01							
	ORIG	DUP						
Total Suspended Solids	ND	ND	NA	NA	NA	NA	45	

SPIKE BLANK

Laboratory ID:	SB0523W1							
	SB	SB		SB				
Total Suspended Solids	82.0	100	NA	82	62-122	NA	NA	



Date of Report: May 30, 2025
Samples Submitted: May 21, 2025
Laboratory Reference: 2505-304
Project: Graymont NPDES

AMMONIA (as Nitrogen)
SM 4500-NH₃ D

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	GR-NPDES-01-052125					
Laboratory ID:	05-304-01					
Ammonia	0.22	0.053	SM 4500-NH3 D	5-23-25	5-23-25	



Date of Report: May 30, 2025
 Samples Submitted: May 21, 2025
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 Project: Graymont NPDES

AMMONIA (as Nitrogen)
SM 4500-NH₃ D
QUALITY CONTROL

Matrix: Water
 Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0523W1					
Ammonia	ND	0.053	SM 4500-NH3 D	5-23-25	5-23-25	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	05-235-01							
	ORIG	DUP						
Ammonia	ND	ND	NA	NA	NA	NA	21	

MATRIX SPIKE

Laboratory ID:	05-235-01							
	MS	MS		MS				
Ammonia	5.13	5.00	ND	103	76-114	NA	NA	

SPIKE BLANK

Laboratory ID:	SB0523W1							
	SB	SB		SB				
Ammonia	5.21	5.00	NA	104	81-110	NA	NA	





Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
 - B - The analyte indicated was also found in the blank sample.
 - C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
 - E - The value reported exceeds the quantitation range and is an estimate.
 - F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
 - H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
 - I - Compound recovery is outside of the control limits.
 - J - The value reported was below the practical quantitation limit. The value is an estimate.
 - K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
 - L - The RPD is outside of the control limits.
 - M - Hydrocarbons in the gasoline range are impacting the diesel range result.
 - M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
 - N - Hydrocarbons in the lube oil range are impacting the diesel range result.
 - N1 - Hydrocarbons in diesel range are impacting lube oil range results.
 - O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
 - P - The RPD of the detected concentrations between the two columns is greater than 40.
 - Q - Surrogate recovery is outside of the control limits.
 - S - Surrogate recovery data is not available due to the necessary dilution of the sample.
 - T - The sample chromatogram is not similar to a typical _____.
 - U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
 - U1 - The practical quantitation limit is elevated due to interferences present in the sample.
 - V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
 - W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
 - X - Sample extract treated with a mercury cleanup procedure.
 - X1 - Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
 - X2 - Sample extract treated with a silica gel cleanup procedure.
 - Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
 - Y1 - Negative effects of the matrix from this sample on the instrument caused values for this analyte in the bracketing continuing calibration verification standard (CCVs) to be outside of 20% acceptance criteria. Because of this, quantitation limits and sample concentrations should be considered estimates.
 - Z -
- ND - Not Detected at PQL
 PQL - Practical Quantitation Limit
 RPD - Relative Percent Difference





May 30, 2025

Service Request No:K2505328

David Baumeister
Onsite Environmental Incorporated
14648 Northeast 95th Street
Redmond, WA 98052

Laboratory Results for: Graymont NPDES

Dear David,

Enclosed are the results of the sample(s) submitted to our laboratory May 23, 2025
For your reference, these analyses have been assigned our service request number **K2505328**.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3261. You may also contact me via email at Nick.Foth@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Nick Foth
Project Manager

ADDRESS 1317 S. 13th Avenue, Kelso, WA 98626
PHONE +1 360 577 7222 | FAX +1 360 636 1068
ALS Group USA, Corp.
dba ALS Environmental



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JUN 05 2025

WA State Department
of Ecology (SWRO)

Narrative Documents

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com



Client: Onsite Environmental Incorporated
Project: Graymont NPDES
Sample Matrix: Wastewater

Service Request: K2505328
Date Received: 05/23/2025

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier II level requested by the client.

Sample Receipt:

One wastewater sample was received for analysis at ALS Environmental on 05/23/2025. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

General Chemistry:

No significant anomalies were noted with this analysis.

A handwritten signature in blue ink, appearing to be "Nif".

Approved by _____

Date 05/30/2025



SAMPLE DETECTION SUMMARY

This form includes only detections above the reporting levels. For a full listing of sample results, continue to the Sample Results section of this Report.

CLIENT ID: GR-NPDES-01-052125

Lab ID: K2505328-001

Analyte	Results	Flag	MDL	MRL	Units	Method
Phenolics, Total	0.020		0.008	0.020	mg/L	420.1



Sample Receipt Information

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

Client: Onsite Environmental Incorporated
Project: Graymont NPDES/05-304

Service Request:K2505328

SAMPLE CROSS-REFERENCE

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
K2505328-001	GR-NPDES-01-052125	5/21/2025	1415



Phone Number: (360) 577-7222

Other: Results by 5/30

Project Name:

42505328

7 of 20

Cooler Receipt and Preservation Form

Client Onsite Environmental Service Request K25 05328 ^{PM} LR
 Received: 5/23/25 0910 Opened: 5/23/25 By: MRP Unloaded: 5/23/25 By: MRP

1. Samples were received via? USPS Fed Ex UPS DHL PDX Courier Hand Delivered
 2. Samples were received in: (circle) Cooler Box Envelope Other NA
 3. Were custody seals on coolers? NA Y N If yes, how many and where? _____
 If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Temp Blank	Sample Temp	IR Gun	Cooler #/COC ID / NA	Out of temp indicate with "X"	PM Notified If out of temp	Tracking Number NA	Filed
	<u>NA</u> <u>3.6</u>	<u>02</u>				<u>1Z 684 E1W019596511</u>	

4. Was a Temperature Blank present in cooler? NA Y N If yes, note the temperature in the appropriate column below:

If no, take the temperature of a representative sample bottle contained within the cooler; notate in the column "Sample Temp":

5. Were samples received within the method specified temperature ranges? NA Y N

If no, were they received on ice and same day as collected? If not, notate the cooler # below and notify the PM. NA Y N

If applicable, tissue samples were received: Frozen Partially Thawed Thawed

6. Packing material: Inserts Baggies Bubble Wrap Gel Packs Wet Ice Dry Ice Sleeves _____

7. Were custody papers properly filled out (ink, signed, etc.)? NA Y N
 8. Were samples received in good condition (unbroken) NA Y N
 9. Were all sample labels complete (ie, analysis, preservation, etc.)? NA Y N
 10. Did all sample labels and tags agree with custody papers? NA Y N
 11. Were appropriate bottles/containers and volumes received for the tests indicated? NA Y N
 12. Were the pH-preserved bottles (see SMO GEN SOP) received at the appropriate pH? Indicate in the table below NA Y N
 13. Were VOA vials received without headspace? Indicate in the table below. NA Y N
 14. Was C12/Res negative? NA Y N
 15. Were samples received within method specified time limit? If not, notate the error below and notify the PM. NA Y N
 16. Were 100mL sterile microbiology bottles filled exactly to the 100mL mark? NA Y N Underfilled Overfilled

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Head- space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, Resolutions: _____



Miscellaneous Forms

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

Inorganic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated value.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.
- H The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

- # The control limit criteria is not applicable.
- J The result is an estimated value.
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- M The duplicate injection precision was not met.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.
- S The reported value was determined by the Method of Standard Additions (MSA).
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- + The correlation coefficient for the MSA is less than 0.995.
- Q See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- A A tentatively identified compound, a suspected aldol-condensation product.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
- D The reported result is from a dilution.
- E The result is an estimated value over the calibration range.
- J The result is an estimated value between the MDL and the MRL.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- P The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- Y The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- Z The chromatographic fingerprint does not resemble a petroleum product.

ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjlabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon - DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.

Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/analyte is offered by that state.

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

ALS Group USA, Corp.

dba ALS Environmental

Analyst Summary report

Client: Onsite Environmental Incorporated
Project: Graymont NPDES/05-304

Service Request: K2505328

Sample Name: GR-NPDES-01-052125
Lab Code: K2505328-001
Sample Matrix: Wastewater

Date Collected: 05/21/25

Date Received: 05/23/25

Analysis Method
420.1

Extracted/Digested By
MSPECHT

Analyzed By
MSPECHT



Sample Results

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com



General Chemistry

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Onsite Environmental Incorporated
Project: Graymont NPDES/05-304
Sample Matrix: Wastewater

Sample Name: GR-NPDES-01-052125
Lab Code: K2505328-001

Service Request: K2505328
Date Collected: 05/21/25 14:15
Date Received: 05/23/25 09:10

Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Phenolics, Total	420.1	0.020	mg/L	0.020	0.008	1	05/30/25 12:30	05/29/25	



QC Summary Forms

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com



General Chemistry

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Onsite Environmental Incorporated
Project: Graymont NPDES/05-304
Sample Matrix: Wastewater
Sample Name: Method Blank
Lab Code: K2505328-MB

Service Request: K2505328
Date Collected: NA
Date Received: NA
Basis: NA

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Phenolics, Total	420.1	ND U	mg/L	0.020	0.008	1	05/30/25 12:30	05/29/25	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Onsite Environmental Incorporated
Project: Graymont NPDES/05-304
Sample Matrix: Wastewater

Service Request: K2505328
Date Analyzed: 05/30/25
Date Extracted: 05/29/25

Lab Control Sample Summary
Phenolics, Total

Analysis Method: 420.1
Prep Method: Method

Units: mg/L
Basis: NA
Analysis Lot: 880858

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K2505328-LCS	0.556	0.600	93	86-112

Am Test Inc.
13600 NE 126th Place Suite C
Kirkland, WA
(425) 885-1664
www.amtestlab.com



**Professional
Analytical
Services**

May 30, 2025

OnSite Environmental Inc.
14648 NE 95th ST
Redmond, WA 98052
Attention: David Baumeister

Project: OSE
Project Number: GAYMONT NPDES
COC Number: 05-304

David Baumeister:

Enclosed please find the analytical data for your OSE project.

Your sample(s) were received on Wednesday, May 21, 2025 and properly maintained prior to the subsequent analysis. The analytical procedures used at AmTest are well documented and are typically derived from the protocols of the EPA, USDA, FDA, Standard Methods or the Army Corps of Engineers.

Following the analytical results you will find the Quality Control (QA/QC) results.

Please note that the detection limits that are listed in the body of the report refer to the Practical Quantitation Limits (PQL's), as opposed to the Method Detection Limits (MDL's).

If you should have any questions pertaining to the data package, please feel free to contact me.
Sincerely,

Aaron Young
DATA SUBJECT TO CHANGE

Am Test Inc.
13600 NE 126th Place Suite C
Kirkland, WA
(425) 885-1664
www.amtestlab.com



*Professional
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Services*

ANALYSIS REPORT

Date Received: 05/21/25
Date Reported: 05/30/25

OnSite Environmental Inc.
14648 NE 95th ST
Redmond, WA 98052
Attention: David Baumeister
Project Name: OSE
Project #: GAYMONT NPDES

Reported Samples

Lab ID	Sample	Matrix	Qualifiers	Date Sampled	Date Received
A25E0458-01	GR-NPDES-01-052125	Water		05/21/2025	05/21/2025

Am Test Inc.
13600 NE 126th Place Suite C
Kirkland, WA
(425) 885-1664
www.amtestlab.com



ANALYSIS REPORT

**Professional
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Services**

OnSite Environmental Inc.
14648 NE 95th ST
Redmond, WA 98052
Attention: David Baumeister
Project Name: OSE
Project #: GAYMONT NPDES

Date Received: 05/21/25

Date Reported: 05/30/25

AMTEST Identification Number: A25E0458-01

Client Identification: GR-NPDES-01-052125

Sampling Date: 05/21/25 14:15

Biochemical Oxygen Demand

PARAMETER	RESULT	UNITS	Q	RL	METHOD	ANALYST	DATE
Biological Oxygen Demand (BOD)	5	mg/L		2	SM 5210B_2016	JM	05/22/2025

Chemical Oxygen Demand

PARAMETER	RESULT	UNITS	Q	RL	METHOD	ANALYST	DATE
Chemical Oxygen Demand	15.0	mg/L		10.0	EPA 410.4_2_1993	KH	05/27/2025

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(425) 885-1664
www.amtestlab.com



Professional
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ANALYSIS REPORT

Date Received: 05/21/25

Date Reported: 05/30/25

OnSite Environmental Inc.
14648 NE 95th ST
Redmond, WA 98052
Attention: David Baumeister
Project Name: OSE
Project #: GAYMONT NPDES

Quality Control

Biochemical Oxygen Demand

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
---------	--------	------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------

Batch: BCE0476 - No Prep - WetChem

Calibration Blank (BCE0476-CCB1)

Prepared & Analyzed: 05/22/25

Biological Oxygen Demand (BOD) ND U mg/L

Duplicate (BCE0476-DUP1)

Source: A25E0439-01

Prepared & Analyzed: 05/22/25

Biological Oxygen Demand (BOD) 170 2 mg/L 200 14 35.5

Quality Control

Chemical Oxygen Demand

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
---------	--------	------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------

Batch: BCE0422 - No Prep - WetChem

LCS (BCE0422-BS1)

Prepared & Analyzed: 05/27/25

Chemical Oxygen Demand 50.2 10.0 mg/L 50.00 100% 70-130%

Calibration Blank (BCE0422-CCB1)

Prepared & Analyzed: 05/27/25

Chemical Oxygen Demand ND U mg/L

Calibration Check (BCE0422-CCV1)

Prepared & Analyzed: 05/27/25

Chemical Oxygen Demand 96.3 10.0 mg/L 100.0 96% 70-130%

Duplicate (BCE0422-DUP1)

Source: A25E0458-01

Prepared & Analyzed: 05/27/25

Chemical Oxygen Demand 11.3 10.0 mg/L 15.0 28 30

Matrix Spike (BCE0422-MS1)

Source: A25E0458-01

Prepared & Analyzed: 05/27/25

Chemical Oxygen Demand 88.8 10.0 mg/L 100.0 15.0 74% 63-131%

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ANALYSIS REPORT

*Professional
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OnSite Environmental Inc.
14648 NE 95th ST
Redmond, WA 98052
Attention: David Baumeister
Project Name: OSE
Project #: GAYMONT NPDES

Date Received: 05/21/25

Date Reported: 05/30/25

Notes and Definitions

Item	Definition
Dry	Sample results reported on a dry weight basis.
ND	Analyte NOT DETECTED at or above the reporting limit.
RPD	Relative Percent Difference
%REC	Percent Recovery
Source	Sample that was matrix spiked or duplicated.



Phone Number: (425) 885-1664

Project Name:

Page 1 of 1

Page 6 of 6

2570458

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Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Chain of Custody

Page 1 of 1

Company: JACOBS					
Project Number:					
Project Name: GRAYMONT NPDES					
Project Manager: MARIO LOPEZ RAMOS					
Sampled by: MARIO LOPEZ RAMOS					
(Check One) <input type="checkbox"/> Same Day <input type="checkbox"/> 1 Day <input type="checkbox"/> 2 Days <input checked="" type="checkbox"/> 3 Days <input type="checkbox"/> Standard (7 Days)					
Date Sampled Time Sampled Matrix					
Lab ID Sample Identification					
Turnaround Request (in working days)					
Laboratory Number: 05-304					
Number of Containers					
NWTPH-HIGH					
NWTPH-Gx/BTEX (8021 <input type="checkbox"/> 8260 <input type="checkbox"/>					
NWTPH-Gx					
NWTPH-Dx (SG Clean-up <input type="checkbox"/>)					
Volatiles 8260 624.1					
Halogenated Volatiles 8260					
EDB EPA 8011 (Waters Only)					
Semivolatiles 8270/SIM (with low-level PAHs) 625.1					
PAHs 8270/SIM (low-level)					
PCBs 8082					
Organochlorine Pesticides 8081					
Organophosphorus Pesticides 8270/SIM					
Chlorinated Acid Herbicides 8151					
Sulfate ASTM D516-16					
Total BCRA Metals 200.8 *					
Total MTCA Metals SM3500-C-B					
Dissolved Hex Chromium					
Total Cyanide EPA 335.4					
HEM (oil and grease) 1664					
TOC SM 5310B					
TSS SM 2540D					
BOD SM 5210B					
COD EPA 410.4 N113D					
AMMONIA SM4500					
% Moisture					
Total Phenols EPA 420.4					
Comments/Special Instructions					
* Sb, As, Ba, Cd, Cr, Cu, Pb, Ni, Se, Ag, Ti, Zn.					
Data Package: Standard <input type="checkbox"/> Level III <input type="checkbox"/> Level IV <input type="checkbox"/>					
Chromatograms with final report <input type="checkbox"/> Electronic Data Deliverables (EDDs) <input type="checkbox"/>					