PACIFIC ECORISK | ENVIRONMENTAL CONSULTING & TESTING

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September 19, 2025

Jessica Vargas:

On behalf of James Connolly of COWI North and Liza McNulty of the City of Berkeley, please find our revised report "Characterization of the Sediment from the Berkeley Water Transportation Pier Ferry Project: Results of Sediment Sampling and Analysis" This revised report now includes BWTPF-DU1 sediments as being suitable for placement at the Montezuma Wetlands Restoration Project (MWRP) as surface material. No other changes were made to the report.

An electronic copy of this report has been uploaded to the DMMO website for DMMO participating agency representatives to access.

If you have any questions, please give me a call at (707) 207-7778. I look forward to hearing from you.

Sincerely,

Jeffrey Cotsifas
President

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DATA REPORT

Characterization of the Sediment from Berkeley Water Transportation Pier Ferry Project: Results of Sediment Sampling and Analysis

Prepared for

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September 2025

PACIFIC ECORISK
ENVIRONMENTAL CONSULTING & TESTING

Table of Contents

Page

1. INTRODUCTION 1
1.1 Objectives of the Sediment Investigation 2
1.2 Organization of this Document 2
2. FIELD SEDIMENT SAMPLE COLLECTION 6
3. SAMPLE PROCESSING 13
3.1 Homogenization and Compositing of Sediments 13
3.2 Shipping of Sediment Samples to the Analytical Laboratories 13
3.3 Chain-of-Custody (COC) Protocol 14
4. RESULTS OF PHYSICAL/CHEMICAL ANALYSES 15
4.1 Berkeley Water Transportation Pier Ferry Project Composited Sediments: Results of Physical/Chemical Analyses 15
4.1.1. Total Solids and Total Organic Carbon 15
4.1.2. Particle Size Distribution 16
4.1.3. Metals 16
4.1.4. Butylins 16
4.1.5. Organochlorine Pesticides 16
4.1.6. Polycyclic Aromatic Hydrocarbons 16
4.1.7. Polychlorinated Biphenyls 16
4.1.8. Dioxins and Furans 16
4.2 Berkeley BWTPF-DU4 Z-Layer Composite: Results of Physical/Chemical Analyses 22
4.3 Results of Chemical Analyses of Berkeley Modified Elutriate 22
5. RESULTS OF BIOLOGICAL TESTING **25**
5.1 Benthic (Solid-Phase Sediment) Toxicity Testing 25
5.1.1 Sediment Porewater Characterization 26
5.1.2 Effects of the BWTPF Sediments on *Leptocheirus plumulosus* 26
5.1.2.1 Reference Toxicant Toxicity to *Leptocheirus plumulosus* 27
5.1.3 Effects of the BWTPF Sediments on *Neanthes arenaceodentata* 27
5.1.3.1 Reference Toxicant Toxicity to *Neanthes arenaceodentata* 28
5.2 Water Column (Standard Sediment Elutriate) Toxicity Testing 28
5.2.1 Toxicity of the Berkeley BWTPF Sediment Elutriates to *Mytilus galloprovincialis* 29
5.2.1.1 Reference Toxicant Toxicity to *Mytilus galloprovincialis* Embryos 31
5.3 Toxicity Testing of Berkeley Modified Elutriate using *Americamysis bahia* 31
5.3.1 Reference Toxicant Toxicity to *Americamysis bahia* 32
6. QUALITY CONTROL REVIEW 33
6.1 Conventional and Chemical Analytical Quality Control Summary 33
6.1.1 Sediment Conventional and Chemical Analytical QA/QC Summary 33
6.1.2 Z-Layer Composite Sediment Conventional and Chemical Analytical QA/QC Summary 34
6.1.3 MET Sample Analytical QA/QC Summary 35
7. SUMMARY 36

7.1 Unconfined Aquatic Disposal in-Bay..... 36
7.2 Placement at the Cullinan Ranch Restoration Project..... 36
7.3 Placement at the Montezuma Wetlands Restoration Project..... 36
7.4 Z-layer Assessment 37
8. REFERENCES..... 38

Appendices

Appendix A	Sampling Field Logs and Data Sheets
Appendix B	Eurofins Data Report for the Sediment Analyses
Appendix C	Eurofins Data Report for the Z-Layer Composite Sediment Analyses
Appendix D	Eurofins Data Report for the Sediment MET Elutriate Analyses
Appendix E	Ammonia and Sulfide Analyses Performed in Support of Bioassay Testing
Appendix F	Test Data and Summary of Statistics for the Evaluation of the Toxicity of BWTPF Sediments to the Amphipod, *Leptocheirus plumulosus*
Appendix G	Test Data and Summary of Statistics for the Reference Toxicant Evaluation of the Amphipod, *Leptocheirus plumulosus*
Appendix H	Test Data and Summary of Statistics for the Evaluation of the Toxicity of BWTPF Sediments to the Polychaete, *Neanthes arenaceodentata*
Appendix I	Test Data and Summary of Statistics for the Reference Toxicant Evaluation of the Polychaete, *Neanthes arenaceodentata*
Appendix J	Test Data and Summary of Statistics for the Evaluation of the Toxicity of BWTPF Sediments Elutriate to Bivalve (*Mytilus galloprovincialis*) Embryos
Appendix K	Test Data and Summary of Statistics for the Reference Toxicant Evaluation of the Bivalve (*Mytilus galloprovincialis*) Embryos
Appendix L	Test Data and Summary of Statistics for the Evaluation of the Toxicity of BWTPF Modified Elutriate Test Sediment Elutriate to Mysids *(Americamysis bahia)*
Appendix M	Test Data and Summary of Statistics for the Reference Toxicant Evaluation of the Mysid, *Americamysis bahia*
Appendix N	Bioassay Standard Test Conditions

List of Figures

Page

Figure 1-1. Location Map: Berkeley Water Transportation Pier Ferry Project 3
Figure 1-2. Vicinity Map: Berkeley Water Transportation Pier Ferry Project 4
Figure 1-3. Project Overview: Berkeley Water Transportation Pier Ferry Project..... 5
Figure 2-1. Proposed and Actual Sample Locations: Berkeley Water Transportation Pier Ferry Project..... 9
Figure 2-2. Proposed and Actual Sample Locations: Berkeley Water Transportation Pier Ferry Project – Dredge Units 1 and 2 10
Figure 2-3. Proposed and Actual Sample Locations: Berkeley Water Transportation Pier Ferry Project – Dredge Units 3 and 4 11
Figure 2-4. Proposed and Actual Sample Locations: Berkeley Water Transportation Pier Ferry Project – Dredge Unit 5..... 12

List of Tables

Page

Table 1-1. Berkeley Water Transportation Pier Ferry Project Dredging Volumes 2
Table 2-1. Locations of Sampling Stations and Core Depths Achieved 7
Table 4-1. Berkeley Water Transportation Pier Ferry Project 2025 Sediment Sample Chemistries 17
Table 4-2. BWTPF-DU4 Z-Layer Composite Sediment Sample Chemistries.....23
Table 4-3. Berkeley Water Transportation Pier Ferry Project 2025 Modified Elutriate Chemistry Results.....24
Table 5-1. Sediment Porewater Initial Water Ammonia Levels.....26
Table 5-2. *Leptocheirus plumulosus* Survival in the BWTPF Sediments 26
Table 5-3. Reference Toxicant Testing: Effects of KCl on *Leptocheirus plumulosus* 27
Table 5-4. *Neanthes arenaceodentata* Survival in the BWTPF Sediments.....27
Table 5-5. Reference Toxicant Testing: Effects of KCl on *Neanthes arenaceodentata* 28
Table 5-6. Effects of BWTPF-DU1 Sediment Elutriate on *Mytilus galloprovincialis*.....29
Table 5-7. Effects of BWTPF-DU2 Sediment Elutriate on *Mytilus galloprovincialis*.....30
Table 5-8. Effects of BWTPF-DU3 Sediment Elutriate on *Mytilus galloprovincialis*.....30
Table 5-9. Effects of BWTPF-DU4 Sediment Elutriate on *Mytilus galloprovincialis*.....30
Table 5-10. Effects of BWTPF-DU5 Sediment Elutriate on *Mytilus galloprovincialis*.....31
Table 5-11. Reference Toxicant Testing: Effects of KCl on *Mytilus galloprovincialis*.....31
Table 5-12. Effects of BWTPF MET Elutriates on *Americamysis bahia*.....32
Table 5-13. Reference Toxicant Testing: Effects of KCl on *Americamysis bahia*.....32

List of Acronyms

Bay	San Francisco Bay
BCDC	Bay Conservation and Development Commission
BT	Bioaccumulation trigger
BWTPF	Berkeley Water Transportation Pier Ferry Project
City	City of Berkeley
CCV	Continuing calibration verification
COC	Chain-of-custody
COWI	COWI North America
CRRP	Cullinan Ranch Restoration Project
CSLC	California State Lands Commission
DDT	Dichlorodiphenyltrichloroethane
DMMO	Dredged Material Management Office
DUP	Duplicate
EC_{50}	50% Effect Concentration
Eurofins	Eurofins Calscience
GPS	Global positioning system
g/L	Grams/liter
HDPE	High density polyethylene
IDA	Isotope Dilution Analyte
ITM	Inland Testing Manual
LC_{50}	50% Lethality Concentration
LCS	Laboratory Control Sample
OCI	Organochlorine
MET	Modified elutriate test
µg/kg	Microgram per kilogram
mg/kg	Milligram per kilogram
mg/L	Milligram per liter
MLLW	Mean lower low water
MDL	Method detection limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
MWRP	Montezuma Wetlands Restoration Project
NUAD	Not suitable for unconfined aquatic disposal

PAH	Polycyclic aromatic hydrocarbons
PCBs	Polychlorinated biphenyls
PER	Pacific EcoRisk, Inc.
QA/QC	Quality assurance/quality control
RL	Reporting limit
SAP	Sampling and Analysis Plan
SD	Standard Deviation
SET	sediment elutriate test
SF-11	Alcatraz disposal site
SF	San Francisco
SFEI	San Francisco Estuary Institute
SFRWQCB	San Francisco Regional Water Quality Control Board
SLC	State Lands Commission
SPP	Suspended particulate phase
SUAD	Suitable for unconfined disposal
TEFs	Toxicity equivalency factors
TEQs	Toxicity equivalency quotients
TMDL	Total maximum daily load
TOC	Total organic carbon
USACE	U.S. Army Corps of Engineers
USEPA	U.S. Environmental Protection Agency
WAAS	Wide angle augmentation system
WETA	Water Emergency Transportation Authority
WHO	World Health Organization
WQC	Water Quality Certification
WQO	Water Quality Objectives
yd^3	Cubic yards

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1. INTRODUCTION

The City of Berkeley (City) is collaborating with the Water Emergency Transportation Authority (WETA) on the design, environmental analysis, and permitting of the Berkeley Water Transportation Pier Ferry (BWTPF) project located on the eastern shoreline of San Francisco Bay (Figures 1-1 through 1-3). The BWTPF will consist of rebuilding the Berkeley Municipal Pier as a dual-purpose pier that provides recreational access and an electric ferry service. The overall project consists of both landside and waterside improvements. To provide necessary ingress and egress to WETA ferry service, dredging of a previous established entrance channel and a turning basin is necessary. This dredging will be performed in conjunction with the overall project construction for which the City is in the process of obtaining necessary permits.

In order to provide the chemical and biological characterization needed to obtain regulatory approval for this dredging, on behalf of the City, COWI North America (COWI) has contracted Pacific EcoRisk (PER) to perform sampling and testing of the BWTPF Project sediments. Sampling and testing of these sediments was performed according to the Inland Testing Manual (ITM [USEPA/USACE 1998]), site-specific requirements of placement site(s), and DMMO guidance. Sampling and testing covered requirements for placement of material at in-Bay disposal sites (e.g., SF-10 and SF-11), Cullinan Ranch Restoration Project (CRRP), and Montezuma Wetlands Restoration Project (MWRP) beneficial reuse sites.

To ensure an adequate water depth for WETA vessels expected to berth at the ferry terminal, the City requires dredging of the BWTPF Project sediments to a depth of -12.51 ft. MLLW + 1.0 ft. over-dredge. Sediments were sampled and tested to a total depth of -13.51 MLLW. In addition, a "Z-layer" sample consisting of the top 6 inches of the post-dredged mudline was collected at each sediment core location.

Based on the most recent bathymetric survey, the total volume of the material within the terminal berth requiring dredging is estimated to be approximately 400,000 cubic yards (yd^3) consisting of 325,521 yd^3 above project depth and 74,479 yd^3 of allowable over-depth. Estimated dredge depths and estimated volumes of dredged material to be removed, including side slope and over-depth, are summarized in Table 1-1. Sediments were sampled and tested per the Sampling and Analysis Plan (SAP [PER 2025]).

Table 1-1. Berkeley Water Transportation Pier Ferry Project Dredging Volumes.

Dredge Unit	Dredge Footprint (Acres)[A]	Proposed Depth (ft. MLLW)	Estimated Volume (yd^3)	Over-depth (ft.)	Estimated Volume (yd^3)	Permitted Depth + Over-depth (ft. MLLW)	Total Estimated Volume (yd^3)[B]
DU1	9.91	-12.51	59,349	+1.0	22,172	-13.51	81,521
DU2	7.38	-12.51	66,818	+1.0	16,511	-13.51	83,329
DU3	6.59	-12.51	70,207	+1.0	14,546	-13.51	84,753
DU4	5.66	-12.51	70,432	+1.0	12,483	-13.51	82,915
DU5	4.58	-12.51	58,715	+1.0	8,767	-13.51	67,482
Total:	**34.1**		**325,521**		**74,479**		**400,000**

Notes:
ft = feet.
MLLW = Mean Lower Low Water.
yd^3 = cubic yards.
A - Dredge boundary is 37.9 acres
B - Dredge volumes are estimates are based on eTrac Multi-beam bathymetric survey performed in July 2024, plus a 10% contingency.

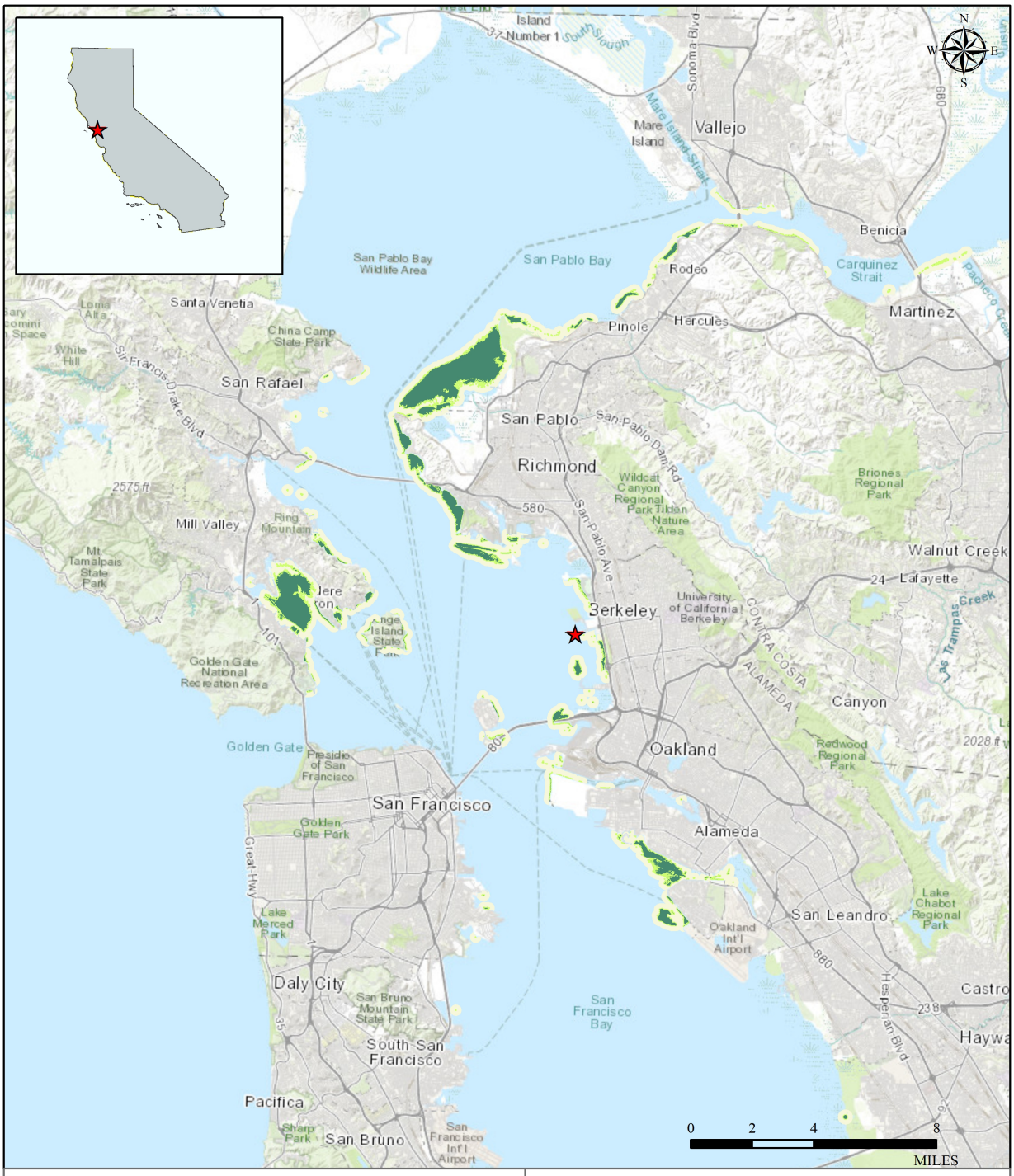
1.1 Objectives of the Sediment Investigation

The purpose of this sampling and testing was to evaluate the proposed dredged material to determine whether it will represent an adverse impact during removal operations and placement at SF-11 or wetland beneficial reuse sites such as CRRP and MWRP. The procedures for sediment sample collection, sample processing and preparation, physical and chemical analyses, biological testing, and data analyses were presented in a previously approved SAP (PER 2025). The specific objectives of the SAP scope-of-work were as follows:

- Collect core samples from within the designated sampling areas following field protocol detailed in the SAP; and
- Conduct chemical and biological analyses of the collected sediments to determine whether they are suitable for proposed placement options.

1.2 Organization of this Document

Sample collection and handling procedures are discussed in Sections 2 and 3 of this report. Results of chemical analyses and biological toxicity testing are provided in Sections 4 and 5. Section 6 discusses quality control (QC) and Section 7 presents the conclusions regarding suitability of the material for placement at in-Bay sites or wetland beneficial reuse sites such as CRRP and MWRP.



LEGEND

PROJECT LOCATION
EELGRASS BEDS
45m EELGRASS BUFFER
250m EELGRASS BUFFER

EELGRASS DATA SOURCED FROM MERKEL & ASSOCIATES SURVEYS FROM 2003, 2009, 2014, AND 2019

FIGURE 1-1.

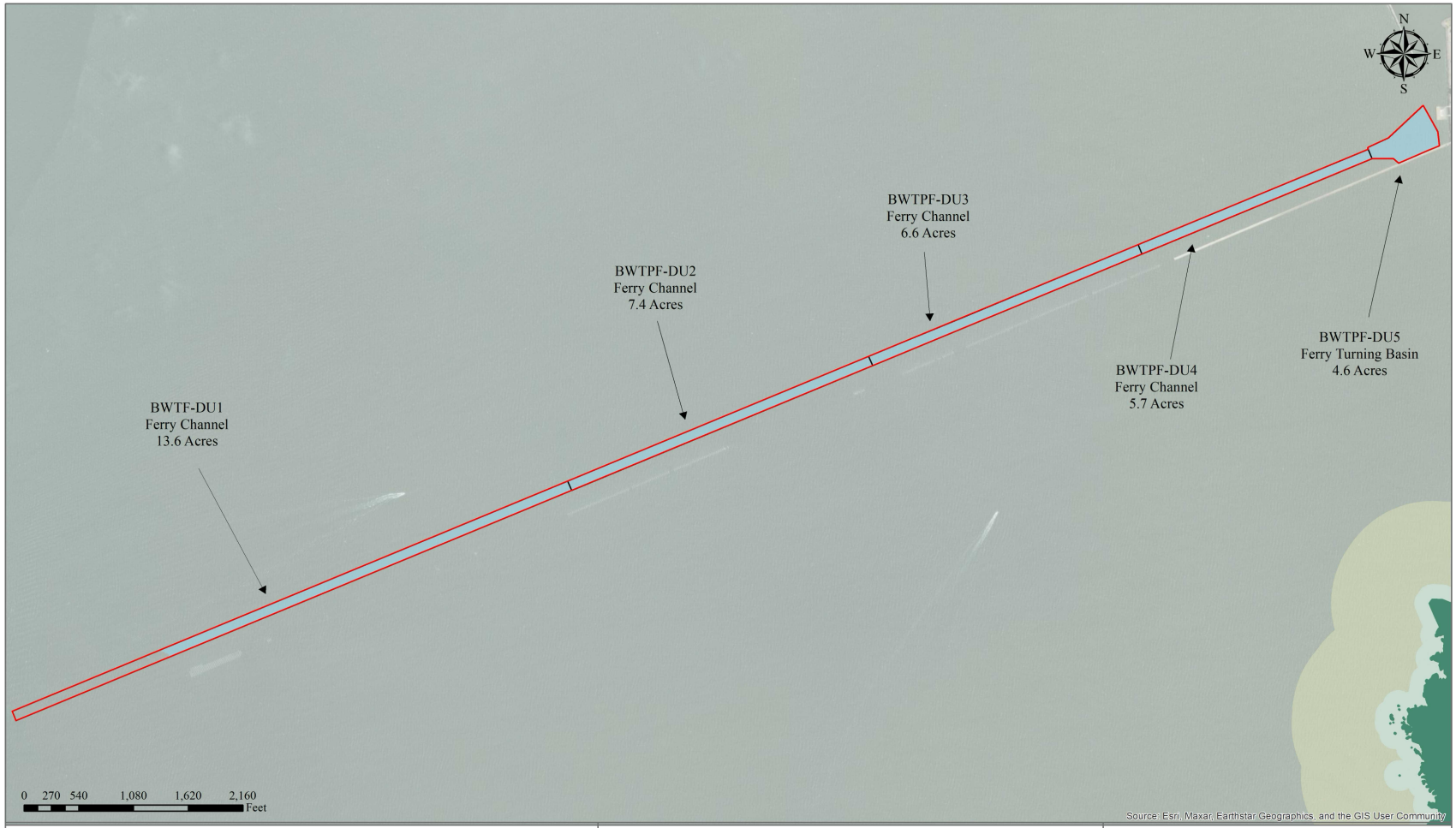
LOCATION MAP:
BERKELEY WATER TRANSPORTATION PIER FERRY PROJECT

PACIFIC ECORISK ENVIRONMENTAL CONSULTING & TESTING



FIGURE 1-2.
VICINITY MAP:
BERKELEY WATER TRANSPORTATION PIER FERRY PROJECT

PACIFIC ECORISK ENVIRONMENTAL CONSULTING & TESTING


N
W
E
S
BWTF-DU1
Ferry Channel
13.6 Acres
BWTPF-DU2
Ferry Channel
7.4 Acres
BWTPF-DU3
Ferry Channel
6.6 Acres
BWTPF-DU4
Ferry Channel
5.7 Acres
BWTPF-DU5
Ferry Turning Basin
4.6 Acres
0 270 540 1,080 1,620 2,160
Feet
Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community
LEGEND
DREDGE UNITS
DREDGE PERMIT BOUNDARY (37.9 Acres)
DREDGE FOOTPRINT (34.1 Acres)
EELGRASS BEDS
45m EELGRASS BUFFER
250m EELGRASS BUFFER
NOTES
1. HORIZONTAL DATUM/PROJECTION: NAD83 (2011), SPCS CALIFORNIA ZONE 03 - U.S. SURVEY FEET
2. EELGRASS DATA SOURCED FROM MERKEL & ASSOCIATES EELGRASS SURVEYS FROM 2003, 2009, 2014, AND 2019
3. MAP PREPARED BY PACIFIC ECORISK ON 3/6/25
FIGURE 1-3.
PROJECT OVERVIEW:
BERKELEY WATER TRANSPORTATION PIER FERRY PROJECT
PACIFIC ECORISK
ENVIRONMENTAL CONSULTING & TESTING

2. FIELD SEDIMENT SAMPLE COLLECTION

All sediments (and site water) were collected in accordance with guidelines and procedures outlined in the SAP (PER 2025). All field sampling activities were under the direction of Mr. Jeffrey Cotsifas (of PER). Leviathan Environmental Services LLC provided the sampling vessel, on-board positioning system, and sampling equipment. PER provided Field Scientists to assist in sediment core collection and collection of site water.

Sampling was performed on May 6-10, 2025. A total of 30 sediment cores were collected from within the proposed dredge boundary (Figure 2-1) of five dredge units (termed DU1, DU2, DU3, DU4, and DU5).

All sediment cores were collected to the project depth plus over-depth using an appropriate coring device; for each of the initially collected cores, an additional 0.5 ft core section was collected from immediately below the 'project depth plus over-depth' and was designated the 'Z-layer'. The 'Z-layer' section of sediment was removed from each core and stored in a separate container. The remaining individual sediment cores were extruded and placed into food-grade polyethylene bags on board the sampling vessel. While aboard the vessel, samples were temporarily stored on ice (or frozen "blue ice") within insulated coolers until transport to the laboratory in Fairfield, CA.

Final sample site positions were determined with a global positioning system (GPS) that uses U.S. Government Wide Angle Augmentation System (WAAS) differential correction data to identify each sampling location.

Upon receipt at PER, all samples were logged in and placed in cold storage at ≤4°C in the dark until needed. There were no unusual circumstances encountered during the fieldwork, and no major deviations from the SAP (PER 2025). Field log sheets are presented in Appendix A.

Table 2-1. Locations of Sampling Stations and Core Depths Achieved.

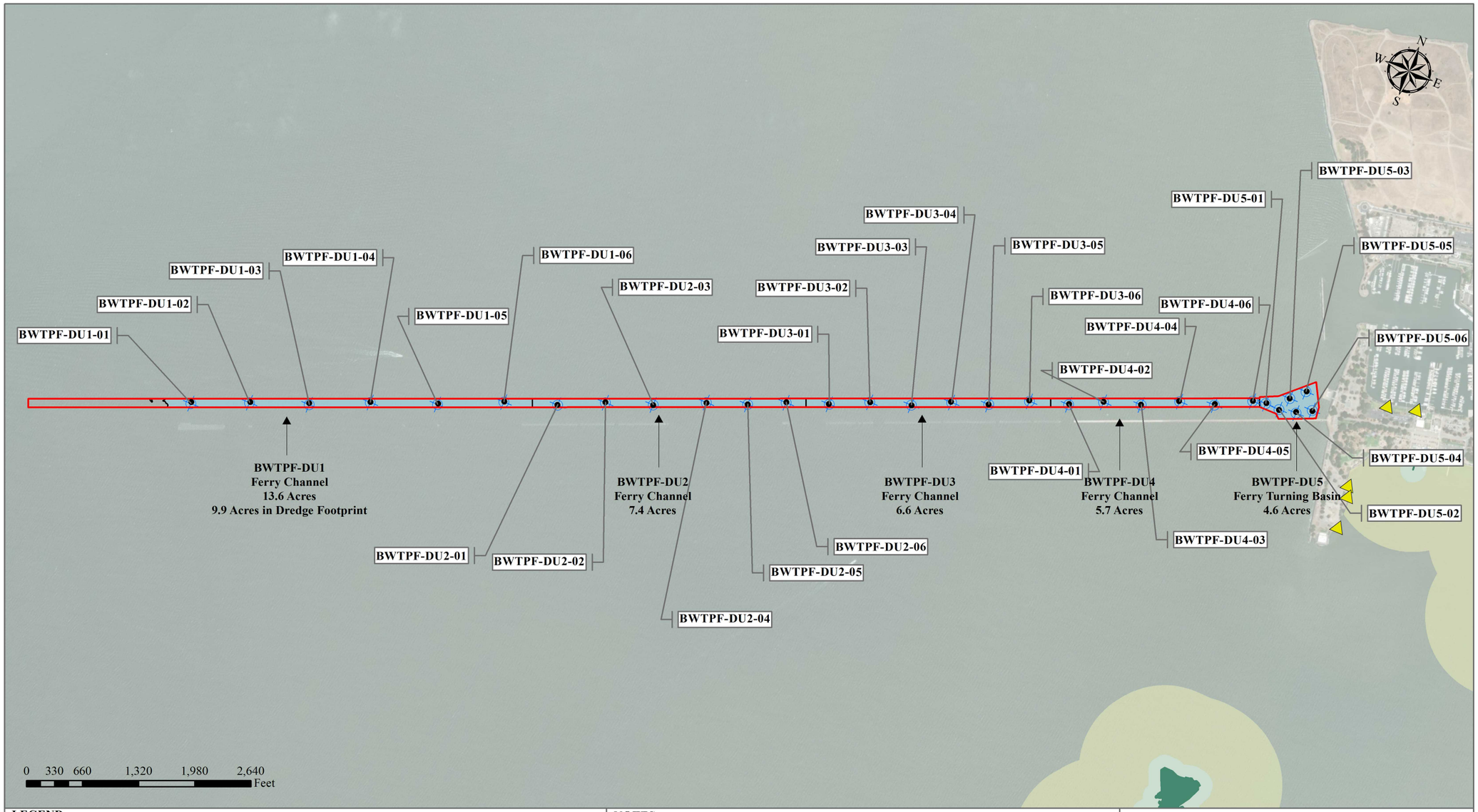
DU (Area)	SAMPLE ID	Latitude (decimal-deg)[A]	Longitude (decimal-deg)[A]	Mudline Elevation (ft MLLW)	Core Penetration Depth (ft) Excluding Z-Layer	Core Penetration Depth (ft) Including Z-Layer	Cored Depth (ft MLLW)
DU1	BWTPF-DU1-01	37.848695	-122.360319	-11.4	2.1	2.6	-14.0
	BWTPF-DU1-02	37.849459	-122.358109	-10.8	2.7	3.2	-14.0
	BWTPF-DU1-03	37.859781	-122.314558	-10.6	2.9	3.4	-14.0
	BWTPF-DU1-04	37.860636	-122.314316	-10.8	2.7	3.2	-14.0
	BWTPF-DU1-05	37.859811	-122.313502	-10.2	3.3	3.8	-14.0
	BWTPF-DU1-06	37.852763	-122.348631	-9.6	3.9	4.4	-14.0
DU2	BWTPF-DU2-01	37.853352	-122.346595	-9.2	4.3	4.8	-14.0
	BWTPF-DU2-02	37.854055	-122.344843	-8.9	4.6	5.1	-14.0
	BWTPF-DU2-03	37.854587	-122.343012	-8.8	4.7	5.2	-14.0
	BWTPF-DU2-04	37.855347	-122.341055	-8.9	4.6	5.1	-14.0
	BWTPF-DU2-05	37.855835	-122.339496	-8.9	4.6	5.1	-14.0
	BWTPF-DU2-06	37.856400	-122.338081	-8.9	4.6	5.1	-14.0
DU3	BWTPF-DU3-01	37.856895	-122.336470	-8.5	5.0	5.5	-14.0
	BWTPF-DU3-02	37.857485	-122.334949	-8.6	4.9	5.4	-14.0
	BWTPF-DU3-03	37.857931	-122.333358	-8.5	5.0	5.5	-14.0
	BWTPF-DU3-04	37.858543	-122.331936	-8.1	5.4	5.9	-14.0
	BWTPF-DU3-05	37.858955	-122.330490	-8.0	5.5	6.0	-14.0
	BWTPF-DU3-06	37.859595	-122.329036	-7.9	5.6	6.1	-14.0
DU4	BWTPF-DU4-01	37.860009	-122.327489	-8.2	5.3	5.8	-14.0
	BWTPF-DU4-02	37.860524	-122.326236	-8.0	5.5	6.0	-14.0
	BWTPF-DU4-03	37.860925	-122.324793	-7.7	5.8	6.3	-14.0
	BWTPF-DU4-04	37.861522	-122.323429	-7.1	6.4	6.9	-14.0
	BWTPF-DU4-05	37.861895	-122.322042	-7.2	6.3	6.8	-14.0
	BWTPF-DU4-06	37.862485	-122.320672	-6.8	6.7	7.2	-14.0

A - State Plane Coordinate System, California Zone 3, NAD 83.
BWTPF – Berkeley Water Transportation Pier Ferry Project
DU- Dredge Unit
MLLW – Mean Lower Low Water
ft - feet

Table 2-1. *(continued)* Locations of Sampling Stations and Core Depths Achieved.

DU (Area)	SAMPLE ID	Latitude (decimal-deg)[A]	Longitude (decimal-deg)[A]	Mudline Elevation (ft MLLW)	Core Penetration Depth (ft) Excluding Z-Layer	Core Penetration Depth (ft) Including Z-Layer	Cored Depth (ft MLLW)
DU5	BWTPF-DU5-01	37.862589	-122.320134	-6.7	6.8	7.3	-14.0
	BWTPF-DU5-02	37.862552	-122.319549	-7.9	5.6	6.1	-14.0
	BWTPF-DU5-03	37.863028	-122.319340	-8.5	5.0	5.5	-14.0
	BWTPF-DU5-04	37.862712	-122.318881	-8.0	5.5	6.0	-14.0
	BWTPF-DU5-05	37.863460	-122.318821	-6.7	6.8	7.3	-14.0
	BWTPF-DU5-06	37.862950	-122.318287	-7.7	5.8	6.3	-14.0

A - State Plane Coordinate System, California Zone 3, NAD 83.
BWTPF – Berkeley Water Transportation Pier Ferry Project
DU- Dredge Unit
MLLW – Mean Lower Low Water
ft - feet



LEGEND

- STORMWATER OUTFALL
- PROPOSED SAMPLING LOCATIONS
- ACTUAL SAMPLING LOCATIONS
- DREDGE FOOTPRINT (34.1 Acres)
- DREDGE PERMIT BOUNDARY (37.9 Acres)
- DREDGE UNITS
- EELGRASS BEDS
- 45m EELGRASS BUFFER
- 250m EELGRASS BUFFER

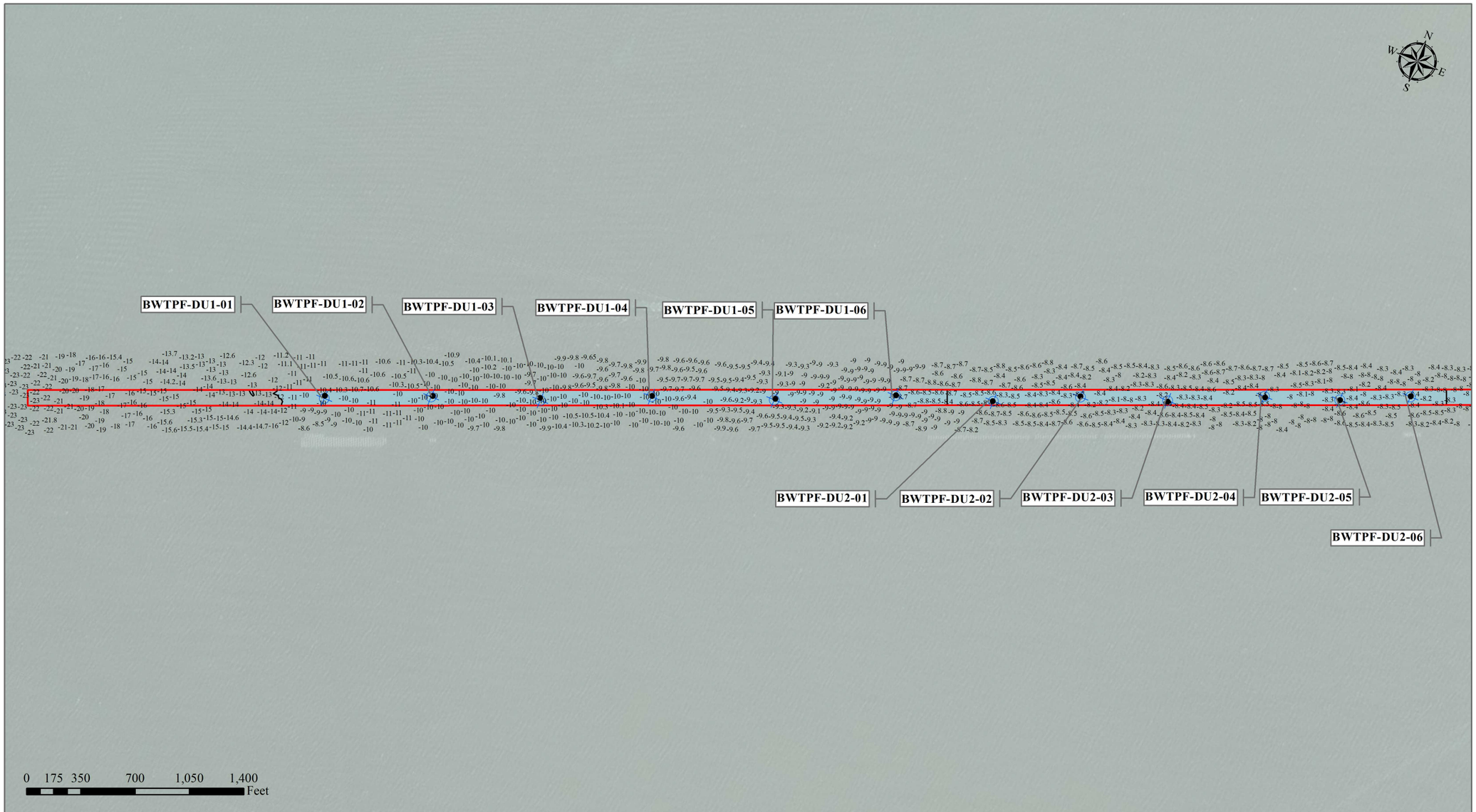
NOTES

1. SURVEY DATA COLLECTED ON JULY 2024
2. HORIZONTAL DATUM/PROJECTION: NAD83 (2011), SPCS CALIFORNIA ZONE 03 - U.S. SURVEY FEET
3. HORIZONTAL CONTROL: ETRAC REFERENCE STATION: RICHMOND, 37°55'22.12651"N, 122°22'04.64358"W
4. VERTICAL DATUM: MLLW, U.S. SURVEY FEET
5. VERTICAL CONTROL: NOAA TIDE STATION 9414816; BENCHMARK "YACHT 1947", ELEVATION 10.99'
6. THIS SURVEY REPRESENTS GENERAL CONDITIONS AT THE TIME OF THE SURVEY.
7. POSITIONING AND MOTION DATA WAS COLLECTED USING AN TRIMBLE MPS POSITIONING SYSTEM
8. SOUNDINGS WERE COLLECTED USING AN R2SONIC 2020 OPERATING AT 400 KHZ.
9. EELGRASS DATA SOURCED FROM MERKEL & ASSOCIATES SURVEYS FROM 2003, 2009, 2014, AND 2019.
10. MAP PREPARED BY PACIFIC ECORISK ON 5/13/25

FIGURE 2-1.

PROPOSED AND ACTUAL SAMPLING LOCATIONS:
BERKELEY WATER TRANSPORTATION PIER FERRY PROJECT

PACIFIC ECORISK ENVIRONMENTAL CONSULTING & TESTING



LEGEND

- PROPOSED SAMPLING LOCATIONS
- ACTUAL SAMPLING LOCATIONS
- DREDGE FOOTPRINT (34.1
- DREDGE PERMIT BOUNDARY (37.9
- DREDGE UNITS

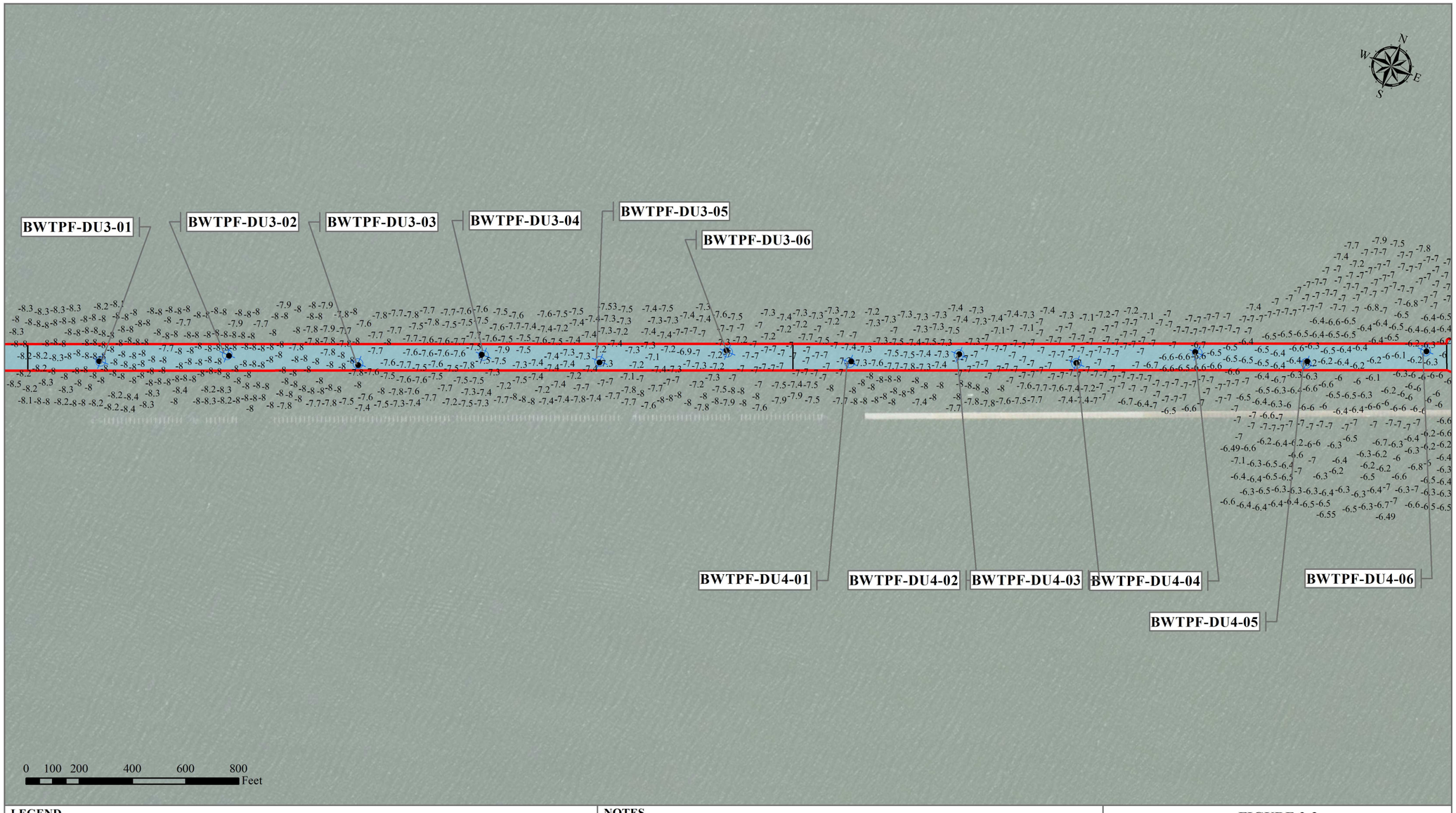
NOTES

1. SURVEY DATA COLLECTED ON JULY 2024
2. HORIZONTAL DATUM/PROJECTION: NAD83 (2011), SPCS CALIFORNIA ZONE 03 - U.S. SURVEY FEET
3. HORIZONTAL CONTROL: ETRAC REFERENCE STATION: RICHMOND, 37°55'22.12651"N, 122°22'04.64358"W
4. VERTICAL DATUM: MLLW, U.S. SURVEY FEET
5. VERTICAL CONTROL: NOAA TIDE STATION 9414816; BENCHMARK "YACHT 1947", ELEVATION 10.99'
6. THIS SURVEY REPRESENTS GENERAL CONDITIONS AT THE TIME OF THE SURVEY.
7. POSITIONING AND MOTION DATA WAS COLLECTED USING AN TRIMBLE MPS POSITIONING SYSTEM
8. SOUNDINGS WERE COLLECTED USING AN R2SONIC 2020 OPERATING AT 400 KHZ.
9. MAP PREPARED BY PACIFIC ECORISK ON 5/13/25

FIGURE 2-2.

PROPOSED AND ACTUAL SAMPLING LOCATIONS:
BERKELEY WATER TRANSPORTATION PIER FERRY PROJECT
DREDGE UNITS 1 AND 2

PACIFIC ECORISK ENVIRONMENTAL CONSULTING & TESTING



LEGEND

- PROPOSED SAMPLING LOCATIONS
- ACTUAL SAMPLING LOCATIONS
- DREDGE FOOTPRINT (34.1 Acres)
- DREDGE PERMIT BOUNDARY (37.9 Acres)
- DREDGE UNITS

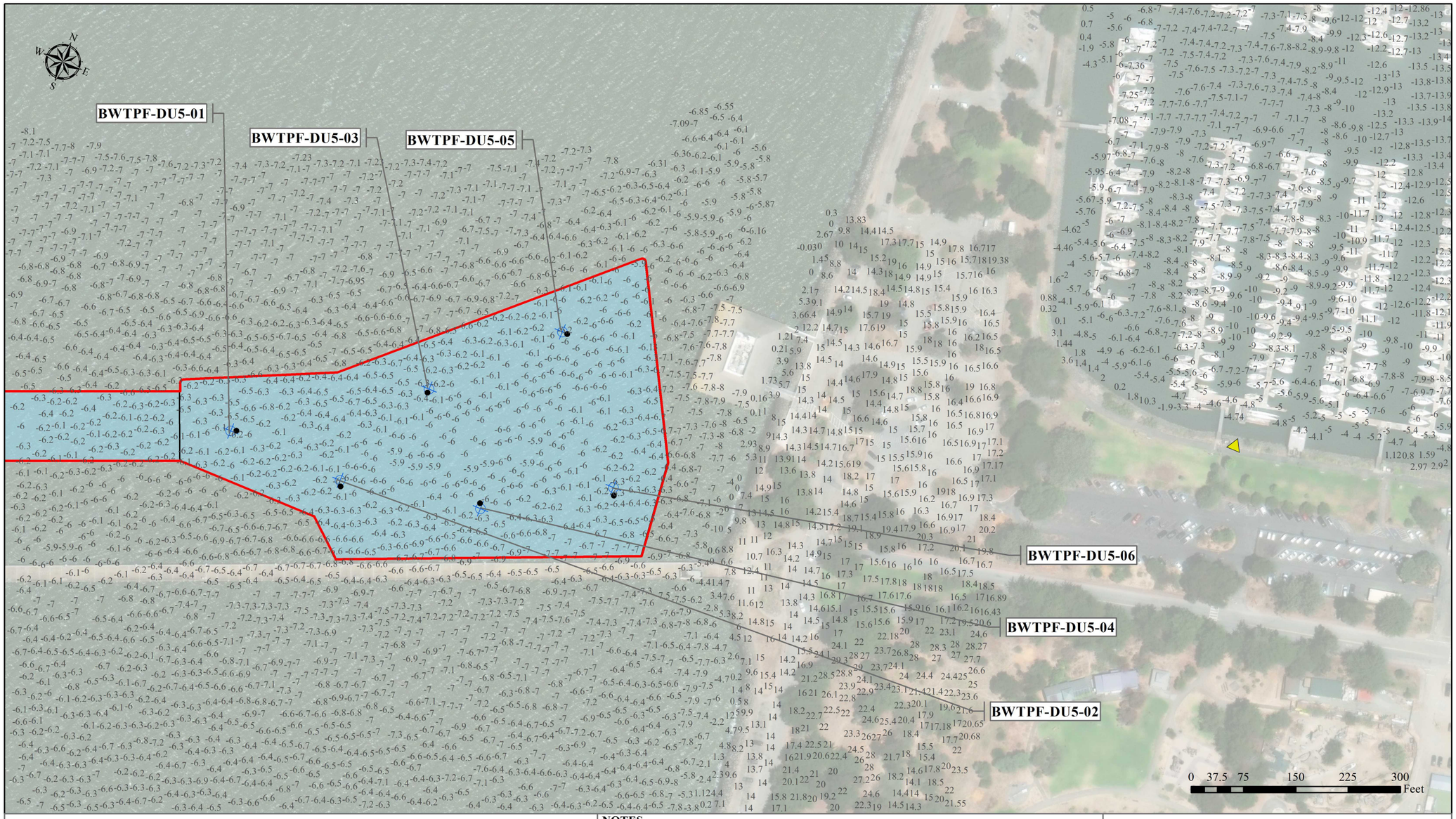
NOTES

1. SURVEY DATA COLLECTED ON JULY 2024
2. HORIZONTAL DATUM/PROJECTION: NAD83 (2011), SPCS CALIFORNIA ZONE 03 - U.S. SURVEY FEET
3. HORIZONTAL CONTROL: ETRAC REFERENCE STATION: RICHMOND, 37°55'22.12651"N, 122°22'04.64358"W
4. VERTICAL DATUM: MLLW, U.S. SURVEY FEET
5. VERTICAL CONTROL: NOAA TIDE STATION 9414816; BENCHMARK "YACHT 1947", ELEVATION 10.99'
6. THIS SURVEY REPRESENTS GENERAL CONDITIONS AT THE TIME OF THE SURVEY.
7. POSITIONING AND MOTION DATA WAS COLLECTED USING AN TRIMBLE MPS POSITIONING SYSTEM
8. SOUNDINGS WERE COLLECTED USING AN R2SONIC 2020 OPERATING AT 400 KHZ.
9. MAP PREPARED BY PACIFIC ECORISK ON 5/13/25.

FIGURE 2-3.

PROPOSED AND ACTUAL SAMPLING LOCATIONS:
BERKELEY WATER TRANSPORTATION PIER FERRY PROJECT
DREDGE UNITS 3 AND 4

PACIFIC ECORISK ENVIRONMENTAL CONSULTING & TESTING



LEGEND

- STORMWATER OUTFALL
- PROPOSED SAMPLING LOCATIONS
- ACTUAL SAMPLING LOCATIONS
- DREDGE FOOTPRINT (34.1 Acres)
- DREDGE PERMIT BOUNDARY (37.9 Acres)
- DREDGE UNIT

NOTES

1. SURVEY DATA COLLECTED ON JULY 2024
2. HORIZONTAL DATUM/PROJECTION: NAD83 (2011), SPCS CALIFORNIA ZONE 03 - U.S. SURVEY FEET
3. HORIZONTAL CONTROL: ETRAC REFERENCE STATION: RICHMOND, 37°55'22.12651"N, 122°22'04.64358"W
4. VERTICAL DATUM: MLLW, U.S. SURVEY FEET
5. VERTICAL CONTROL: NOAA TIDE STATION 9414816; BENCHMARK "YACHT 1947", ELEVATION 10.99'
6. THIS SURVEY REPRESENTS GENERAL CONDITIONS AT THE TIME OF THE SURVEY.
7. POSITIONING AND MOTION DATA WAS COLLECTED USING AN TRIMBLE MPS POSITIONING SYSTEM
8. SOUNDINGS WERE COLLECTED USING AN R2SONIC 2020 OPERATING AT 400 KHZ.
9. MAP PREPARED BY PACIFIC ECORISK ON 5/13/25

FIGURE 2-4.

PROPOSED AND ACTUAL SAMPLING LOCATIONS:
BERKELEY WATER TRANSPORTATION PIER FERRY PROJECT
DREDGE UNIT 5

PACIFIC ECORISK ENVIRONMENTAL CONSULTING & TESTING

3. SAMPLE PROCESSING

3.1 Homogenization and Compositing of Sediments

As described above, each core was divided into maintenance-depth sections and Z-layer sections while aboard the sampling vessel. Subsequent homogenization and compositing of individual sediment core sections was performed at the PER laboratory in Fairfield, CA. The maintenance depth sections from each individual core were individually homogenized in a stainless-steel bowl or high-density polyethylene (HDPE) container. A 500-mL sub-sample of the homogenized sediment from each individual sediment core was archived to allow for additional chemical analyses, if necessary. Archived samples will be stored frozen at ≤ -20˚C for up to one [1] year after sample collection.

Proportionate amounts of the homogenized sediment from each of the BWTPF-DU1 individual sediment cores were composited and homogenized within a stainless-steel container to form the "BWTPF-DU1" composite sediment. The DU2, DU3, DU4, and DU5 maintenance depth sediment core sections were similarly processed to form the "BWTPF-DU2", "BWTPF-DU3", "BWTPF-DU4", and "BWTPF-DU5" composite sediments. Sub-samples of each of the composited sediments were frozen for archival storage as described above. The Z-layer sediment sections were processed and archived in a similar fashion.

Samples of the composited maintenance-depth sediments were submitted for chemical and conventional analyses and toxicity testing to support a suitability determination for placement at in-Bay sites or wetland beneficial reuse sites such as CRRP and MWRP.

All sediment was processed following procedures outlined in the SAP (PER 2025), with no deviations.

3.2 Shipping of Sediment Samples to the Analytical Laboratories

Prior to shipping to the analytical laboratory, sample containers were wrapped in bubble wrap and securely packed inside a cooler with ice packs or crushed ice. A temperature blank was included in each cooler. The original signed chain-of-custody (COC) forms were placed in a sealed plastic bag and taped to the inside lid of each cooler. Appropriate packaging tape was wrapped completely around each cooler. *This Side Up* arrow labels and a *Glass-Handle with Care* label were attached on each side and to the top of each cooler, respectively. Each cooler was then sealed with custody seals on both the front and the back lid seams.

The sediment samples were shipped by overnight delivery. The sub-contracting analytical laboratories have been instructed to not dispose of any samples for this project unless notified by PER in writing.

3.3 Chain-of-Custody (COC) Protocol

COC procedures were followed for all samples throughout the collection, handling, and analyses activities. The Sampling and Analysis Project Manager, or a designee, was responsible for all sample tracking and COC procedures. This person was responsible for final sample inventory, maintenance of sample custody documentation, and completion of COC forms prior to transferring samples to the analytical laboratory. A COC form accompanied each cooler of samples to the respective analytical laboratories. Each custodian of the samples signed the COC form; copies of the COC forms are retained in the project file.

4. RESULTS OF PHYSICAL/CHEMICAL ANALYSES

Sediment physical and chemical characteristics provide information about chemicals of concern present in the sediment and their potential bioavailability, and about non-chemical factors that could affect toxicity. The BWTPF composite sediments were submitted to Eurofins Calscience (Tustin, CA) for conventional and chemical parameters specified in the SAP (PER 2025). Conventional parameters included total organic carbon (TOC), total solids, and grain size. Chemical analyses included trace metals, polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs), organochlorine (OCl) pesticides, butyltins (also referred to as organotins), and dioxins/furans. The results of these analyses are presented in Table 4-1. The full Data Report submitted by Eurofins is provided in Appendix B.

Due to the exceedance of the SF Bay Bioaccumulation Trigger for total PCBs in the BWTPF-DU4 composite sample, the Z-Layer sediment composite sample corresponding to this area was submitted to Eurofins Calscience for total PCBs, TOCs, and percent solids. The results of these analyses are presented in Table 4-2 and Section 4-2; the full Data Reports submitted by Eurofins are provided in Appendix C.

A Modified Elutriate Test (MET) was performed on the composite samples and analyzed for metals; the results of these analyses are presented in Section 4.3 and Table 4-3. The full Data Report submitted by Eurofins for the MET analyses is provided in Appendix D. The MET elutriates were also evaluated for toxicity; the results of these analyses are presented in Section 5.3.

The results of the physical and chemical analyses of the sediments were compared to:

- San Francisco (SF) Bay ambient sediment concentrations (SFEI 2015);
- SF Bay sediment Bioaccumulation Trigger (BT) Levels (SFEI 2025);
- SF Bay sediment mercury and PCB TMDL Thresholds (SFEI 2025);
- CRRP sediment screening levels (USFWS 2010), where they differ from the SF Bay ambient concentrations; and
- MWRP sediment screening levels (where they differ from the SF Bay ambient concentrations) and sediment elutriate screening levels (SFRWQCB 2012).

4.1 Berkeley Water Transportation Pier Ferry Project Sediments: Results of Physical/Chemical Analyses

The results of these analyses are presented in Table 4-1 and in Sections 4.1.1 through 4.1.8.

4.1.1. Total Solids and Total Organic Carbon

Total solids in the samples ranged from 53.5 - 62.3%. The TOC concentrations were 0.58 - 0.81%.

4.1.2. Particle Size Distribution

Particle size distributions were 100% fines (silt and clay) for all DUs. Total sand and gravel were 0% for all DUs.

4.1.3. Metals

All metal analyte concentrations were below all screening criteria.

4.1.4. Butyltins

Total butyltins concentration for each DU was below the method detection limit (MDL).

4.1.5. Organochlorine (OCl) Pesticides

Total DDT concentrations ranged from 0.77 – 1.5 µg/kg dry weight in the BWTPF sediments which were below all screening criteria.

Total chlordane concentrations ranged from 0.33 – 0.72 µg/kg dry weight in the BWTPF sediments. Total chlordanes in the BWTPF-DU2, BWTPF-DU3, BWTPF-DU4, and BWTPF-DU5 sediments were above the SF Bay Background concentration but below remaining screening criteria. Total chlordane in the BWTPF-DU1 sediment was below all screening criteria

Dieldrin concentrations ranged from <MDL – 0.26 µg/kg dry weight in the BWTPF sediments. Dieldrin in the BWTPF-DU1, BWTPF-DU4, and BWTPF-DU5 sediments were above the SF Bay Background concentration but below remaining screening criteria. Dieldrin in the BWTPF-DU2 and BWTPF-DU3 sediments were below all screening criteria. All remaining OCl analyte concentrations were below screening criteria.

4.1.6. Polycyclic Aromatic Hydrocarbons (PAHs)

Total PAH concentrations ranged from 1,286 – 3,552 µg/kg. The total PAH concentration in the BWTPF-DU1 sediment was slightly above than CRRP and MWRP surface material screening criteria. Total PAHs in the BWTPF-DU2, BWTPF-DU3, BWTPF-DU4, and BWTPF-DU5 sediments were below all criteria.

4.1.7. Polychlorinated Biphenyls (PCBs)

Total PCB concentrations ranged from 3.85 – 19.6 µg/kg dry weight in the BWTPF sediments. Total PCBs in the BWTPF-DU4 were above the SF Bay Background concentration and the SF Bay Bioaccumulation trigger but below remaining screening criteria. Total PCBs in the BWTPF-DU1, BWTPF-DU2, BWTPF-DU3, and BWTPF-DU5 sediments were below all screening criteria.

4.1.8. Dioxins and Furans

Total dioxin and furan concentrations were adjusted according to applicable World Health Organization (WHO) toxicity equivalency factors (TEFs) and were expressed as toxicity equivalency quotients (TEQs). The total dioxins and furans TEQs ranged from 0.666 - 1.59 ng TEQ/kg dry weight in the BWTPF sediments, which were below all screening criteria.

Table 4-1. Berkeley Water Transportation Pier Ferry Project 2025 Sediment Sample Chemistries.

Analyte	Sample ID					Bay Background[1] <100% fines	CRRP Screening Criteria[2]	MWRP Screening Criteria[3]	
	BWTPF-DU1	BWTPF-DU2	BWTPF-DU3	BWTPF-DU4	BWTPF-DU5			Surface	Foundation
% Solids	59.6	56.9	53.5	58.3	62.3	-	-	-	-
% TOC	0.697	0.780	0.810	0.710	0.585	-	-	-	-
Grain Size (%, dry wt)									
Gravel (>2.00 mm)	0	0	0	0	0	<100% fines	NA	NA	NA
Sand (0.0625 mm to 2.00 mm)	0	0	0	0	0				
Silt (0.0039 mm to 0.0625 mm)	46.0	42.8	53.6	54.8	39.7				
Clay (< 0.0039 mm)	54.0	57.2	46.4	45.2	60.3				
Percent fines (Silt+Clay)	100	100	100	100	100				
Metals (mg/kg, dry wt***)***									
Arsenic	7.51	5.86	6.59	6.23	6.32	13.9	15.3	15.3	70
Cadmium	0.182	0.176	0.239	0.135	0.224	0.33	0.7	0.33	9.6
Chromium	60.3	46.9	55.6	50.0	47.7	112	112	112	370
Copper	28.4	21.9	27.8	26.2	22.6	53.9	68.1	68.1	270
Lead	15.7	10.2	15.1	16.3	14.5	25.1	43.2	43.2	218
Mercury	0.237	0.172	0.185	0.162	0.263	0.33 (0.43[a])	0.43	0.43	1.3
Nickel	59.6	45.6	53.8	48.4	43.2	98.3	112	112	200
Selenium	0.321 J	0.331 J	0.338 J	0.276 J	0.257 J	0.36	0.64	0.64	1.4
Silver	0.181	0.148	0.193	0.208	0.176	0.32	0.58	0.58	3.7
Zinc	74.2	52.6	70.5	66.1	57.0	136	158	158	410
Butyltins (µg/kg, dry wt)									
Tetrabutyltin	<0.84	<0.87	<0.93	<0.86	<0.79	-	-	-	-
Tributyltin	<0.75	<0.78	<0.83	<0.76	<0.70	-	-	-	-
Dibutyltin	<0.83	<0.86	<0.92	<0.85	<0.78	-	-	-	-
Monobutyltin	<0.90	<0.94	<1.0	<0.92	<0.85	-	-	-	-
∑ detected Butyltins	**0**	**0**	**0**	**0**	**0**	**-**	**-**	**-**	**-**

Notes:
1 - San Francisco Estuary Institute: Updated Ambient Concentrations of Toxic Chemicals in San Francisco Bay Sediments (SFEI 2015).
2 - U.S. Fish and Wildlife Service Biological Opinion on the Effects of the Proposed Cullinan Ranch Restoration Project, Napa and Solano Counties, California (USFWS 2010).
3 - Montezuma Wetlands Restoration Project Waste Discharge Requirements Order No. R2-2012-0087 (SFRWQCB 2012).
a - Mercury concentration SF Bay TMDL threshold (= 99th percentile for San Francisco Bay [SFEI 2025]).
J - Analyte detected below the method reporting limit (MRL) and the reported value is therefore an estimate.
All concentrations reported as being below the laboratory MDL are reported above as < the MDL.

Table 4-1. ***(continued)*** **Berkeley Water Transportation Pier Ferry Project 2025 Sediment Sample Chemistries.**

Analyte	Sample ID					Bay Background[1] <100% fines	CRRP Screening Criteria[2]	MWRP Screening Criteria[3]	
	BWTPF-DU1	BWTPF-DU2	BWTPF-DU3	BWTPF-DU4	BWTPF-DU5			Surface	Foundation
Organochlorine Pesticides (µg/kg, dry wt)									
Aldrin	<0.61	<0.64	<0.68	<0.62	<0.58	0.03	-	-	-
alpha-BHC	<0.13	<0.14	<0.15	<0.14	<0.13	-	-	-	-
beta-BHC	<0.32	<0.33	<0.36	<0.33	<0.31	-	-	-	-
delta-BHC	<0.25	<0.26	<0.28	<0.26	<0.24	-	-	-	-
gamma-BHC (Lindane)	<0.18	<0.19	<0.20	<0.18	<0.17	-	-	-	-
Total BHCs	0	0	0	0	0	0.78	0.99	-	-
Chlordane (technical)	<1.2	<1.2	<1.3	<1.2	<1.1	-	-	-	-
Cis-nonachlor	0.33 J	0.40 J	0.72 J	0.63 J	0.53 J	-	-	-	-
alpha-Chlordane	<0.17	<0.18	<0.19	<0.17	<0.16	-	-	-	-
gamma-Chlordane	<0.59	<0.61	<0.65	<0.60	<0.56	-	-	-	-
Trans-nonachlor	<0.19	<0.20	<0.21	<0.19	<0.18	-	-	-	-
Oxychlordane	<0.25	<0.26	<0.28	<0.26	<0.24	-	-	-	-
Heptachlor	<0.10	<0.10	<0.11	<0.10	<0.095	-	-	-	-
Heptachlor epoxide	<0.14	<0.15	<0.16	<0.15	<0.14	-	-	-	-
∑ Chlordane[4]	**0.33 J**	**0.40 J[A]**	**0.72 J[A]**	**0.63 J[A]**	**0.53 J[A]**	0.34 (37[a])	1.1	2.3	4.8
Dieldrin	0.26 J[A]	<0.12	<0.12	0.24 J[A]	0.18 J[A]	0.16 (1.9[a])	0.72	0.70	4.3
Endosulfan I	<0.20	<0.20	<0.22	<0.20	<0.19	-	-	-	-
Endosulfan II	<0.38	<0.40	<0.42	<0.39	<0.36	-	-	-	-
Endosulfan sulfate	<0.18	0.67 J	<0.20	0.77 J	0.50 J	-	-	-	-
Endrin	<0.32	<0.33	<0.35	<0.32	<0.30	0.01	-	-	-
Endrin aldehyde	<1.6	<1.7	<1.8	<1.7	<1.6	-	-	-	-
Endrin ketone	<0.32	<0.33	<0.36	<0.33	<0.31	-	-	-	-
Toxaphene	<1.7	<1.7	<1.9	<1.7	<1.6	-	-	-	-
2,4'-DDD	<0.11	<0.11	<0.12	<0.11	<0.10	0.51	-	-	-
2,4'-DDE	<1.7	<1.8	<1.9	<1.8	<1.7	0.11	-	-	-
2,4'-DDT	<0.15	<0.16	<0.17	<0.16	<0.15	0.04	-	-	-
4,4'-DDD	<0.84	<0.87	<0.93	<0.85	<0.80	1.98	-	-	-
4,4'-DDE	0.72 J	0.95 J	1.5 J	1.3 J	0.77 J	1.98	-	-	-
4,4'-DDT	<0.52	<0.54	<0.57	<0.53	<0.49	0.27	-	-	-
∑ detected DDTs	**0.72 J**	**0.95 J**	**1.5 J**	**1.3 J**	**0.77 J**	**4.68 (50[a])**	**7.0**	**7.0**	**100**

Notes:
1 - San Francisco Estuary Institute: Updated Ambient Concentrations of Toxic Chemicals in San Francisco Bay Sediments (SFEI 2015).
2 - U.S. Fish and Wildlife Service Biological Opinion on the Effects of the Proposed Cullinan Ranch Restoration Project, Napa and Solano Counties, California (USFWS 2010).
3 - Montezuma Wetlands Restoration Project Waste Discharge Requirements Order No. R2-2012-0087 (SFRWQCB 2012).
4 - Total Chlordane is the sum of: alpha Chlordane, gamma Chlordane, Cis-nonachlor, Trans-nonachlor, Oxychlordane, Heptachlor, and Heptachlor epoxide.
a - San Francisco Bay Bioaccumulation Trigger Level (SFEI 2025).
J - Analyte detected below the method reporting limit (MRL) and the reported value is therefore an estimate.
All concentrations reported as being below the laboratory MDL are reported above as < the MDL.
A - Value exceeds Bay Background (SFEI 2015).

Table 4-1. ***(continued)*** **Berkeley Water Transportation Pier Ferry Project 2025 Sediment Sample Chemistries.**

Analyte	Sample ID					Bay Background[1] <100% fines	CRRP Screening Criteria[2]	MWRP Screening Criteria[3]	
	BWTPF-DU1	BWTPF-DU2	BWTPF-DU3	BWTPF-DU4	BWTPF-DU5			Surface	Foundation
PAHs (µg/kg, dry wt)									
1,6,7-Trimethylnaphthalene	4.2 J	4.7 J	4.5 J	<3.3	<3.1	7.43	-	-	-
1-Methylnaphthalene	<7.6	<8.0	<8.5	<7.8	<7.3	13.4	-	-	-
1-Methylphenanthrene	31	33	<3.4	<3.1	14 J	37.6	-	-	-
2,6-Dimethylnaphthalene	11 J	12 J	14 J[A]	12 J	5.6 J	13	-	-	-
2-Methylnaphthalene	6.9 J	7.1 J	5.8 J	6.6 J	<4.4	20.8	-	-	-
Acenaphthene	11 J	7.9 J	8.3 J	8.0 J	<3.2	13.5	-	-	-
Acenaphthylene	25	22	25	22	11 J	32.6	-	-	-
Anthracene	56	46	47	49	18	80.1	-	-	-
Benzo(a)anthracene	170	140	150	140	68	212	-	-	-
Benzo(a)pyrene	370	290	270	270	140	428	-	-	-
Benzo(b)fluoranthene	260[A]	190	180	180	100	227	-	-	-
Benzo(e)pyrene	200	160	150	150	76	244	-	-	-
Benzo(g,h,i)perylene	360	290	240	250	130	416	-	-	-
Benzo(k)fluoranthene	200	170	160	160	91	231	-	-	-
Biphenyl	6.0 J	4.9 J	<4.9	4.9 J	<4.2	11.7	-	-	-
Chrysene	200	170	160	150	77	252	-	-	-
Dibenz(a,h)anthracene	36	27	25	27	13 J	49.9	-	-	-
Dibenzothiophene	11 J	9.1 J	9.2 J	8.4 J	<3.7	-	-	-	-
Fluoranthene	430	340	310	310	140	620	-	-	-
Fluorene	16 J	13 J	9.2 J	13 J	5.3 J	27.1	-	-	-
Indeno(1,2,3-cd)pyrene	290	230	200	200	110	337	-	-	-
Naphthalene	18	15 J	12 J	12 J	8.4 J	56.4	-	-	-
Perylene	110	90	92	86	45	216	-	-	-
Phenanthrene	170	150	150	140	54	176	-	-	-
Pyrene	560	450	410	410	180	791	-	-	-
∑ detected PAHs	**3,552[A]**	**2,872**	**2,632**	**2,609**	**1,286**	**4,540 (4,700[a])**	**3,390**	**3,390**	**44,792**

Notes:
1 - San Francisco Estuary Institute: Updated Ambient Concentrations of Toxic Chemicals in San Francisco Bay Sediments (SFEI 2015).
2 - U.S. Fish and Wildlife Service Biological Opinion on the Effects of the Proposed Cullinan Ranch Restoration Project, Napa and Solano Counties, California (USFWS 2010).
3 - Montezuma Wetlands Restoration Project Waste Discharge Requirements Order No. R2-2012-0087 (SFRWQCB 2012).
a - San Francisco Bay Bioaccumulation Trigger Level (SFEI 2025).
J - Analyte detected below the method reporting limit (MRL) and the reported value is therefore an estimate.
All concentrations reported as being below the laboratory MDL are reported above as < the MDL.
A - Value exceeds Bay Background (SFEI 2015) or CRRP/MWRP Surface screening criteria.

Table 4-1. (*continued*) Berkeley Water Transportation Pier Ferry Project 2025 Sediment Sample Chemistries.

Analyte	Sample ID					Bay Background[1] <100% fines	CRRP Screening Criteria[2]	MWRP Screening Criteria[3]	
	BWTPF-DU1	BWTPF-DU2	BWTPF-DU3	BWTPF-DU4	BWTPF-DU5			Surface	Foundation
PCBs (µg/kg, dry wt)									
PCB 005/008	<0.19	<0.20	<0.21	<0.20	<0.18	0.14	-	-	-
PCB 018	<0.16	<0.16	<0.18	<0.16	<0.15	0.07	-	-	-
PCB 028	<0.17	<0.18	0.34 J[A]	0.31 J[A]	0.20 J	0.28	-	-	-
PCB 031	<0.15	<0.16	<0.17	<0.15	<0.14	0.13	-	-	-
PCB 033	<0.079	<0.083	<0.088	<0.081	<0.075	0.08	-	-	-
PCB 044	<0.20	<0.21	<0.22	0.42[A]	<0.19	0.33	-	-	-
PCB 049	<0.18	<0.19	0.30 J[A]	<0.19	0.27 J[A]	0.25	-	-	-
PCB 052	0.30 J	<0.14	0.53[A]	0.35	0.35	0.39	-	-	-
PCB 056	<0.079	<0.083	<0.088	<0.081	<0.075	0.14	-	-	-
PCB 060	<0.22	<0.23	<0.24	<0.22	<0.21	0.07	-	-	-
PCB 066	0.34	<0.19	<0.21	0.33 J	<0.18	0.48	-	-	-
PCB 070	<0.15	<0.16	0.36 J	<0.16	<0.15	0.59	-	-	-
PCB 074	<0.17	<0.18	<0.19	<0.18	<0.16	-	-	-	-
PCB 087	0.64[A]	<0.22	<0.23	<0.21	1.0[A]	0.46	-	-	-
PCB 095	0.77[A]	0.41	0.71[A]	1.0[A]	0.65[A]	0.60	-	-	-
PCB 097	<0.23	<0.24	<0.26	<0.24	<0.22	-	-	-	-
PCB 099	0.96[A]	<0.15	1.1[A]	1.1[A]	0.91[A]	0.65	-	-	-
PCB 101	1.4[A]	0.64	1.4[A]	1.5[A]	1.2[A]	1.15	-	-	-
PCB 105	<0.18	<0.18	<0.20	<0.18	<0.17	0.36	-	-	-
PCB 110	0.67	0.23 J	0.67	0.77	0.59	1.04	-	-	-
PCB 118	<0.13	<0.14	<0.15	0.73	0.31 J	0.98	-	-	-
PCB 128	<0.23	<0.24	<0.26	<0.24	<0.22	0.28	-	-	-
PCB 132/153	2.0	<0.42	2.1	3.0[A]	1.8	2.11	-	-	-
PCB 138/158	1.5	<0.42	<0.45	2.2[A]	1.3	1.98	-	-	-
PCB 141	<0.11	<0.12	<0.12	<0.11	<0.11	0.20	-	-	-
PCB 149	0.99	0.44	1.2	1.7[A]	0.90	1.25	-	-	-
PCB 151	0.42	0.19 J	0.23 J	0.57[A]	0.32	0.56	-	-	-
PCB 156	<0.16	<0.17	<0.18	<0.16	<0.15	0.16	-	-	-
PCB 170	0.54[A]	0.40	0.64[A]	0.82[A]	0.51[A]	0.47	-	-	-
PCB 174	0.33	0.24 J	0.37	0.74[A]	0.25 J	0.49	-	-	-
PCB 177	0.16 J	<0.17	0.18 J	0.37[A]	<0.15	0.36	-	-	-
PCB 180	1.2[A]	0.78	1.2[A]	2.0[A]	0.82	1.02	-	-	-
PCB 183	<0.20	<0.21	<0.23	0.52[A]	<0.19	0.37	-	-	-
PCB 187	0.70	0.52	0.82	1.2[A]	0.65	0.87	-	-	-
PCB 194	<0.19	<0.20	<0.21	<0.19	<0.18	0.33	-	-	-
PCB 195	<0.10	<0.11	0.13 J[A]	<0.11	<0.099	0.11	-	-	-
PCB 201	<0.23	<0.24	<0.26	<0.24	<0.22	0.05	-	-	-
PCB 203	<0.12	<0.12	<0.13	<0.12	<0.11	0.17	-	-	-
∑ detected PCBs	**12.9**	**3.85**	**12.3**	**19.6[A,B]**	**12.0**	**18.3, 18[a], 26.5[b]**	**22.7**	**22.7**	**180**

Notes:
1 - San Francisco Estuary Institute: Updated Ambient Concentrations of Toxic Chemicals in San Francisco Bay Sediments (SFEI 2015).
2 - U.S. Fish and Wildlife Service Biological Opinion on the Effects of the Proposed Cullinan Ranch Restoration Project, Napa and Solano Counties, California (USFWS 2010).
3 - Montezuma Wetlands Restoration Project Waste Discharge Requirements Order No. R2-2012-0087 (SFRWQCB 2012).
a - San Francisco Bay Bioaccumulation Trigger Level (SFEI 2025).
b - Total PCB concentration SF Bay TMDL threshold (= 99th percentile for San Francisco Bay [SFEI 2025]).
J - Analyte detected below the method reporting limit (MRL) and the reported value is therefore an estimate.
All concentrations reported as being below the laboratory MDL are reported above as < the MDL.
A - Value exceeds Bay Background (SFEI 2015).
B – Value exceeds San Francisco Bay Bioaccumulation Trigger.

Table 4-1. (*continued*) Berkeley Water Transportation Pier Ferry Project 2025 Sediment Sample Chemistries.

Analyte	TEF	Sample ID										Bay Background[1] <100% fines	CRRP Screening Criteria[2]	MWRP Screening Criteria[3]	
		BWTPF-DU1		BWTPF-DU2		BWTPF-DU3		BWTPF-DU4		BWTPF-DU5				Surface	Foundation
Dioxins and Furans (ng/kg, dry wt)		**Conc.**	**TEQ**	**Conc.**	**TEQ**	**Conc.**	**TEQ**	**Conc.**	**TEQ**	**Conc.**	**TEQ**				
1,2,3,4,6,7,8-HpCDD	0.05	3.7 J	0.185	3.0 J	0.15	8.5 J	0.425	10	0.5	5.1 J	0.255	-	-	-	-
1,2,3,4,6,7,8-HpCDF	0.02	0.93 J	0.0186	0.90 J	0.018	1.7 J	0.034	2.1 J	0.042	1.1 J	0.022	-	-	-	-
1,2,3,4,7,8-HxCDD	0.09	0.24 J	0.0216	0.12 J	0.0108	0.22 J	0.0198	0.35 J	0.0315	<0.033	0	-	-	-	-
1,2,3,4,7,8-HxCDF	0.3	0.28 J	0.084	0.26 J	0.078	0.46 J	0.138	0.45 J	0.135	0.23 J	0.069	-	-	-	-
1,2,3,4,7,8,9-HpCDF	0.1	0.26 J	0.026	0.18 J	0.018	0.22 J	0.022	0.30 J	0.03	0.14 J	0.014	-	-	-	-
1,2,3,6,7,8-HxCDD	0.07	0.40 J	0.028	0.37 J	0.0259	0.72 J	0.0504	1.1 J	0.077	0.51 J	0.0357	-	-	-	-
1,2,3,6,7,8-HxCDF	0.09	0.24 J	0.0216	0.25 J	0.0225	0.30 J	0.027	0.40 J	0.036	0.19 J	0.0171	-	-	-	-
1,2,3,7,8-PeCDD	0.4	0.21 J	0.084	0.32 J	0.128	0.40 J	0.16	0.37 J	0.148	0.18 J	0.072	-	-	-	-
1,2,3,7,8-PeCDF	0.1	<0.019	0	<0.056	0	<0.035	0	<0.031	0	<0.034	0	-	-	-	-
1,2,3,7,8,9-HxCDD	0.05	0.31 J	0.0155	0.26 J	0.013	0.54 J	0.027	0.73 J	0.0365	0.30 J	0.015	-	-	-	-
1,2,3,7,8,9-HxCDF	0.2	0.2 J	0.04	0.15 J	0.03	0.31 J	0.062	0.18 J	0.036	0.28 J	0.056	-	-	-	-
2,3,4,6,7,8-HxCDF	0.1	0.26 J	0.026	0.33 J	0.033	0.45 J	0.045	0.63 J	0.063	0.30 J	0.03	-	-	-	-
2,3,4,7,8-PeCDF	0.1	0.48 J	0.048	0.76 J	0.076	0.80 J	0.08	1.1 J	0.11	0.75 J	0.075	-	-	-	-
2,3,7,8-TCDD	1	0.10 J	0.1	<0.006	0	0.15 J	0.15	0.18 J	0.18	<0.013	0	-	-	-	-
2,3,7,8-TCDF	0.07	0.69 J	0.0483	0.59 J	0.0413	1.6 J	0.112	1.7 J	0.119	0.91 J	0.0637	-	-	-	-
OCDD	0.001	23	0.023	18 J	0.018	45	0.045	43	0.043	27	0.027	-	-	-	-
OCDF	0.002	1.7 J	0.0034	1.8 J	0.0036	3.0 J	0.006	3.4 J	0.0068	1.9 J	0.0038	-	-	-	-
∑ Dioxin/Furan ng TEQ/kg	**NA**	**NA**	**0.773**	**NA**	**0.666**	**NA**	**1.40**	**NA**	**1.59**	**NA**	**0.755**	**2.90 (10[a])**	**20**	**-**	**-**

Notes:
1 - San Francisco Estuary Institute: Updated Ambient Concentrations of Toxic Chemicals in San Francisco Bay Sediments (SFEI 2015).
2 - U.S. Fish and Wildlife Service Biological Opinion on the Effects of the Proposed Cullinan Ranch Restoration Project, Napa and Solano Counties, California (USFWS 2010).
3 - Montezuma Wetlands Restoration Project Waste Discharge Requirements Order No. R2-2012-0087 (SFRWQCB 2012).
a - San Francisco Bay Bioaccumulation Trigger Level (SFEI 2025).
J - Analyte detected below the method reporting limit (MRL) and the reported value is therefore an estimate.
All concentrations reported as being below the laboratory MDL are reported above as < the MDL.
TEF = Toxicity Equivalency Factor.
TEQ = Toxicity Equivalency Quotient.

4.2. Berkeley BWTPF-DU4 Z-Layer Composite: Results of Physical/Chemical Analyses

The Berkeley BWTPF-DU4 Z-Layer composite sediment was evaluated for total PCBs to determine if the sediment layer that would be exposed after dredging operations would exceed overlying sediment total PCBs concentrations. Total solids and TOC were also evaluated. The results of analysis of the Z-layer composite sediments are presented in Table 4-2.

Total Solids and Total Organic Carbon

Total solids in the BWTPF-DU4 Z-Layer composite was 0.466%. The TOC concentration was 75.2%.

Polychlorinated Biphenyls (PCBs)

The BWTPF-DU4 Z-Layer composite total PCBs concentration was 0.58 µg/kg, which was below the BWTPF-DU4 concentration of 19.6 µg/kg.

4.3 Results of Chemical Analyses of Berkeley Modified Elutriate

The sediment MET elutriate was analyzed and evaluated to predict the concentrations of metals that would be present in decant water discharged from a wetland beneficial reuse site following the upland placement of dredged material; the results of these analyses are summarized in Table 4-3.

None of the MET analyte concentrations exceeded available screening criteria.

Table 4-2. BWTPF-DU4 Z-Layer Composite Sediment Sample Chemistries.

Analyte	Sample ID
	BWTPF-DU4 Z-Layer
% Solids	75.2
% TOC	0.466
PCBs (µg/kg, dry wt)	
PCB 005/008	<0.15
PCB 018	<0.12
PCB 028	<0.13
PCB 031	<0.12
PCB 033	<0.062
PCB 044	<0.16
PCB 049	<0.14
PCB 052	<0.10
PCB 056	<0.062
PCB 060	<0.17
PCB 066	<0.15
PCB 070	<0.12
PCB 074	<0.14
PCB 087	<0.16
PCB 095	<0.087
PCB 097	<0.18
PCB 099	0.17 J
PCB 101	0.15 J
PCB 105	<0.14
PCB 110	<0.12
PCB 118	<0.11
PCB 128	<0.18
PCB 132/153	<0.32
PCB 138/158	<0.32
PCB 141	<0.087
PCB 149	<0.14
PCB 151	<0.12
PCB 156	<0.13
PCB 170	0.14 J
PCB 174	<0.076
PCB 177	<0.12
PCB 180	0.12 J
PCB 183	<0.16
PCB 187	<0.12
PCB 194	<0.15
PCB 195	<0.082
PCB 201	<0.18
PCB 203	<0.092
∑ detected PCBs	**0.58 J**

Notes:
J - Analyte detected below the method reporting limit (MRL) and the reported value is therefore an estimate.
All concentrations reported as being below the laboratory MDL are reported above as < the MDL.

Table 4-3. Berkeley Water Transportation Pier Ferry Project 2025 Modified Elutriate Test Chemistry Results.

Analyte	Sample ID					MWRP Surface Water Discharge Screening Criteria[1]
	BWTPF-DU1	BWTPF-DU2	BWTPF-DU3	BWTPF-DU4	BWTPF-DU5	
Metals (µg/L)						
Dissolved Arsenic	7.50	10.0	4.78	4.54	11.4	69
Dissolved Cadmium	<0.0130	0.0137 J	<0.0130	<0.0130	<0.0130	3.9[a]
Dissolved Chromium	1.02	1.21	0.978 J	0.855 J	0.875 J	16[b]
Dissolved Copper	0.682	0.643	0.487 J	0.591	0.631	9.4
Dissolved Lead	0.0635	0.0737	0.0753	0.0879	0.111	65
Total Mercury	0.00403	0.00374	0.00301	0.00379	0.00287	2.1
Dissolved Nickel	1.68	2.03	1.58	1.50	2.18	74
Total Selenium	1.14	1.84	0.850	0.643 J	1.71	20
Dissolved Silver	<0.0780	<0.0780	<0.0780	<0.0780	<0.0780	1.9[a]
Dissolved Zinc	1.16	0.934 J	0.902 J	0.843 J	0.705 J	90

Notes:
1- Montezuma Wetlands Restoration Project Waste Discharge Requirements Order No. R2-2012-0087 (SFRWQCB 2012).
a - Assumes a hardness of 100 mg/L as $CaCO_3$.
b - WQO is for Chromium VI; however, it may be met as total Chromium.
J - Analyte detected below the method reporting limit (MRL) and the reported value is therefore an estimate.
All concentrations reported as being below the laboratory MDL are reported above as < the MDL.

5. RESULTS OF BIOLOGICAL TESTING

Four different biological tests were performed for each of the BWTPF DU samples:

1. A 10-day amphipod survival test with *Leptocheirus plumulosus*,
2. A 10-day juvenile polychaete survival test with *Neanthes arenaceodentata*,
3. A 48-hr bivalve embryo survival and development test with the mussel *Mytilus galloprovincialis,* and
4. A 96-hr modified (MET) elutriate mysid survival test with *Americamysis bahia,*

All tests were performed following protocols as outlined in the SAP (PER 2025). Test data and summaries of the statistical analyses for the bioassay results are provided in Appendices E-M. Summaries of test conditions and test acceptability criteria are provided in Appendix N.

5.1 Benthic (Solid-Phase Sediment) Toxicity Testing

Solid-phase bioassays were conducted with the amphipod *L. plumulosus* and the polychaete *N. arenaceodentata*. Positive and negative Control treatments were tested concurrently with the bioassays. The positive Control for both species consisted of a 96-hr waterborne reference toxicant test. The results of these tests were compared to PER's in-house reference toxicant test response databases to determine whether these test organisms were responding to toxic stress in a typical fashion. The negative Control (termed "Lab Control") for the *L. plumulosus* and *N. arenaceodentata* tests consisted of sediment collected from Paradise Cove located in Central SF Bay.

ITM guidance requires that site sediment results be compared with disposal site and/or reference site sediment results or a reference site database (if available) to determine the potential impact of whole sediment on benthic organisms at and beyond the boundaries of the disposal site (USEPA/USACE 1998). As detailed in the ITM, comparative guidelines for acceptance were followed as listed below:

1. If survival is greater in the proposed dredged sediments than in reference site sediment(s) or the reference site sediment database, the proposed dredged sediments are <u>not</u> acutely toxic to benthic organisms.
2. If the difference between the survival response in the site sediment and in the reference sediment (or the 'reference site database survival') is ≤20% for amphipods or ≤10% for polychaetes, the test sediments are <u>not</u> acutely toxic to benthic organisms.
3. If the difference between the survival response in the site sediment and in the reference sediment (or the 'reference site database survival') is >20% for amphipods or >10% for polychaetes, then the respective survival responses must be statistically compared. If a statistically significant reduction in survival is observed for the site sediment, then the site sediment is considered to be acutely toxic to benthic organisms. Statistical analyses are not performed when reference site database values are used.

5.1.1 Sediment Porewater Characterization

Prior to the initiation of the sediment tests, the composite samples were removed from refrigerated storage, and each sample was re-homogenized in a large stainless-steel bowl. Aliquots of the re-homogenized composite sediments were centrifuged at 2,500 g for 15 minutes; the resulting supernatant porewaters were carefully collected and analyzed for ammonia analysis (Table 5-1). A summary of the measured concentrations of total ammonia and total sulfides in the sediment porewaters, and summary tables of the total ammonia concentrations measured in the test overlying waters are presented in Appendix E.

Table 5-1. Sediment Porewater Initial Water Ammonia Levels.

Sample ID	pH	Total Ammonia (mg/L N)	Total Sulfide (mg/L)
BWTPF-DU1	7.65	2.01	0.042
BWTPF-DU2	7.79	2.32	0.019
BWTPF-DU3	7.73	7.50	0.066
BWTPF-DU4	7.70	10.9	0.017
BWTPF-DU5	7.77	3.98	0.039

5.1.2 Effects of the BWTPF Sediments on *Leptocheirus plumulosus*

The results of this testing are summarized in Table 5-2. There was 94% survival in the Lab Control treatment, indicating an acceptable survival response by the test organisms. There was ≥83% survival in the site sediment samples. The difference in survival in the site sediments relative to the reference sediments database survival response was <20%. The difference in survival in the site sediments relative to the control treatment was <20%. These test results indicate that the BWTPF sediments are not toxic to amphipods. The test data and summary of statistical analyses for this testing are presented in Appendix F.

Table 5-2. *Leptocheirus plumulosus* Survival in the BWTPF Sediments.

Test Treatment	% Survival in Test Replicates					Mean % Survival
	Rep A	Rep B	Rep C	Rep D	Rep E	
Lab Control	95.0	90.0	90.0	100	95.0	94.0
BWTPF-DU1	100	95.0	95.0	95.0	100	97.0
BWTPF-DU2	90.0	100	90.0	95.0	90.0	93.0
BWTPF-DU3	90.0	90.0	80.0	65.0	90.0	83.0
BWTPF-DU4	100	100	100	100	95.0	99.0
BWTPF-DU5	100	95.0	90.0	95.0	100	96.0
SF-11 Database[A]	-	-	-	-	-	97.3

A – Pacific EcoRisk 2020-2022 testing mean survival results (summary provided in Appendix F).

5.1.2.1 Reference Toxicant Toxicity to *Leptocheirus plumulosus* - The results of this test are presented in Table 5-3. The LC_{50} for this test was consistent with the reference toxicant test database for this species, indicating that these test organisms were responding to toxic stress in a typical fashion. The test data and summary of statistical analyses for this test are presented in Appendix G.

Table 5-3. Reference Toxicant Testing: Effects of KCl on *Leptocheirus plumulosus.*

KCl Treatment (g/L)	Mean % Survival
Lab Control	100
0.25	100
0.5	100
1	**75.0***
2	**5.0***
4	**0.0***
LC_{50} =	1.23 g/L KCl
Typical Response Range (mean LC_{50} ± 2 SD) =	0.93 – 1.52 g/L KCl

* The survival response at this treatment was significantly less than the Lab Control response at $p < 0.05$.

5.1.3 Effects of the BWTPF Sediments on *Neanthes arenaceodentata*

The results of this testing are summarized in Table 5-4. There was 100% survival in the Lab Control treatment, indicating an acceptable survival response by the test organisms. There was ≥96% survival in the site sediment samples. The difference in survival in the site sediments relative to the reference sediment database survival response was <10%. The differences in survival in the site sediments relative to the control treatment was <10%. These test results indicate that the BWTPF sediments are not toxic to polychaetes. The test data and summary of statistical analyses for this testing are presented in Appendix H.

Table 5-4. *Neanthes arenaceodentata* Survival in the BWTPF Sediments.

Test Treatment	% Survival in Test Replicates					Mean % Survival
	Rep A	Rep B	Rep C	Rep D	Rep E	
Lab Control	100	100	100	100	100	100
BWTPF-DU1	100	90.0	100	100	100	98.0
BWTPF-DU2	100	100	100	100	100	100
BWTPF-DU3	100	100	100	100	100	100
BWTPF-DU4	100	100	100	100	100	100
BWTPF-DU5	100	100	100	90.0	90.0	96.0
SF-11 Database[A]	-	-	-	-	-	99.0

A – Pacific EcoRisk 2020-2022 testing mean survival results (summary provided in Appendix H).

5.1.3.1 Reference Toxicant Toxicity to *Neanthes arenaceodentata* - The results of this test are presented in Table 5-5. The LC_{50} for this test was consistent with the reference toxicant test database for this species, indicating that these test organisms were responding to toxic stress in a typical fashion. The test data and summary of statistical analyses for this test are attached as Appendix I.

Table 5-5. Reference Toxicant Testing: Effects of KCl on *Neanthes arenaceodentata.*

KCl Treatment (g/L)	Mean % Survival
Lab Control	100
0.5	100
1	100
2	**0.0***
3	**0.0***
4	**0.0***
LC_{50} =	1.41 g/L KCl
Typical Response Range (mean $LC_{50} \pm 2$ SD) =	1.07 – 2.13 g/L KCl

* The survival response at this treatment was significantly less than the Lab Control response at $p < 0.05$.

5.2 Water Column (Standard Elutriate Test) Toxicity Testing

The 48-hr bivalve embryo survival and development toxicity test with *M. galloprovincialis* was performed on standard sediment elutriates to assess the water column effects of dredged material disposal. Detailed toxicity test results are presented in Section 5.2.1. The test data and summary of statistical analyses for these tests are presented in Appendices J.

Positive and negative Lab Control treatments were tested concurrently with the site sediment elutriates. The positive Lab Control consisted of a 'waterborne' reference toxicant test; the results of these tests were compared to PER's reference toxicant test response database to determine whether these test organisms were responding to toxic stress in a typical fashion. The negative Lab Control (and dilution media) consisted of 0.45 µm-filtered natural seawater (obtained from the UC Davis - Granite Canyon Laboratory), diluted to a test salinity of 30 ppt via addition of Type 1 lab water (reverse-osmosis de-ionized water). As an additional QA measure, the site water that was collected from the same area as the sediment cores, and which was mixed with the sediments to prepare the 100% elutriates, was also tested.

The test results for the sediment composite elutriates were compared with the test organism responses at the negative Lab Control treatment to determine the potential impact of the proposed dredged materials on pelagic organisms at and beyond the boundaries of the disposal site (USEPA/USACE 1998). The following criteria were used for suitability determinations:

1. If the survival response and/or normal embryo development response in the 100% sediment elutriate treatment is ≥ the Control (clean seawater) treatment response(s), the dredged material is not predicted to be acutely toxic to water column organisms.
2. If the reduction in survival response and/or normal embryo development response in the 100% sediment elutriate treatment relative to the Control treatment is ≤10%, there is no need for statistical analyses and no indication of water column toxicity attributable to the test sediments.
3. If the reduction in survival response and/or normal embryo development response in the 100% sediment elutriate treatment relative to the Control treatment is >10%, then the data must be evaluated statistically to determine the magnitude of toxicity. If there is >50% survival or normal embryo development in the 100% elutriate treatment, the LC_{50}/EC_{50} is assumed to be ≥100%. If there is <50% survival or normal embryo development in at least one of the elutriate treatments, then an LC_{50}/EC_{50} should be calculated and compared with existing acceptability standards.

In order for the dredged material to be determined suitable for disposal at in-Bay sites (e.g., SF-11) compliance with the narrative water quality standard must be met. Compliance with the narrative water quality standard is determined by evaluating whether the dredge material concentration (suspended particulate phase [SPP]), after mixing, would exceed 1% of the LC_{50} or EC_{50} value calculated from the sediment elutriate test (whichever is most conservative), outside of the mixing zone. Since the EC_{50}/LC_{50} values were >100% sediment elutriate, dilution model calculations were not necessary.

5.2.1 Toxicity of the BWTPF Sediment Elutriates to *Mytilus galloprovincialis*

The results of this testing are summarized below in Tables 5-6 through 5-10. There was ≥83.7% survival and ≥97.9% normal development in the Lab Control treatments, indicating acceptable responses by the test organisms. The sediment elutriates normal development EC_{50} and survival LC_{50} values were >100% elutriate. The test data and the summary of statistical analyses for these tests are presented in Appendix J.

Table 5-6. Effects of BWTPF-DU1 Sediment Elutriate on *Mytilus galloprovincialis.*

Elutriate Treatment	Mean % Survival	Mean % Normal Development
Lab Control	95.6	98.7
1%	94.8	98.6
10%	96.6	98.7
50%	100	98.4
100%	98.7	98.3
Site Water	77.4	98.9
Salt Control	96.1	97.1
Survival LC_{50} or Development EC_{50} =	>100% elutriate	>100% elutriate

Table 5-7. Effects of BWTPF-DU2 Sediment Elutriate on *Mytilus galloprovincialis.*

Elutriate Treatment	Mean % Survival	Mean % Normal Development
Lab Control	88.8	98.0
1%	82.0	98.2
10%	81.4	98.7
50%	83.7	98.4
100%	83.0	97.2
Site Water	77.4	98.9
Salt Control	96.1	97.1
Survival LC_{50} or Development EC_{50} =	>100% elutriate	>100% elutriate

Table 5-8. Effects of BWTPF-DU3 Sediment Elutriate on *Mytilus galloprovincialis.*

Elutriate Treatment	Mean % Survival	Mean % Normal Development
Lab Control	90.9	98.1
1%	82.4	97.9
10%	89.1	98.8
50%	91.4	98.4
100%	86.8	92.7
Site Water	77.4	98.9
Salt Control	96.1	97.1
Survival LC_{50} or Development EC_{50} =	>100% elutriate	>100% elutriate

Table 5-9. Effects of BWTPF-DU4 Sediment Elutriate on *Mytilus galloprovincialis.*

Elutriate Treatment	Mean % Survival	Mean % Normal Development
Lab Control	88.6	97.9
1%	86.3	98.0
10%	89.8	97.4
50%	85.7	97.1
100%	**48.6***	**49.6***
Site Water	77.4	98.9
Salt Control	96.1	97.1
Survival LC_{50} or Development EC_{50} =	>100% elutriate	>100% elutriate

* The response at this test treatment was significantly less than the Control treatment response at $p < 0.05$.

Table 5-10. Effects of BWTPF-DU5 Sediment Elutriate on *Mytilus galloprovincialis.*

Elutriate Treatment	Mean % Survival	Mean % Normal Development
Lab Control	83.7	98.8
1%	82.6	98.7
10%	77.4	98.8
50%	83.9	97.4
100%	81.9	98.1
Site Water	77.4	98.9
Salt Control	96.1	97.1
Survival LC_{50} or Development EC_{50} =	>100% elutriate	>100% elutriate

5.2.1.1 Reference Toxicant Toxicity to *Mytilus galloprovincialis* Embryos - The results of this test are presented in Table 5-11. The EC_{50} for this test was consistent with PER's reference toxicant test database for this species, indicating that these test organisms were responding to toxic stress in a typical fashion. The test data and summary of statistical analyses for this test are presented in Appendix K.

Table 5-11. Reference Toxicant Testing: Effects of KCl on *Mytilus galloprovincialis.*

KCl Treatment (g/L)	Mean % Normal Embryo Development
Lab Control	98.2
0.5	99.4
1	98.4
2	96.1
3	**4.3***
4	**0.0***
EC_{50} =	2.51 g/L KCl
Typical Response Range (mean ± 2 SD)	1.74 – 2.88 g/L KCl

* The normal development response at this treatment was significantly less than the Lab Control response at $p < 0.05$.

5.3 Toxicity Testing of BWTPF Modified Elutriate using *Americamysis bahia*

The results of the MET tests are summarized in Table 5-12. There was 100% survival at the Lab Control treatment, indicating an acceptable survival response by the test organisms. There was ≥96% survival in the composite MET samples. The test data and summary of statistical analyses for this testing are presented in Appendix L.

Table 5-12. Effects of BWTPF MET Elutriates on *Americamysis bahia.*

Test Treatments	Mean % Survival
Lab Control	100
BWTPF-DU1	100
BWTPF-DU2	96.0
BWTPF-DU3	98.0
BWTPF-DU4	98.0
BWTPF-DU5	100
Site Water	100

5.3.1 Reference Toxicant Toxicity to *Americamysis bahia*

The results of this test are presented in Table 5-13. The LC_{50} for this test was consistent with PER's reference toxicant test database for this species, indicating that these test organisms were responding to toxic stress in a typical fashion The test data and summary of statistical analyses for this test are presented in Appendix M.

Table 5-13. Reference Toxicant Testing: Effects of KCl on *Americamysis bahia*.

KCl Treatment (g/L)	Mean % Survival
Lab Control	97.5
0.125	97.7
0.25	100
0.5	97.5
1	**0.0***
2	**0.0***
LC_{50} =	0.70 g/L KCl
Typical Response Range (mean ± 2 SD) =	0.52 – 0.77 g/L KCl

* The response at this test treatment was significantly less than the Control treatment response at $p < 0.05$.

6. QUALITY CONTROL REVIEW

6.1 Conventional and Chemical Analytical Quality Control Summary

The QA/QC review entailed reviewing the contract lab Data Reports for sample integrity, correct methodology, and compliance with all appropriate quality Lab Control requirements. The overall data quality assessment found that all data were usable. A summary of any anomalies reported by the analytical laboratory are presented in Sections 6.1.1 – 6.1.3. Appendices B and C contains the sediment conventional and chemical analysis reports. Appendix D contains the MET results report. The report includes the contract laboratory QA/QC narrative.

6.1.1 Sediment Conventional and Chemical Analytical QA/QC Summary

Eurofins Calscience Report 570-230772-1

Metals – The method blank for preparation batch 570-573335 and analytical batch 570-573673 contained copper above the method detection limit (MDL). This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or re-analysis of samples was not performed.

The matrix spike duplicate (MSD) recoveries for preparation batch 570-573335 and analytical batch 570-573673 were outside control limits. Non-homogeneity was suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Butyltins – The matrix spike (MS)/ MSD and/or LCS/laboratory control sample duplicate (LCSD) for preparation batches 570-573582 and 570-57441 and analytical batches 570-574619 and 5170-576588 were recovered outside control limits for monobutyltin. Monobutyltin has been identified as a poor performing analyte by the analytical laboratory when analyzed using this method; therefore, re-extraction/re-analysis was not performed. Batch precision also exceeded control limits for this analyte. These results were reported and qualified.

The relative percent difference (RPD) of the LCS and LCSD for preparation batch 570-573582 and analytical batch 570-574619 were recovered outside control limits for tetrabutyltin, tributyltin, dibutyltin, and tripentyltin.

The method blank for preparation batch 570-574411 and analytical batch 570-576588 contained dibutyltin above the MDL. This target analyte concentration was less than the RL in the method blank; therefore, re-extraction and/or re-analysis of samples was not performed.

OCl Pesticides – The MS/MSD/sample duplicate (DUP) precision for preparation batch 570-572188 and analytical batch 570-578599 were outside control limits. Sample matrix interference and/or non-homogeneity were suspected because the associated LCS/LCSD precision was within acceptance limits.

PCBs – The continuing calibration verification (CCV) associated with batch 570-575699 recovered above the upper control limit for PCB-60. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data were reported.

Dioxins/Furans – Diphenyl ethers were found to be interfering with 1,2,3,7,8-PeCDF at greater than 20%. The native compound was marked non-detect due to diphenyl ether interference.

Diphenyl ethers were found to be interfering with non-2,3,7,8 substituted furans in totals reporting. Non-2,3,7,8 substituted furans with interfering diphenyl ethers were removed from reporting in totals.

The Isotope Dilution Analyte (IDA) recovery associated with the MS was below the method recommended limit. Signal-to-noise ratios were within recommended limits. Matrix interference was suspected in affecting sample results.

The bracketing CCV associated with batch 410-649163 had an analyte with percent difference values that were outside the method. Per method guidelines, an average relative response factor was calculated from the bracketing CCV and was used to quantitate any positive results in the associated samples for the affected analytes.

No additional analytical or quality issues were noted.

Eurofins Calscience Report 570-230772-2

No analytical or quality issues were noted.

6.1.2 Z-Layer Composite Sediment Conventional and Chemical Analytical QA/QC Summary

Eurofins Calscience Report 570-234876-1

PCBs – PCB-5/8 was recovered outside control limits for the MSD associated with preparation batch 570-590041 and analytical batch 570-589364. The lab stated that this is not indicative of a systematic control problem because these were random marginal exceedances.

No additional analytical or quality issues were noted.

6.1.3 MET Sample Analytical QA/QC Summary

Eurofins Calscience Report 570-231775-1

Metals – MS recoveries for analytical batch 350-7267 were outside control limits. Sample matrix interference was suspected because the associated LC recovery was within acceptance limits.

MS/MS recoveries and precision for preparation batch 350-6997 and 350-7217 and analytical batch 350-7354 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated LCS/LCSD precision was within acceptance limits.

The method blank for preparation batches 350-6997, 350-7217, and 350-7363 contained zinc above the RL. None of the samples associated with this method blank contained the target compound; therefore, re-extraction and/or re-analysis of samples were not performed.

No additional analytical or quality issues were noted.

7. SUMMARY

BWTPF sediments were analyzed to evaluate suitability for placement at in-Bay disposal sites (e.g., SF-11), Cullinan Ranch Restoration Project (CRRP), or Montezuma Wetlands Restoration Project (MWRP) beneficial reuse sites.

A summary of the chemical and biological evaluations assessing each of these potential placement/disposal options is provided below in Sections 7.1 through 7.3. Due to the observation of elevated total PCBs in the BWTPF-DU4 sediment, a preliminary Z-layer assessment was performed and is presented in Section 7.4.

7.1 Unconfined Aquatic Disposal in-Bay

One or more analyte(s) measured in the BWTPF sediments were above SF Bay Background concentrations. Total PCBs in the BWTPF-DU4 were above the SF Bay Bioaccumulation trigger. Benthic toxicity tests indicated that none of the measured compounds were biologically available to cause toxicity in the 10-day sediment tests. The narrative WQO was met for the sediment elutriate tests.

Based on these results, the BWTPF-DU1, BWTPF-DU2, BWTPF-DU3, and BWTPF-DU5 sediments would be considered suitable for unconfined aquatic disposal (SUAD) at in-Bay sites; the BWTPF-DU4 sediments would be considered not suitable for unconfined aquatic disposal (NUAD) at in-Bay sites.

7.2 Placement at the Cullinan Ranch Restoration Project

The total PAH concentration in the BWTPF-DU1 sediment exceeded CRRP screening criteria. The remaining analyte concentrations in the BWTPF-DU1 sediment and remaining BWTPF sediments were below CRRP screening criteria. Benthic toxicity tests indicated that none of the measured compounds were biologically available to cause toxicity in the 10-day sediment tests.

Based on these results, the BWTPF-DU2, BWTPF-DU3, BWTPF-DU4, and BWTPF-DU5 sediments would be considered suitable for placement at CRRP. BWTPF-DU1 sediments are not considered suitable for placement at CRRP.

7.3 Placement at the Montezuma Wetlands Restoration Project

The total PAH concentration in the BWTPF-DU1 sediment exceeded MWRP Surface screening criteria. The remaining analyte concentrations in the BWTPF-DU1 sediment and remaining BWTPF sediments were below MWRP Surface screening criteria. Sediment analyte concentrations were all below MWRP Foundation screening criteria. Benthic toxicity tests

indicated that none of the measured compounds were biologically available to cause toxicity in the 10-day sediment tests.

Based on these results, the BWTPF-DU1, BWTPF-DU2, BWTPF-DU3, BWTPF-DU4, and BWTPF-DU5 sediments would be considered suitable for placement at MWRP as Surface material.

7.4 Z-layer Assessment

Due to an exceedance of the SF-Bay Bioaccumulation Trigger for total PCBs, the BWTPF-DU4 Z-Layer sediment composite sample was submitted for analysis of total PCBs. The measured total PCBs concentration in the Z-layer composite was less than the total PCB concentration reported for the proposed overlying dredge material. As a result, no additional assessment of the Z-layer is proposed.

8. REFERENCES

PER (2025) Sediment Characterization Sampling and Analysis Plan (SAP) for the Dredging of Sediment in Support of the Berkeley Water Transportation Pier Ferry Project. Prepared for COWI North and the City of Berkeley. Prepared by Pacific EcoRisk, Fairfield, CA.

SFEI (2015) Regional Monitoring Program: Updated Ambient Concentrations of Toxic Chemical in San Francisco Bay Sediments. San Francisco Estuary Institute. July 2015.

SFEI (2025) Dredged Material Testing Thresholds for San Francisco Bay Area Sediments. Prepared by San Francisco Estuary Institute (http://www.sfei.org/content/dmmo-ambient-sediment-conditions). Prepared for the Long-Term Management Strategy Program for the Placement of Dredged Material in the San Francisco Bay Region.

SFRWQCB (2012) Montezuma Wetlands Restoration Project Waste Discharge Requirements Order No. R2-2012-0087. California Regional Water Quality Control Board San Francisco Bay Region 2.

USEPA/USACE (1998) Evaluation of Dredged Material Proposed for Discharge in Waters of the U.S. – Testing Manual – Inland Testing Manual. U.S. Environmental Protection Agency/U.S. Army Corps of Engineers. EPA-823-B-94-002. U.S. Environmental Protection Agency, Office of Water (4305).

USFWS (2010) U.S. Fish and Wildlife Service: Intra-Service Section 7 Consultation on Implementation of the Proposed Cullinan Ranch Restoration Project. Biological Opinion on the Effects of the Proposed Cullinan Ranch Restoration Project Located in Napa and Solano Counties, California.

Appendix A

Sampling Field Logs and Data Sheets

Pacific EcoRisk
Environmental Consulting and Testing

Sediment Core Collection Form

2250 Cordelia Road Fairfield, CA 94534
Phone: (707) 207-7760

Project Name:	Berkeley BWTPF	Station ID:	**BWTPF – DU1-01**
Date:	May 6, 2025	Project No.:	39995
Vertical Datum:	**MLLW** MLW Other	Depth Measurement:	Sounder (Leadline)
Navigation Datum:	NAD83	Field Crew:	Miguel G, David S
Project Depth:	-12.5 ft MLLW	Overdredge and Z-layer:	- 1 – 0.5 ft MLLW

	Attempt 1	Attempt 2	Attempt 3	Description of Material	Depth
Time:	0835			Mudline	
Latitude/Northing:	37848695				
Longitude/Easting:	-122.360379				
(A) Measured Water Depth (ft)	-15.9				
(B) Tide Height (ft)	+4.5				
(C) Mudline Elevation (A+B=C)	-11.4				
(D) Calculated Core Length (ft) -[(PD+OD+Z)-C]=D	2.6				
Penetration/Recovery (ft)	2.6 / 2.6				
Core Characteristics					
Sediment Type	cobble, gravel, sand C M F, (silt clay), (organic matter)	cobble, gravel, sand C M F, silt clay, organic matter	cobble, gravel, sand C M F, silt clay, organic matter	Comments:	
Sediment Color	(gray), (black), (brown), brown surface, olivine	gray, black, brown, brown surface, olivine	gray, black, brown, brown surface, olivine		
Sediment Odor	(None) slight, mod, strong H_2S, petroleum, septic	None, slight, mod, strong H_2S, petroleum, septic	None, slight, mod, strong H_2S, petroleum, septic		
Homogenous (H) or Layering (L)	H (L)	H L	H L	Recorded by: MG	

Pacific EcoRisk
Environmental Consulting and Testing

Sediment Core Collection Form

2250 Cordelia Road Fairfield, CA 94534
Phone: (707) 207-7760

Project Name:	Berkeley BWTPF	Station ID:	**BWTPF – DU1 - 02**
Date:	May 6 , 2025	Project No.:	39995
Vertical Datum:	**MLLW** MLW Other	Depth Measurement:	Sounder (Leadline)
Navigation Datum:	NAD83	Field Crew:	Miguel G, David S
Project Depth:	-12.5 ft MLLW	Overdredge and Z-layer:	- 1 – 0.5 ft MLLW

	Attempt 1	Attempt 2	Attempt 3	Description of Material	Depth
Time:	0915			Mudline	
Latitude/Northing:	37.849459				
Longitude/Easting:	-122.358109				
(A) Measured Water Depth (ft)	-15.0				
(B) Tide Height (ft)	+4.2				
(C) Mudline Elevation (A+B=C)	-10.8				
(D) Calculated Core Length (ft) -[(PD+OD+Z)-C]=D	3.2				
Penetration/Recovery (ft)	3.2 2.5				
Core Characteristics					
Sediment Type	cobble, gravel, sand C M F, silt clay, organic matter	cobble, gravel, sand C M F, silt clay, organic matter	cobble, gravel, sand C M F, silt clay, organic matter	Comments:	
Sediment Color	gray, black, brown, brown surface, olivine	gray, black, brown, brown surface, olivine	gray, black, brown, brown surface, olivine		
Sediment Odor	None, slight, mod, strong H_2S, petroleum, septic	None, slight, mod, strong H_2S, petroleum, septic	None, slight, mod, strong H_2S, petroleum, septic		
Homogenous (H) or Layering (L)	H (L)	H L	H L	Recorded by: MG	

Pacific EcoRisk
Environmental Consulting and Testing

Sediment Core Collection Form

2250 Cordelia Road Fairfield, CA 94534
Phone: (707) 207-7760

Project Name:	Berkeley BWTPF	Station ID:	**BWTPF – DU1 - 03**
Date:	May 6 , 2025	Project No.:	39995
Vertical Datum:	**MLLW** MLW Other	Depth Measurement:	Sounder (Leadline)
Navigation Datum:	NAD83	Field Crew:	Miguel G, David S
Project Depth:	-12.5 ft MLLW	Overdredge and Z-layer:	- 1 – 0.5 ft MLLW

	Attempt 1	Attempt 2	Attempt 3	Description of Material	Depth
Time:	0945			Mudline	
Latitude/Northing:	37.850190				
Longitude/Easting:	-122.355895				
(A) Measured Water Depth (ft)	-14.5				
(B) Tide Height (ft)	+3.9				
(C) Mudline Elevation (A+B=C)	-10.6				
(D) Calculated Core Length (ft) -[(PD+OD+Z)-C]=D	3.4				
Penetration/Recovery (ft)	3.4 / 3.0				
Core Characteristics					
Sediment Type	cobble, gravel, sand C M F, (silt clay), organic matter	cobble, gravel, sand C M F, silt clay, organic matter	cobble, gravel, sand C M F, silt clay, organic matter	Comments:	
Sediment Color	(gray) (black), brown, brown surface, olivine	gray, black, brown, brown surface, olivine	gray, black, brown, brown surface, olivine		
Sediment Odor	(None), slight, mod, strong H_2S, petroleum, septic	None, slight, mod, strong H_2S, petroleum, septic	None, slight, mod, strong H_2S, petroleum, septic		
Homogenous (H) or Layering (L)	H (L)	H L	H L	Recorded by: MG	

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Environmental Consulting and Testing

Sediment Core Collection Form

2250 Cordelia Road Fairfield, CA 94534
Phone: (707) 207-7760

Project Name:	Berkeley BWTPF	Station ID:	**BWTPF – DU1 - 04**
Date:	May 6 , 2025	Project No.:	39995
Vertical Datum:	**MLLW** MLW Other	Depth Measurement:	Sounder (Leadline)
Navigation Datum:	NAD83	Field Crew:	Miguel G, David S
Project Depth:	-12.5 ft MLLW	Overdredge and Z-layer:	- 1 – 0.5 ft MLLW

	Attempt 1	Attempt 2	Attempt 3	Description of Material	Depth
Time:	1025			Mudline	
Latitude/Northing:	37.851016				
Longitude/Easting:	-122.353619				
(A) Measured Water Depth (ft)	-14.2				
(B) Tide Height (ft)	+3.4				
(C) Mudline Elevation (A+B=C)	-10.8				
(D) Calculated Core Length (ft) -[(PD+OD+Z)-C]=D	3.2				
Penetration/Recovery (ft)	3.2 3.2				
Core Characteristics					
Sediment Type	cobble, gravel, sand C M F, silt clay, organic matter	cobble, gravel, sand C M F, silt clay, organic matter	cobble, gravel, sand C M F, silt clay, organic matter	Comments:	
Sediment Color	gray, black, brown, brown surface, olivine	gray, black, brown, brown surface, olivine	gray, black, brown, brown surface, olivine		
Sediment Odor	None, slight, mod, strong H_2S, petroleum, septic	None, slight, mod, strong H_2S, petroleum, septic	None, slight, mod, strong H_2S, petroleum, septic		
Homogenous (H) or Layering (L)	H (L)	H L	H L	Recorded by: MG	

Sediment Core Collection Form

Pacific EcoRisk
Environmental Consulting and Testing
2250 Cordelia Road Fairfield, CA 94534
Phone: (707) 207-7760

Project Name:	Berkeley BWTPF	Station ID:	**BWTPF – DU 1 - 05**
Date:	May 6 , 2025	Project No.:	39995
Vertical Datum:	**MLLW** MLW Other	Depth Measurement:	Sounder (Leadline)
Navigation Datum:	NAD83	Field Crew:	Miguel G, David S
Project Depth:	-12.5 ft MLLW	Overdredge and Z-layer:	- 1 – 0.5 ft MLLW

	Attempt 1	Attempt 2	Attempt 3	Description of Material	Depth
Time:	1110			Mudline	
Latitude/Northing:	37.851847				
Longitude/Easting:	-122.351072				
(A) Measured Water Depth (ft)	13.0				
(B) Tide Height (ft)	+2.8				
(C) Mudline Elevation (A+B=C)	-10.2				
(D) Calculated Core Length (ft) -[(PD+OD+Z)-C]=D	3.8				
Penetration/Recovery (ft)	3.8 | 3.8				
Core Characteristics					
Sediment Type	cobble, gravel, (sand C M F), (silt clay), organic matter	cobble, gravel, sand C M F, silt clay, organic matter	cobble, gravel, sand C M F, silt clay, organic matter	Comments:	
Sediment Color	(gray) black, brown, brown surface, olivine	gray, black, brown, brown surface, olivine	gray, black, brown, brown surface, olivine		
Sediment Odor	(None) slight, mod, strong H_2S, petroleum, septic	None, slight, mod, strong H_2S, petroleum, septic	None, slight, mod, strong H_2S, petroleum, septic		
Homogenous (H) or Layering (L)	H (L)	H L	H L	Recorded by: MG	

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Sediment Core Collection Form

2250 Cordelia Road Fairfield, CA 94534
Phone: (707) 207-7760

Project Name:	Berkeley BWTPF	Station ID:	**BWTPF – DU1 - 06**
Date:	May 8, 2025	Project No.:	39995
Vertical Datum:	**MLLW** MLW Other	Depth Measurement:	Sounder (Leadline)
Navigation Datum:	NAD83	Field Crew:	Miguel G, David S
Project Depth:	-12.5 ft MLLW	Overdredge and Z-layer:	- 1 – 0.5 ft MLLW

	Attempt 1	Attempt 2	Attempt 3	Description of Material	Depth
Time:	1050H			Mudline	
Latitude/Northing:	37.852763				
Longitude/Easting:	-122.348631				
(A) Measured Water Depth (ft)	-13.9				
(B) Tide Height (ft)	+4.3				
(C) Mudline Elevation (A+B=C)	-9.6				
(D) Calculated Core Length (ft) -[(PD+OD+Z)-C]=D	4.4				
Penetration/Recovery (ft)	4.4 / 4.2				
Core Characteristics					
Sediment Type	cobble, gravel, sand C M F, (silt clay), organic matter	cobble, gravel, sand C M F, silt clay, organic matter	cobble, gravel, sand C M F, silt clay, organic matter	Comments: MG -5/8/25 -shell hash along Z horizon	
Sediment Color	(gray), black, (brown), brown surface, olivine	gray, black, brown, brown surface, olivine	gray, black, brown, brown surface, olivine		
Sediment Odor	(None), slight, mod, strong H_2S, petroleum, septic	None, slight, mod, strong H_2S, petroleum, septic	None, slight, mod, strong H_2S, petroleum, septic		
Homogenous (H) or Layering (L)	H (L)	H L	H L	Recorded by: MG	

Pacific EcoRisk
Environmental Consulting and Testing

Sediment Core Collection Form

2250 Cordelia Road Fairfield, CA 94534
Phone: (707) 207-7760

Project Name:	Berkeley BWTPF	Station ID:	**BWTPF – DU2 - 01**
Date:	May 8 , 2025	Project No.:	39995
Vertical Datum:	**MLLW** MLW Other	Depth Measurement:	Sounder (Leadline)
Navigation Datum:	NAD83	Field Crew:	Miguel G, David S
Project Depth:	-12.5 ft MLLW	Overdredge and Z-layer:	- 1 – 0.5 ft MLLW

	Attempt 1	Attempt 2	Attempt 3	Description of Material	Depth
Time:	1010			Mudline	
Latitude/Northing:	37.853352				
Longitude/Easting:	-122.346595				
(A) Measured Water Depth (ft)	-13.5				
(B) Tide Height (ft)	+4.3				
(C) Mudline Elevation (A+B=C)	- 9.2				
(D) Calculated Core Length (ft) -[(PD+OD+Z)-C]=D	4.8				
Penetration/Recovery (ft)	4.8 / 4.6				
Core Characteristics					
Sediment Type	cobble, gravel, sand C M F, (silt clay) organic matter	cobble, gravel, sand C M F, silt clay, organic matter	cobble, gravel, sand C M F, silt clay, organic matter	Comments:	
Sediment Color	(gray, black, brown,) brown surface, olivine	gray, black, brown, brown surface, olivine	gray, black, brown, brown surface, olivine		
Sediment Odor	None (slight,) mod, strong H_2S, petroleum, septic	None, slight, mod, strong H_2S, petroleum, septic	None, slight, mod, strong H_2S, petroleum, septic		
Homogenous (H) or Layering (L)	H (L)	H L	H L	Recorded by: MG	

Pacific EcoRisk
Environmental Consulting and Testing
2250 Cordelia Road Fairfield, CA 94534
Phone: (707) 207-7760

Sediment Core Collection Form

Project Name:	Berkeley BWTPF	Station ID:	**BWTPF – DU2-02**
Date:	May 8, 2025	Project No.:	39995
Vertical Datum:	**MLLW** MLW Other	Depth Measurement:	Sounder (Leadline)
Navigation Datum:	NAD83	Field Crew:	Miguel G, David S
Project Depth:	-12.5 ft MLLW	Overdredge and Z-layer:	- 1 – 0.5 ft MLLW

	Attempt 1	Attempt 2	Attempt 3	Description of Material	Depth
Time:	0935H			Mudline	
Latitude/Northing:	37.854055				
Longitude/Easting:	-122.344843				
(A) Measured Water Depth (ft)	-13.0				
(B) Tide Height (ft)	+4.1				
(C) Mudline Elevation (A+B=C)	-8.9				
(D) Calculated Core Length (ft) -[(PD+OD+Z)-C]=D	5.1				
Penetration/Recovery (ft)	5.1 | 4.7				
Core Characteristics					
Sediment Type	cobble, gravel, sand C M F, silt clay, organic matter	cobble, gravel, sand C M F, silt clay, organic matter	cobble, gravel, sand C M F, silt clay, organic matter	Comments: 5/8/25 - MG 2 fine sand/shell hash along p.d./z horizon	
Sediment Color	gray, black, brown, brown surface, olivine	gray, black, brown, brown surface, olivine	gray, black, brown, brown surface, olivine		
Sediment Odor	None, slight, mod, strong H_2S, petroleum, septic	None, slight, mod, strong H_2S, petroleum, septic	None, slight, mod, strong H_2S, petroleum, septic		
Homogenous (H) or Layering (L)	H (L)	H L	H L	Recorded by: MG	

Sediment Core Collection Form

Pacific EcoRisk
Environmental Consulting and Testing
2250 Cordelia Road Fairfield, CA 94534
Phone: (707) 207-7760

DV 2-03

Project Name:	Berkeley BWTPF	Station ID:	BWTPF – DU~~7~~ - 0 MG 5/9/25 MG 5/9/25
Date:	May 9, 2025	Project No.:	39995
Vertical Datum:	**MLLW** MLW Other	Depth Measurement:	Sounder (Leadline)
Navigation Datum:	NAD83	Field Crew:	Miguel G, David S
Project Depth:	-12.5 ft MLLW	Overdredge and Z-layer:	- 1 – 0.5 ft MLLW

	Attempt 1	Attempt 2	Attempt 3	Description of Material	Depth
Time:	1055			Mudline	
Latitude/Northing:	37.854587				
Longitude/Easting:	-122.343012				
(A) Measured Water Depth (ft)	-13.1				
(B) Tide Height (ft)	+4.3				
(C) Mudline Elevation (A+B=C)	- 8.8				
(D) Calculated Core Length (ft) -[(PD+OD+Z)-C]=D	5.2				
Penetration/Recovery (ft)	5.2 / 5.0				
Core Characteristics					
Sediment Type	cobble, gravel, sand C M F, silt clay, organic matter	cobble, gravel, sand C M F, silt clay, organic matter	cobble, gravel, sand C M F, silt clay, organic matter	Comments: MG-5/9/25 -corrected Stn. ID to DU2-03	
Sediment Color	gray, black, brown, brown surface, olivine	gray, black, brown, brown surface, olivine	gray, black, brown, brown surface, olivine		
Sediment Odor	None, slight, mod, strong H_2S, petroleum, septic	None, slight, mod, strong H_2S, petroleum, septic	None, slight, mod, strong H_2S, petroleum, septic		
Homogenous (H) or Layering (L)	H (L)	H L	H L	Recorded by: MG	

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Sediment Core Collection Form

Project Name:	Berkeley BWTPF	Station ID:	**BWTPF – DU2- 04**
Date:	May 9 , 2025	Project No.:	39995
Vertical Datum:	**MLLW** MLW Other	Depth Measurement:	Sounder (Leadline)
Navigation Datum:	NAD83	Field Crew:	Miguel G, David S
Project Depth:	-12.5 ft MLLW	Overdredge and Z-layer:	- 1 – 0.5 ft MLLW

	Attempt 1	Attempt 2	Attempt 3	Description of Material	Depth
Time:	1015			Mudline	
Latitude/Northing:	37.8553147				
Longitude/Easting:	-122.341055				
(A) Measured Water Depth (ft)	-13.0				
(B) Tide Height (ft)	+4.1				
(C) Mudline Elevation (A+B=C)	-8.9				
(D) Calculated Core Length (ft) -[(PD+OD+Z)-C]=D	5.1				
Penetration/Recovery (ft)	5.1 / 4.0				
Core Characteristics					
Sediment Type	cobble, gravel, sand C M F, (silt clay), organic matter	cobble, gravel, sand C M F, silt clay, organic matter	cobble, gravel, sand C M F, silt clay, organic matter	Comments: 5/9/25 MG - sediment of this core appears to be mostly fines, no shell hash observed, more loosely packed overall.	
Sediment Color	(gray), black, (brown), brown surface, olivine	gray, black, brown, brown surface, olivine	gray, black, brown, brown surface, olivine		
Sediment Odor	(None), slight, mod, strong H_2S, petroleum, septic	None, slight, mod, strong H_2S, petroleum, septic	None, slight, mod, strong H_2S, petroleum, septic		
Homogenous (H) or Layering (L)	H (L)	H L	H L	Recorded by: MG	

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Sediment Core Collection Form

Project Name:	Berkeley BWTPF	Station ID:	**BWTPF – DU2 - 05**
Date:	May 10 , 2025	Project No.:	39995
Vertical Datum:	**MLLW** MLW Other	Depth Measurement:	Sounder (Leadline)
Navigation Datum:	NAD83	Field Crew:	Miguel G, Evan C
Project Depth:	-12.5 ft MLLW	Overdredge and Z-layer:	- 1 – 0.5 ft MLLW

	Attempt 1	Attempt 2	Attempt 3	Description of Material	Depth
Time:	0715			Mudline	
Latitude/Northing:	37.855835				
Longitude/Easting:	-122.339496				
(A) Measured Water Depth (ft)	-9.5				
(B) Tide Height (ft)	+0.6				
(C) Mudline Elevation (A+B=C)	-8.9				
(D) Calculated Core Length (ft) -[(PD+OD+Z)-C]=D	5.1				
Penetration/Recovery (ft)	5.1 4.8				
Core Characteristics					
Sediment Type	cobble, gravel, sand C M F, silt clay, organic matter	cobble, gravel, sand C M F, silt clay, organic matter	cobble, gravel, sand C M F, silt clay, organic matter	Comments:	
Sediment Color	gray, black, brown, brown surface, olivine	gray, black, brown, brown surface, olivine	gray, black, brown, brown surface, olivine		
Sediment Odor	None, slight, mod, strong H_2S, petroleum, septic	None, slight, mod, strong H_2S, petroleum, septic	None, slight, mod, strong H_2S, petroleum, septic		
Homogenous (H) or Layering (L)	H (L)	H L	H L	Recorded by: MG	

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Sediment Core Collection Form

2250 Cordelia Road Fairfield, CA 94534
Phone: (707) 207-7760

Project Name:	Berkeley BWTPF	Station ID:	**BWTPF – DU2 - 06**
Date:	May 10 , 2025	Project No.:	39995
Vertical Datum:	**MLLW** MLW Other	Depth Measurement:	Sounder (Leadline)
Navigation Datum:	NAD83	Field Crew:	Miguel G, Evan C
Project Depth:	-12.5 ft MLLW	Overdredge and Z-layer:	- 1 – 0.5 ft MLLW

	Attempt 1	Attempt 2	Attempt 3	Description of Material	Depth
Time:	0640			Mudline	
Latitude/Northing:	37.856400				
Longitude/Easting:	-122338081				
(A) Measured Water Depth (ft)	-9.2				
(B) Tide Height (ft)	+0.3				
(C) Mudline Elevation (A+B=C)	-8.9				
(D) Calculated Core Length (ft) -[(PD+OD+Z)-C]=D	5.1				
Penetration/Recovery (ft)	5.1 | 4.9				
Core Characteristics					
Sediment Type	cobble, gravel, sand C M F, silt clay, organic matter	cobble, gravel, sand C M F, silt clay, organic matter	cobble, gravel, sand C M F, silt clay, organic matter	Comments:	
Sediment Color	gray, black, brown, brown surface, olivine	gray, black, brown, brown surface, olivine	gray, black, brown, brown surface, olivine		
Sediment Odor	None, slight, mod, strong H_2S, petroleum, septic	None, slight, mod, strong H_2S, petroleum, septic	None, slight, mod, strong H_2S, petroleum, septic		
Homogenous (H) or Layering (L)	H (L)	H L	H L	Recorded by: MG	

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Sediment Core Collection Form

2250 Cordelia Road Fairfield, CA 94534
Phone: (707) 207-7760

Project Name:	Berkeley BWTPF	Station ID:	**BWTPF – DU3-01**
Date:	May 9, 2025	Project No.:	39995
Vertical Datum:	**MLLW** MLW Other	Depth Measurement:	Sounder (Leadline)
Navigation Datum:	NAD83	Field Crew:	Miguel G, Daniel S
Project Depth:	-12.5 ft MLLW	Overdredge and Z-layer:	- 1 – 0.5 ft MLLW

	Attempt 1	Attempt 2	Attempt 3	Description of Material	Depth
Time:	0930			Mudline	
Latitude/Northing:	37.856895				
Longitude/Easting:	-122.330470				
(A) Measured Water Depth (ft)	-12.1				
(B) Tide Height (ft)	+3.6				
(C) Mudline Elevation (A+B=C)	-8.5				
(D) Calculated Core Length (ft) -[(PD+OD+Z)-C]=D	5.5				
Penetration/Recovery (ft)	5.5 / 5.2				
Core Characteristics					
Sediment Type	cobble, gravel, sand C M F, (silt clay) organic matter	cobble, gravel, sand C M F, silt clay, organic matter	cobble, gravel, sand C M F, silt clay, organic matter	Comments:	
Sediment Color	(gray) black, (brown) brown surface, olivine	gray, black, brown, brown surface, olivine	gray, black, brown, brown surface, olivine		
Sediment Odor	(None), slight, mod, strong H_2S, petroleum, septic	None, slight, mod, strong H_2S, petroleum, septic	None, slight, mod, strong H_2S, petroleum, septic		
Homogenous (H) or Layering (L)	H (L)	H L	H L	Recorded by: MG	

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Sediment Core Collection Form

2250 Cordelia Road Fairfield, CA 94534
Phone: (707) 207-7760

Project Name:	Berkeley BWTPF	Station ID:	**BWTPF – DU3- 02**
Date:	May 9 , 2025	Project No.:	39995
Vertical Datum:	**MLLW** MLW Other	Depth Measurement:	Sounder (Leadline)
Navigation Datum:	NAD83	Field Crew:	Miguel G, Daniel S
Project Depth:	-12.5 ft MLLW	Overdredge and Z-layer:	- 1 – 0.5 ft MLLW

	Attempt 1	Attempt 2	Attempt 3	Description of Material	Depth
Time:	0900			Mudline	
Latitude/Northing:	37.857485				
Longitude/Easting:	-122.334949				
(A) Measured Water Depth (ft)	-11.8				
(B) Tide Height (ft)	+3.2				
(C) Mudline Elevation (A+B=C)	- 8.6				
(D) Calculated Core Length (ft) -[(PD+OD+Z)-C]=D	5.4				
Penetration/Recovery (ft)	5.4 | 5.0				
Core Characteristics					
Sediment Type	cobble, gravel, sand C M F, (silt clay), organic matter	cobble, gravel, sand C M F, silt clay, organic matter	cobble, gravel, sand C M F, silt clay, organic matter	Comments:	
Sediment Color	(gray), black, (brown), brown surface, olivine	gray, black, brown, brown surface, olivine	gray, black, brown, brown surface, olivine		
Sediment Odor	(None), slight, mod, strong H_2S, petroleum, septic	None, slight, mod, strong H_2S, petroleum, septic	None, slight, mod, strong H_2S, petroleum, septic		
Homogenous (H) or Layering (L)	H (L)	H L	H L	Recorded by: MG	

Sediment Core Collection Form

Pacific EcoRisk
Environmental Consulting and Testing
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Phone: (707) 207-7760

Project Name:	Berkeley BWTPF	Station ID:	**BWTPF – DU3- 03**
Date:	May 9 , 2025	Project No.:	39995
Vertical Datum:	**MLLW** MLW Other	Depth Measurement:	Sounder (Leadline)
Navigation Datum:	NAD83	Field Crew:	Miguel G, David S
Project Depth:	-12.5 ft MLLW	Overdredge and Z-layer:	- 1 – 0.5 ft MLLW

	Attempt 1	Attempt 2	Attempt 3	Description of Material	Depth
Time:	0815			-Mudline	
Latitude/Northing:	37.857931				
Longitude/Easting:	-122.333358				
(A) Measured Water Depth (ft)	-11.0				
(B) Tide Height (ft)	+2.5				
(C) Mudline Elevation (A+B=C)	-8.5				
(D) Calculated Core Length (ft) -[(PD+OD+Z)-C]=D	5.5				
Penetration/Recovery (ft)	5.5 | 5.2				
Core Characteristics					
Sediment Type	cobble, gravel, sand C M F, (silt clay), organic matter	cobble, gravel, sand C M F, silt clay, organic matter	cobble, gravel, sand C M F, silt clay, organic matter	Comments:	
Sediment Color	(gray, black, brown,) brown surface, olivine	gray, black, brown, brown surface, olivine	gray, black, brown, brown surface, olivine		
Sediment Odor	(None, slight, mod, strong H_2S, petroleum, septic	None, slight, mod, strong H_2S, petroleum, septic	None, slight, mod, strong H_2S, petroleum, septic		
Homogenous (H) or Layering (L)	H (L)	H L	H L	Recorded by: MG	

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Sediment Core Collection Form

2250 Cordelia Road Fairfield, CA 94534
Phone: (707) 207-7760

Project Name:	Berkeley BWTPF	Station ID:	**BWTPF – DU3 - 04**
Date:	May 9 , 2025	Project No.:	39995
Vertical Datum:	**MLLW** MLW Other	Depth Measurement:	Sounder (Leadline)
Navigation Datum:	NAD83	Field Crew:	Miguel G, David S
Project Depth:	-12.5 ft MLLW	Overdredge and Z-layer:	- 1 – 0.5 ft MLLW

	Attempt 1	Attempt 2	Attempt 3	Description of Material	Depth
Time:	0740			Mudline	
Latitude/Northing:	37.858543				
Longitude/Easting:	-122.331936				
(A) Measured Water Depth (ft)	-10.0				
(B) Tide Height (ft)	+1.9				
(C) Mudline Elevation (A+B=C)	-8.1				
(D) Calculated Core Length (ft) -[(PD+OD+Z)-C]=D	5.9				
Penetration/Recovery (ft)	5.9 | 5.8				
Core Characteristics					
Sediment Type	cobble, gravel, sand C M F, silt clay, organic matter	cobble, gravel, sand C M F, silt clay, organic matter	cobble, gravel, sand C M F, silt clay, organic matter	Comments:	
Sediment Color	gray, black, brown, brown surface, olivine	gray, black, brown, brown surface, olivine	gray, black, brown, brown surface, olivine		
Sediment Odor	None, slight, mod, strong H_2S, petroleum, septic	None, slight, mod, strong H_2S, petroleum, septic	None, slight, mod, strong H_2S, petroleum, septic		
Homogenous (H) or Layering (L)	H (L)	H L	H L	Recorded by: MG	

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Sediment Core Collection Form

2250 Cordelia Road Fairfield, CA 94534
Phone: (707) 207-7760

Project Name:	Berkeley BWTPF	Station ID:	**BWTPF – DU3 - 05**
Date:	May 9 , 2025	Project No.:	39995
Vertical Datum:	**MLLW** MLW Other	Depth Measurement:	Sounder (Leadline)
Navigation Datum:	NAD83	Field Crew:	Miguel G, David S
Project Depth:	-12.5 ft MLLW	Overdredge and Z-layer:	- 1 – 0.5 ft MLLW

	Attempt 1	Attempt 2	Attempt 3	Description of Material	Depth
Time:	0710			Mudline	
Latitude/Northing:	37.858955				
Longitude/Easting:	-122.330490				
(A) Measured Water Depth (ft)	-9.5				
(B) Tide Height (ft)	+1.5				
(C) Mudline Elevation (A+B=C)	-8.0				
(D) Calculated Core Length (ft) -[(PD+OD+Z)-C]=D	6.0				
Penetration/Recovery (ft)	6.0 / 5.7				
Core Characteristics					
Sediment Type	cobble, gravel, sand C M F, silt clay, organic matter	cobble, gravel, sand C M F, silt clay, organic matter	cobble, gravel, sand C M F, silt clay, organic matter	Comments: 5/9/25 - MG - shell hash along Z / p.d. horizon	
Sediment Color	gray, black, brown, brown surface, olivine	gray, black, brown, brown surface, olivine	gray, black, brown, brown surface, olivine		
Sediment Odor	None, slight, mod, strong H_2S, petroleum, septic	None, slight, mod, strong H_2S, petroleum, septic	None, slight, mod, strong H_2S, petroleum, septic		
Homogenous (H) or Layering (L)	H (L)	H L	H L	Recorded by: MG	

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Sediment Core Collection Form

2250 Cordelia Road Fairfield, CA 94534
Phone: (707) 207-7760

Project Name:	Berkeley BWTPF	Station ID:	**BWTPF – DU3-06**
Date:	May 9, 2025	Project No.:	39995
Vertical Datum:	**MLLW** MLW Other	Depth Measurement:	Sounder (Leadline)
Navigation Datum:	NAD83	Field Crew:	Miguel G, David S
Project Depth:	-12.5 ft MLLW	Overdredge and Z-layer:	- 1 – 0.5 ft MLLW

	Attempt 1	Attempt 2	Attempt 3	Description of Material	Depth
Time:	0640			Mudline	
Latitude/Northing:	37.859595				
Longitude/Easting:	-122.329036				
(A) Measured Water Depth (ft)	-8.9				
(B) Tide Height (ft)	+1.0				
(C) Mudline Elevation (A+B=C)	-7.9				
(D) Calculated Core Length (ft) -[(PD+OD+Z)-C]=D	6.1				
Penetration/Recovery (ft)	6.1 / 5.9				
Core Characteristics					
Sediment Type	cobble, gravel, sand C M F, (silt clay), organic matter	cobble, gravel, sand C M F, silt clay, organic matter	cobble, gravel, sand C M F, silt clay, organic matter	Comments:	
Sediment Color	(gray, black, brown), brown surface, olivine	gray, black, brown, brown surface, olivine	gray, black, brown, brown surface, olivine		
Sediment Odor	(None) slight, mod, strong H_2S, petroleum, septic	None, slight, mod, strong H_2S, petroleum, septic	None, slight, mod, strong H_2S, petroleum, septic		
Homogenous (H) or Layering (L)	H (L)	H L	H L	Recorded by: MG	

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Sediment Core Collection Form

2250 Cordelia Road Fairfield, CA 94534
Phone: (707) 207-7760

Project Name:	Berkeley BWTPF	Station ID:	**BWTPF – DU4-01**
Date:	May 7, 2025	Project No.:	39995
Vertical Datum:	**MLLW** MLW Other	Depth Measurement:	Sounder Leadline
Navigation Datum:	NAD83	Field Crew:	Miguel G, David S
Project Depth:	-12.5 ft MLLW	Overdredge and Z-layer:	- 1 – 0.5 ft MLLW

	Attempt 1	Attempt 2	Attempt 3	Description of Material	Depth
Time:				Mudline	
Latitude/Northing:					
Longitude/Easting:					
(A) Measured Water Depth (ft)					
(B) Tide Height (ft)					
(C) Mudline Elevation (A+B=C)					
(D) Calculated Core Length (ft) -[(PD+OD+Z)-C]=D					
Penetration/Recovery (ft)					
Core Characteristics					
Sediment Type	cobble, gravel, sand C M F, silt clay, organic matter	cobble, gravel, sand C M F, silt clay, organic matter	cobble, gravel, sand C M F, silt clay, organic matter	Comments: MG -5/7/25 256 Site water collected at this site 0845H	
Sediment Color	gray, black, brown, brown surface, olivine	gray, black, brown, brown surface, olivine	gray, black, brown, brown surface, olivine		
Sediment Odor	None, slight, mod, strong H_2S, petroleum, septic	None, slight, mod, strong H_2S, petroleum, septic	None, slight, mod, strong H_2S, petroleum, septic		
Homogenous (H) or Layering (L)	H L	H L	H L	Recorded by: MG	

Sediment Core Collection Form

Pacific EcoRisk
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2250 Cordelia Road Fairfield, CA 94534
Phone: (707) 207-7760

Project Name:	Berkeley BWTPF	Station ID:	**BWTPF – DU4- 01**
Date:	May 8 , 2025	Project No.:	39995
Vertical Datum:	**MLLW** MLW Other	Depth Measurement:	Sounder (Leadline)
Navigation Datum:	NAD83	Field Crew:	Miguel G, David S
Project Depth:	-12.5 ft MLLW	Overdredge and Z-layer:	- 1 – 0.5 ft MLLW

	Attempt 1	Attempt 2	Attempt 3	Description of Material	Depth
Time:	0840			Mudline	
Latitude/Northing:	37.860009				
Longitude/Easting:	-122.327489				
(A) Measured Water Depth (ft)	-11.8				
(B) Tide Height (ft)	+3.6				
(C) Mudline Elevation (A+B=C)	-8.2				
(D) Calculated Core Length (ft) -[(PD+OD+Z)-C]=D	5.8				
Penetration/Recovery (ft)	5.8 / 5.5				
Core Characteristics					
Sediment Type	cobble, gravel, sand C M F, (silt clay), organic matter	cobble, gravel, sand C M F, silt clay, organic matter	cobble, gravel, sand C M F, silt clay, organic matter	Comments:	
Sediment Color	(gray), black, (brown), brown surface, olivine	gray, black, brown, brown surface, olivine	gray, black, brown, brown surface, olivine		
Sediment Odor	(None), slight, mod, strong H_2S, petroleum, septic	None, slight, mod, strong H_2S, petroleum, septic	None, slight, mod, strong H_2S, petroleum, septic		
Homogenous (H) or Layering (L)	H (L)	H L	H L	Recorded by: MG	

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Sediment Core Collection Form

2250 Cordelia Road Fairfield, CA 94534
Phone: (707) 207-7760

Project Name:	Berkeley BWTPF	Station ID:	BWTPF – DU4-02
Date:	May 8, 2025	Project No.:	39995
Vertical Datum:	**MLLW** MLW Other	Depth Measurement:	Sounder (Leadline)
Navigation Datum:	NAD83	Field Crew:	Miguel G, David S
Project Depth:	-12.5 ft MLLW	Overdredge and Z-layer:	- 1 – 0.5 ft MLLW

	Attempt 1	Attempt 2	Attempt 3	Description of Material	Depth
Time:	0810			Mudline	
Latitude/Northing:	37.860524				
Longitude/Easting:	-122.326236				
(A) Measured Water Depth (ft)	-11.2				
(B) Tide Height (ft)	+3.2				
(C) Mudline Elevation (A+B=C)	-8.0				
(D) Calculated Core Length (ft) -[(PD+OD+Z)-C]=D	6.0				
Penetration/Recovery (ft)	6.0 / 5.5				
Core Characteristics					
Sediment Type	cobble, gravel, sand C M F, silt clay, organic matter	cobble, gravel, sand C M F, silt clay, organic matter	cobble, gravel, sand C M F, silt clay, organic matter	Comments: MG -5/8/25 -shell hash, fine sand along z / p.d. horizon	
Sediment Color	gray, black, brown, brown surface, olivine	gray, black, brown, brown surface, olivine	gray, black, brown, brown surface, olivine		
Sediment Odor	None, slight, mod, strong H_2S, petroleum, septic	None, slight, mod, strong H_2S, petroleum, septic	None, slight, mod, strong H_2S, petroleum, septic		
Homogenous (H) or Layering (L)	H (L)	H L	H L	Recorded by: MG	

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Sediment Core Collection Form

2250 Cordelia Road Fairfield, CA 94534
Phone: (707) 207-7760

Project Name:	Berkeley BWTPF	Station ID:	**BWTPF – DU4- 03**
Date:	May 8 , 2025	Project No.:	39995
Vertical Datum:	**MLLW** MLW Other	Depth Measurement:	Sounder (Leadline)
Navigation Datum:	NAD83	Field Crew:	Miguel G, David S
Project Depth:	-12.5 ft MLLW	Overdredge and Z-layer:	- 1 – 0.5 ft MLLW

	Attempt 1	Attempt 2	Attempt 3	Description of Material	Depth
Time:	0745			Mudline	
Latitude/Northing:	37.860925				
Longitude/Easting:	-122.324793				
(A) Measured Water Depth (ft)	-10.5				
(B) Tide Height (ft)	+2.8				
(C) Mudline Elevation (A+B=C)	-7.7				
(D) Calculated Core Length (ft) -[(PD+OD+Z)-C]=D	6.3				
Penetration/Recovery (ft)	6.3 / 5.8	/	/		
Core Characteristics					
Sediment Type	cobble, gravel, sand C M F, silt clay, organic matter	cobble, gravel, sand C M F, silt clay, organic matter	cobble, gravel, sand C M F, silt clay, organic matter	Comments: MG-5/8/25 ?sand, shell hash along e/p.d. horizon	
Sediment Color	gray, black, brown, brown surface, olivine	gray, black, brown, brown surface, olivine	gray, black, brown, brown surface, olivine		
Sediment Odor	None, slight, mod, strong H_2S, petroleum, septic	None, slight, mod, strong H_2S, petroleum, septic	None, slight, mod, strong H_2S, petroleum, septic		
Homogenous (H) or Layering (L)	H (L)	H L	H L	Recorded by: MG	

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Sediment Core Collection Form

2250 Cordelia Road Fairfield, CA 94534
Phone: (707) 207-7760

Project Name:	Berkeley BWTPF	Station ID:	**BWTPF – DU404**
Date:	May 8, 2025	Project No.:	39995
Vertical Datum:	**MLLW** MLW Other	Depth Measurement:	Sounder (Leadline)
Navigation Datum:	NAD83	Field Crew:	Miguel G, Daniel S
Project Depth:	-12.5 ft MLLW	Overdredge and Z-layer:	- 1 – 0.5 ft MLLW

	Attempt 1	Attempt 2	Attempt 3	Description of Material	Depth
Time:	0700			Mudline	
Latitude/Northing:	37.861522				
Longitude/Easting:	-122.323429				
(A) Measured Water Depth (ft)	9.4				
(B) Tide Height (ft)	+2.3				
(C) Mudline Elevation (A+B=C)	-7.1				
(D) Calculated Core Length (ft) -[(PD+OD+Z)-C]=D	6.9				
Penetration/Recovery (ft)	6.9 / 6.2				
Core Characteristics					
Sediment Type	cobble, gravel, (sand) C M F, (silt) (clay), organic matter	cobble, gravel, sand C M F, silt clay, organic matter	cobble, gravel, sand C M F, silt clay, organic matter	Comments:	
Sediment Color	(gray) black, (brown), brown surface, olivine	gray, black, brown, brown surface, olivine	gray, black, brown, brown surface, olivine		
Sediment Odor	(None), slight, mod, strong H_2S, petroleum, septic	None, slight, mod, strong H_2S, petroleum, septic	None, slight, mod, strong H_2S, petroleum, septic		
Homogenous (H) or Layering (L)	H (L)	H L	H L	Recorded by: MG	

Pacific EcoRisk
Environmental Consulting and Testing

Sediment Core Collection Form

2250 Cordelia Road Fairfield, CA 94534
Phone: (707) 207-7760

Project Name:	Berkeley BWTPF	Station ID:	**BWTPF – DU4 - 05**
Date:	May 8 , 2025	Project No.:	39995
Vertical Datum:	**MLLW** MLW Other	Depth Measurement:	Sounder (Leadline)
Navigation Datum:	NAD83	Field Crew:	Miguel G, David S
Project Depth:	-12.5 ft MLLW	Overdredge and Z-layer:	- 1 – 0.5 ft MLLW

	Attempt 1	Attempt 2	Attempt 3	Description of Material	Depth
Time:	0625			Mudline	
Latitude/Northing:	37.861895				
Longitude/Easting:	-122.322042				
(A) Measured Water Depth (ft)	- 9.0				
(B) Tide Height (ft)	+1.8				
(C) Mudline Elevation (A+B=C)	- 7.2				
(D) Calculated Core Length (ft) -[(PD+OD+Z)-C]=D	6.8				
Penetration/Recovery (ft)	7.2 / 6.7				
Core Characteristics					
Sediment Type	cobble, gravel, sand C M F, silt clay, organic matter	cobble, gravel, sand C M F, silt clay, organic matter	cobble, gravel, sand C M F, silt clay, organic matter	Comments: MG - 5/8/25 +B = +1.8 +shell hash/fine sand along Z/pd. horizon	
Sediment Color	gray, black, brown, brown surface, olivine	gray, black, brown, brown surface, olivine	gray, black, brown, brown surface, olivine		
Sediment Odor	None, slight, mod, strong H_2S, petroleum, septic	None, slight, mod, strong H_2S, petroleum, septic	None, slight, mod, strong H_2S, petroleum, septic		
Homogenous (H) or Layering (L)	H (L)	H L	H L	Recorded by: MG	

Pacific EcoRisk
Environmental Consulting and Testing

Sediment Core Collection Form

2250 Cordelia Road Fairfield, CA 94534
Phone: (707) 207-7760

Project Name:	Berkeley BWTPF	Station ID:	**BWTPF – DU 406**
Date:	May 7, 2025	Project No.:	39995
Vertical Datum:	**MLLW** MLW Other	Depth Measurement:	Sounder (Leadline)
Navigation Datum:	NAD83	Field Crew:	Miguel G, David S
Project Depth:	-12.5 ft MLLW	Overdredge and Z-layer:	- 1 – 0.5 ft MLLW

	Attempt 1	Attempt 2	Attempt 3	Description of Material	Depth
Time:	1215			Mudline	
Latitude/Northing:	37.862485				
Longitude/Easting:	-122.320672				
(A) Measured Water Depth (ft)	~~10.0~~ 9.5 ~~9.5~~ MG 5/7/10				
(B) Tide Height (ft)	+2.7				
(C) Mudline Elevation (A+B=C)	-6.8				
(D) Calculated Core Length (ft) -[(PD+OD+Z)-C]=D	7.2				
Penetration/Recovery (ft)	7.2 / 7.1				
Core Characteristics					
Sediment Type	cobble, gravel, (sand) C M F, (silt clay), organic matter	cobble, gravel, sand C M F, silt clay, organic matter	cobble, gravel, sand C M F, silt clay, organic matter	Comments: MG -5/7/10 -corrected leadline	
Sediment Color	(gray), black, (brown), brown surface, olivine	gray, black, brown, brown surface, olivine	gray, black, brown, brown surface, olivine		
Sediment Odor	(None), slight, mod, strong H_2S, petroleum, septic	None, slight, mod, strong H_2S, petroleum, septic	None, slight, mod, strong H_2S, petroleum, septic		
Homogenous (H) or Layering (L)	H (L)	H L	H L	Recorded by: MG	

Pacific EcoRisk
Environmental Consulting and Testing

Sediment Core Collection Form

2250 Cordelia Road Fairfield, CA 94534
Phone: (707) 207-7760

Project Name:	Berkeley BWTPF	Station ID:	**BWTPF – DU5 - 01**
Date:	May 7 , 2025	Project No.:	39995
Vertical Datum:	**MLLW** MLW Other	Depth Measurement:	Sounder (Leadline)
Navigation Datum:	NAD83	Field Crew:	Miguel G,
Project Depth:	-12.5 ft MLLW	Overdredge and Z-layer:	- 1 – 0.5 ft MLLW

	Attempt 1	Attempt 2	Attempt 3	Description of Material	Depth
Time:	1140			Mudline	
Latitude/Northing:	37.862589				
Longitude/Easting:	-122.320134				
(A) Measured Water Depth (ft)	-10.0				
(B) Tide Height (ft)	+3.3				
(C) Mudline Elevation (A+B=C)	-6.7				
(D) Calculated Core Length (ft) -[(PD+OD+Z)-C]=D	7.3				
Penetration/Recovery (ft)	7.8 / 6.2 6.2				
Core Characteristics	MG 5/7/25				
Sediment Type	cobble, gravel, sand C M F, silt clay, organic matter	cobble, gravel, sand C M F, silt clay, organic matter	cobble, gravel, sand C M F, silt clay, organic matter	Comments: MG -5/7/25 - corrected pen	
Sediment Color	gray, black, brown, brown surface, olivine	gray, black, brown, brown surface, olivine	gray, black, brown, brown surface, olivine		
Sediment Odor	None, slight, mod, strong H_2S, petroleum, septic	None, slight, mod, strong H_2S, petroleum, septic	None, slight, mod, strong H_2S, petroleum, septic		
Homogenous (H) or Layering (L)	H (L)	H L	H L	Recorded by: MG	

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Environmental Consulting and Testing

Sediment Core Collection Form

2250 Cordelia Road Fairfield, CA 94534
Phone: (707) 207-7760

Project Name:	Berkeley BWTPF	Station ID:	BWTPF – DU 3-02
Date:	May 7, 2025	Project No.:	39995
Vertical Datum:	**MLLW** MLW Other	Depth Measurement:	Sounder (Leadline)
Navigation Datum:	NAD83	Field Crew:	Miguel G, David S
Project Depth:	-12.5 ft MLLW	Overdredge and Z-layer:	- 1 – 0.5 ft MLLW

	Attempt 1	Attempt 2	Attempt 3	Description of Material	Depth
Time:	1105H			Mudline	
Latitude/Northing:	37.862552				
Longitude/Easting:	-122.319549				
(A) Measured Water Depth (ft)	-11.5				
(B) Tide Height (ft)	+3.6				
(C) Mudline Elevation (A+B=C)	-7.9				
(D) Calculated Core Length (ft) -[(PD+OD+Z)-C]=D	6.1				
Penetration/Recovery (ft)	6.1 | 6.1				
Core Characteristics					
Sediment Type	cobble, gravel, sand C M F, silt clay, organic matter	cobble, gravel, sand C M F, silt clay, organic matter	cobble, gravel, sand C M F, silt clay, organic matter	Comments: 5/7/25 - MC -shell hash along Z	
Sediment Color	gray, black, brown, brown surface, olivine	gray, black, brown, brown surface, olivine	gray, black, brown, brown surface, olivine		
Sediment Odor	None, slight, mod, strong H_2S, petroleum, septic	None, slight, mod, strong H_2S, petroleum, septic	None, slight, mod, strong H_2S, petroleum, septic		
Homogenous (H) or Layering (L)	H (L)	H L	H L	Recorded by: MG	

Pacific EcoRisk
Environmental Consulting and Testing

Sediment Core Collection Form

2250 Cordelia Road Fairfield, CA 94534
Phone: (707) 207-7760

Project Name:	Berkeley BWTPF	Station ID:	**BWTPF – DU5-03**
Date:	May 7, 2025	Project No.:	39995
Vertical Datum:	**MLLW** MLW Other	Depth Measurement:	Sounder (Leadline)
Navigation Datum:	NAD83	Field Crew:	Miguel G, David S
Project Depth:	-12.5 ft MLLW	Overdredge and Z-layer:	- 1 – 0.5 ft MLLW

	Attempt 1	Attempt 2	Attempt 3	Description of Material	Depth
Time:	1025			Mudline	
Latitude/Northing:	37.863028				
Longitude/Easting:	-122.319340				
(A) Measured Water Depth (ft)	-12.5				
(B) Tide Height (ft)	+4.0				
(C) Mudline Elevation (A+B=C)	-8.5				
(D) Calculated Core Length (ft) -[(PD+OD+Z)-C]=D	5.5				
Penetration/Recovery (ft)	5.5 | 5.5				
Core Characteristics					
Sediment Type	cobble, (gravel), (sand) C M F, (silt clay), organic matter	cobble, gravel, sand C M F, silt clay, organic matter	cobble, gravel, sand C M F, silt clay, organic matter	Comments: MG-5/7/25 -Shell hash | sand | gravel along z-layer	
Sediment Color	(gray), black, (brown), brown surface, olivine	gray, black, brown, brown surface, olivine	gray, black, brown, brown surface, olivine		
Sediment Odor	(None) slight, mod, strong H_2S, petroleum, septic	None, slight, mod, strong H_2S, petroleum, septic	None, slight, mod, strong H_2S, petroleum, septic		
Homogenous (H) or Layering (L)	H (L)	H L	H L	Recorded by: MG	

Pacific EcoRisk
Environmental Consulting and Testing
2250 Cordelia Road Fairfield, CA 94534
Phone: (707) 207-7760

Sediment Core Collection Form

PU5-04

Project Name:	Berkeley BWTPF	Station ID:	BWTPF ~~DU4-06~~
Date:	May 7, 2025	Project No.:	39995
Vertical Datum:	**MLLW** MLW Other	Depth Measurement:	Sounder (Leadline)
Navigation Datum:	NAD83	Field Crew:	Miguel G, David S
Project Depth:	-12.5 ft MLLW	Overdredge and Z-layer:	- 1 – 0.5 ft MLLW

	Attempt 1	Attempt 2	Attempt 3	Description of Material	Depth
Time:	0950H			Mudline	
Latitude/Northing:	37.862712				
Longitude/Easting:	-122.318881				
(A) Measured Water Depth (ft)	-12.2				
(B) Tide Height (ft)	+4.2				
(C) Mudline Elevation (A+B=C)	-8.0				
(D) Calculated Core Length (ft) -[(PD+OD+Z)-C]=D	6.0				
Penetration/Recovery (ft)	6.0 6.0				
Core Characteristics					
Sediment Type	cobble, gravel, sand C M F, silt clay, organic matter	cobble, gravel, sand C M F, silt clay, organic matter	cobble, gravel, sand C M F, silt clay, organic matter	Comments: MG-5/7/25 -dense shell hash fine sand around P.D. horizon / Z-layer	
Sediment Color	gray, black, brown, brown surface, olivine	gray, black, brown, brown surface, olivine	gray, black, brown, brown surface, olivine		
Sediment Odor	None, slight, mod, strong H_2S, petroleum, septic	None, slight, mod, strong H_2S, petroleum, septic	None, slight, mod, strong H_2S, petroleum, septic		
Homogenous (H) or Layering (L)	H (L)	H L	H L	Recorded by: MG	

Pacific EcoRisk
Environmental Consulting and Testing

Sediment Core Collection Form

2250 Cordelia Road Fairfield, CA 94534
Phone: (707) 207-7760

Project Name:	Berkeley BWTPF	Station ID:	BWTPF – DU5 - 05
Date:	May 7, 2025	Project No.:	39995
Vertical Datum:	**MLLW** MLW Other	Depth Measurement:	Sounder (Leadline)
Navigation Datum:	NAD83	Field Crew:	Miguel G, David S
Project Depth:	-12.5 ft MLLW	Overdredge and Z-layer:	- 1 – 0.5 ft MLLW

	Attempt 1	Attempt 2	Attempt 3	Description of Material	Depth
Time:	0705H	0725H	0740H	Mudline	
Latitude/Northing:	37.863460	→	→		
Longitude/Easting:	-122.318821	→	→		
(A) Measured Water Depth (ft)	-10.0	–	–		
(B) Tide Height (ft)	+3.3	–	–		
(C) Mudline Elevation (A+B=C)	6.7	6.7	6.7		
(D) Calculated Core Length (ft) -[(PD+OD+Z)-C]=D	7.3	7.3	7.3		
Penetration/Recovery (ft)	6.3 / 5.4	7.3 / 4.5	7.3 / 7.2		
Core Characteristics					
Sediment Type	cobble, gravel, sand, C M F, silt clay, organic matter	cobble, gravel, sand, C M F, silt clay, organic matter	cobble, gravel, sand, C M F, silt clay, organic matter	Comments: ~~ME-5/7/25~~ MG-5/7/25 - refusal during att. 1, 2 - att. 3 collected - horizon around p.d. observed to contain mostly shell hash fine sand	
Sediment Color	gray, black, brown, brown surface, olivine	gray, black, brown, brown surface, olivine	gray, black, brown, brown surface, olivine		
Sediment Odor	None, slight, mod, strong H_2S, petroleum, septic	None, slight, mod, strong H_2S, petroleum, septic	None, slight, mod, strong H_2S, petroleum, septic		
Homogenous (H) or Layering (L)	H (L)	H (L)	H (L)	Recorded by: MG	

Sediment Core Collection Form

Pacific EcoRisk
Environmental Consulting and Testing
2250 Cordelia Road Fairfield, CA 94534
Phone: (707) 207-7760

Project Name:	Berkeley BWTPF	Station ID:	**BWTPF – DU5 - 0C**
Date:	May 7, 2025	Project No.:	39995
Vertical Datum:	**MLLW** MLW Other	Depth Measurement:	Sounder (Leadline)
Navigation Datum:	NAD83	Field Crew:	Miguel G, David S
Project Depth:	-12.5 ft MLLW	Overdredge and Z-layer:	- 1 – 0.5 ft MLLW

	Attempt 1	Attempt 2	Attempt 3	Description of Material	Depth
Time:	0630			Mudline	
Latitude/Northing:	37.862950				
Longitude/Easting:	-122.318287				
(A) Measured Water Depth (ft)	10.5				
(B) Tide Height (ft)	+ +2.8				
(C) Mudline Elevation (A+B=C)	- 7.7				
(D) Calculated Core Length (ft) -[(PD+OD+Z)-C]=D	6.3				
Penetration/Recovery (ft)	6.2 / 6.1				
Core Characteristics					
Sediment Type	cobble, gravel, sand C M F, silt clay, organic matter	cobble, gravel, sand C M F, silt clay, organic matter	cobble, gravel, sand C M F, silt clay, organic matter	Comments: 5/9/25 - refusal encountered at att. 1 due to dense rock/sand layer. Sample collected and processed with ~0.4ft z. No additional attempt made due to surf conditions & safety.	
Sediment Color	gray, black, brown, brown surface, olivine	gray, black, brown, brown surface, olivine	gray, black, brown, brown surface, olivine		
Sediment Odor	None, slight, mod, strong H_2S, petroleum, septic	None, slight, mod, strong H_2S, petroleum, septic	None, slight, mod, strong H_2S, petroleum, septic		
Homogenous (H) or Layering (L)	H (L)	H L	H L	Recorded by: NC	

Appendix B

Eurofins Data Report for the Sediment Analyses

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Jeff Cotsifas
Pacific EcoRisk Inc
2250 Cordelia Rd
Fairfield, California 94534

Generated 6/11/2025 8:49:40 AM

JOB DESCRIPTION

Berkeley Water Transportation Pier Ferry (Sed)

JOB NUMBER

570-230772-1

Eurofins Calscience
2841 Dow Avenue, Suite 100
Tustin CA 92780

See page two for job notes and contact information.

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Calscience Project Manager.

Authorization



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6/11/2025 8:49:40 AM

Authorized for release by
Carla Hollowell, Project Manager I
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(714)895-5494

Table of Contents

Cover Page 1
Table of Contents 3
Definitions/Glossary 4
Case Narrative 6
Client Sample Results 9
Surrogate Summary 44
Isotope Dilution Summary 47
QC Sample Results 49
QC Association Summary 72
Lab Chronicle 77
Certification Summary 81
Method Summary 85
Sample Summary 86
Chain of Custody 87
Receipt Checklists 97

Client: Pacific EcoRisk Inc
Job ID: 570-230772-1
Project/Site: Berkeley Water Transportation Pier Ferry (Sed)

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
*1	LCS/LCSD RPD exceeds control limits.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC Semi VOA

Qualifier	Qualifier Description
F2	MS/MSD RPD exceeds control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
p	The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.

Dioxin

Qualifier	Qualifier Description
*5-	Isotope dilution analyte is outside acceptance limits, low biased.
B	Compound was found in the blank and sample.
I	Value is EMPC (estimated maximum possible concentration).
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job Narrative
570-230772-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

The samples were frozen after collection (prior to holding time expiration and/or pursuant to information obtained from the client) at -18C, and remained frozen until the laboratory was ready to prepare the samples for analysis. Eurofins Calscience, Inc. follows SWAMP criteria and the Puget Sound Protocol (USEPA/PSWQAT, 1997, Table 2) for holding times in marine tissues and / or sediment samples, which states holding times may be extended up to six months to one year (two years for metals) for most analyses if stored frozen at -18C after collection. Therefore, the sample results have not been flagged as exceeding the EPA Method recommended holding times.

Receipt
The samples were received on 5/15/2025 9:40 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were -2.0°C and 2.6°C.

GC/MS Semi VOA
Method Organotins_SIM: The laboratory control sample and/or the laboratory control sample duplicate (LCS/LCSD) for preparation batch 570-573582 and analytical batch 570-574619 recovered outside control limits for the following analyte(s): Monobutyltin. Monobutyltin has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed. Batch precision also exceeded control limits for these analyte(s). These results have been reported and qualified.

Method Organotins_SIM: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 570-573582 and analytical batch 570-574619 recovered outside control limits for the following analytes: Tetrabutyltin, Tributyltin, Dibutyltin and Tripentyltin.

Method Organotins_SIM: The matrix spike/matrix spike duplicate (MS/MSD) for preparation batch 570-573582 and analytical batch 570-574619 exceeded control limits for the following analyte(s): Monobutyltin, Note that this analyte is a known poor performer when analyzed using this method.

Method Organotins_SIM: The method blank for preparation batch 570-574411 and analytical batch 570-576588 contained Dibutyltin above the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or re-analysis of samples was not performed.

Method Organotins_SIM: The laboratory control sample and/or the laboratory control sample duplicate (LCS/LCSD) for preparation batch 570-574411 and analytical batch 570-576588 recovered outside control limits for the following analyte(s): Monobutyltin. Monobutyltin has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

PCBs
Method 8270C_SIM_CON: The continuing calibration verification (CCV) associated with batch 570-575699 recovered above the upper control limit for PCB-60. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are:BWTPF-2025-DU1 (570-230772-1), BWTPF-2025-DU2 (570-230772-2), BWTPF-2025-DU3 (570-230772-3), BWTPF-2025-DU4 (570-230772-4) and BWTPF-2025-DU5 (570-230772-5).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Pesticides
Method 8081A: The following samples required a mercury clean-up, via EPA Method 3660A, to reduce matrix interferences caused by sulfur: BWTPF-2025-DU1 (570-230772-1), BWTPF-2025-DU1 (570-230772-1[MS]), BWTPF-2025-DU1 (570-230772-1[MSD]), BWTPF-2025-DU2 (570-230772-2), BWTPF-2025-DU3 (570-230772-3), BWTPF-2025-DU4 (570-230772-4) and BWTPF-2025-DU5 (570-230772-5). The reagent lot number used was: 5963588
Method:8081

Method 8081A: The matrix spike / matrix spike duplicate / sample duplicate (MS/MSD/DUP) precision for preparation batch 570-572188 and analytical batch 570-578599 was outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) precision was within acceptance limits.

Method 8081A: The matrix spike / matrix spike duplicate / sample duplicate (MS/MSD/DUP) precision for preparation batch 570-572188 and analytical batch 570-578599 was outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) precision was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Dioxin
Method 8290A: Diphenyl ethers were found to be interfering with 1,2,3,7,8-PeCDF at greater than 20%. Native compound has been marked non-detect due to diphenyl ether interference.

Method 8290A: Diphenyl ethers were found to be interfering with non-2,3,7,8 substituted furans in totals reporting. Non-2,3,7,8 substituted furans with interfering diphenyl ethers have been removed from reporting in totals.

Method 8290A: The Isotope Dilution Analyte (IDA) recovery associated with the following sample is below the method recommended limit: BWTPF-2025-DU1 (570-230772-1[MS]). Signal-to-noise ratios are within recommended limits. Matrix interference suspected in affecting sample results.

Method 8290A: The bracketing continuing calibration verification (CCV) associated with batch 410-649163 has analyte(s) with percent difference values that are outside the method. Per method guidelines, an average relative response factor (RRF) is calculated from the bracketing CCV and is used to quantitate any positive results in the associated samples for the affected analytes.

Method 8290A: Diphenyl ethers were found to be interfering with non-2,3,7,8 substituted furans in totals reporting. Non-2,3,7,8 substituted furans with interfering diphenyl ethers have been removed from reporting in totals.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Metals
Method 6020: The method blank for preparation batch 570-573335 and analytical batch 570-573673 contained Copper above the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or re-analysis of samples was not performed.

Method 6020: The serial dilution performed for the following sample associated with batch 570-573673 was outside control limits: (570-230772-B-1-A SD)

Method 6020: The matrix spike duplicate (MSD) recoveries for preparation batch 570-573335 and analytical batch 570-573673 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

General Chemistry
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Geotechnical
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Method: SW846 8270C SIM CON - PCB Congeners (GC/MS)

Client Sample ID: BWTPF-2025-DU1
Lab Sample ID: 570-230772-1
Date Collected: 05/06/25 08:35
Matrix: Solid
Date Received: 05/15/25 09:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-5/8	ND		0.67	0.19	ug/Kg	☼	05/17/25 09:00	05/25/25 15:15	1
PCB-18	ND		0.33	0.16	ug/Kg	☼	05/17/25 09:00	05/25/25 15:15	1
PCB-28	ND		0.33	0.17	ug/Kg	☼	05/17/25 09:00	05/25/25 15:15	1
PCB-31	ND		0.33	0.15	ug/Kg	☼	05/17/25 09:00	05/25/25 15:15	1
PCB-33	ND		0.33	0.079	ug/Kg	☼	05/17/25 09:00	05/25/25 15:15	1
PCB-44	ND		0.33	0.20	ug/Kg	☼	05/17/25 09:00	05/25/25 15:15	1
PCB-49	ND		0.33	0.18	ug/Kg	☼	05/17/25 09:00	05/25/25 15:15	1
PCB-52	**0.30**	**J**	0.33	0.13	ug/Kg	☼	05/17/25 09:00	05/25/25 15:15	1
PCB-56	ND		0.33	0.079	ug/Kg	☼	05/17/25 09:00	05/25/25 15:15	1
PCB-60	ND		0.33	0.22	ug/Kg	☼	05/17/25 09:00	05/25/25 15:15	1
PCB-66	**0.34**		0.33	0.18	ug/Kg	☼	05/17/25 09:00	05/25/25 15:15	1
PCB-70	ND		0.33	0.15	ug/Kg	☼	05/17/25 09:00	05/25/25 15:15	1
PCB-74	ND		0.33	0.17	ug/Kg	☼	05/17/25 09:00	05/25/25 15:15	1
PCB-87	**0.64**		0.33	0.21	ug/Kg	☼	05/17/25 09:00	05/25/25 15:15	1
PCB-95	**0.77**		0.33	0.11	ug/Kg	☼	05/17/25 09:00	05/25/25 15:15	1
PCB-97	ND		0.33	0.23	ug/Kg	☼	05/17/25 09:00	05/25/25 15:15	1
PCB-99	**0.96**		0.33	0.14	ug/Kg	☼	05/17/25 09:00	05/25/25 15:15	1
PCB-101	**1.4**		0.33	0.18	ug/Kg	☼	05/17/25 09:00	05/25/25 15:15	1
PCB-105	ND		0.33	0.18	ug/Kg	☼	05/17/25 09:00	05/25/25 15:15	1
PCB-110	**0.67**		0.33	0.15	ug/Kg	☼	05/17/25 09:00	05/25/25 15:15	1
PCB-118	ND		0.33	0.13	ug/Kg	☼	05/17/25 09:00	05/25/25 15:15	1
PCB-128	ND		0.33	0.23	ug/Kg	☼	05/17/25 09:00	05/25/25 15:15	1
PCB-132/153	**2.0**		0.67	0.40	ug/Kg	☼	05/17/25 09:00	05/25/25 15:15	1
PCB-138/158	**1.5**		0.67	0.40	ug/Kg	☼	05/17/25 09:00	05/25/25 15:15	1
PCB-141	ND		0.33	0.11	ug/Kg	☼	05/17/25 09:00	05/25/25 15:15	1
PCB-149	**0.99**		0.33	0.18	ug/Kg	☼	05/17/25 09:00	05/25/25 15:15	1
PCB-151	**0.42**		0.33	0.15	ug/Kg	☼	05/17/25 09:00	05/25/25 15:15	1
PCB-156	ND		0.33	0.16	ug/Kg	☼	05/17/25 09:00	05/25/25 15:15	1
PCB-170	**0.54**		0.33	0.17	ug/Kg	☼	05/17/25 09:00	05/25/25 15:15	1
PCB-174	**0.33**		0.33	0.095	ug/Kg	☼	05/17/25 09:00	05/25/25 15:15	1
PCB-177	**0.16**	**J**	0.33	0.16	ug/Kg	☼	05/17/25 09:00	05/25/25 15:15	1
PCB-180	**1.2**		0.33	0.14	ug/Kg	☼	05/17/25 09:00	05/25/25 15:15	1
PCB-183	ND		0.33	0.20	ug/Kg	☼	05/17/25 09:00	05/25/25 15:15	1
PCB-187	**0.70**		0.33	0.15	ug/Kg	☼	05/17/25 09:00	05/25/25 15:15	1
PCB-194	ND		0.33	0.19	ug/Kg	☼	05/17/25 09:00	05/25/25 15:15	1
PCB-195	ND		0.33	0.10	ug/Kg	☼	05/17/25 09:00	05/25/25 15:15	1
PCB-201	ND		0.33	0.23	ug/Kg	☼	05/17/25 09:00	05/25/25 15:15	1
PCB-203	ND		0.33	0.12	ug/Kg	☼	05/17/25 09:00	05/25/25 15:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*50*		*20 - 139*	*05/17/25 09:00*	*05/25/25 15:15*	*1*
p-Terphenyl-d14	*115*		*37 - 165*	*05/17/25 09:00*	*05/25/25 15:15*	*1*

Client Sample ID: BWTPF-2025-DU2
Lab Sample ID: 570-230772-2
Date Collected: 05/06/25 09:35
Matrix: Solid
Date Received: 05/15/25 09:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-5/8	ND		0.70	0.20	ug/Kg	☼	05/17/25 09:00	05/25/25 15:41	1
PCB-18	ND		0.35	0.16	ug/Kg	☼	05/17/25 09:00	05/25/25 15:41	1
PCB-28	ND		0.35	0.18	ug/Kg	☼	05/17/25 09:00	05/25/25 15:41	1

Method: SW846 8270C SIM CON - PCB Congeners (GC/MS) (Continued)

Client Sample ID: BWTPF-2025-DU2
Date Collected: 05/06/25 09:35
Date Received: 05/15/25 09:40

Lab Sample ID: 570-230772-2
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-31	ND		0.35	0.16	ug/Kg	☼	05/17/25 09:00	05/25/25 15:41	1
PCB-33	ND		0.35	0.083	ug/Kg	☼	05/17/25 09:00	05/25/25 15:41	1
PCB-44	ND		0.35	0.21	ug/Kg	☼	05/17/25 09:00	05/25/25 15:41	1
PCB-49	ND		0.35	0.19	ug/Kg	☼	05/17/25 09:00	05/25/25 15:41	1
PCB-52	ND		0.35	0.14	ug/Kg	☼	05/17/25 09:00	05/25/25 15:41	1
PCB-56	ND		0.35	0.083	ug/Kg	☼	05/17/25 09:00	05/25/25 15:41	1
PCB-60	ND		0.35	0.23	ug/Kg	☼	05/17/25 09:00	05/25/25 15:41	1
PCB-66	ND		0.35	0.19	ug/Kg	☼	05/17/25 09:00	05/25/25 15:41	1
PCB-70	ND		0.35	0.16	ug/Kg	☼	05/17/25 09:00	05/25/25 15:41	1
PCB-74	ND		0.35	0.18	ug/Kg	☼	05/17/25 09:00	05/25/25 15:41	1
PCB-87	ND		0.35	0.22	ug/Kg	☼	05/17/25 09:00	05/25/25 15:41	1
PCB-95	**0.41**		0.35	0.12	ug/Kg	☼	05/17/25 09:00	05/25/25 15:41	1
PCB-97	ND		0.35	0.24	ug/Kg	☼	05/17/25 09:00	05/25/25 15:41	1
PCB-99	ND		0.35	0.15	ug/Kg	☼	05/17/25 09:00	05/25/25 15:41	1
PCB-101	**0.64**		0.35	0.19	ug/Kg	☼	05/17/25 09:00	05/25/25 15:41	1
PCB-105	ND		0.35	0.18	ug/Kg	☼	05/17/25 09:00	05/25/25 15:41	1
PCB-110	**0.23**	**J**	0.35	0.16	ug/Kg	☼	05/17/25 09:00	05/25/25 15:41	1
PCB-118	ND		0.35	0.14	ug/Kg	☼	05/17/25 09:00	05/25/25 15:41	1
PCB-128	ND		0.35	0.24	ug/Kg	☼	05/17/25 09:00	05/25/25 15:41	1
PCB-132/153	ND		0.70	0.42	ug/Kg	☼	05/17/25 09:00	05/25/25 15:41	1
PCB-138/158	ND		0.70	0.42	ug/Kg	☼	05/17/25 09:00	05/25/25 15:41	1
PCB-141	ND		0.35	0.12	ug/Kg	☼	05/17/25 09:00	05/25/25 15:41	1
PCB-149	**0.44**		0.35	0.19	ug/Kg	☼	05/17/25 09:00	05/25/25 15:41	1
PCB-151	**0.19**	**J**	0.35	0.16	ug/Kg	☼	05/17/25 09:00	05/25/25 15:41	1
PCB-156	ND		0.35	0.17	ug/Kg	☼	05/17/25 09:00	05/25/25 15:41	1
PCB-170	**0.40**		0.35	0.18	ug/Kg	☼	05/17/25 09:00	05/25/25 15:41	1
PCB-174	**0.24**	**J**	0.35	0.10	ug/Kg	☼	05/17/25 09:00	05/25/25 15:41	1
PCB-177	ND		0.35	0.17	ug/Kg	☼	05/17/25 09:00	05/25/25 15:41	1
PCB-180	**0.78**		0.35	0.14	ug/Kg	☼	05/17/25 09:00	05/25/25 15:41	1
PCB-183	ND		0.35	0.21	ug/Kg	☼	05/17/25 09:00	05/25/25 15:41	1
PCB-187	**0.52**		0.35	0.16	ug/Kg	☼	05/17/25 09:00	05/25/25 15:41	1
PCB-194	ND		0.35	0.20	ug/Kg	☼	05/17/25 09:00	05/25/25 15:41	1
PCB-195	ND		0.35	0.11	ug/Kg	☼	05/17/25 09:00	05/25/25 15:41	1
PCB-201	ND		0.35	0.24	ug/Kg	☼	05/17/25 09:00	05/25/25 15:41	1
PCB-203	ND		0.35	0.12	ug/Kg	☼	05/17/25 09:00	05/25/25 15:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*51*		*20 - 139*	*05/17/25 09:00*	*05/25/25 15:41*	*1*
p-Terphenyl-d14	*110*		*37 - 165*	*05/17/25 09:00*	*05/25/25 15:41*	*1*

Client Sample ID: BWTPF-2025-DU3
Date Collected: 05/09/25 06:40
Date Received: 05/15/25 09:40

Lab Sample ID: 570-230772-3
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-5/8	ND		0.75	0.21	ug/Kg	☼	05/17/25 09:00	05/25/25 16:06	1
PCB-18	ND		0.37	0.18	ug/Kg	☼	05/17/25 09:00	05/25/25 16:06	1
PCB-28	**0.34**	**J**	0.37	0.19	ug/Kg	☼	05/17/25 09:00	05/25/25 16:06	1
PCB-31	ND		0.37	0.17	ug/Kg	☼	05/17/25 09:00	05/25/25 16:06	1
PCB-33	ND		0.37	0.088	ug/Kg	☼	05/17/25 09:00	05/25/25 16:06	1
PCB-44	ND		0.37	0.22	ug/Kg	☼	05/17/25 09:00	05/25/25 16:06	1

Method: SW846 8270C SIM CON - PCB Congeners (GC/MS) (Continued)

Client Sample ID: BWTPF-2025-DU3
Date Collected: 05/09/25 06:40
Date Received: 05/15/25 09:40

Lab Sample ID: 570-230772-3
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-49	**0.30**	**J**	0.37	0.20	ug/Kg	☼	05/17/25 09:00	05/25/25 16:06	1
PCB-52	**0.53**		0.37	0.15	ug/Kg	☼	05/17/25 09:00	05/25/25 16:06	1
PCB-56	ND		0.37	0.088	ug/Kg	☼	05/17/25 09:00	05/25/25 16:06	1
PCB-60	ND		0.37	0.24	ug/Kg	☼	05/17/25 09:00	05/25/25 16:06	1
PCB-66	ND		0.37	0.21	ug/Kg	☼	05/17/25 09:00	05/25/25 16:06	1
PCB-70	**0.36**	**J**	0.37	0.17	ug/Kg	☼	05/17/25 09:00	05/25/25 16:06	1
PCB-74	ND		0.37	0.19	ug/Kg	☼	05/17/25 09:00	05/25/25 16:06	1
PCB-87	ND		0.37	0.23	ug/Kg	☼	05/17/25 09:00	05/25/25 16:06	1
PCB-95	**0.71**		0.37	0.12	ug/Kg	☼	05/17/25 09:00	05/25/25 16:06	1
PCB-97	ND		0.37	0.26	ug/Kg	☼	05/17/25 09:00	05/25/25 16:06	1
PCB-99	**1.1**		0.37	0.16	ug/Kg	☼	05/17/25 09:00	05/25/25 16:06	1
PCB-101	**1.4**		0.37	0.20	ug/Kg	☼	05/17/25 09:00	05/25/25 16:06	1
PCB-105	ND		0.37	0.20	ug/Kg	☼	05/17/25 09:00	05/25/25 16:06	1
PCB-110	**0.67**		0.37	0.17	ug/Kg	☼	05/17/25 09:00	05/25/25 16:06	1
PCB-118	ND		0.37	0.15	ug/Kg	☼	05/17/25 09:00	05/25/25 16:06	1
PCB-128	ND		0.37	0.26	ug/Kg	☼	05/17/25 09:00	05/25/25 16:06	1
PCB-132/153	**2.1**		0.75	0.45	ug/Kg	☼	05/17/25 09:00	05/25/25 16:06	1
PCB-138/158	ND		0.75	0.45	ug/Kg	☼	05/17/25 09:00	05/25/25 16:06	1
PCB-141	ND		0.37	0.12	ug/Kg	☼	05/17/25 09:00	05/25/25 16:06	1
PCB-149	**1.2**		0.37	0.20	ug/Kg	☼	05/17/25 09:00	05/25/25 16:06	1
PCB-151	**0.23**	**J**	0.37	0.17	ug/Kg	☼	05/17/25 09:00	05/25/25 16:06	1
PCB-156	ND		0.37	0.18	ug/Kg	☼	05/17/25 09:00	05/25/25 16:06	1
PCB-170	**0.64**		0.37	0.19	ug/Kg	☼	05/17/25 09:00	05/25/25 16:06	1
PCB-174	**0.37**		0.37	0.11	ug/Kg	☼	05/17/25 09:00	05/25/25 16:06	1
PCB-177	**0.18**	**J**	0.37	0.18	ug/Kg	☼	05/17/25 09:00	05/25/25 16:06	1
PCB-180	**1.2**		0.37	0.15	ug/Kg	☼	05/17/25 09:00	05/25/25 16:06	1
PCB-183	ND		0.37	0.23	ug/Kg	☼	05/17/25 09:00	05/25/25 16:06	1
PCB-187	**0.82**		0.37	0.17	ug/Kg	☼	05/17/25 09:00	05/25/25 16:06	1
PCB-194	ND		0.37	0.21	ug/Kg	☼	05/17/25 09:00	05/25/25 16:06	1
PCB-195	**0.13**	**J**	0.37	0.12	ug/Kg	☼	05/17/25 09:00	05/25/25 16:06	1
PCB-201	ND		0.37	0.26	ug/Kg	☼	05/17/25 09:00	05/25/25 16:06	1
PCB-203	ND		0.37	0.13	ug/Kg	☼	05/17/25 09:00	05/25/25 16:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*48*		*20 - 139*	*05/17/25 09:00*	*05/25/25 16:06*	*1*
p-Terphenyl-d14	*113*		*37 - 165*	*05/17/25 09:00*	*05/25/25 16:06*	*1*

Client Sample ID: BWTPF-2025-DU4
Date Collected: 05/07/25 12:15
Date Received: 05/15/25 09:40

Lab Sample ID: 570-230772-4
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-5/8	ND		0.68	0.20	ug/Kg	☼	05/17/25 09:00	05/25/25 16:32	1
PCB-18	ND		0.34	0.16	ug/Kg	☼	05/17/25 09:00	05/25/25 16:32	1
PCB-28	**0.31**	**J**	0.34	0.17	ug/Kg	☼	05/17/25 09:00	05/25/25 16:32	1
PCB-31	ND		0.34	0.15	ug/Kg	☼	05/17/25 09:00	05/25/25 16:32	1
PCB-33	ND		0.34	0.081	ug/Kg	☼	05/17/25 09:00	05/25/25 16:32	1
PCB-44	**0.42**		0.34	0.20	ug/Kg	☼	05/17/25 09:00	05/25/25 16:32	1
PCB-49	ND		0.34	0.19	ug/Kg	☼	05/17/25 09:00	05/25/25 16:32	1
PCB-52	**0.35**		0.34	0.14	ug/Kg	☼	05/17/25 09:00	05/25/25 16:32	1
PCB-56	ND		0.34	0.081	ug/Kg	☼	05/17/25 09:00	05/25/25 16:32	1

Method: SW846 8270C SIM CON - PCB Congeners (GC/MS) (Continued)

Client Sample ID: BWTPF-2025-DU4
Lab Sample ID: 570-230772-4
Date Collected: 05/07/25 12:15
Matrix: Solid
Date Received: 05/15/25 09:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-60	ND		0.34	0.22	ug/Kg	☼	05/17/25 09:00	05/25/25 16:32	1
PCB-66	**0.33**	**J**	0.34	0.19	ug/Kg	☼	05/17/25 09:00	05/25/25 16:32	1
PCB-70	ND		0.34	0.16	ug/Kg	☼	05/17/25 09:00	05/25/25 16:32	1
PCB-74	ND		0.34	0.18	ug/Kg	☼	05/17/25 09:00	05/25/25 16:32	1
PCB-87	ND		0.34	0.21	ug/Kg	☼	05/17/25 09:00	05/25/25 16:32	1
PCB-95	**1.0**		0.34	0.11	ug/Kg	☼	05/17/25 09:00	05/25/25 16:32	1
PCB-97	ND		0.34	0.24	ug/Kg	☼	05/17/25 09:00	05/25/25 16:32	1
PCB-99	**1.1**		0.34	0.15	ug/Kg	☼	05/17/25 09:00	05/25/25 16:32	1
PCB-101	**1.5**		0.34	0.19	ug/Kg	☼	05/17/25 09:00	05/25/25 16:32	1
PCB-105	ND		0.34	0.18	ug/Kg	☼	05/17/25 09:00	05/25/25 16:32	1
PCB-110	**0.77**		0.34	0.15	ug/Kg	☼	05/17/25 09:00	05/25/25 16:32	1
PCB-118	**0.73**		0.34	0.14	ug/Kg	☼	05/17/25 09:00	05/25/25 16:32	1
PCB-128	ND		0.34	0.24	ug/Kg	☼	05/17/25 09:00	05/25/25 16:32	1
PCB-132/153	**3.0**		0.68	0.41	ug/Kg	☼	05/17/25 09:00	05/25/25 16:32	1
PCB-138/158	**2.2**		0.68	0.41	ug/Kg	☼	05/17/25 09:00	05/25/25 16:32	1
PCB-141	ND		0.34	0.11	ug/Kg	☼	05/17/25 09:00	05/25/25 16:32	1
PCB-149	**1.7**		0.34	0.19	ug/Kg	☼	05/17/25 09:00	05/25/25 16:32	1
PCB-151	**0.57**		0.34	0.16	ug/Kg	☼	05/17/25 09:00	05/25/25 16:32	1
PCB-156	ND		0.34	0.16	ug/Kg	☼	05/17/25 09:00	05/25/25 16:32	1
PCB-170	**0.82**		0.34	0.18	ug/Kg	☼	05/17/25 09:00	05/25/25 16:32	1
PCB-174	**0.74**		0.34	0.098	ug/Kg	☼	05/17/25 09:00	05/25/25 16:32	1
PCB-177	**0.37**		0.34	0.16	ug/Kg	☼	05/17/25 09:00	05/25/25 16:32	1
PCB-180	**2.0**		0.34	0.14	ug/Kg	☼	05/17/25 09:00	05/25/25 16:32	1
PCB-183	**0.52**		0.34	0.21	ug/Kg	☼	05/17/25 09:00	05/25/25 16:32	1
PCB-187	**1.2**		0.34	0.15	ug/Kg	☼	05/17/25 09:00	05/25/25 16:32	1
PCB-194	ND		0.34	0.19	ug/Kg	☼	05/17/25 09:00	05/25/25 16:32	1
PCB-195	ND		0.34	0.11	ug/Kg	☼	05/17/25 09:00	05/25/25 16:32	1
PCB-201	ND		0.34	0.24	ug/Kg	☼	05/17/25 09:00	05/25/25 16:32	1
PCB-203	ND		0.34	0.12	ug/Kg	☼	05/17/25 09:00	05/25/25 16:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*53*		*20 - 139*	*05/17/25 09:00*	*05/25/25 16:32*	*1*
p-Terphenyl-d14	*117*		*37 - 165*	*05/17/25 09:00*	*05/25/25 16:32*	*1*

Client Sample ID: BWTPF-2025-DU5
Lab Sample ID: 570-230772-5
Date Collected: 05/07/25 06:30
Matrix: Solid
Date Received: 05/15/25 09:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-5/8	ND		0.64	0.18	ug/Kg	☼	05/17/25 09:00	05/25/25 16:57	1
PCB-18	ND		0.32	0.15	ug/Kg	☼	05/17/25 09:00	05/25/25 16:57	1
PCB-28	**0.20**	**J**	0.32	0.16	ug/Kg	☼	05/17/25 09:00	05/25/25 16:57	1
PCB-31	ND		0.32	0.14	ug/Kg	☼	05/17/25 09:00	05/25/25 16:57	1
PCB-33	ND		0.32	0.075	ug/Kg	☼	05/17/25 09:00	05/25/25 16:57	1
PCB-44	ND		0.32	0.19	ug/Kg	☼	05/17/25 09:00	05/25/25 16:57	1
PCB-49	**0.27**	**J**	0.32	0.17	ug/Kg	☼	05/17/25 09:00	05/25/25 16:57	1
PCB-52	**0.35**		0.32	0.13	ug/Kg	☼	05/17/25 09:00	05/25/25 16:57	1
PCB-56	ND		0.32	0.075	ug/Kg	☼	05/17/25 09:00	05/25/25 16:57	1
PCB-60	ND		0.32	0.21	ug/Kg	☼	05/17/25 09:00	05/25/25 16:57	1
PCB-66	ND		0.32	0.18	ug/Kg	☼	05/17/25 09:00	05/25/25 16:57	1
PCB-70	ND		0.32	0.15	ug/Kg	☼	05/17/25 09:00	05/25/25 16:57	1

Method: SW846 8270C SIM CON - PCB Congeners (GC/MS) (Continued)

Client Sample ID: BWTPF-2025-DU5
Lab Sample ID: 570-230772-5
Date Collected: 05/07/25 06:30
Matrix: Solid
Date Received: 05/15/25 09:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-74	ND		0.32	0.16	ug/Kg	☼	05/17/25 09:00	05/25/25 16:57	1
PCB-87	**1.0**		0.32	0.20	ug/Kg	☼	05/17/25 09:00	05/25/25 16:57	1
PCB-95	**0.65**		0.32	0.11	ug/Kg	☼	05/17/25 09:00	05/25/25 16:57	1
PCB-97	ND		0.32	0.22	ug/Kg	☼	05/17/25 09:00	05/25/25 16:57	1
PCB-99	**0.91**		0.32	0.14	ug/Kg	☼	05/17/25 09:00	05/25/25 16:57	1
PCB-101	**1.2**		0.32	0.17	ug/Kg	☼	05/17/25 09:00	05/25/25 16:57	1
PCB-105	ND		0.32	0.17	ug/Kg	☼	05/17/25 09:00	05/25/25 16:57	1
PCB-110	**0.59**		0.32	0.14	ug/Kg	☼	05/17/25 09:00	05/25/25 16:57	1
PCB-118	**0.31**	**J**	0.32	0.13	ug/Kg	☼	05/17/25 09:00	05/25/25 16:57	1
PCB-128	ND		0.32	0.22	ug/Kg	☼	05/17/25 09:00	05/25/25 16:57	1
PCB-132/153	**1.8**		0.64	0.38	ug/Kg	☼	05/17/25 09:00	05/25/25 16:57	1
PCB-138/158	**1.3**		0.64	0.39	ug/Kg	☼	05/17/25 09:00	05/25/25 16:57	1
PCB-141	ND		0.32	0.11	ug/Kg	☼	05/17/25 09:00	05/25/25 16:57	1
PCB-149	**0.90**		0.32	0.17	ug/Kg	☼	05/17/25 09:00	05/25/25 16:57	1
PCB-151	**0.32**		0.32	0.15	ug/Kg	☼	05/17/25 09:00	05/25/25 16:57	1
PCB-156	ND		0.32	0.15	ug/Kg	☼	05/17/25 09:00	05/25/25 16:57	1
PCB-170	**0.51**		0.32	0.17	ug/Kg	☼	05/17/25 09:00	05/25/25 16:57	1
PCB-174	**0.25**	**J**	0.32	0.091	ug/Kg	☼	05/17/25 09:00	05/25/25 16:57	1
PCB-177	ND		0.32	0.15	ug/Kg	☼	05/17/25 09:00	05/25/25 16:57	1
PCB-180	**0.82**		0.32	0.13	ug/Kg	☼	05/17/25 09:00	05/25/25 16:57	1
PCB-183	ND		0.32	0.19	ug/Kg	☼	05/17/25 09:00	05/25/25 16:57	1
PCB-187	**0.65**		0.32	0.14	ug/Kg	☼	05/17/25 09:00	05/25/25 16:57	1
PCB-194	ND		0.32	0.18	ug/Kg	☼	05/17/25 09:00	05/25/25 16:57	1
PCB-195	ND		0.32	0.099	ug/Kg	☼	05/17/25 09:00	05/25/25 16:57	1
PCB-201	ND		0.32	0.22	ug/Kg	☼	05/17/25 09:00	05/25/25 16:57	1
PCB-203	ND		0.32	0.11	ug/Kg	☼	05/17/25 09:00	05/25/25 16:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*55*		*20 - 139*	*05/17/25 09:00*	*05/25/25 16:57*	*1*
p-Terphenyl-d14	*119*		*37 - 165*	*05/17/25 09:00*	*05/25/25 16:57*	*1*

Method: SW846 8270C SIM - PAHs (GC/MS SIM)

Client Sample ID: BWTPF-2025-DU1
Lab Sample ID: 570-230772-1
Date Collected: 05/06/25 08:35
Matrix: Solid
Date Received: 05/15/25 09:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	11	J	17	3.3	ug/Kg	☼	06/05/25 13:00	06/07/25 00:55	1
Acenaphthylene	25		17	4.4	ug/Kg	☼	06/05/25 13:00	06/07/25 00:55	1
Anthracene	56		17	2.5	ug/Kg	☼	06/05/25 13:00	06/07/25 00:55	1
Benzo[a]anthracene	170		17	6.5	ug/Kg	☼	06/05/25 13:00	06/07/25 00:55	1
Benzo[a]pyrene	370		17	8.0	ug/Kg	☼	06/05/25 13:00	06/07/25 00:55	1
Benzo[b]fluoranthene	260		17	8.0	ug/Kg	☼	06/05/25 13:00	06/07/25 00:55	1
Benzo[e]pyrene	200		17	5.7	ug/Kg	☼	06/05/25 13:00	06/07/25 00:55	1
Benzo[g,h,i]perylene	360		17	10	ug/Kg	☼	06/05/25 13:00	06/07/25 00:55	1
Benzo[k]fluoranthene	200		17	4.5	ug/Kg	☼	06/05/25 13:00	06/07/25 00:55	1
Biphenyl	6.0	J	17	4.4	ug/Kg	☼	06/05/25 13:00	06/07/25 00:55	1
Chrysene	200		17	4.2	ug/Kg	☼	06/05/25 13:00	06/07/25 00:55	1
Dibenz(a,h)anthracene	36		17	5.1	ug/Kg	☼	06/05/25 13:00	06/07/25 00:55	1
Dibenzothiophene	11	J	17	3.9	ug/Kg	☼	06/05/25 13:00	06/07/25 00:55	1
2,6-Dimethylnaphthalene	11	J	17	3.0	ug/Kg	☼	06/05/25 13:00	06/07/25 00:55	1
Fluoranthene	430		17	4.6	ug/Kg	☼	06/05/25 13:00	06/07/25 00:55	1
Fluorene	16	J	17	3.1	ug/Kg	☼	06/05/25 13:00	06/07/25 00:55	1
Indeno[1,2,3-cd]pyrene	290		17	6.1	ug/Kg	☼	06/05/25 13:00	06/07/25 00:55	1
1-Methylnaphthalene	ND		17	7.6	ug/Kg	☼	06/05/25 13:00	06/07/25 00:55	1
2-Methylnaphthalene	6.9	J	17	4.6	ug/Kg	☼	06/05/25 13:00	06/07/25 00:55	1
1-Methylphenanthrene	31		17	3.0	ug/Kg	☼	06/05/25 13:00	06/07/25 00:55	1
Naphthalene	18		17	7.5	ug/Kg	☼	06/05/25 13:00	06/07/25 00:55	1
Perylene	110		17	5.5	ug/Kg	☼	06/05/25 13:00	06/07/25 00:55	1
Phenanthrene	170		17	2.9	ug/Kg	☼	06/05/25 13:00	06/07/25 00:55	1
Pyrene	560		17	4.8	ug/Kg	☼	06/05/25 13:00	06/07/25 00:55	1
1,6,7-Trimethylnaphthalene	4.2	J	17	3.3	ug/Kg	☼	06/05/25 13:00	06/07/25 00:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*85*		*22 - 130*	*06/05/25 13:00*	*06/07/25 00:55*	*1*
Nitrobenzene-d5	*63*		*20 - 145*	*06/05/25 13:00*	*06/07/25 00:55*	*1*
p-Terphenyl-d14	*115*		*33 - 147*	*06/05/25 13:00*	*06/07/25 00:55*	*1*

Client Sample ID: BWTPF-2025-DU2
Lab Sample ID: 570-230772-2
Date Collected: 05/06/25 09:35
Matrix: Solid
Date Received: 05/15/25 09:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	7.9	J	18	3.5	ug/Kg	☼	06/05/25 13:00	06/07/25 01:17	1
Acenaphthylene	22		18	4.6	ug/Kg	☼	06/05/25 13:00	06/07/25 01:17	1
Anthracene	46		18	2.6	ug/Kg	☼	06/05/25 13:00	06/07/25 01:17	1
Benzo[a]anthracene	140		18	6.8	ug/Kg	☼	06/05/25 13:00	06/07/25 01:17	1
Benzo[a]pyrene	290		18	8.4	ug/Kg	☼	06/05/25 13:00	06/07/25 01:17	1
Benzo[b]fluoranthene	190		18	8.3	ug/Kg	☼	06/05/25 13:00	06/07/25 01:17	1
Benzo[e]pyrene	160		18	6.0	ug/Kg	☼	06/05/25 13:00	06/07/25 01:17	1
Benzo[g,h,i]perylene	290		18	11	ug/Kg	☼	06/05/25 13:00	06/07/25 01:17	1
Benzo[k]fluoranthene	170		18	4.7	ug/Kg	☼	06/05/25 13:00	06/07/25 01:17	1
Biphenyl	4.9	J	18	4.6	ug/Kg	☼	06/05/25 13:00	06/07/25 01:17	1
Chrysene	170		18	4.4	ug/Kg	☼	06/05/25 13:00	06/07/25 01:17	1
Dibenz(a,h)anthracene	27		18	5.3	ug/Kg	☼	06/05/25 13:00	06/07/25 01:17	1
Dibenzothiophene	9.1	J	18	4.0	ug/Kg	☼	06/05/25 13:00	06/07/25 01:17	1
2,6-Dimethylnaphthalene	12	J	18	3.2	ug/Kg	☼	06/05/25 13:00	06/07/25 01:17	1
Fluoranthene	340		18	4.8	ug/Kg	☼	06/05/25 13:00	06/07/25 01:17	1

Method: SW846 8270C SIM - PAHs (GC/MS SIM) (Continued)

Client Sample ID: BWTPF-2025-DU2
Lab Sample ID: 570-230772-2
Date Collected: 05/06/25 09:35
Matrix: Solid
Date Received: 05/15/25 09:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	13	J	18	3.2	ug/Kg	☼	06/05/25 13:00	06/07/25 01:17	1
Indeno[1,2,3-cd]pyrene	230		18	6.4	ug/Kg	☼	06/05/25 13:00	06/07/25 01:17	1
1-Methylnaphthalene	ND		18	8.0	ug/Kg	☼	06/05/25 13:00	06/07/25 01:17	1
2-Methylnaphthalene	7.1	J	18	4.8	ug/Kg	☼	06/05/25 13:00	06/07/25 01:17	1
1-Methylphenanthrene	33		18	3.2	ug/Kg	☼	06/05/25 13:00	06/07/25 01:17	1
Naphthalene	15	J	18	7.8	ug/Kg	☼	06/05/25 13:00	06/07/25 01:17	1
Perylene	90		18	5.8	ug/Kg	☼	06/05/25 13:00	06/07/25 01:17	1
Phenanthrene	150		18	3.1	ug/Kg	☼	06/05/25 13:00	06/07/25 01:17	1
Pyrene	450		18	5.0	ug/Kg	☼	06/05/25 13:00	06/07/25 01:17	1
1,6,7-Trimethylnaphthalene	4.7	J	18	3.4	ug/Kg	☼	06/05/25 13:00	06/07/25 01:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*92*		*22 - 130*	*06/05/25 13:00*	*06/07/25 01:17*	*1*
Nitrobenzene-d5	*68*		*20 - 145*	*06/05/25 13:00*	*06/07/25 01:17*	*1*
p-Terphenyl-d14	*114*		*33 - 147*	*06/05/25 13:00*	*06/07/25 01:17*	*1*

Client Sample ID: BWTPF-2025-DU3
Lab Sample ID: 570-230772-3
Date Collected: 05/09/25 06:40
Matrix: Solid
Date Received: 05/15/25 09:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	8.3	J	19	3.7	ug/Kg	☼	06/05/25 13:00	06/07/25 01:40	1
Acenaphthylene	25		19	4.8	ug/Kg	☼	06/05/25 13:00	06/07/25 01:40	1
Anthracene	47		19	2.8	ug/Kg	☼	06/05/25 13:00	06/07/25 01:40	1
Benzo[a]anthracene	150		19	7.3	ug/Kg	☼	06/05/25 13:00	06/07/25 01:40	1
Benzo[a]pyrene	270		19	8.9	ug/Kg	☼	06/05/25 13:00	06/07/25 01:40	1
Benzo[b]fluoranthene	180		19	8.8	ug/Kg	☼	06/05/25 13:00	06/07/25 01:40	1
Benzo[e]pyrene	150		19	6.3	ug/Kg	☼	06/05/25 13:00	06/07/25 01:40	1
Benzo[g,h,i]perylene	240		19	11	ug/Kg	☼	06/05/25 13:00	06/07/25 01:40	1
Benzo[k]fluoranthene	160		19	5.0	ug/Kg	☼	06/05/25 13:00	06/07/25 01:40	1
Biphenyl	ND		19	4.9	ug/Kg	☼	06/05/25 13:00	06/07/25 01:40	1
Chrysene	160		19	4.7	ug/Kg	☼	06/05/25 13:00	06/07/25 01:40	1
Dibenz(a,h)anthracene	25		19	5.7	ug/Kg	☼	06/05/25 13:00	06/07/25 01:40	1
Dibenzothiophene	9.2	J	19	4.3	ug/Kg	☼	06/05/25 13:00	06/07/25 01:40	1
2,6-Dimethylnaphthalene	14	J	19	3.4	ug/Kg	☼	06/05/25 13:00	06/07/25 01:40	1
Fluoranthene	310		19	5.1	ug/Kg	☼	06/05/25 13:00	06/07/25 01:40	1
Fluorene	9.2	J	19	3.4	ug/Kg	☼	06/05/25 13:00	06/07/25 01:40	1
Indeno[1,2,3-cd]pyrene	200		19	6.8	ug/Kg	☼	06/05/25 13:00	06/07/25 01:40	1
1-Methylnaphthalene	ND		19	8.5	ug/Kg	☼	06/05/25 13:00	06/07/25 01:40	1
2-Methylnaphthalene	5.8	J	19	5.1	ug/Kg	☼	06/05/25 13:00	06/07/25 01:40	1
1-Methylphenanthrene	ND		19	3.4	ug/Kg	☼	06/05/25 13:00	06/07/25 01:40	1
Naphthalene	12	J	19	8.3	ug/Kg	☼	06/05/25 13:00	06/07/25 01:40	1
Perylene	92		19	6.1	ug/Kg	☼	06/05/25 13:00	06/07/25 01:40	1
Phenanthrene	150		19	3.3	ug/Kg	☼	06/05/25 13:00	06/07/25 01:40	1
Pyrene	410		19	5.3	ug/Kg	☼	06/05/25 13:00	06/07/25 01:40	1
1,6,7-Trimethylnaphthalene	4.5	J	19	3.6	ug/Kg	☼	06/05/25 13:00	06/07/25 01:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*82*		*22 - 130*	*06/05/25 13:00*	*06/07/25 01:40*	*1*
Nitrobenzene-d5	*58*		*20 - 145*	*06/05/25 13:00*	*06/07/25 01:40*	*1*
p-Terphenyl-d14	*116*		*33 - 147*	*06/05/25 13:00*	*06/07/25 01:40*	*1*

Method: SW846 8270C SIM - PAHs (GC/MS SIM)

Client Sample ID: BWTPF-2025-DU4
Lab Sample ID: 570-230772-4
Date Collected: 05/07/25 12:15
Matrix: Solid
Date Received: 05/15/25 09:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	**8.0**	**J**	17	3.4	ug/Kg	☼	06/05/25 13:00	06/07/25 02:03	1
Acenaphthylene	**22**		17	4.5	ug/Kg	☼	06/05/25 13:00	06/07/25 02:03	1
Anthracene	**49**		17	2.6	ug/Kg	☼	06/05/25 13:00	06/07/25 02:03	1
Benzo[a]anthracene	**140**		17	6.7	ug/Kg	☼	06/05/25 13:00	06/07/25 02:03	1
Benzo[a]pyrene	**270**		17	8.2	ug/Kg	☼	06/05/25 13:00	06/07/25 02:03	1
Benzo[b]fluoranthene	**180**		17	8.1	ug/Kg	☼	06/05/25 13:00	06/07/25 02:03	1
Benzo[e]pyrene	**150**		17	5.8	ug/Kg	☼	06/05/25 13:00	06/07/25 02:03	1
Benzo[g,h,i]perylene	**250**		17	10	ug/Kg	☼	06/05/25 13:00	06/07/25 02:03	1
Benzo[k]fluoranthene	**160**		17	4.6	ug/Kg	☼	06/05/25 13:00	06/07/25 02:03	1
Biphenyl	**4.9**	**J**	17	4.5	ug/Kg	☼	06/05/25 13:00	06/07/25 02:03	1
Chrysene	**150**		17	4.3	ug/Kg	☼	06/05/25 13:00	06/07/25 02:03	1
Dibenz(a,h)anthracene	**27**		17	5.2	ug/Kg	☼	06/05/25 13:00	06/07/25 02:03	1
Dibenzothiophene	**8.4**	**J**	17	3.9	ug/Kg	☼	06/05/25 13:00	06/07/25 02:03	1
2,6-Dimethylnaphthalene	**12**	**J**	17	3.1	ug/Kg	☼	06/05/25 13:00	06/07/25 02:03	1
Fluoranthene	**310**		17	4.7	ug/Kg	☼	06/05/25 13:00	06/07/25 02:03	1
Fluorene	**13**	**J**	17	3.2	ug/Kg	☼	06/05/25 13:00	06/07/25 02:03	1
Indeno[1,2,3-cd]pyrene	**200**		17	6.3	ug/Kg	☼	06/05/25 13:00	06/07/25 02:03	1
1-Methylnaphthalene	ND		17	7.8	ug/Kg	☼	06/05/25 13:00	06/07/25 02:03	1
2-Methylnaphthalene	**6.6**	**J**	17	4.7	ug/Kg	☼	06/05/25 13:00	06/07/25 02:03	1
1-Methylphenanthrene	ND		17	3.1	ug/Kg	☼	06/05/25 13:00	06/07/25 02:03	1
Naphthalene	**12**	**J**	17	7.6	ug/Kg	☼	06/05/25 13:00	06/07/25 02:03	1
Perylene	**86**		17	5.7	ug/Kg	☼	06/05/25 13:00	06/07/25 02:03	1
Phenanthrene	**140**		17	3.0	ug/Kg	☼	06/05/25 13:00	06/07/25 02:03	1
Pyrene	**410**		17	4.9	ug/Kg	☼	06/05/25 13:00	06/07/25 02:03	1
1,6,7-Trimethylnaphthalene	ND		17	3.3	ug/Kg	☼	06/05/25 13:00	06/07/25 02:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*86*		*22 - 130*	*06/05/25 13:00*	*06/07/25 02:03*	*1*
Nitrobenzene-d5	*61*		*20 - 145*	*06/05/25 13:00*	*06/07/25 02:03*	*1*
p-Terphenyl-d14	*112*		*33 - 147*	*06/05/25 13:00*	*06/07/25 02:03*	*1*

Client Sample ID: BWTPF-2025-DU5
Lab Sample ID: 570-230772-5
Date Collected: 05/07/25 06:30
Matrix: Solid
Date Received: 05/15/25 09:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		16	3.2	ug/Kg	☼	06/05/25 13:00	06/07/25 02:25	1
Acenaphthylene	**11**	**J**	16	4.2	ug/Kg	☼	06/05/25 13:00	06/07/25 02:25	1
Anthracene	**18**		16	2.4	ug/Kg	☼	06/05/25 13:00	06/07/25 02:25	1
Benzo[a]anthracene	**68**		16	6.3	ug/Kg	☼	06/05/25 13:00	06/07/25 02:25	1
Benzo[a]pyrene	**140**		16	7.7	ug/Kg	☼	06/05/25 13:00	06/07/25 02:25	1
Benzo[b]fluoranthene	**100**		16	7.6	ug/Kg	☼	06/05/25 13:00	06/07/25 02:25	1
Benzo[e]pyrene	**76**		16	5.4	ug/Kg	☼	06/05/25 13:00	06/07/25 02:25	1
Benzo[g,h,i]perylene	**130**		16	9.6	ug/Kg	☼	06/05/25 13:00	06/07/25 02:25	1
Benzo[k]fluoranthene	**91**		16	4.3	ug/Kg	☼	06/05/25 13:00	06/07/25 02:25	1
Biphenyl	ND		16	4.2	ug/Kg	☼	06/05/25 13:00	06/07/25 02:25	1
Chrysene	**77**		16	4.0	ug/Kg	☼	06/05/25 13:00	06/07/25 02:25	1
Dibenz(a,h)anthracene	**13**	**J**	16	4.9	ug/Kg	☼	06/05/25 13:00	06/07/25 02:25	1
Dibenzothiophene	ND		16	3.7	ug/Kg	☼	06/05/25 13:00	06/07/25 02:25	1
2,6-Dimethylnaphthalene	**5.6**	**J**	16	2.9	ug/Kg	☼	06/05/25 13:00	06/07/25 02:25	1
Fluoranthene	**140**		16	4.4	ug/Kg	☼	06/05/25 13:00	06/07/25 02:25	1

Client: Pacific EcoRisk Inc
Job ID: 570-230772-1
Project/Site: Berkeley Water Transportation Pier Ferry (Sed)

Method: SW846 8270C SIM - PAHs (GC/MS SIM) (Continued)

Client Sample ID: BWTPF-2025-DU5
Lab Sample ID: 570-230772-5
Date Collected: 05/07/25 06:30
Matrix: Solid
Date Received: 05/15/25 09:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	**5.3**	**J**	16	3.0	ug/Kg	☼	06/05/25 13:00	06/07/25 02:25	1
Indeno[1,2,3-cd]pyrene	**110**		16	5.8	ug/Kg	☼	06/05/25 13:00	06/07/25 02:25	1
1-Methylnaphthalene	ND		16	7.3	ug/Kg	☼	06/05/25 13:00	06/07/25 02:25	1
2-Methylnaphthalene	ND		16	4.4	ug/Kg	☼	06/05/25 13:00	06/07/25 02:25	1
1-Methylphenanthrene	**14**	**J**	16	2.9	ug/Kg	☼	06/05/25 13:00	06/07/25 02:25	1
Naphthalene	**8.4**	**J**	16	7.1	ug/Kg	☼	06/05/25 13:00	06/07/25 02:25	1
Perylene	**45**		16	5.3	ug/Kg	☼	06/05/25 13:00	06/07/25 02:25	1
Phenanthrene	**54**		16	2.8	ug/Kg	☼	06/05/25 13:00	06/07/25 02:25	1
Pyrene	**180**		16	4.6	ug/Kg	☼	06/05/25 13:00	06/07/25 02:25	1
1,6,7-Trimethylnaphthalene	ND		16	3.1	ug/Kg	☼	06/05/25 13:00	06/07/25 02:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*85*		*22 - 130*	*06/05/25 13:00*	*06/07/25 02:25*	*1*
Nitrobenzene-d5	*67*		*20 - 145*	*06/05/25 13:00*	*06/07/25 02:25*	*1*
p-Terphenyl-d14	*115*		*33 - 147*	*06/05/25 13:00*	*06/07/25 02:25*	*1*

Method: Lab SOP Organotins SIM - Organotins (GC/MS SIM)

Client Sample ID: BWTPF-2025-DU1
Lab Sample ID: 570-230772-1
Date Collected: 05/06/25 08:35
Matrix: Solid
Date Received: 05/15/25 09:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrabutyltin	ND	*1	5.0	0.84	ug/Kg	☼	05/20/25 14:41	05/22/25 22:39	1
Tributyltin	ND	*1	5.0	0.75	ug/Kg	☼	05/20/25 14:41	05/22/25 22:39	1
Dibutyltin	ND	*1	5.0	0.83	ug/Kg	☼	05/20/25 14:41	05/22/25 22:39	1
Monobutyltin	ND	*- F1	5.0	0.90	ug/Kg	☼	05/20/25 14:41	05/22/25 22:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tripentyltin	*75*		*39 - 150*	*05/20/25 14:41*	*05/22/25 22:39*	*1*

Client Sample ID: BWTPF-2025-DU2
Lab Sample ID: 570-230772-2
Date Collected: 05/06/25 09:35
Matrix: Solid
Date Received: 05/15/25 09:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrabutyltin	ND	*1	5.2	0.87	ug/Kg	☼	05/20/25 14:41	05/22/25 22:56	1
Tributyltin	ND	*1	5.2	0.78	ug/Kg	☼	05/20/25 14:41	05/22/25 22:56	1
Dibutyltin	ND	*1	5.2	0.86	ug/Kg	☼	05/20/25 14:41	05/22/25 22:56	1
Monobutyltin	ND	*-	5.2	0.94	ug/Kg	☼	05/20/25 14:41	05/22/25 22:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tripentyltin	*73*		*39 - 150*	*05/20/25 14:41*	*05/22/25 22:56*	*1*

Client Sample ID: BWTPF-2025-DU3
Lab Sample ID: 570-230772-3
Date Collected: 05/09/25 06:40
Matrix: Solid
Date Received: 05/15/25 09:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrabutyltin	ND		5.6	0.93	ug/Kg	☼	05/22/25 08:18	05/28/25 18:21	1
Tributyltin	ND		5.6	0.83	ug/Kg	☼	05/22/25 08:18	05/28/25 18:21	1
Dibutyltin	ND		5.6	0.92	ug/Kg	☼	05/22/25 08:18	05/28/25 18:21	1
Monobutyltin	ND	*-	5.6	1.0	ug/Kg	☼	05/22/25 08:18	05/28/25 18:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tripentyltin	*69*		*39 - 150*	*05/22/25 08:18*	*05/28/25 18:21*	*1*

Client Sample ID: BWTPF-2025-DU4
Lab Sample ID: 570-230772-4
Date Collected: 05/07/25 12:15
Matrix: Solid
Date Received: 05/15/25 09:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrabutyltin	ND	*1	5.1	0.86	ug/Kg	☼	05/20/25 14:41	05/22/25 23:13	1
Tributyltin	ND	*1	5.1	0.76	ug/Kg	☼	05/20/25 14:41	05/22/25 23:13	1
Dibutyltin	ND	*1	5.1	0.85	ug/Kg	☼	05/20/25 14:41	05/22/25 23:13	1
Monobutyltin	ND	*-	5.1	0.92	ug/Kg	☼	05/20/25 14:41	05/22/25 23:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tripentyltin	*75*		*39 - 150*	*05/20/25 14:41*	*05/22/25 23:13*	*1*

Client Sample ID: BWTPF-2025-DU5
Lab Sample ID: 570-230772-5
Date Collected: 05/07/25 06:30
Matrix: Solid
Date Received: 05/15/25 09:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrabutyltin	ND	*1	4.7	0.79	ug/Kg	☼	05/20/25 14:41	05/22/25 23:29	1
Tributyltin	ND	*1	4.7	0.70	ug/Kg	☼	05/20/25 14:41	05/22/25 23:29	1
Dibutyltin	ND	*1	4.7	0.78	ug/Kg	☼	05/20/25 14:41	05/22/25 23:29	1

Client: Pacific EcoRisk Inc
Job ID: 570-230772-1
Project/Site: Berkeley Water Transportation Pier Ferry (Sed)

Method: Lab SOP Organotins SIM - Organotins (GC/MS SIM) (Continued)

Client Sample ID: BWTPF-2025-DU5
Lab Sample ID: 570-230772-5
Date Collected: 05/07/25 06:30
Matrix: Solid
Date Received: 05/15/25 09:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Monobutyltin	ND	*-	4.7	0.85	ug/Kg	☼	05/20/25 14:41	05/22/25 23:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tripentyltin	*70*		*39 - 150*	*05/20/25 14:41*	*05/22/25 23:29*	*1*

Method: SW846 8081A - Organochlorine Pesticides (GC)

Client Sample ID: BWTPF-2025-DU1
Lab Sample ID: 570-230772-1
Date Collected: 05/06/25 08:35
Matrix: Solid
Date Received: 05/15/25 09:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4'-DDD	ND		1.7	0.11	ug/Kg	☼	05/17/25 09:00	06/03/25 04:39	1
2,4'-DDE	ND		3.3	1.7	ug/Kg	☼	05/17/25 09:00	06/03/25 04:39	1
2,4'-DDT	ND		1.7	0.15	ug/Kg	☼	05/17/25 09:00	06/03/25 04:39	1
4,4'-DDD	ND		1.7	0.84	ug/Kg	☼	05/17/25 09:00	06/03/25 04:39	1
4,4'-DDE	**0.72**	**J**	1.7	0.45	ug/Kg	☼	05/17/25 09:00	06/03/25 04:39	1
4,4'-DDT	ND		1.7	0.52	ug/Kg	☼	05/17/25 09:00	06/03/25 04:39	1
Aldrin	ND		1.7	0.61	ug/Kg	☼	05/17/25 09:00	06/03/25 04:39	1
alpha-BHC	ND		1.7	0.13	ug/Kg	☼	05/17/25 09:00	06/03/25 04:39	1
alpha-Chlordane	ND		1.7	0.17	ug/Kg	☼	05/17/25 09:00	06/03/25 04:39	1
beta-BHC	ND		1.7	0.32	ug/Kg	☼	05/17/25 09:00	06/03/25 04:39	1
Chlordane	ND		8.4	1.2	ug/Kg	☼	05/17/25 09:00	06/03/25 04:39	1
cis-Nonachlor	**0.33**	**J p F2**	1.7	0.079	ug/Kg	☼	05/17/25 09:00	06/03/25 04:39	1
delta-BHC	ND		1.7	0.25	ug/Kg	☼	05/17/25 09:00	06/03/25 04:39	1
Dieldrin	**0.26**	**J p**	0.33	0.11	ug/Kg	☼	05/17/25 09:00	06/03/25 04:39	1
Endosulfan I	ND		1.7	0.20	ug/Kg	☼	05/17/25 09:00	06/03/25 04:39	1
Endosulfan II	ND		1.7	0.38	ug/Kg	☼	05/17/25 09:00	06/03/25 04:39	1
Endosulfan sulfate	ND		1.7	0.18	ug/Kg	☼	05/17/25 09:00	06/03/25 04:39	1
Endrin	ND		1.7	0.32	ug/Kg	☼	05/17/25 09:00	06/03/25 04:39	1
Endrin aldehyde	ND		1.7	1.6	ug/Kg	☼	05/17/25 09:00	06/03/25 04:39	1
Endrin ketone	ND		1.7	0.32	ug/Kg	☼	05/17/25 09:00	06/03/25 04:39	1
gamma-BHC	ND		1.7	0.18	ug/Kg	☼	05/17/25 09:00	06/03/25 04:39	1
gamma-Chlordane	ND		1.7	0.59	ug/Kg	☼	05/17/25 09:00	06/03/25 04:39	1
Heptachlor	ND		1.7	0.10	ug/Kg	☼	05/17/25 09:00	06/03/25 04:39	1
Heptachlor epoxide	ND		1.7	0.14	ug/Kg	☼	05/17/25 09:00	06/03/25 04:39	1
Oxychlordane	ND		1.7	0.25	ug/Kg	☼	05/17/25 09:00	06/03/25 04:39	1
Toxaphene	ND		8.4	1.7	ug/Kg	☼	05/17/25 09:00	06/03/25 04:39	1
trans-Nonachlor	ND		1.7	0.19	ug/Kg	☼	05/17/25 09:00	06/03/25 04:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*75*		*20 - 180*	*05/17/25 09:00*	*06/03/25 04:39*	*1*
Tetrachloro-m-xylene	*67*		*20 - 131*	*05/17/25 09:00*	*06/03/25 04:39*	*1*

Client Sample ID: BWTPF-2025-DU2
Lab Sample ID: 570-230772-2
Date Collected: 05/06/25 09:35
Matrix: Solid
Date Received: 05/15/25 09:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4'-DDD	ND		1.7	0.11	ug/Kg	☼	05/17/25 09:00	06/03/25 04:54	1
2,4'-DDE	ND		3.5	1.8	ug/Kg	☼	05/17/25 09:00	06/03/25 04:54	1
2,4'-DDT	ND		1.7	0.16	ug/Kg	☼	05/17/25 09:00	06/03/25 04:54	1
4,4'-DDD	ND		1.7	0.87	ug/Kg	☼	05/17/25 09:00	06/03/25 04:54	1
4,4'-DDE	**0.95**	**J**	1.7	0.47	ug/Kg	☼	05/17/25 09:00	06/03/25 04:54	1
4,4'-DDT	ND		1.7	0.54	ug/Kg	☼	05/17/25 09:00	06/03/25 04:54	1
Aldrin	ND		1.7	0.64	ug/Kg	☼	05/17/25 09:00	06/03/25 04:54	1
alpha-BHC	ND		1.7	0.14	ug/Kg	☼	05/17/25 09:00	06/03/25 04:54	1
alpha-Chlordane	ND		1.7	0.18	ug/Kg	☼	05/17/25 09:00	06/03/25 04:54	1
beta-BHC	ND		1.7	0.33	ug/Kg	☼	05/17/25 09:00	06/03/25 04:54	1
Chlordane	ND		8.7	1.2	ug/Kg	☼	05/17/25 09:00	06/03/25 04:54	1
cis-Nonachlor	**0.40**	**J**	1.7	0.083	ug/Kg	☼	05/17/25 09:00	06/03/25 04:54	1
delta-BHC	ND		1.7	0.26	ug/Kg	☼	05/17/25 09:00	06/03/25 04:54	1
Dieldrin	ND		0.35	0.12	ug/Kg	☼	05/17/25 09:00	06/03/25 04:54	1

Method: SW846 8081A - Organochlorine Pesticides (GC) (Continued)

Client Sample ID: BWTPF-2025-DU2
Lab Sample ID: 570-230772-2
Date Collected: 05/06/25 09:35
Matrix: Solid
Date Received: 05/15/25 09:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Endosulfan I	ND		1.7	0.20	ug/Kg	☼	05/17/25 09:00	06/03/25 04:54	1
Endosulfan II	ND		1.7	0.40	ug/Kg	☼	05/17/25 09:00	06/03/25 04:54	1
Endosulfan sulfate	**0.67**	**J p**	1.7	0.19	ug/Kg	☼	05/17/25 09:00	06/03/25 04:54	1
Endrin	ND		1.7	0.33	ug/Kg	☼	05/17/25 09:00	06/03/25 04:54	1
Endrin aldehyde	ND		1.7	1.7	ug/Kg	☼	05/17/25 09:00	06/03/25 04:54	1
Endrin ketone	ND		1.7	0.33	ug/Kg	☼	05/17/25 09:00	06/03/25 04:54	1
gamma-BHC	ND		1.7	0.19	ug/Kg	☼	05/17/25 09:00	06/03/25 04:54	1
gamma-Chlordane	ND		1.7	0.61	ug/Kg	☼	05/17/25 09:00	06/03/25 04:54	1
Heptachlor	ND		1.7	0.10	ug/Kg	☼	05/17/25 09:00	06/03/25 04:54	1
Heptachlor epoxide	ND		1.7	0.15	ug/Kg	☼	05/17/25 09:00	06/03/25 04:54	1
Oxychlordane	ND		1.7	0.26	ug/Kg	☼	05/17/25 09:00	06/03/25 04:54	1
Toxaphene	ND		8.7	1.7	ug/Kg	☼	05/17/25 09:00	06/03/25 04:54	1
trans-Nonachlor	ND		1.7	0.20	ug/Kg	☼	05/17/25 09:00	06/03/25 04:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*98*		*20 - 180*	*05/17/25 09:00*	*06/03/25 04:54*	*1*
Tetrachloro-m-xylene	*80*		*20 - 131*	*05/17/25 09:00*	*06/03/25 04:54*	*1*

Client Sample ID: BWTPF-2025-DU3
Lab Sample ID: 570-230772-3
Date Collected: 05/09/25 06:40
Matrix: Solid
Date Received: 05/15/25 09:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4'-DDD	ND		1.9	0.12	ug/Kg	☼	05/17/25 09:00	06/03/25 05:09	1
2,4'-DDE	ND		3.7	1.9	ug/Kg	☼	05/17/25 09:00	06/03/25 05:09	1
2,4'-DDT	ND		1.9	0.17	ug/Kg	☼	05/17/25 09:00	06/03/25 05:09	1
4,4'-DDD	ND		1.9	0.93	ug/Kg	☼	05/17/25 09:00	06/03/25 05:09	1
4,4'-DDE	**1.5**	**J**	1.9	0.50	ug/Kg	☼	05/17/25 09:00	06/03/25 05:09	1
4,4'-DDT	ND		1.9	0.57	ug/Kg	☼	05/17/25 09:00	06/03/25 05:09	1
Aldrin	ND		1.9	0.68	ug/Kg	☼	05/17/25 09:00	06/03/25 05:09	1
alpha-BHC	ND		1.9	0.15	ug/Kg	☼	05/17/25 09:00	06/03/25 05:09	1
alpha-Chlordane	ND		1.9	0.19	ug/Kg	☼	05/17/25 09:00	06/03/25 05:09	1
beta-BHC	ND		1.9	0.36	ug/Kg	☼	05/17/25 09:00	06/03/25 05:09	1
Chlordane	ND		9.3	1.3	ug/Kg	☼	05/17/25 09:00	06/03/25 05:09	1
cis-Nonachlor	**0.72**	**J**	1.9	0.088	ug/Kg	☼	05/17/25 09:00	06/03/25 05:09	1
delta-BHC	ND		1.9	0.28	ug/Kg	☼	05/17/25 09:00	06/03/25 05:09	1
Dieldrin	ND		0.37	0.12	ug/Kg	☼	05/17/25 09:00	06/03/25 05:09	1
Endosulfan I	ND		1.9	0.22	ug/Kg	☼	05/17/25 09:00	06/03/25 05:09	1
Endosulfan II	ND		1.9	0.42	ug/Kg	☼	05/17/25 09:00	06/03/25 05:09	1
Endosulfan sulfate	ND		1.9	0.20	ug/Kg	☼	05/17/25 09:00	06/03/25 05:09	1
Endrin	ND		1.9	0.35	ug/Kg	☼	05/17/25 09:00	06/03/25 05:09	1
Endrin aldehyde	ND		1.9	1.8	ug/Kg	☼	05/17/25 09:00	06/03/25 05:09	1
Endrin ketone	ND		1.9	0.36	ug/Kg	☼	05/17/25 09:00	06/03/25 05:09	1
gamma-BHC	ND		1.9	0.20	ug/Kg	☼	05/17/25 09:00	06/03/25 05:09	1
gamma-Chlordane	ND		1.9	0.65	ug/Kg	☼	05/17/25 09:00	06/03/25 05:09	1
Heptachlor	ND		1.9	0.11	ug/Kg	☼	05/17/25 09:00	06/03/25 05:09	1
Heptachlor epoxide	ND		1.9	0.16	ug/Kg	☼	05/17/25 09:00	06/03/25 05:09	1
Oxychlordane	ND		1.9	0.28	ug/Kg	☼	05/17/25 09:00	06/03/25 05:09	1
Toxaphene	ND		9.3	1.9	ug/Kg	☼	05/17/25 09:00	06/03/25 05:09	1
trans-Nonachlor	ND		1.9	0.21	ug/Kg	☼	05/17/25 09:00	06/03/25 05:09	1

Method: SW846 8081A - Organochlorine Pesticides (GC) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	84		20 - 180	05/17/25 09:00	06/03/25 05:09	1
Tetrachloro-m-xylene	76		20 - 131	05/17/25 09:00	06/03/25 05:09	1

Client Sample ID: BWTPF-2025-DU4
Date Collected: 05/07/25 12:15
Date Received: 05/15/25 09:40

Lab Sample ID: 570-230772-4
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4'-DDD	ND		1.7	0.11	ug/Kg	☼	05/17/25 09:00	06/03/25 05:24	1
2,4'-DDE	ND		3.4	1.8	ug/Kg	☼	05/17/25 09:00	06/03/25 05:24	1
2,4'-DDT	ND		1.7	0.16	ug/Kg	☼	05/17/25 09:00	06/03/25 05:24	1
4,4'-DDD	ND		1.7	0.85	ug/Kg	☼	05/17/25 09:00	06/03/25 05:24	1
4,4'-DDE	**1.3**	**J**	1.7	0.46	ug/Kg	☼	05/17/25 09:00	06/03/25 05:24	1
4,4'-DDT	ND		1.7	0.53	ug/Kg	☼	05/17/25 09:00	06/03/25 05:24	1
Aldrin	ND		1.7	0.62	ug/Kg	☼	05/17/25 09:00	06/03/25 05:24	1
alpha-BHC	ND		1.7	0.14	ug/Kg	☼	05/17/25 09:00	06/03/25 05:24	1
alpha-Chlordane	ND		1.7	0.17	ug/Kg	☼	05/17/25 09:00	06/03/25 05:24	1
beta-BHC	ND		1.7	0.33	ug/Kg	☼	05/17/25 09:00	06/03/25 05:24	1
Chlordane	ND		8.6	1.2	ug/Kg	☼	05/17/25 09:00	06/03/25 05:24	1
cis-Nonachlor	**0.63**	**J**	1.7	0.081	ug/Kg	☼	05/17/25 09:00	06/03/25 05:24	1
delta-BHC	ND		1.7	0.26	ug/Kg	☼	05/17/25 09:00	06/03/25 05:24	1
Dieldrin	**0.24**	**J p**	0.34	0.11	ug/Kg	☼	05/17/25 09:00	06/03/25 05:24	1
Endosulfan I	ND		1.7	0.20	ug/Kg	☼	05/17/25 09:00	06/03/25 05:24	1
Endosulfan II	ND		1.7	0.39	ug/Kg	☼	05/17/25 09:00	06/03/25 05:24	1
Endosulfan sulfate	**0.77**	**J p**	1.7	0.19	ug/Kg	☼	05/17/25 09:00	06/03/25 05:24	1
Endrin	ND		1.7	0.32	ug/Kg	☼	05/17/25 09:00	06/03/25 05:24	1
Endrin aldehyde	ND		1.7	1.7	ug/Kg	☼	05/17/25 09:00	06/03/25 05:24	1
Endrin ketone	ND		1.7	0.33	ug/Kg	☼	05/17/25 09:00	06/03/25 05:24	1
gamma-BHC	ND		1.7	0.18	ug/Kg	☼	05/17/25 09:00	06/03/25 05:24	1
gamma-Chlordane	ND		1.7	0.60	ug/Kg	☼	05/17/25 09:00	06/03/25 05:24	1
Heptachlor	ND		1.7	0.10	ug/Kg	☼	05/17/25 09:00	06/03/25 05:24	1
Heptachlor epoxide	ND		1.7	0.15	ug/Kg	☼	05/17/25 09:00	06/03/25 05:24	1
Oxychlordane	ND		1.7	0.26	ug/Kg	☼	05/17/25 09:00	06/03/25 05:24	1
Toxaphene	ND		8.6	1.7	ug/Kg	☼	05/17/25 09:00	06/03/25 05:24	1
trans-Nonachlor	ND		1.7	0.19	ug/Kg	☼	05/17/25 09:00	06/03/25 05:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	89		20 - 180	05/17/25 09:00	06/03/25 05:24	1
Tetrachloro-m-xylene	89		20 - 131	05/17/25 09:00	06/03/25 05:24	1

Client Sample ID: BWTPF-2025-DU5
Date Collected: 05/07/25 06:30
Date Received: 05/15/25 09:40

Lab Sample ID: 570-230772-5
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4'-DDD	ND		1.6	0.10	ug/Kg	☼	05/17/25 09:00	06/03/25 05:39	1
2,4'-DDE	ND		3.2	1.7	ug/Kg	☼	05/17/25 09:00	06/03/25 05:39	1
2,4'-DDT	ND		1.6	0.15	ug/Kg	☼	05/17/25 09:00	06/03/25 05:39	1
4,4'-DDD	ND		1.6	0.80	ug/Kg	☼	05/17/25 09:00	06/03/25 05:39	1
4,4'-DDE	**0.77**	**J**	1.6	0.43	ug/Kg	☼	05/17/25 09:00	06/03/25 05:39	1
4,4'-DDT	ND		1.6	0.49	ug/Kg	☼	05/17/25 09:00	06/03/25 05:39	1
Aldrin	ND		1.6	0.58	ug/Kg	☼	05/17/25 09:00	06/03/25 05:39	1
alpha-BHC	ND		1.6	0.13	ug/Kg	☼	05/17/25 09:00	06/03/25 05:39	1
alpha-Chlordane	ND		1.6	0.16	ug/Kg	☼	05/17/25 09:00	06/03/25 05:39	1
beta-BHC	ND		1.6	0.31	ug/Kg	☼	05/17/25 09:00	06/03/25 05:39	1

Method: SW846 8081A - Organochlorine Pesticides (GC) (Continued)

Client Sample ID: BWTPF-2025-DU5
Date Collected: 05/07/25 06:30
Date Received: 05/15/25 09:40

Lab Sample ID: 570-230772-5
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlordane	ND		8.0	1.1	ug/Kg	☼	05/17/25 09:00	06/03/25 05:39	1
cis-Nonachlor	**0.53**	**J**	1.6	0.076	ug/Kg	☼	05/17/25 09:00	06/03/25 05:39	1
delta-BHC	ND		1.6	0.24	ug/Kg	☼	05/17/25 09:00	06/03/25 05:39	1
Dieldrin	**0.18**	**J p**	0.32	0.11	ug/Kg	☼	05/17/25 09:00	06/03/25 05:39	1
Endosulfan I	ND		1.6	0.19	ug/Kg	☼	05/17/25 09:00	06/03/25 05:39	1
Endosulfan II	ND		1.6	0.36	ug/Kg	☼	05/17/25 09:00	06/03/25 05:39	1
Endosulfan sulfate	**0.50**	**J p**	1.6	0.17	ug/Kg	☼	05/17/25 09:00	06/03/25 05:39	1
Endrin	ND		1.6	0.30	ug/Kg	☼	05/17/25 09:00	06/03/25 05:39	1
Endrin aldehyde	ND		1.6	1.6	ug/Kg	☼	05/17/25 09:00	06/03/25 05:39	1
Endrin ketone	ND		1.6	0.31	ug/Kg	☼	05/17/25 09:00	06/03/25 05:39	1
gamma-BHC	ND		1.6	0.17	ug/Kg	☼	05/17/25 09:00	06/03/25 05:39	1
gamma-Chlordane	ND		1.6	0.56	ug/Kg	☼	05/17/25 09:00	06/03/25 05:39	1
Heptachlor	ND		1.6	0.095	ug/Kg	☼	05/17/25 09:00	06/03/25 05:39	1
Heptachlor epoxide	ND		1.6	0.14	ug/Kg	☼	05/17/25 09:00	06/03/25 05:39	1
Oxychlordane	ND		1.6	0.24	ug/Kg	☼	05/17/25 09:00	06/03/25 05:39	1
Toxaphene	ND		8.0	1.6	ug/Kg	☼	05/17/25 09:00	06/03/25 05:39	1
trans-Nonachlor	ND		1.6	0.18	ug/Kg	☼	05/17/25 09:00	06/03/25 05:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*91*		*20 - 180*	*05/17/25 09:00*	*06/03/25 05:39*	*1*
Tetrachloro-m-xylene	*89*		*20 - 131*	*05/17/25 09:00*	*06/03/25 05:39*	*1*

Method: SW846 8290A - Dioxins and Furans (HRGC/HRMS)

Client Sample ID: BWTPF-2025-DU1
Lab Sample ID: 570-230772-1
Date Collected: 05/06/25 08:35
Matrix: Solid
Date Received: 05/15/25 09:40

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,6,7,8-HpCDD	3.7	J B	8.1	0.032	ng/Kg	☼	05/21/25 07:43	05/26/25 13:50	1
1,2,3,4,6,7,8-HpCDF	0.93	J I B	8.1	0.021	ng/Kg	☼	05/21/25 07:43	05/26/25 13:50	1
1,2,3,4,7,8-HxCDD	0.24	J B	8.1	0.019	ng/Kg	☼	05/21/25 07:43	05/26/25 13:50	1
1,2,3,4,7,8-HxCDF	0.28	J B	8.1	0.018	ng/Kg	☼	05/21/25 07:43	05/26/25 13:50	1
1,2,3,4,7,8,9-HpCDF	0.26	J I B	8.1	0.024	ng/Kg	☼	05/21/25 07:43	05/26/25 13:50	1
1,2,3,6,7,8-HxCDD	0.40	J I B	8.1	0.018	ng/Kg	☼	05/21/25 07:43	05/26/25 13:50	1
1,2,3,6,7,8-HxCDF	0.24	J I B	8.1	0.018	ng/Kg	☼	05/21/25 07:43	05/26/25 13:50	1
1,2,3,7,8-PeCDD	0.21	J I B	8.1	0.013	ng/Kg	☼	05/21/25 07:43	05/26/25 13:50	1
1,2,3,7,8-PeCDF	ND		8.1	0.019	ng/Kg	☼	05/21/25 07:43	05/26/25 13:50	1
1,2,3,7,8,9-HxCDD	0.31	J B	8.1	0.018	ng/Kg	☼	05/21/25 07:43	05/26/25 13:50	1
1,2,3,7,8,9-HxCDF	0.20	J I B	8.1	0.017	ng/Kg	☼	05/21/25 07:43	05/26/25 13:50	1
2,3,4,6,7,8-HxCDF	0.26	J B	8.1	0.016	ng/Kg	☼	05/21/25 07:43	05/26/25 13:50	1
2,3,4,7,8-PeCDF	0.48	J B	8.1	0.015	ng/Kg	☼	05/21/25 07:43	05/26/25 13:50	1
2,3,7,8-TCDD	0.10	J I	1.6	0.012	ng/Kg	☼	05/21/25 07:43	05/26/25 13:50	1
2,3,7,8-TCDF	0.69	J B	1.6	0.042	ng/Kg	☼	05/21/25 07:43	05/26/25 13:50	1
OCDD	23	J B	24	0.032	ng/Kg	☼	05/21/25 07:43	05/26/25 13:50	1
OCDF	1.7	J B	16	0.011	ng/Kg	☼	05/21/25 07:43	05/26/25 13:50	1
Total HxCDD	3.7	J I B	8.1	0.019	ng/Kg	☼	05/21/25 07:43	05/26/25 13:50	1
Total HxCDF	2.1	J I B	8.1	0.017	ng/Kg	☼	05/21/25 07:43	05/26/25 13:50	1
Total HpCDD	9.3	B	8.1	0.032	ng/Kg	☼	05/21/25 07:43	05/26/25 13:50	1
Total HpCDF	2.5	J I B	8.1	0.022	ng/Kg	☼	05/21/25 07:43	05/26/25 13:50	1
Total PeCDD	0.21	J I B	8.1	0.013	ng/Kg	☼	05/21/25 07:43	05/26/25 13:50	1
Total PeCDF	2.1	J I B	8.1	0.017	ng/Kg	☼	05/21/25 07:43	05/26/25 13:50	1
Total TCDD	0.17	J I	1.6	0.012	ng/Kg	☼	05/21/25 07:43	05/26/25 13:50	1
Total TCDF	3.8	B	1.6	0.042	ng/Kg	☼	05/21/25 07:43	05/26/25 13:50	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-OCDF	*44*		*40 - 135*	*05/21/25 07:43*	*05/26/25 13:50*	*1*
13C-OCDD	*43*		*40 - 135*	*05/21/25 07:43*	*05/26/25 13:50*	*1*
13C-2,3,7,8-TCDF	*66*		*40 - 135*	*05/21/25 07:43*	*05/26/25 13:50*	*1*
13C-2,3,7,8-TCDD	*62*		*40 - 135*	*05/21/25 07:43*	*05/26/25 13:50*	*1*
13C-2,3,4,7,8-PeCDF	*53*		*40 - 135*	*05/21/25 07:43*	*05/26/25 13:50*	*1*
13C-2,3,4,6,7,8-HxCDF	*53*		*40 - 135*	*05/21/25 07:43*	*05/26/25 13:50*	*1*
13C-1,2,3,7,8,9-HxCDF	*53*		*40 - 135*	*05/21/25 07:43*	*05/26/25 13:50*	*1*
13C-1,2,3,7,8,9-HxCDD	*52*		*40 - 135*	*05/21/25 07:43*	*05/26/25 13:50*	*1*
13C-1,2,3,7,8-PeCDF	*57*		*40 - 135*	*05/21/25 07:43*	*05/26/25 13:50*	*1*
13C-1,2,3,7,8-PeCDD	*54*		*40 - 135*	*05/21/25 07:43*	*05/26/25 13:50*	*1*
13C-1,2,3,6,7,8-HxCDF	*52*		*40 - 135*	*05/21/25 07:43*	*05/26/25 13:50*	*1*
13C-1,2,3,6,7,8-HxCDD	*51*		*40 - 135*	*05/21/25 07:43*	*05/26/25 13:50*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*52*		*40 - 135*	*05/21/25 07:43*	*05/26/25 13:50*	*1*
13C-1,2,3,4,7,8-HxCDF	*56*		*40 - 135*	*05/21/25 07:43*	*05/26/25 13:50*	*1*
13C-1,2,3,4,7,8-HxCDD	*52*		*40 - 135*	*05/21/25 07:43*	*05/26/25 13:50*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*49*		*40 - 135*	*05/21/25 07:43*	*05/26/25 13:50*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*48*		*40 - 135*	*05/21/25 07:43*	*05/26/25 13:50*	*1*

Client Sample ID: BWTPF-2025-DU2
Lab Sample ID: 570-230772-2
Date Collected: 05/06/25 09:35
Matrix: Solid
Date Received: 05/15/25 09:40

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,6,7,8-HpCDD	3.0	J I B	8.7	0.037	ng/Kg	☼	05/28/25 10:59	05/30/25 18:26	1

Method: SW846 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Client Sample ID: BWTPF-2025-DU2
Lab Sample ID: 570-230772-2
Date Collected: 05/06/25 09:35
Matrix: Solid
Date Received: 05/15/25 09:40

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,6,7,8-HpCDF	0.90	J B	8.7	0.025	ng/Kg	☼	05/28/25 10:59	05/30/25 18:26	1
1,2,3,4,7,8-HxCDD	0.12	J I B	8.7	0.025	ng/Kg	☼	05/28/25 10:59	05/30/25 18:26	1
1,2,3,4,7,8-HxCDF	0.26	J I B	8.7	0.023	ng/Kg	☼	05/28/25 10:59	05/30/25 18:26	1
1,2,3,4,7,8,9-HpCDF	0.18	J B	8.7	0.028	ng/Kg	☼	05/28/25 10:59	05/30/25 18:26	1
1,2,3,6,7,8-HxCDD	0.37	J I B	8.7	0.025	ng/Kg	☼	05/28/25 10:59	05/30/25 18:26	1
1,2,3,6,7,8-HxCDF	0.25	J I	8.7	0.023	ng/Kg	☼	05/28/25 10:59	05/30/25 18:26	1
1,2,3,7,8-PeCDD	0.32	J I B	8.7	0.024	ng/Kg	☼	05/28/25 10:59	05/30/25 18:26	1
1,2,3,7,8-PeCDF	ND		8.7	0.056	ng/Kg	☼	05/28/25 10:59	05/30/25 18:26	1
1,2,3,7,8,9-HxCDD	0.26	J I B	8.7	0.025	ng/Kg	☼	05/28/25 10:59	05/30/25 18:26	1
1,2,3,7,8,9-HxCDF	0.15	J B	8.7	0.025	ng/Kg	☼	05/28/25 10:59	05/30/25 18:26	1
2,3,4,6,7,8-HxCDF	0.33	J B	8.7	0.022	ng/Kg	☼	05/28/25 10:59	05/30/25 18:26	1
2,3,4,7,8-PeCDF	0.76	J I B	8.7	0.047	ng/Kg	☼	05/28/25 10:59	05/30/25 18:26	1
2,3,7,8-TCDD	ND		1.7	0.0056	ng/Kg	☼	05/28/25 10:59	05/30/25 18:26	1
2,3,7,8-TCDF	0.59	J	1.7	0.028	ng/Kg	☼	05/28/25 10:59	05/30/25 18:26	1
OCDD	18	J B	26	0.057	ng/Kg	☼	05/28/25 10:59	05/30/25 18:26	1
OCDF	1.8	J I B	17	0.0052	ng/Kg	☼	05/28/25 10:59	05/30/25 18:26	1
Total HxCDD	4.8	J I B	8.7	0.025	ng/Kg	☼	05/28/25 10:59	05/30/25 18:26	1
Total HxCDF	1.5	J I B	8.7	0.023	ng/Kg	☼	05/28/25 10:59	05/30/25 18:26	1
Total HpCDD	7.4	J I B	8.7	0.037	ng/Kg	☼	05/28/25 10:59	05/30/25 18:26	1
Total HpCDF	2.7	J B	8.7	0.026	ng/Kg	☼	05/28/25 10:59	05/30/25 18:26	1
Total PeCDD	0.75	J I B	8.7	0.024	ng/Kg	☼	05/28/25 10:59	05/30/25 18:26	1
Total PeCDF	3.0	J I B	8.7	0.052	ng/Kg	☼	05/28/25 10:59	05/30/25 18:26	1
Total TCDD	0.77	J B	1.7	0.0056	ng/Kg	☼	05/28/25 10:59	05/30/25 18:26	1
Total TCDF	2.9		1.7	0.028	ng/Kg	☼	05/28/25 10:59	05/30/25 18:26	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-OCDF	*73*		*40 - 135*	*05/28/25 10:59*	*05/30/25 18:26*	*1*
13C-OCDD	*68*		*40 - 135*	*05/28/25 10:59*	*05/30/25 18:26*	*1*
13C-2,3,7,8-TCDF	*91*		*40 - 135*	*05/28/25 10:59*	*05/30/25 18:26*	*1*
13C-2,3,7,8-TCDD	*89*		*40 - 135*	*05/28/25 10:59*	*05/30/25 18:26*	*1*
13C-2,3,4,7,8-PeCDF	*91*		*40 - 135*	*05/28/25 10:59*	*05/30/25 18:26*	*1*
13C-2,3,4,6,7,8-HxCDF	*77*		*40 - 135*	*05/28/25 10:59*	*05/30/25 18:26*	*1*
13C-1,2,3,7,8,9-HxCDF	*81*		*40 - 135*	*05/28/25 10:59*	*05/30/25 18:26*	*1*
13C-1,2,3,7,8,9-HxCDD	*76*		*40 - 135*	*05/28/25 10:59*	*05/30/25 18:26*	*1*
13C-1,2,3,7,8-PeCDF	*86*		*40 - 135*	*05/28/25 10:59*	*05/30/25 18:26*	*1*
13C-1,2,3,7,8-PeCDD	*85*		*40 - 135*	*05/28/25 10:59*	*05/30/25 18:26*	*1*
13C-1,2,3,6,7,8-HxCDF	*76*		*40 - 135*	*05/28/25 10:59*	*05/30/25 18:26*	*1*
13C-1,2,3,6,7,8-HxCDD	*75*		*40 - 135*	*05/28/25 10:59*	*05/30/25 18:26*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*81*		*40 - 135*	*05/28/25 10:59*	*05/30/25 18:26*	*1*
13C-1,2,3,4,7,8-HxCDF	*78*		*40 - 135*	*05/28/25 10:59*	*05/30/25 18:26*	*1*
13C-1,2,3,4,7,8-HxCDD	*78*		*40 - 135*	*05/28/25 10:59*	*05/30/25 18:26*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*70*		*40 - 135*	*05/28/25 10:59*	*05/30/25 18:26*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*73*		*40 - 135*	*05/28/25 10:59*	*05/30/25 18:26*	*1*

Client Sample ID: BWTPF-2025-DU3
Lab Sample ID: 570-230772-3
Date Collected: 05/09/25 06:40
Matrix: Solid
Date Received: 05/15/25 09:40

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,6,7,8-HpCDD	8.5	J B	9.3	0.046	ng/Kg	☼	05/21/25 07:43	05/26/25 10:26	1
1,2,3,4,6,7,8-HpCDF	1.7	J B	9.3	0.024	ng/Kg	☼	05/21/25 07:43	05/26/25 10:26	1

Method: SW846 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Client Sample ID: BWTPF-2025-DU3
Lab Sample ID: 570-230772-3
Date Collected: 05/09/25 06:40
Matrix: Solid
Date Received: 05/15/25 09:40

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,7,8-HxCDD	0.22	J I B	9.3	0.035	ng/Kg	☼	05/21/25 07:43	05/26/25 10:26	1
1,2,3,4,7,8-HxCDF	0.46	J I B	9.3	0.020	ng/Kg	☼	05/21/25 07:43	05/26/25 10:26	1
1,2,3,4,7,8,9-HpCDF	0.22	J B	9.3	0.027	ng/Kg	☼	05/21/25 07:43	05/26/25 10:26	1
1,2,3,6,7,8-HxCDD	0.72	J B	9.3	0.035	ng/Kg	☼	05/21/25 07:43	05/26/25 10:26	1
1,2,3,6,7,8-HxCDF	0.30	J B	9.3	0.020	ng/Kg	☼	05/21/25 07:43	05/26/25 10:26	1
1,2,3,7,8-PeCDD	0.40	J I B	9.3	0.024	ng/Kg	☼	05/21/25 07:43	05/26/25 10:26	1
1,2,3,7,8-PeCDF	ND		9.3	0.035	ng/Kg	☼	05/21/25 07:43	05/26/25 10:26	1
1,2,3,7,8,9-HxCDD	0.54	J I B	9.3	0.035	ng/Kg	☼	05/21/25 07:43	05/26/25 10:26	1
1,2,3,7,8,9-HxCDF	0.31	J B	9.3	0.020	ng/Kg	☼	05/21/25 07:43	05/26/25 10:26	1
2,3,4,6,7,8-HxCDF	0.45	J B	9.3	0.019	ng/Kg	☼	05/21/25 07:43	05/26/25 10:26	1
2,3,4,7,8-PeCDF	0.80	J B	9.3	0.028	ng/Kg	☼	05/21/25 07:43	05/26/25 10:26	1
2,3,7,8-TCDD	0.15	J I	1.9	0.020	ng/Kg	☼	05/21/25 07:43	05/26/25 10:26	1
2,3,7,8-TCDF	1.6	J B	1.9	0.080	ng/Kg	☼	05/21/25 07:43	05/26/25 10:26	1
OCDD	45	B	28	0.037	ng/Kg	☼	05/21/25 07:43	05/26/25 10:26	1
OCDF	3.0	J I B	19	0.012	ng/Kg	☼	05/21/25 07:43	05/26/25 10:26	1
Total HxCDD	9.0	J I B	9.3	0.035	ng/Kg	☼	05/21/25 07:43	05/26/25 10:26	1
Total HxCDF	4.1	J I B	9.3	0.020	ng/Kg	☼	05/21/25 07:43	05/26/25 10:26	1
Total HpCDD	22	B	9.3	0.046	ng/Kg	☼	05/21/25 07:43	05/26/25 10:26	1
Total HpCDF	5.4	J B	9.3	0.026	ng/Kg	☼	05/21/25 07:43	05/26/25 10:26	1
Total PeCDD	1.5	J I B	9.3	0.024	ng/Kg	☼	05/21/25 07:43	05/26/25 10:26	1
Total PeCDF	6.8	J I B	9.3	0.031	ng/Kg	☼	05/21/25 07:43	05/26/25 10:26	1
Total TCDD	0.15	J I	1.9	0.020	ng/Kg	☼	05/21/25 07:43	05/26/25 10:26	1
Total TCDF	4.4	B	1.9	0.080	ng/Kg	☼	05/21/25 07:43	05/26/25 10:26	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-OCDF	*47*		*40 - 135*	*05/21/25 07:43*	*05/26/25 10:26*	*1*
13C-OCDD	*44*		*40 - 135*	*05/21/25 07:43*	*05/26/25 10:26*	*1*
13C-2,3,7,8-TCDF	*71*		*40 - 135*	*05/21/25 07:43*	*05/26/25 10:26*	*1*
13C-2,3,7,8-TCDD	*66*		*40 - 135*	*05/21/25 07:43*	*05/26/25 10:26*	*1*
13C-2,3,4,7,8-PeCDF	*56*		*40 - 135*	*05/21/25 07:43*	*05/26/25 10:26*	*1*
13C-2,3,4,6,7,8-HxCDF	*56*		*40 - 135*	*05/21/25 07:43*	*05/26/25 10:26*	*1*
13C-1,2,3,7,8,9-HxCDF	*59*		*40 - 135*	*05/21/25 07:43*	*05/26/25 10:26*	*1*
13C-1,2,3,7,8,9-HxCDD	*54*		*40 - 135*	*05/21/25 07:43*	*05/26/25 10:26*	*1*
13C-1,2,3,7,8-PeCDF	*59*		*40 - 135*	*05/21/25 07:43*	*05/26/25 10:26*	*1*
13C-1,2,3,7,8-PeCDD	*55*		*40 - 135*	*05/21/25 07:43*	*05/26/25 10:26*	*1*
13C-1,2,3,6,7,8-HxCDF	*55*		*40 - 135*	*05/21/25 07:43*	*05/26/25 10:26*	*1*
13C-1,2,3,6,7,8-HxCDD	*53*		*40 - 135*	*05/21/25 07:43*	*05/26/25 10:26*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*54*		*40 - 135*	*05/21/25 07:43*	*05/26/25 10:26*	*1*
13C-1,2,3,4,7,8-HxCDF	*59*		*40 - 135*	*05/21/25 07:43*	*05/26/25 10:26*	*1*
13C-1,2,3,4,7,8-HxCDD	*56*		*40 - 135*	*05/21/25 07:43*	*05/26/25 10:26*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*48*		*40 - 135*	*05/21/25 07:43*	*05/26/25 10:26*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*49*		*40 - 135*	*05/21/25 07:43*	*05/26/25 10:26*	*1*

Client Sample ID: BWTPF-2025-DU4
Lab Sample ID: 570-230772-4
Date Collected: 05/07/25 12:15
Matrix: Solid
Date Received: 05/15/25 09:40

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,6,7,8-HpCDD	10	B	8.5	0.041	ng/Kg	☼	05/21/25 07:43	05/26/25 11:17	1
1,2,3,4,6,7,8-HpCDF	2.1	J B	8.5	0.027	ng/Kg	☼	05/21/25 07:43	05/26/25 11:17	1
1,2,3,4,7,8-HxCDD	0.35	J B	8.5	0.035	ng/Kg	☼	05/21/25 07:43	05/26/25 11:17	1

Method: SW846 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Client Sample ID: BWTPF-2025-DU4
Lab Sample ID: 570-230772-4
Date Collected: 05/07/25 12:15
Matrix: Solid
Date Received: 05/15/25 09:40

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,7,8-HxCDF	0.45	J B	8.5	0.018	ng/Kg	☼	05/21/25 07:43	05/26/25 11:17	1
1,2,3,4,7,8,9-HpCDF	0.30	J B	8.5	0.029	ng/Kg	☼	05/21/25 07:43	05/26/25 11:17	1
1,2,3,6,7,8-HxCDD	1.1	J B	8.5	0.036	ng/Kg	☼	05/21/25 07:43	05/26/25 11:17	1
1,2,3,6,7,8-HxCDF	0.40	J B	8.5	0.018	ng/Kg	☼	05/21/25 07:43	05/26/25 11:17	1
1,2,3,7,8-PeCDD	0.37	J B	8.5	0.021	ng/Kg	☼	05/21/25 07:43	05/26/25 11:17	1
1,2,3,7,8-PeCDF	ND		8.5	0.031	ng/Kg	☼	05/21/25 07:43	05/26/25 11:17	1
1,2,3,7,8,9-HxCDD	0.73	J I B	8.5	0.036	ng/Kg	☼	05/21/25 07:43	05/26/25 11:17	1
1,2,3,7,8,9-HxCDF	0.18	J B	8.5	0.017	ng/Kg	☼	05/21/25 07:43	05/26/25 11:17	1
2,3,4,6,7,8-HxCDF	0.63	J B	8.5	0.017	ng/Kg	☼	05/21/25 07:43	05/26/25 11:17	1
2,3,4,7,8-PeCDF	1.1	J B	8.5	0.024	ng/Kg	☼	05/21/25 07:43	05/26/25 11:17	1
2,3,7,8-TCDD	0.18	J I	1.7	0.018	ng/Kg	☼	05/21/25 07:43	05/26/25 11:17	1
2,3,7,8-TCDF	1.7	B	1.7	0.060	ng/Kg	☼	05/21/25 07:43	05/26/25 11:17	1
OCDD	43	B	26	0.042	ng/Kg	☼	05/21/25 07:43	05/26/25 11:17	1
OCDF	3.4	J B	17	0.020	ng/Kg	☼	05/21/25 07:43	05/26/25 11:17	1
Total HxCDD	14	I B	8.5	0.035	ng/Kg	☼	05/21/25 07:43	05/26/25 11:17	1
Total HxCDF	7.6	J B	8.5	0.018	ng/Kg	☼	05/21/25 07:43	05/26/25 11:17	1
Total HpCDD	27	B	8.5	0.041	ng/Kg	☼	05/21/25 07:43	05/26/25 11:17	1
Total HpCDF	6.9	J B	8.5	0.028	ng/Kg	☼	05/21/25 07:43	05/26/25 11:17	1
Total PeCDD	3.7	J B	8.5	0.021	ng/Kg	☼	05/21/25 07:43	05/26/25 11:17	1
Total PeCDF	10	B	8.5	0.027	ng/Kg	☼	05/21/25 07:43	05/26/25 11:17	1
Total TCDD	2.3	I	1.7	0.018	ng/Kg	☼	05/21/25 07:43	05/26/25 11:17	1
Total TCDF	13	B	1.7	0.060	ng/Kg	☼	05/21/25 07:43	05/26/25 11:17	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-OCDF	*46*		*40 - 135*	*05/21/25 07:43*	*05/26/25 11:17*	*1*
13C-OCDD	*41*		*40 - 135*	*05/21/25 07:43*	*05/26/25 11:17*	*1*
13C-2,3,7,8-TCDF	*74*		*40 - 135*	*05/21/25 07:43*	*05/26/25 11:17*	*1*
13C-2,3,7,8-TCDD	*69*		*40 - 135*	*05/21/25 07:43*	*05/26/25 11:17*	*1*
13C-2,3,4,7,8-PeCDF	*61*		*40 - 135*	*05/21/25 07:43*	*05/26/25 11:17*	*1*
13C-2,3,4,6,7,8-HxCDF	*56*		*40 - 135*	*05/21/25 07:43*	*05/26/25 11:17*	*1*
13C-1,2,3,7,8,9-HxCDF	*61*		*40 - 135*	*05/21/25 07:43*	*05/26/25 11:17*	*1*
13C-1,2,3,7,8,9-HxCDD	*55*		*40 - 135*	*05/21/25 07:43*	*05/26/25 11:17*	*1*
13C-1,2,3,7,8-PeCDF	*63*		*40 - 135*	*05/21/25 07:43*	*05/26/25 11:17*	*1*
13C-1,2,3,7,8-PeCDD	*59*		*40 - 135*	*05/21/25 07:43*	*05/26/25 11:17*	*1*
13C-1,2,3,6,7,8-HxCDF	*58*		*40 - 135*	*05/21/25 07:43*	*05/26/25 11:17*	*1*
13C-1,2,3,6,7,8-HxCDD	*54*		*40 - 135*	*05/21/25 07:43*	*05/26/25 11:17*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*57*		*40 - 135*	*05/21/25 07:43*	*05/26/25 11:17*	*1*
13C-1,2,3,4,7,8-HxCDF	*63*		*40 - 135*	*05/21/25 07:43*	*05/26/25 11:17*	*1*
13C-1,2,3,4,7,8-HxCDD	*60*		*40 - 135*	*05/21/25 07:43*	*05/26/25 11:17*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*45*		*40 - 135*	*05/21/25 07:43*	*05/26/25 11:17*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*48*		*40 - 135*	*05/21/25 07:43*	*05/26/25 11:17*	*1*

Client Sample ID: BWTPF-2025-DU5
Lab Sample ID: 570-230772-5
Date Collected: 05/07/25 06:30
Matrix: Solid
Date Received: 05/15/25 09:40

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,6,7,8-HpCDD	5.1	J B	7.9	0.052	ng/Kg	☼	05/21/25 07:43	05/26/25 12:08	1
1,2,3,4,6,7,8-HpCDF	1.1	J B	7.9	0.022	ng/Kg	☼	05/21/25 07:43	05/26/25 12:08	1
1,2,3,4,7,8-HxCDD	ND		7.9	0.033	ng/Kg	☼	05/21/25 07:43	05/26/25 12:08	1
1,2,3,4,7,8-HxCDF	0.23	J I B	7.9	0.020	ng/Kg	☼	05/21/25 07:43	05/26/25 12:08	1

Method: SW846 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Client Sample ID: BWTPF-2025-DU5
Date Collected: 05/07/25 06:30
Date Received: 05/15/25 09:40

Lab Sample ID: 570-230772-5
Matrix: Solid

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,7,8,9-HpCDF	0.14	J I B	7.9	0.025	ng/Kg	☼	05/21/25 07:43	05/26/25 12:08	1
1,2,3,6,7,8-HxCDD	0.51	J B	7.9	0.031	ng/Kg	☼	05/21/25 07:43	05/26/25 12:08	1
1,2,3,6,7,8-HxCDF	0.19	J B	7.9	0.019	ng/Kg	☼	05/21/25 07:43	05/26/25 12:08	1
1,2,3,7,8-PeCDD	0.18	J B	7.9	0.022	ng/Kg	☼	05/21/25 07:43	05/26/25 12:08	1
1,2,3,7,8-PeCDF	ND		7.9	0.034	ng/Kg	☼	05/21/25 07:43	05/26/25 12:08	1
1,2,3,7,8,9-HxCDD	0.30	J B	7.9	0.032	ng/Kg	☼	05/21/25 07:43	05/26/25 12:08	1
1,2,3,7,8,9-HxCDF	0.28	J B	7.9	0.020	ng/Kg	☼	05/21/25 07:43	05/26/25 12:08	1
2,3,4,6,7,8-HxCDF	0.30	J B	7.9	0.017	ng/Kg	☼	05/21/25 07:43	05/26/25 12:08	1
2,3,4,7,8-PeCDF	0.75	J B	7.9	0.026	ng/Kg	☼	05/21/25 07:43	05/26/25 12:08	1
2,3,7,8-TCDD	ND		1.6	0.013	ng/Kg	☼	05/21/25 07:43	05/26/25 12:08	1
2,3,7,8-TCDF	0.91	J B	1.6	0.082	ng/Kg	☼	05/21/25 07:43	05/26/25 12:08	1
OCDD	27	B	24	0.036	ng/Kg	☼	05/21/25 07:43	05/26/25 12:08	1
OCDF	1.9	J B	16	0.013	ng/Kg	☼	05/21/25 07:43	05/26/25 12:08	1
Total HxCDD	4.7	J B	7.9	0.032	ng/Kg	☼	05/21/25 07:43	05/26/25 12:08	1
Total HxCDF	4.5	J I B	7.9	0.019	ng/Kg	☼	05/21/25 07:43	05/26/25 12:08	1
Total HpCDD	13	B	7.9	0.052	ng/Kg	☼	05/21/25 07:43	05/26/25 12:08	1
Total HpCDF	3.2	J I B	7.9	0.023	ng/Kg	☼	05/21/25 07:43	05/26/25 12:08	1
Total PeCDD	0.65	J B	7.9	0.022	ng/Kg	☼	05/21/25 07:43	05/26/25 12:08	1
Total PeCDF	5.5	J B	7.9	0.030	ng/Kg	☼	05/21/25 07:43	05/26/25 12:08	1
Total TCDD	0.98	J	1.6	0.013	ng/Kg	☼	05/21/25 07:43	05/26/25 12:08	1
Total TCDF	5.2	B	1.6	0.082	ng/Kg	☼	05/21/25 07:43	05/26/25 12:08	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-OCDF	*48*		*40 - 135*	*05/21/25 07:43*	*05/26/25 12:08*	*1*
13C-OCDD	*44*		*40 - 135*	*05/21/25 07:43*	*05/26/25 12:08*	*1*
13C-2,3,7,8-TCDF	*72*		*40 - 135*	*05/21/25 07:43*	*05/26/25 12:08*	*1*
13C-2,3,7,8-TCDD	*67*		*40 - 135*	*05/21/25 07:43*	*05/26/25 12:08*	*1*
13C-2,3,4,7,8-PeCDF	*58*		*40 - 135*	*05/21/25 07:43*	*05/26/25 12:08*	*1*
13C-2,3,4,6,7,8-HxCDF	*55*		*40 - 135*	*05/21/25 07:43*	*05/26/25 12:08*	*1*
13C-1,2,3,7,8,9-HxCDF	*57*		*40 - 135*	*05/21/25 07:43*	*05/26/25 12:08*	*1*
13C-1,2,3,7,8,9-HxCDD	*53*		*40 - 135*	*05/21/25 07:43*	*05/26/25 12:08*	*1*
13C-1,2,3,7,8-PeCDF	*58*		*40 - 135*	*05/21/25 07:43*	*05/26/25 12:08*	*1*
13C-1,2,3,7,8-PeCDD	*55*		*40 - 135*	*05/21/25 07:43*	*05/26/25 12:08*	*1*
13C-1,2,3,6,7,8-HxCDF	*54*		*40 - 135*	*05/21/25 07:43*	*05/26/25 12:08*	*1*
13C-1,2,3,6,7,8-HxCDD	*52*		*40 - 135*	*05/21/25 07:43*	*05/26/25 12:08*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*56*		*40 - 135*	*05/21/25 07:43*	*05/26/25 12:08*	*1*
13C-1,2,3,4,7,8-HxCDF	*57*		*40 - 135*	*05/21/25 07:43*	*05/26/25 12:08*	*1*
13C-1,2,3,4,7,8-HxCDD	*55*		*40 - 135*	*05/21/25 07:43*	*05/26/25 12:08*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*49*		*40 - 135*	*05/21/25 07:43*	*05/26/25 12:08*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*50*		*40 - 135*	*05/21/25 07:43*	*05/26/25 12:08*	*1*

Method: SW846 6020 - Metals (ICP/MS)

Client Sample ID: BWTPF-2025-DU1
Date Collected: 05/06/25 08:35
Date Received: 05/15/25 09:40
Lab Sample ID: 570-230772-1
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	7.51		0.831	0.105	mg/Kg	☼	05/20/25 07:32	05/20/25 15:35	20
Chromium	60.3	F1	1.66	0.384	mg/Kg	☼	05/20/25 07:32	05/20/25 15:35	20
Copper	28.4	B	1.66	0.510	mg/Kg	☼	05/20/25 07:32	05/20/25 15:35	20
Nickel	59.6	F1	1.66	0.444	mg/Kg	☼	05/20/25 07:32	05/20/25 15:35	20
Lead	15.7		0.831	0.156	mg/Kg	☼	05/20/25 07:32	05/20/25 15:35	20
Zinc	74.2	F1	16.6	1.83	mg/Kg	☼	05/20/25 07:32	05/20/25 15:35	20

Client Sample ID: BWTPF-2025-DU2
Date Collected: 05/06/25 09:35
Date Received: 05/15/25 09:40
Lab Sample ID: 570-230772-2
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	5.86		0.870	0.110	mg/Kg	☼	05/20/25 07:32	05/20/25 16:04	20
Chromium	46.9		1.74	0.402	mg/Kg	☼	05/20/25 07:32	05/20/25 16:04	20
Copper	21.9	B	1.74	0.534	mg/Kg	☼	05/20/25 07:32	05/20/25 16:04	20
Nickel	45.6		1.74	0.465	mg/Kg	☼	05/20/25 07:32	05/20/25 16:04	20
Lead	10.2		0.870	0.164	mg/Kg	☼	05/20/25 07:32	05/20/25 16:04	20
Zinc	52.6		17.4	1.91	mg/Kg	☼	05/20/25 07:32	05/20/25 16:04	20

Client Sample ID: BWTPF-2025-DU3
Date Collected: 05/09/25 06:40
Date Received: 05/15/25 09:40
Lab Sample ID: 570-230772-3
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	6.59		0.916	0.115	mg/Kg	☼	05/20/25 07:32	05/20/25 16:07	20
Chromium	55.6		1.83	0.423	mg/Kg	☼	05/20/25 07:32	05/20/25 16:07	20
Copper	27.8	B	1.83	0.563	mg/Kg	☼	05/20/25 07:32	05/20/25 16:07	20
Nickel	53.8		1.83	0.489	mg/Kg	☼	05/20/25 07:32	05/20/25 16:07	20
Lead	15.1		0.916	0.172	mg/Kg	☼	05/20/25 07:32	05/20/25 16:07	20
Zinc	70.5		18.3	2.01	mg/Kg	☼	05/20/25 07:32	05/20/25 16:07	20

Client Sample ID: BWTPF-2025-DU4
Date Collected: 05/07/25 12:15
Date Received: 05/15/25 09:40
Lab Sample ID: 570-230772-4
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	6.23		0.862	0.109	mg/Kg	☼	05/20/25 07:32	05/20/25 16:10	20
Chromium	50.0		1.72	0.398	mg/Kg	☼	05/20/25 07:32	05/20/25 16:10	20
Copper	26.2	B	1.72	0.529	mg/Kg	☼	05/20/25 07:32	05/20/25 16:10	20
Nickel	48.4		1.72	0.460	mg/Kg	☼	05/20/25 07:32	05/20/25 16:10	20
Lead	16.3		0.862	0.162	mg/Kg	☼	05/20/25 07:32	05/20/25 16:10	20
Zinc	66.1		17.2	1.89	mg/Kg	☼	05/20/25 07:32	05/20/25 16:10	20

Client Sample ID: BWTPF-2025-DU5
Date Collected: 05/07/25 06:30
Date Received: 05/15/25 09:40
Lab Sample ID: 570-230772-5
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	6.32		0.791	0.0996	mg/Kg	☼	05/20/25 07:32	05/20/25 16:13	20
Chromium	47.7		1.58	0.365	mg/Kg	☼	05/20/25 07:32	05/20/25 16:13	20
Copper	22.6	B	1.58	0.485	mg/Kg	☼	05/20/25 07:32	05/20/25 16:13	20
Nickel	43.2		1.58	0.422	mg/Kg	☼	05/20/25 07:32	05/20/25 16:13	20
Lead	14.5		0.791	0.149	mg/Kg	☼	05/20/25 07:32	05/20/25 16:13	20
Zinc	57.0		15.8	1.74	mg/Kg	☼	05/20/25 07:32	05/20/25 16:13	20

Client: Pacific EcoRisk Inc
Job ID: 570-230772-1
Project/Site: Berkeley Water Transportation Pier Ferry (Sed)

Method: SW846 7471A - Mercury (CVAA)

Client Sample ID: BWTPF-2025-DU1
Lab Sample ID: 570-230772-1
Date Collected: 05/06/25 08:35
Matrix: Solid
Date Received: 05/15/25 09:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.237		0.132	0.0364	mg/Kg	☼	05/20/25 10:51	05/20/25 12:48	1

Client Sample ID: BWTPF-2025-DU2
Lab Sample ID: 570-230772-2
Date Collected: 05/06/25 09:35
Matrix: Solid
Date Received: 05/15/25 09:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.172		0.138	0.0381	mg/Kg	☼	05/20/25 10:51	05/20/25 13:17	1

Client Sample ID: BWTPF-2025-DU3
Lab Sample ID: 570-230772-3
Date Collected: 05/09/25 06:40
Matrix: Solid
Date Received: 05/15/25 09:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.185		0.150	0.0413	mg/Kg	☼	05/20/25 10:51	05/20/25 13:18	1

Client Sample ID: BWTPF-2025-DU4
Lab Sample ID: 570-230772-4
Date Collected: 05/07/25 12:15
Matrix: Solid
Date Received: 05/15/25 09:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.162		0.135	0.0372	mg/Kg	☼	05/20/25 10:51	05/20/25 13:20	1

Client Sample ID: BWTPF-2025-DU5
Lab Sample ID: 570-230772-5
Date Collected: 05/07/25 06:30
Matrix: Solid
Date Received: 05/15/25 09:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.263		0.136	0.0377	mg/Kg	☼	05/20/25 10:51	05/20/25 13:22	1

Client: Pacific EcoRisk Inc
Job ID: 570-230772-1
Project/Site: Berkeley Water Transportation Pier Ferry (Sed)

General Chemistry

Client Sample ID: BWTPF-2025-DU1
Lab Sample ID: 570-230772-1
Date Collected: 05/06/25 08:35
Matrix: Solid
Date Received: 05/15/25 09:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (EPA Moisture)	59.6		0.1	0.1	%			05/18/25 14:31	1

Client Sample ID: BWTPF-2025-DU2
Lab Sample ID: 570-230772-2
Date Collected: 05/06/25 09:35
Matrix: Solid
Date Received: 05/15/25 09:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (EPA Moisture)	56.9		0.1	0.1	%			05/18/25 09:11	1

Client Sample ID: BWTPF-2025-DU3
Lab Sample ID: 570-230772-3
Date Collected: 05/09/25 06:40
Matrix: Solid
Date Received: 05/15/25 09:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (EPA Moisture)	53.5		0.1	0.1	%			05/18/25 14:31	1

Client Sample ID: BWTPF-2025-DU4
Lab Sample ID: 570-230772-4
Date Collected: 05/07/25 12:15
Matrix: Solid
Date Received: 05/15/25 09:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (EPA Moisture)	58.3		0.1	0.1	%			05/18/25 14:31	1

Client Sample ID: BWTPF-2025-DU5
Lab Sample ID: 570-230772-5
Date Collected: 05/07/25 06:30
Matrix: Solid
Date Received: 05/15/25 09:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (EPA Moisture)	62.3		0.1	0.1	%			05/18/25 09:11	1

Method: ASTM D4464 - Particle Size Distribution of Catalytic Material (Laser light scattering)

Client Sample ID: BWTPF-2025-DU1
Lab Sample ID: 570-230772-1
Date Collected: 05/06/25 08:35
Matrix: Solid
Date Received: 05/15/25 09:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Clay (less than 0.00391 mm)	**54.03**		0.01	0.01	%			05/24/25 12:35	1
Coarse Sand (0.5mm to 1mm)	ND		0.01	0.01	%			05/24/25 12:35	1
Fine Sand (0.125 to 0.25mm)	ND		0.01	0.01	%			05/24/25 12:35	1
Gravel (greater than 2 mm)	ND		0.01	0.01	%			05/24/25 12:35	1
Medium Sand (0.25 to 0.5 mm)	ND		0.01	0.01	%			05/24/25 12:35	1
Silt (0.00391 to 0.0625mm)	**45.97**		0.01	0.01	%			05/24/25 12:35	1
Total Silt and Clay (0 to 0.0626mm)	**100.00**		0.01	0.01	%			05/24/25 12:35	1
Very Coarse Sand (1 to 2mm)	ND		0.01	0.01	%			05/24/25 12:35	1
Very Fine Sand (0.0625 to 0.125 mm)	ND		0.01	0.01	%			05/24/25 12:35	1

Client Sample ID: BWTPF-2025-DU2
Lab Sample ID: 570-230772-2
Date Collected: 05/06/25 09:35
Matrix: Solid
Date Received: 05/15/25 09:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Clay (less than 0.00391 mm)	**57.17**		0.01	0.01	%			05/24/25 13:13	1
Coarse Sand (0.5mm to 1mm)	ND		0.01	0.01	%			05/24/25 13:13	1
Fine Sand (0.125 to 0.25mm)	ND		0.01	0.01	%			05/24/25 13:13	1
Gravel (greater than 2 mm)	ND		0.01	0.01	%			05/24/25 13:13	1
Medium Sand (0.25 to 0.5 mm)	ND		0.01	0.01	%			05/24/25 13:13	1
Silt (0.00391 to 0.0625mm)	**42.83**		0.01	0.01	%			05/24/25 13:13	1
Total Silt and Clay (0 to 0.0626mm)	**100.00**		0.01	0.01	%			05/24/25 13:13	1
Very Coarse Sand (1 to 2mm)	ND		0.01	0.01	%			05/24/25 13:13	1
Very Fine Sand (0.0625 to 0.125 mm)	ND		0.01	0.01	%			05/24/25 13:13	1

Client Sample ID: BWTPF-2025-DU3
Lab Sample ID: 570-230772-3
Date Collected: 05/09/25 06:40
Matrix: Solid
Date Received: 05/15/25 09:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Clay (less than 0.00391 mm)	**46.37**		0.01	0.01	%			05/24/25 13:25	1
Coarse Sand (0.5mm to 1mm)	ND		0.01	0.01	%			05/24/25 13:25	1
Fine Sand (0.125 to 0.25mm)	ND		0.01	0.01	%			05/24/25 13:25	1
Gravel (greater than 2 mm)	ND		0.01	0.01	%			05/24/25 13:25	1
Medium Sand (0.25 to 0.5 mm)	ND		0.01	0.01	%			05/24/25 13:25	1
Silt (0.00391 to 0.0625mm)	**53.63**		0.01	0.01	%			05/24/25 13:25	1
Total Silt and Clay (0 to 0.0626mm)	**100.00**		0.01	0.01	%			05/24/25 13:25	1
Very Coarse Sand (1 to 2mm)	ND		0.01	0.01	%			05/24/25 13:25	1
Very Fine Sand (0.0625 to 0.125 mm)	ND		0.01	0.01	%			05/24/25 13:25	1

Client Sample ID: BWTPF-2025-DU4
Lab Sample ID: 570-230772-4
Date Collected: 05/07/25 12:15
Matrix: Solid
Date Received: 05/15/25 09:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Clay (less than 0.00391 mm)	**45.20**		0.01	0.01	%			05/24/25 13:36	1
Coarse Sand (0.5mm to 1mm)	ND		0.01	0.01	%			05/24/25 13:36	1
Fine Sand (0.125 to 0.25mm)	ND		0.01	0.01	%			05/24/25 13:36	1
Gravel (greater than 2 mm)	ND		0.01	0.01	%			05/24/25 13:36	1
Medium Sand (0.25 to 0.5 mm)	ND		0.01	0.01	%			05/24/25 13:36	1
Silt (0.00391 to 0.0625mm)	**54.80**		0.01	0.01	%			05/24/25 13:36	1
Total Silt and Clay (0 to 0.0626mm)	**100.00**		0.01	0.01	%			05/24/25 13:36	1
Very Coarse Sand (1 to 2mm)	ND		0.01	0.01	%			05/24/25 13:36	1

Method: ASTM D4464 - Particle Size Distribution of Catalytic Material (Laser light scattering) (Continued)

Client Sample ID: BWTPF-2025-DU4
Date Collected: 05/07/25 12:15
Date Received: 05/15/25 09:40
Lab Sample ID: 570-230772-4
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Very Fine Sand (0.0625 to 0.125 mm)	ND		0.01	0.01	%			05/24/25 13:36	1

Client Sample ID: BWTPF-2025-DU5
Date Collected: 05/07/25 06:30
Date Received: 05/15/25 09:40
Lab Sample ID: 570-230772-5
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Clay (less than 0.00391 mm)	**60.28**		0.01	0.01	%			05/24/25 13:48	1
Coarse Sand (0.5mm to 1mm)	ND		0.01	0.01	%			05/24/25 13:48	1
Fine Sand (0.125 to 0.25mm)	ND		0.01	0.01	%			05/24/25 13:48	1
Gravel (greater than 2 mm)	ND		0.01	0.01	%			05/24/25 13:48	1
Medium Sand (0.25 to 0.5 mm)	ND		0.01	0.01	%			05/24/25 13:48	1
Silt (0.00391 to 0.0625mm)	**39.72**		0.01	0.01	%			05/24/25 13:48	1
Total Silt and Clay (0 to 0.0626mm)	**100.00**		0.01	0.01	%			05/24/25 13:48	1
Very Coarse Sand (1 to 2mm)	ND		0.01	0.01	%			05/24/25 13:48	1
Very Fine Sand (0.0625 to 0.125 mm)	ND		0.01	0.01	%			05/24/25 13:48	1

PARTICLE SIZE SUMMARY

(ASTM D422 / D4464M)

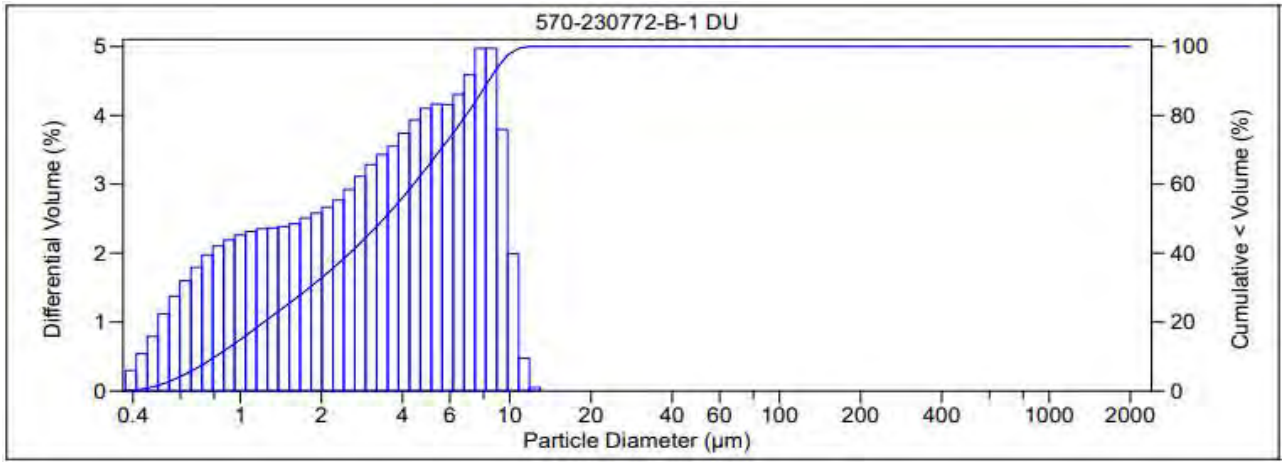
LAB DUPLICATE

Date Sampled:	05/06/25
Date Received:	05/15/25
Work Order No:	570-230772-1DU
Date Analyzed:	05/24/25
Method:	ASTM D4464M

DUPLICATE

Sample ID	Depth ft	Description	Mean Grain Size mm
DUPLICATE		Silt	0.004

Particle Size Distribution, wt by percent								
Total Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Silt	Clay	Total Silt & Clay
0.000	0.000	0.000	0.000	0.000	0.000	44.792	55.208	100.000



V 3.0

PARTICLE SIZE SUMMARY

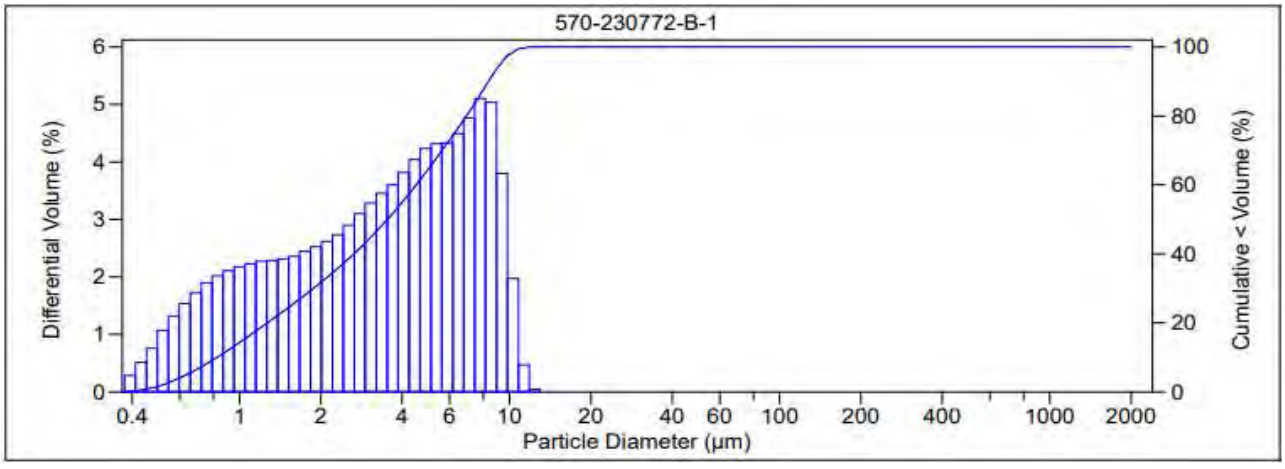
(ASTM D422 / D4464M)

Pacific EcoRisk Inc Fairfield	Date Sampled:	05/06/25
	Date Received:	05/15/25
	Work Order No:	570-230772-1
	Date Analyzed:	05/24/25
	Method:	ASTM D4464M

BWTPF-2025-DU1

Sample ID	Depth ft	Description	Mean Grain Size mm
BWTPF-2025-DU1		Silt	0.004

Particle Size Distribution, wt by percent								Total Silt & Clay
Total Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Silt	Clay	
0.000	0.000	0.000	0.000	0.000	0.000	45.966	54.034	100.000



V 3.0

PARTICLE SIZE SUMMARY

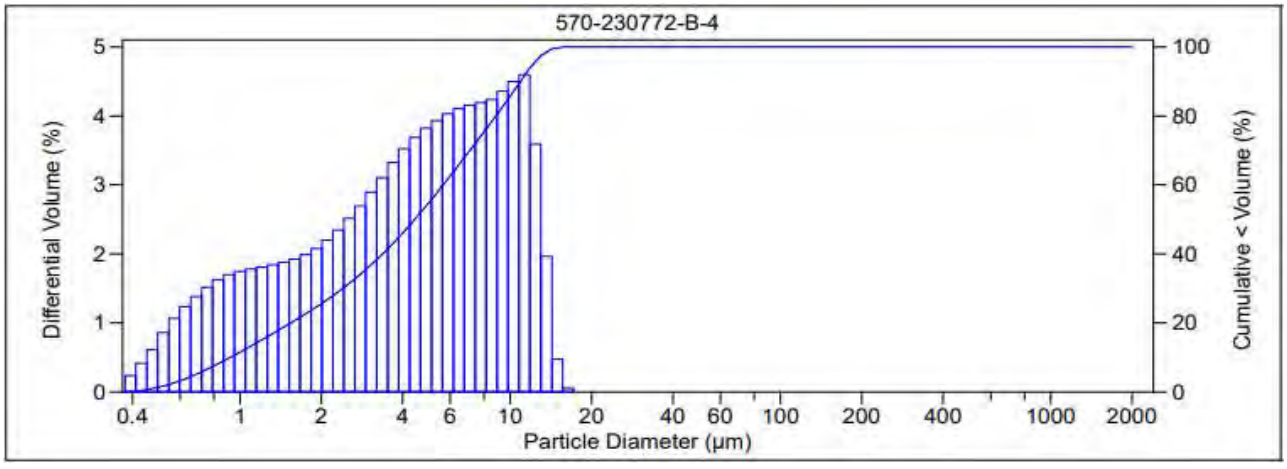
(ASTM D422 / D4464M)

Pacific EcoRisk Inc Fairfield	Date Sampled:	05/07/25
	Date Received:	05/15/25
	Work Order No:	570-230772-4
	Date Analyzed:	05/24/25
	Method:	ASTM D4464M

BWTPF-2025-DU4

Sample ID	Depth ft	Description	Mean Grain Size mm
BWTPF-2025-DU4		Silt	0.005

Particle Size Distribution, wt by percent								
Total Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Silt	Clay	Total Silt & Clay
0.000	0.000	0.000	0.000	0.000	0.000	54.798	45.202	100.000



V 3.0

PARTICLE SIZE SUMMARY

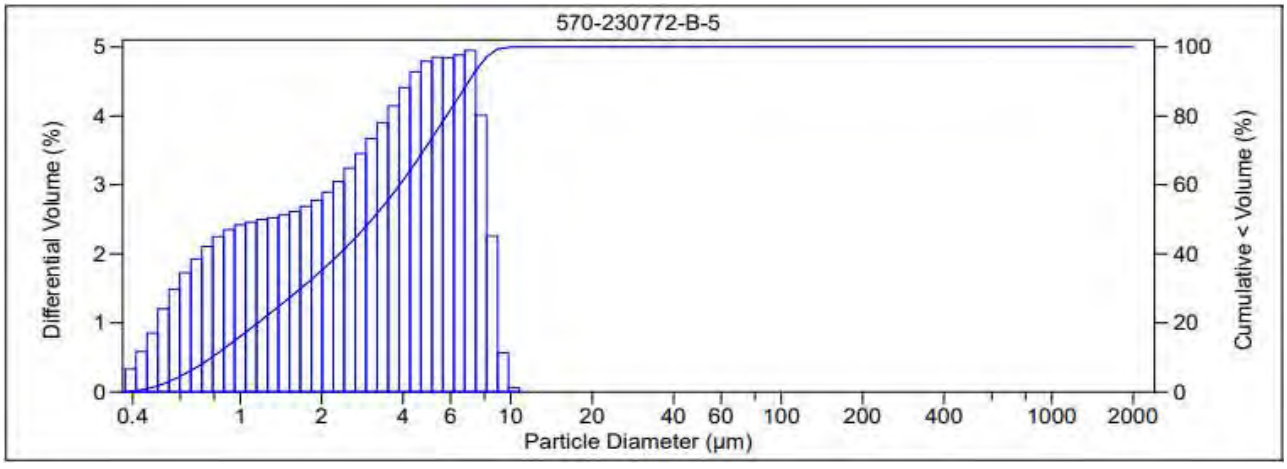
(ASTM D422 / D4464M)

Pacific EcoRisk Inc Fairfield	Date Sampled:	05/07/25
	Date Received:	05/15/25
	Work Order No:	570-230772-5
	Date Analyzed:	05/24/25
	Method:	ASTM D4464M

BWTPF-2025-DU5

Sample ID	Depth ft	Description	Mean Grain Size mm
BWTPF-2025-DU5		Silt	0.003

Particle Size Distribution, wt by percent								
Total Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Silt	Clay	Total Silt & Clay
0.000	0.000	0.000	0.000	0.000	0.000	39.718	60.282	100.000



V 3.0

PARTICLE SIZE SUMMARY

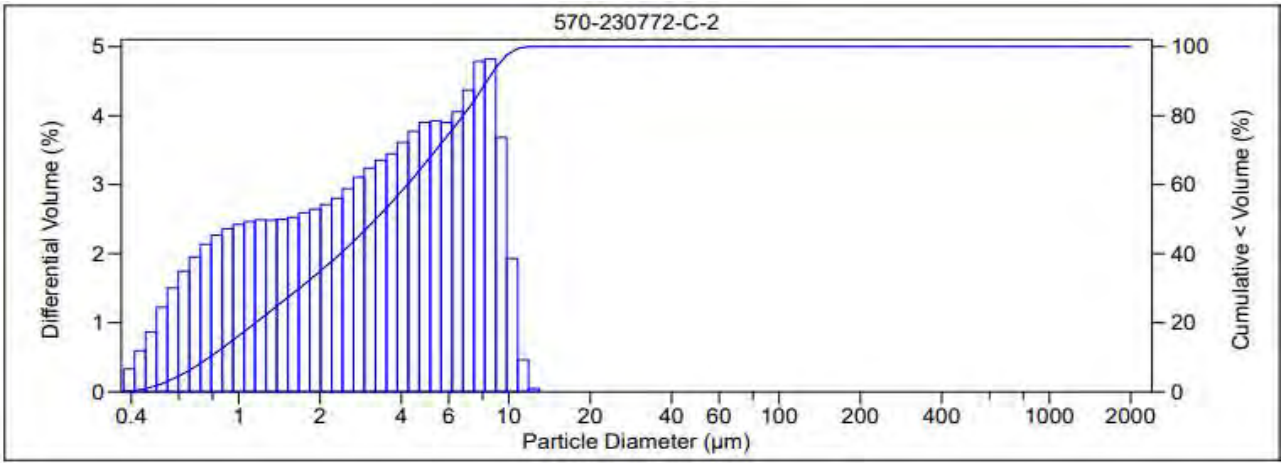
(ASTM D422 / D4464M)

Pacific EcoRisk Inc Fairfield	Date Sampled:	05/06/25
	Date Received:	05/15/25
	Work Order No:	570-230772-2
	Date Analyzed:	05/24/25
	Method:	ASTM D4464M

BWTPF-2025-DU2

Sample ID	Depth ft	Description	Mean Grain Size mm
BWTPF-2025-DU2		Silt	0.004

Particle Size Distribution, wt by percent								
Total Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Silt	Clay	Total Silt & Clay
0.000	0.000	0.000	0.000	0.000	0.000	42.828	57.172	100.000



V 3.0

PARTICLE SIZE SUMMARY

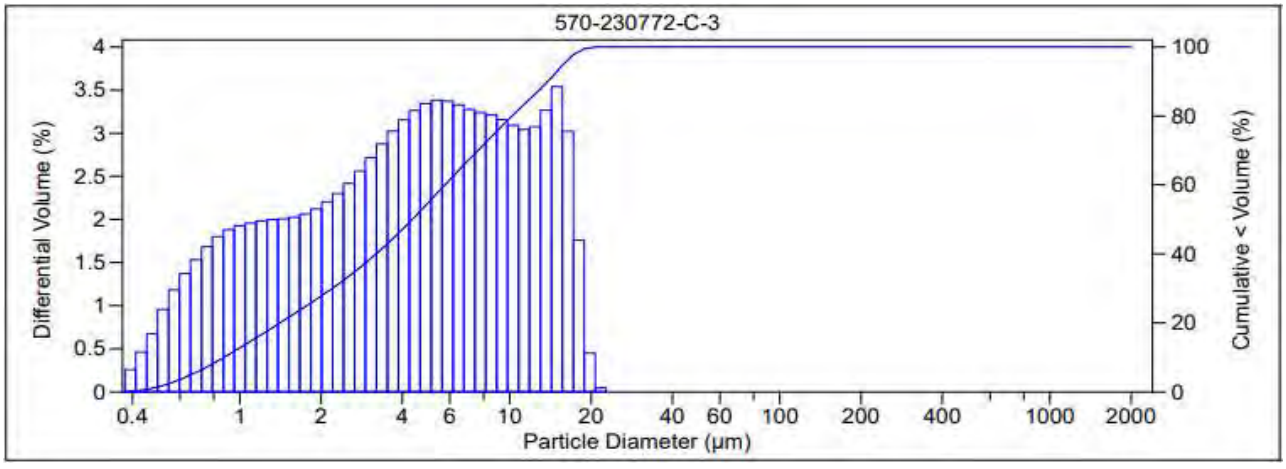
(ASTM D422 / D4464M)

Pacific EcoRisk Inc Fairfield	Date Sampled:	05/09/25
	Date Received:	05/15/25
	Work Order No:	570-230772-3
	Date Analyzed:	05/24/25
	Method:	ASTM D4464M

BWTPF-2025-DU3

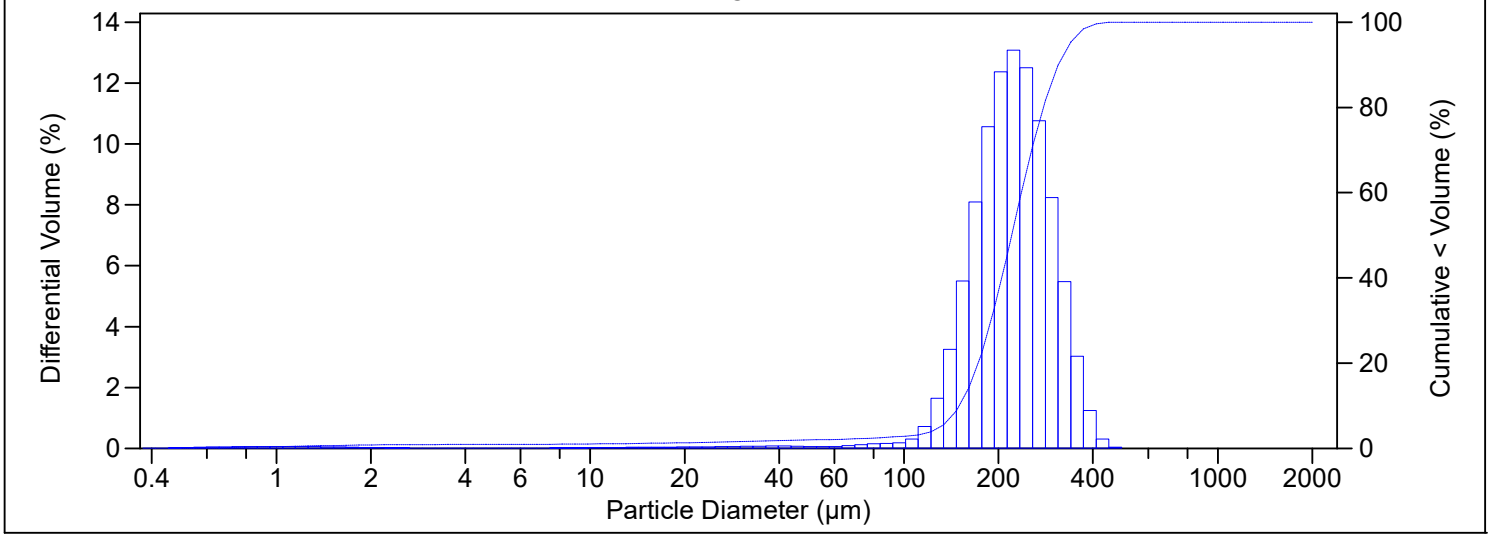
Sample ID	Depth ft	Description	Mean Grain Size mm
BWTPF-2025-DU3		Silt	0.006

Particle Size Distribution, wt by percent								
Total Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Silt	Clay	Total Silt & Clay
0.000	0.000	0.000	0.000	0.000	0.000	53.632	46.368	100.000



V 3.0

File name:	C:\LS13320\LCS_24 May 2025_12.22.58.$ls LCS_24 May 2025_12.22.58.$ls		
File ID:	LCS		
Sample ID:	LCS		
Operator:	EL8Q		
Bar code:	6112983		
Run number:	1 Control Sample		
Comment 1:	ASTM D4464M, LPSA1		
Comment 2:	6112983		
Optical model:	Fraunhofer.rf780d		
Residual:	0.69%		
LS 13 320	Aqueous Liquid Module		
Start time:	12:21 24 May 2025	Run length:	60 seconds
Pump speed:	49		
Obscuration:	9%		
Software:	6.01	Firmware:	4.00



Volume Statistics (Arithmetic) LCS_24 May 2025_12.22.58.$ls

Calculations from 0.375 µm to 2000 µm

Volume:	100%		
Mean:	223.8 µm	S.D.:	67.72 µm
Median:	220.7 µm	Variance:	4586 µm^2
Mean/Median ratio:	1.014	Skewness:	-0.136 Left skewed
Mode:	223.4 µm	Kurtosis:	1.042 Leptokurtic

d_{10}: 149.9 µm d_{50}: 220.7 µm d_{90}: 310.2 µm

Folk and Ward Statistics (Phi)

Mean:	2.19	Median:	2.18	Deviation:	0.41
Skewness:	0.07	Kurtosis:	1.02		

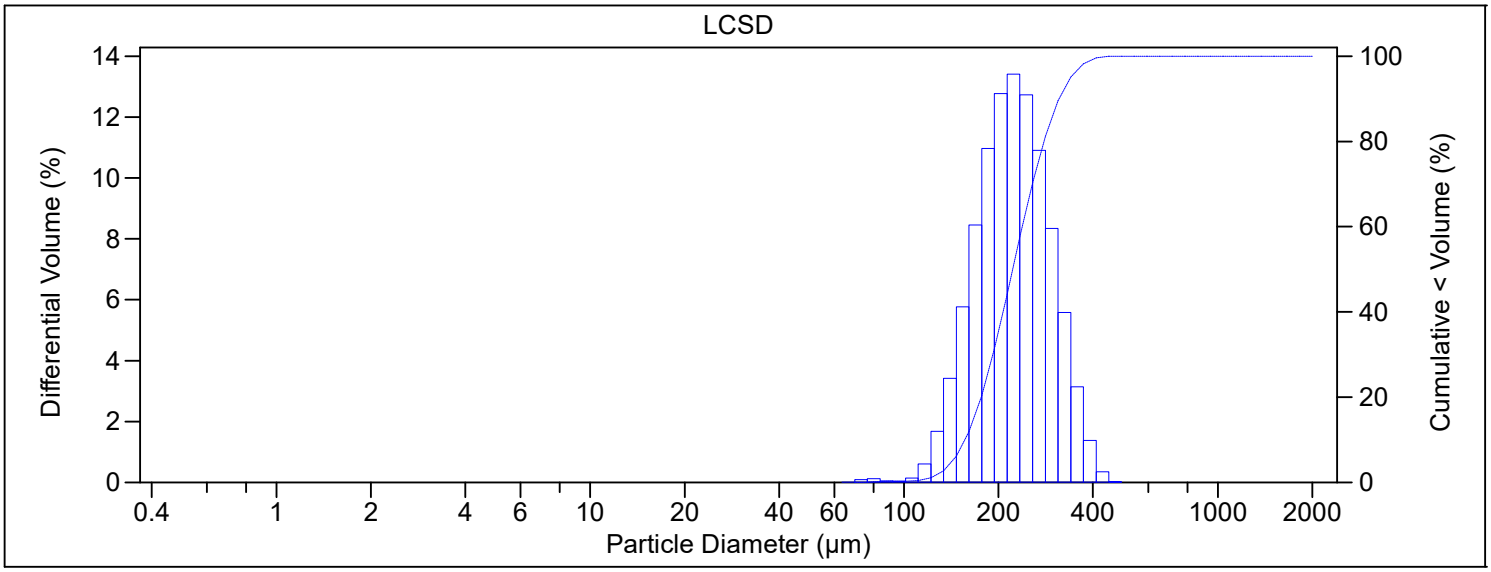
<5%	<16%	<25%	<40%	<50%	<75%	<84%	<95%
129.8 µm	164.5 µm	181.2 µm	205.0 µm	220.7 µm	266.5 µm	289.9 µm	337.8 µm

Particle Diameter µm	LCS_24 May 2025_12.22 .58.$ls Volume %
0.04	0.0050
0.4	0.80
1.95	0.13
3.91	1.21
62.5	2.20
125	62.8
250	32.9
500	0.0011
1000	0
2000	

LCS_24 May 2025_12.22.58.$ls

Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %
0.375	0.0073	22.73	0.055	1377	0
0.412	0.014	24.95	0.060	1512	0
0.452	0.023	27.39	0.066	1660	0
0.496	0.032	30.07	0.072	1822	0
0.545	0.040	33.01	0.077	2000	
0.598	0.047	36.24	0.080		
0.657	0.053	39.78	0.079		
0.721	0.058	43.67	0.073		
0.791	0.061	47.94	0.064		
0.869	0.063	52.63	0.059		
0.954	0.064	57.77	0.065		
1.047	0.063	63.42	0.089		
1.149	0.061	69.62	0.13		
1.261	0.057	76.43	0.16		
1.385	0.053	83.90	0.17		
1.520	0.047	92.10	0.19		
1.669	0.042	101.1	0.31		
1.832	0.036	111.0	0.72		
2.011	0.030	121.8	1.65		
2.208	0.024	133.7	3.26		
2.423	0.019	146.8	5.50		
2.660	0.015	161.2	8.09		
2.920	0.011	176.9	10.6		
3.206	0.0084	194.2	12.4		
3.519	0.0067	213.2	13.1		
3.863	0.0058	234.1	12.5		
4.241	0.0056	256.9	10.8		
4.656	0.0061	282.1	8.23		
5.111	0.0071	309.6	5.47		
5.611	0.0087	339.9	3.03		
6.159	0.011	373.1	1.24		
6.761	0.013	409.6	0.31		
7.422	0.016	449.7	0.038		
8.148	0.019	493.6	0.0013		
8.944	0.023	541.9	0		
9.819	0.026	594.9	0		
10.78	0.030	653.0	0		
11.83	0.034	716.9	0		
12.99	0.037	786.9	0		
14.26	0.041	863.9	0		
15.65	0.043	948.3	0		
17.18	0.046	1041	0		
18.86	0.048	1143	0		
20.71	0.051	1255	0		

File name:	C:\LS13320\LCSD_24 May 2025_12.49.56.$ls		
	LCSD_24 May 2025_12.49.56.$ls		
File ID:	LCSD		
Sample ID:	LCSD		
Operator:	EL8Q		
Bar code:	6112983		
Run number:	3		
	Control Sample		
Comment 1:	ASTM D4464M, LPSA1		
Comment 2:	6112983		
Optical model:	Fraunhofer.rf780d		
Residual:	1.68%		
LS 13 320	Aqueous Liquid Module		
Start time:	12:48 24 May 2025	Run length:	60 seconds
Pump speed:	49		
Obscuration:	8%		
Software:	6.01	Firmware:	4.00



Volume Statistics (Arithmetic) LCSD_24 May 2025_12.49.56.$ls

Calculations from 0.375 µm to 2000 µm

Volume:	100%		
Mean:	229.0 µm	S.D.:	60.40 µm
Median:	222.3 µm	Variance:	3648 µm^2
Mean/Median ratio:	1.030	Skewness:	0.532 Right skewed
Mode:	223.4 µm	Kurtosis:	0.061 Leptokurtic

d_{10}: 156.4 µm d_{50}: 222.3 µm d_{90}: 312.2 µm

Folk and Ward Statistics (Phi)

Mean:	2.17	Median:	2.17	Deviation:	0.39
Skewness:	0.02	Kurtosis:	0.95		

<5%	<16%	<25%	<40%	<50%	<75%	<84%	<95%
142.4 µm	168.7 µm	184.2 µm	207.1 µm	222.3 µm	267.8 µm	291.4 µm	339.3 µm

Particle Diameter µm	LCSD_24 May 2025 _12.49.56 .$ls Volume %
0.04	0
0.4	0
1.95	0
3.91	0
62.5	1.52
125	64.9
250	33.6
500	0
1000	0
2000	

LCSD_24 May 2025_12.49.56.$ls

Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %	Channel Diameter (Lower) µm	Diff. Volume %
0.375	0	20.71	0	1143	0
0.412	0	22.73	0	1255	0
0.452	0	24.95	0	1377	0
0.496	0	27.39	0	1512	0
0.545	0	30.07	0	1660	0
0.598	0	33.01	0	1822	0
0.657	0	36.24	0	2000	
0.721	0	39.78	0		
0.791	0	43.67	0		
0.869	0	47.94	0		
0.954	0	52.63	0		
1.047	0	57.77	0		
1.149	0	63.42	0.0097		
1.261	0	69.62	0.089		
1.385	0	76.43	0.13		
1.520	0	83.90	0.056		
1.669	0	92.10	0.037		
1.832	0	101.1	0.14		
2.011	0	111.0	0.61		
2.208	0	121.8	1.68		
2.423	0	133.7	3.42		
2.660	0	146.8	5.77		
2.920	0	161.2	8.45		
3.206	0	176.9	11.0		
3.519	0	194.2	12.8		
3.863	0	213.2	13.4		
4.241	0	234.1	12.7		
4.656	0	256.9	10.9		
5.111	0	282.1	8.34		
5.611	0	309.6	5.58		
6.159	0	339.9	3.15		
6.761	0	373.1	1.38		
7.422	0	409.6	0.35		
8.148	0	449.7	0.022		
8.944	0	493.6	0		
9.819	0	541.9	0		
10.78	0	594.9	0		
11.83	0	653.0	0		
12.99	0	716.9	0		
14.26	0	786.9	0		
15.65	0	863.9	0		
17.18	0	948.3	0		
18.86	0	1041	0		

Surrogate Summary

Client: Pacific EcoRisk Inc
Job ID: 570-230772-1
Project/Site: Berkeley Water Transportation Pier Ferry (Sed)

Method: 8270C SIM - PAHs (GC/MS SIM)

Matrix: Solid
Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)		
		FBP	NBZ	TPHd14
Lab Sample ID	Client Sample ID	(22-130)	(20-145)	(33-147)
570-230772-1	BWTPF-2025-DU1	85	63	115
570-230772-2	BWTPF-2025-DU2	92	68	114
570-230772-3	BWTPF-2025-DU3	82	58	116
570-230772-4	BWTPF-2025-DU4	86	61	112
570-230772-5	BWTPF-2025-DU5	85	67	115
570-232661-A-17-J MS	Matrix Spike	88	63	119
570-232661-A-17-K MSD	Matrix Spike Duplicate	94	61	118
LCS 570-579616/2-A	Lab Control Sample	108	84	123
LCSD 570-579616/3-A	Lab Control Sample Dup	102	85	120
MB 570-579616/1-A	Method Blank	113	94	121

Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)
NBZ = Nitrobenzene-d5
TPHd14 = p-Terphenyl-d14

Method: 8270C SIM CON - PCB Congeners (GC/MS)

Matrix: Solid
Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
		FBP	TPHd14
Lab Sample ID	Client Sample ID	(20-139)	(37-165)
570-230772-1	BWTPF-2025-DU1	50	115
570-230772-1 MS	BWTPF-2025-DU1	57	120
570-230772-1 MSD	BWTPF-2025-DU1	57	116
570-230772-2	BWTPF-2025-DU2	51	110
570-230772-3	BWTPF-2025-DU3	48	113
570-230772-4	BWTPF-2025-DU4	53	117
570-230772-5	BWTPF-2025-DU5	55	119
LCS 570-572192/2-A	Lab Control Sample	63	113
LCSD 570-572192/3-A	Lab Control Sample Dup	59	108
MB 570-572192/1-A	Method Blank	62	113

Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)
TPHd14 = p-Terphenyl-d14

Method: Organotins SIM - Organotins (GC/MS SIM)

Matrix: Solid
Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)
		TPTT
Lab Sample ID	Client Sample ID	(39-150)
400-276152-E-4-A MS	Matrix Spike	91
400-276152-E-4-B MSD	Matrix Spike Duplicate	85
570-230772-1	BWTPF-2025-DU1	75
570-230772-1 MS	BWTPF-2025-DU1	75
570-230772-1 MSD	BWTPF-2025-DU1	86
570-230772-2	BWTPF-2025-DU2	73
570-230772-3	BWTPF-2025-DU3	69
570-230772-4	BWTPF-2025-DU4	75

Surrogate Summary

Client: Pacific EcoRisk Inc
Job ID: 570-230772-1
Project/Site: Berkeley Water Transportation Pier Ferry (Sed)

Method: Organotins SIM - Organotins (GC/MS SIM) (Continued)

Matrix: Solid
Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)							
		TPTT							
Lab Sample ID	Client Sample ID	(39-150)							
570-230772-5	BWTPF-2025-DU5	70							
LCS 570-573582/2-A	Lab Control Sample	41							
LCS 570-574411/2-A	Lab Control Sample	86							
LCSD 570-573582/3-A	Lab Control Sample Dup	95							
LCSD 570-574411/3-A	Lab Control Sample Dup	100							
MB 570-573582/1-A	Method Blank	65							
MB 570-574411/1-A	Method Blank	58							

Surrogate Legend

TPTT = Tripentyltin

Method: 8081A - Organochlorine Pesticides (GC)

Matrix: Solid
Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)							
		DCB1	TCX1						
Lab Sample ID	Client Sample ID	(20-180)	(20-131)						
570-230772-1	BWTPF-2025-DU1	75	67						
570-230772-1 MS	BWTPF-2025-DU1	88	73						
570-230772-1 MSD	BWTPF-2025-DU1	104	80						
570-230772-1 MSD	BWTPF-2025-DU1	73	72						
LCS 570-572188/4-A	Lab Control Sample	100	94						
LCSD 570-572188/3-A	Lab Control Sample Dup	113	108						
LCSD 570-572188/5-A	Lab Control Sample Dup	122	107						
MB 570-572188/1-A	Method Blank	122	107						

Surrogate Legend

DCB = DCB Decachlorobiphenyl (Surr)

TCX = Tetrachloro-m-xylene

Method: 8081A - Organochlorine Pesticides (GC)

Matrix: Solid
Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)							
		DCB1	TCX2						
Lab Sample ID	Client Sample ID	(20-180)	(20-131)						
570-230772-1 MS	BWTPF-2025-DU1	102	88						
570-230772-3	BWTPF-2025-DU3	84	76						
LCS 570-572188/2-A	Lab Control Sample	116	101						

Surrogate Legend

DCB = DCB Decachlorobiphenyl (Surr)

TCX = Tetrachloro-m-xylene

Method: 8081A - Organochlorine Pesticides (GC)

Matrix: Solid
Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)							
		DCB2	TCX2						
Lab Sample ID	Client Sample ID	(20-180)	(20-131)						
570-230772-2	BWTPF-2025-DU2	98	80						
570-230772-4	BWTPF-2025-DU4	89	89						
570-230772-5	BWTPF-2025-DU5	91	89						

Surrogate Summary

Client: Pacific EcoRisk Inc
Job ID: 570-230772-1
Project/Site: Berkeley Water Transportation Pier Ferry (Sed)

Surrogate Legend

DCB = DCB Decachlorobiphenyl (Surr)

TCX = Tetrachloro-m-xylene

Isotope Dilution Summary

Client: Pacific EcoRisk Inc
Job ID: 570-230772-1
Project/Site: Berkeley Water Transportation Pier Ferry (Sed)

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Matrix: Solid **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		OCDF	OCDD	TCDF	TCDD	PeCF	13CHxCF	HxCF	13CHxCD
Lab Sample ID	Client Sample ID	(40-135)	(40-135)	(40-135)	(40-135)	(40-135)	(40-135)	(40-135)	(40-135)
570-230772-1	BWTPF-2025-DU1	44	43	66	62	53	53	53	52
570-230772-1 MS	BWTPF-2025-DU1	39 *5-	34 *5-	70	66	57	52	56	50
570-230772-1 MSD	BWTPF-2025-DU1	42	40	66	64	49	49	53	48
570-230772-2	BWTPF-2025-DU2	73	68	91	89	91	77	81	76
570-230772-3	BWTPF-2025-DU3	47	44	71	66	56	56	59	54
570-230772-4	BWTPF-2025-DU4	46	41	74	69	61	56	61	55
570-230772-5	BWTPF-2025-DU5	48	44	72	67	58	55	57	53
LCS 410-646946/2-A	Lab Control Sample	69	69	72	69	59	78	73	79
LCS 410-649651/2-A	Lab Control Sample	104	109	93	92	101	97	100	103
LCSD 410-646946/3-A	Lab Control Sample Dup	81	82	84	79	67	92	86	92
LCSD 410-649651/3-A	Lab Control Sample Dup	100	101	91	90	98	95	95	99
MB 410-646946/1-A	Method Blank	83	79	96	87	73	103	98	103
MB 410-649651/1-A	Method Blank	101	101	94	93	100	97	97	97

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		PeCDF	PeCDD	HxDF	HxDD	HpCDF2	HxCDF	HxCDD	HpCDF
Lab Sample ID	Client Sample ID	(40-135)	(40-135)	(40-135)	(40-135)	(40-135)	(40-135)	(40-135)	(40-135)
570-230772-1	BWTPF-2025-DU1	57	54	52	51	52	56	52	49
570-230772-1 MS	BWTPF-2025-DU1	61	56	53	50	51	56	57	43
570-230772-1 MSD	BWTPF-2025-DU1	51	47	52	46	55	55	52	45
570-230772-2	BWTPF-2025-DU2	86	85	76	75	81	78	78	70
570-230772-3	BWTPF-2025-DU3	59	55	55	53	54	59	56	48
570-230772-4	BWTPF-2025-DU4	63	59	58	54	57	63	60	45
570-230772-5	BWTPF-2025-DU5	58	55	54	52	56	57	55	49
LCS 410-646946/2-A	Lab Control Sample	60	55	79	76	70	79	74	76
LCS 410-649651/2-A	Lab Control Sample	100	98	97	102	97	99	97	99
LCSD 410-646946/3-A	Lab Control Sample Dup	68	62	96	86	81	94	89	89
LCSD 410-649651/3-A	Lab Control Sample Dup	93	94	94	96	96	93	95	97
MB 410-646946/1-A	Method Blank	74	68	102	92	93	100	95	97
MB 410-649651/1-A	Method Blank	95	93	96	103	98	94	93	97

		Percent Isotope Dilution Recovery (Acceptance Limits)
		HpCDD
Lab Sample ID	Client Sample ID	(40-135)
570-230772-1	BWTPF-2025-DU1	48
570-230772-1 MS	BWTPF-2025-DU1	45
570-230772-1 MSD	BWTPF-2025-DU1	49
570-230772-2	BWTPF-2025-DU2	73
570-230772-3	BWTPF-2025-DU3	49
570-230772-4	BWTPF-2025-DU4	48
570-230772-5	BWTPF-2025-DU5	50
LCS 410-646946/2-A	Lab Control Sample	73
LCS 410-649651/2-A	Lab Control Sample	103
LCSD 410-646946/3-A	Lab Control Sample Dup	84
LCSD 410-649651/3-A	Lab Control Sample Dup	102
MB 410-646946/1-A	Method Blank	99
MB 410-649651/1-A	Method Blank	100

Surrogate Legend

OCDF = 13C-OCDF

OCDD = 13C-OCDD

Isotope Dilution Summary

Client: Pacific EcoRisk Inc

Job ID: 570-230772-1

Project/Site: Berkeley Water Transportation Pier Ferry (Sed)

TCDF = 13C-2,3,7,8-TCDF
TCDD = 13C-2,3,7,8-TCDD
PeCF = 13C-2,3,4,7,8-PeCDF
13CHxCF = 13C-2,3,4,6,7,8-HxCDF
HxCF = 13C-1,2,3,7,8,9-HxCDF
13CHxCD = 13C-1,2,3,7,8,9-HxCDD
PeCDF = 13C-1,2,3,7,8-PeCDF
PeCDD = 13C-1,2,3,7,8-PeCDD
HxDF = 13C-1,2,3,6,7,8-HxCDF
HxDD = 13C-1,2,3,6,7,8-HxCDD
HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF
HxCDF = 13C-1,2,3,4,7,8-HxCDF
HxCDD = 13C-1,2,3,4,7,8-HxCDD
HpCDF = 13C-1,2,3,4,6,7,8-HpCDF
HpCDD = 13C-1,2,3,4,6,7,8-HpCDD

Method: 8270C SIM - PAHs (GC/MS SIM)

Lab Sample ID: MB 570-579616/1-A
Client Sample ID: Method Blank
Matrix: Solid
Prep Type: Total/NA
Analysis Batch: 580771
Prep Batch: 579616

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		10	2.0	ug/Kg		06/05/25 13:00	06/06/25 21:55	1
Acenaphthylene	ND		10	2.6	ug/Kg		06/05/25 13:00	06/06/25 21:55	1
Anthracene	ND		10	1.5	ug/Kg		06/05/25 13:00	06/06/25 21:55	1
Benzo[a]anthracene	ND		10	3.9	ug/Kg		06/05/25 13:00	06/06/25 21:55	1
Benzo[a]pyrene	ND		10	4.8	ug/Kg		06/05/25 13:00	06/06/25 21:55	1
Benzo[b]fluoranthene	ND		10	4.8	ug/Kg		06/05/25 13:00	06/06/25 21:55	1
Benzo[e]pyrene	ND		10	3.4	ug/Kg		06/05/25 13:00	06/06/25 21:55	1
Benzo[g,h,i]perylene	ND		10	6.0	ug/Kg		06/05/25 13:00	06/06/25 21:55	1
Benzo[k]fluoranthene	ND		10	2.7	ug/Kg		06/05/25 13:00	06/06/25 21:55	1
Biphenyl	ND		10	2.7	ug/Kg		06/05/25 13:00	06/06/25 21:55	1
Chrysene	ND		10	2.5	ug/Kg		06/05/25 13:00	06/06/25 21:55	1
Dibenz(a,h)anthracene	ND		10	3.1	ug/Kg		06/05/25 13:00	06/06/25 21:55	1
Dibenzothiophene	ND		10	2.3	ug/Kg		06/05/25 13:00	06/06/25 21:55	1
2,6-Dimethylnaphthalene	ND		10	1.8	ug/Kg		06/05/25 13:00	06/06/25 21:55	1
Fluoranthene	ND		10	2.8	ug/Kg		06/05/25 13:00	06/06/25 21:55	1
Fluorene	ND		10	1.9	ug/Kg		06/05/25 13:00	06/06/25 21:55	1
Indeno[1,2,3-cd]pyrene	ND		10	3.7	ug/Kg		06/05/25 13:00	06/06/25 21:55	1
1-Methylnaphthalene	ND		10	4.6	ug/Kg		06/05/25 13:00	06/06/25 21:55	1
2-Methylnaphthalene	ND		10	2.8	ug/Kg		06/05/25 13:00	06/06/25 21:55	1
1-Methylphenanthrene	ND		10	1.8	ug/Kg		06/05/25 13:00	06/06/25 21:55	1
Naphthalene	ND		10	4.5	ug/Kg		06/05/25 13:00	06/06/25 21:55	1
Perylene	ND		10	3.3	ug/Kg		06/05/25 13:00	06/06/25 21:55	1
Phenanthrene	ND		10	1.8	ug/Kg		06/05/25 13:00	06/06/25 21:55	1
Pyrene	ND		10	2.9	ug/Kg		06/05/25 13:00	06/06/25 21:55	1
1,6,7-Trimethylnaphthalene	ND		10	2.0	ug/Kg		06/05/25 13:00	06/06/25 21:55	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*113*		*22 - 130*	*06/05/25 13:00*	*06/06/25 21:55*	*1*
Nitrobenzene-d5	*94*		*20 - 145*	*06/05/25 13:00*	*06/06/25 21:55*	*1*
p-Terphenyl-d14	*121*		*33 - 147*	*06/05/25 13:00*	*06/06/25 21:55*	*1*

Lab Sample ID: LCS 570-579616/2-A
Client Sample ID: Lab Control Sample
Matrix: Solid
Prep Type: Total/NA
Analysis Batch: 580771
Prep Batch: 579616

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acenaphthene	500	497.3		ug/Kg		99	53 - 125
Acenaphthylene	500	481.0		ug/Kg		96	50 - 123
Anthracene	500	539.5		ug/Kg		108	50 - 132
Benzo[a]anthracene	500	512.4		ug/Kg		102	50 - 133
Benzo[a]pyrene	500	520.3		ug/Kg		104	50 - 134
Benzo[b]fluoranthene	500	530.9		ug/Kg		106	50 - 142
Benzo[g,h,i]perylene	500	518.5		ug/Kg		104	50 - 130
Benzo[k]fluoranthene	500	526.5		ug/Kg		105	49 - 150
Chrysene	500	512.4		ug/Kg		102	51 - 129
Dibenz(a,h)anthracene	500	534.0		ug/Kg		107	50 - 133
Fluoranthene	500	542.2		ug/Kg		108	55 - 127
Fluorene	500	503.2		ug/Kg		101	55 - 127

Method: 8270C SIM - PAHs (GC/MS SIM) (Continued)

Lab Sample ID: LCS 570-579616/2-A
Matrix: Solid
Analysis Batch: 580771

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 579616

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Indeno[1,2,3-cd]pyrene			500	503.7		ug/Kg		101	50 - 148		
1-Methylnaphthalene			500	442.2		ug/Kg		88	54 - 132		
2-Methylnaphthalene			500	463.5		ug/Kg		93	50 - 127		
Naphthalene			500	420.0		ug/Kg		84	51 - 129		
Phenanthrene			500	512.2		ug/Kg		102	50 - 122		
Pyrene			500	537.6		ug/Kg		108	50 - 134		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*108*		*22 - 130*
Nitrobenzene-d5	*84*		*20 - 145*
p-Terphenyl-d14	*123*		*33 - 147*

Lab Sample ID: LCSD 570-579616/3-A
Matrix: Solid
Analysis Batch: 580771

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 579616

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Acenaphthene			500	483.9		ug/Kg		97	53 - 125	3	20
Acenaphthylene			500	471.7		ug/Kg		94	50 - 123	2	20
Anthracene			500	486.2		ug/Kg		97	50 - 132	10	20
Benzo[a]anthracene			500	512.5		ug/Kg		103	50 - 133	0	20
Benzo[a]pyrene			500	519.7		ug/Kg		104	50 - 134	0	20
Benzo[b]fluoranthene			500	541.5		ug/Kg		108	50 - 142	2	20
Benzo[g,h,i]perylene			500	527.5		ug/Kg		105	50 - 130	2	20
Benzo[k]fluoranthene			500	527.1		ug/Kg		105	49 - 150	0	20
Chrysene			500	525.5		ug/Kg		105	51 - 129	3	20
Dibenz(a,h)anthracene			500	536.2		ug/Kg		107	50 - 133	0	20
Fluoranthene			500	519.7		ug/Kg		104	55 - 127	4	20
Fluorene			500	494.9		ug/Kg		99	55 - 127	2	20
Indeno[1,2,3-cd]pyrene			500	498.1		ug/Kg		100	50 - 148	1	20
1-Methylnaphthalene			500	444.4		ug/Kg		89	54 - 132	1	20
2-Methylnaphthalene			500	448.8		ug/Kg		90	50 - 127	3	20
Naphthalene			500	417.1		ug/Kg		83	51 - 129	1	20
Phenanthrene			500	489.1		ug/Kg		98	50 - 122	5	20
Pyrene			500	550.0		ug/Kg		110	50 - 134	2	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*102*		*22 - 130*
Nitrobenzene-d5	*85*		*20 - 145*
p-Terphenyl-d14	*120*		*33 - 147*

Lab Sample ID: 570-232661-A-17-J MS
Matrix: Solid
Analysis Batch: 580771

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 579616

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Acenaphthene	7.8	J	986	937.3		ug/Kg	☼	94	29 - 137		
Acenaphthylene	20		986	931.9		ug/Kg	☼	92	29 - 131		

Method: 8270C SIM - PAHs (GC/MS SIM) (Continued)

Lab Sample ID: 570-232661-A-17-J MS
Matrix: Solid
Analysis Batch: 580771

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 579616

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Anthracene	61		986	1128		ug/Kg	☼	108	26 - 134
Benzo[a]anthracene	130		986	1146		ug/Kg	☼	103	24 - 150
Benzo[a]pyrene	350		986	1359		ug/Kg	☼	102	29 - 149
Benzo[b]fluoranthene	360		986	1389		ug/Kg	☼	104	21 - 153
Benzo[g,h,i]perylene	200		986	1158		ug/Kg	☼	97	20 - 148
Benzo[k]fluoranthene	310		986	1297		ug/Kg	☼	100	28 - 148
Chrysene	210		986	1286		ug/Kg	☼	109	25 - 145
Dibenz(a,h)anthracene	48		986	1059		ug/Kg	☼	103	20 - 132
Fluoranthene	180		986	1216		ug/Kg	☼	105	20 - 151
Fluorene	14	J	986	1018		ug/Kg	☼	102	36 - 132
Indeno[1,2,3-cd]pyrene	200		986	1123		ug/Kg	☼	93	20 - 154
1-Methylnaphthalene	ND		986	828.1		ug/Kg	☼	84	34 - 136
2-Methylnaphthalene	9.5	J	986	807.4		ug/Kg	☼	81	29 - 137
Naphthalene	14	J	986	731.9		ug/Kg	☼	73	20 - 150
Phenanthrene	60		986	1060		ug/Kg	☼	101	20 - 144
Pyrene	670		986	1571		ug/Kg	☼	91	20 - 150

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*88*		*22 - 130*
Nitrobenzene-d5	*63*		*20 - 145*
p-Terphenyl-d14	*119*		*33 - 147*

Lab Sample ID: 570-232661-A-17-K MSD
Matrix: Solid
Analysis Batch: 580771

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 579616

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Acenaphthene	7.8	J	985	944.4		ug/Kg	☼	95	29 - 137	1	28
Acenaphthylene	20		985	906.1		ug/Kg	☼	90	29 - 131	3	32
Anthracene	61		985	1230		ug/Kg	☼	119	26 - 134	9	27
Benzo[a]anthracene	130		985	1114		ug/Kg	☼	100	24 - 150	3	24
Benzo[a]pyrene	350		985	1340		ug/Kg	☼	100	29 - 149	1	22
Benzo[b]fluoranthene	360		985	1406		ug/Kg	☼	106	21 - 153	1	26
Benzo[g,h,i]perylene	200		985	1124		ug/Kg	☼	94	20 - 148	3	27
Benzo[k]fluoranthene	310		985	1308		ug/Kg	☼	101	28 - 148	1	26
Chrysene	210		985	1129		ug/Kg	☼	93	25 - 145	13	28
Dibenz(a,h)anthracene	48		985	1058		ug/Kg	☼	102	20 - 132	0	26
Fluoranthene	180		985	1476		ug/Kg	☼	132	20 - 151	19	26
Fluorene	14	J	985	809.5		ug/Kg	☼	81	36 - 132	23	27
Indeno[1,2,3-cd]pyrene	200		985	1095		ug/Kg	☼	90	20 - 154	3	25
1-Methylnaphthalene	ND		985	843.4		ug/Kg	☼	86	34 - 136	2	29
2-Methylnaphthalene	9.5	J	985	836.1		ug/Kg	☼	84	29 - 137	3	31
Naphthalene	14	J	985	741.9		ug/Kg	☼	74	20 - 150	1	33
Phenanthrene	60		985	1026		ug/Kg	☼	98	20 - 144	3	27
Pyrene	670		985	1684		ug/Kg	☼	103	20 - 150	7	32

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*94*		*22 - 130*

Method: 8270C SIM - PAHs (GC/MS SIM) (Continued)

Lab Sample ID: 570-232661-A-17-K MSD
Matrix: Solid
Analysis Batch: 580771

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 579616

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Nitrobenzene-d5	*61*		*20 - 145*
p-Terphenyl-d14	*118*		*33 - 147*

Method: 8270C SIM CON - PCB Congeners (GC/MS)

Lab Sample ID: MB 570-572192/1-A
Matrix: Solid
Analysis Batch: 575699

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 572192

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-5/8	ND		0.40	0.11	ug/Kg		05/17/25 09:00	05/25/25 13:08	1
PCB-18	ND		0.20	0.094	ug/Kg		05/17/25 09:00	05/25/25 13:08	1
PCB-28	ND		0.20	0.10	ug/Kg		05/17/25 09:00	05/25/25 13:08	1
PCB-31	ND		0.20	0.089	ug/Kg		05/17/25 09:00	05/25/25 13:08	1
PCB-33	ND		0.20	0.047	ug/Kg		05/17/25 09:00	05/25/25 13:08	1
PCB-44	ND		0.20	0.12	ug/Kg		05/17/25 09:00	05/25/25 13:08	1
PCB-49	ND		0.20	0.11	ug/Kg		05/17/25 09:00	05/25/25 13:08	1
PCB-52	ND		0.20	0.079	ug/Kg		05/17/25 09:00	05/25/25 13:08	1
PCB-56	ND		0.20	0.047	ug/Kg		05/17/25 09:00	05/25/25 13:08	1
PCB-60	ND		0.20	0.13	ug/Kg		05/17/25 09:00	05/25/25 13:08	1
PCB-66	ND		0.20	0.11	ug/Kg		05/17/25 09:00	05/25/25 13:08	1
PCB-70	ND		0.20	0.093	ug/Kg		05/17/25 09:00	05/25/25 13:08	1
PCB-74	ND		0.20	0.10	ug/Kg		05/17/25 09:00	05/25/25 13:08	1
PCB-87	ND		0.20	0.12	ug/Kg		05/17/25 09:00	05/25/25 13:08	1
PCB-95	ND		0.20	0.066	ug/Kg		05/17/25 09:00	05/25/25 13:08	1
PCB-97	ND		0.20	0.14	ug/Kg		05/17/25 09:00	05/25/25 13:08	1
PCB-99	ND		0.20	0.086	ug/Kg		05/17/25 09:00	05/25/25 13:08	1
PCB-101	ND		0.20	0.11	ug/Kg		05/17/25 09:00	05/25/25 13:08	1
PCB-105	ND		0.20	0.11	ug/Kg		05/17/25 09:00	05/25/25 13:08	1
PCB-110	ND		0.20	0.089	ug/Kg		05/17/25 09:00	05/25/25 13:08	1
PCB-118	ND		0.20	0.080	ug/Kg		05/17/25 09:00	05/25/25 13:08	1
PCB-128	ND		0.20	0.14	ug/Kg		05/17/25 09:00	05/25/25 13:08	1
PCB-132/153	ND		0.40	0.24	ug/Kg		05/17/25 09:00	05/25/25 13:08	1
PCB-138/158	ND		0.40	0.24	ug/Kg		05/17/25 09:00	05/25/25 13:08	1
PCB-141	ND		0.20	0.066	ug/Kg		05/17/25 09:00	05/25/25 13:08	1
PCB-149	ND		0.20	0.11	ug/Kg		05/17/25 09:00	05/25/25 13:08	1
PCB-151	ND		0.20	0.092	ug/Kg		05/17/25 09:00	05/25/25 13:08	1
PCB-156	ND		0.20	0.095	ug/Kg		05/17/25 09:00	05/25/25 13:08	1
PCB-170	ND		0.20	0.10	ug/Kg		05/17/25 09:00	05/25/25 13:08	1
PCB-174	ND		0.20	0.057	ug/Kg		05/17/25 09:00	05/25/25 13:08	1
PCB-177	ND		0.20	0.094	ug/Kg		05/17/25 09:00	05/25/25 13:08	1
PCB-180	ND		0.20	0.083	ug/Kg		05/17/25 09:00	05/25/25 13:08	1
PCB-183	ND		0.20	0.12	ug/Kg		05/17/25 09:00	05/25/25 13:08	1
PCB-187	ND		0.20	0.089	ug/Kg		05/17/25 09:00	05/25/25 13:08	1
PCB-194	ND		0.20	0.11	ug/Kg		05/17/25 09:00	05/25/25 13:08	1
PCB-195	ND		0.20	0.062	ug/Kg		05/17/25 09:00	05/25/25 13:08	1
PCB-201	ND		0.20	0.14	ug/Kg		05/17/25 09:00	05/25/25 13:08	1
PCB-203	ND		0.20	0.070	ug/Kg		05/17/25 09:00	05/25/25 13:08	1

Method: 8270C SIM CON - PCB Congeners (GC/MS) (Continued)

Lab Sample ID: MB 570-572192/1-A
Matrix: Solid
Analysis Batch: 575699

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 572192

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	62		20 - 139	05/17/25 09:00	05/25/25 13:08	1
p-Terphenyl-d14	113		37 - 165	05/17/25 09:00	05/25/25 13:08	1

Lab Sample ID: LCS 570-572192/2-A
Matrix: Solid
Analysis Batch: 575699

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 572192

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
PCB-5/8	50.0	43.08		ug/Kg		86	50 - 150
PCB-18	50.0	35.25		ug/Kg		71	33 - 114
PCB-28	50.0	51.18		ug/Kg		102	40 - 132
PCB-44	50.0	48.87		ug/Kg		98	38 - 131
PCB-52	50.0	51.67		ug/Kg		103	38 - 131
PCB-66	50.0	52.04		ug/Kg		104	42 - 141
PCB-101	50.0	53.14		ug/Kg		106	40 - 132
PCB-105	50.0	49.08		ug/Kg		98	39 - 135
PCB-118	50.0	48.83		ug/Kg		98	38 - 131
PCB-128	50.0	56.36		ug/Kg		113	43 - 149
PCB-132/153	50.0	52.77		ug/Kg		106	37 - 164
PCB-138/158	50.0	45.82		ug/Kg		92	36 - 124
PCB-170	50.0	48.50		ug/Kg		97	35 - 134
PCB-180	50.0	62.21		ug/Kg		124	38 - 159
PCB-187	50.0	51.18		ug/Kg		102	41 - 147
PCB-195	50.0	51.37		ug/Kg		103	44 - 128
PCB-201	50.0	59.38		ug/Kg		119	40 - 156

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Fluorobiphenyl (Surr)	63		20 - 139
p-Terphenyl-d14	113		37 - 165

Lab Sample ID: LCSD 570-572192/3-A
Matrix: Solid
Analysis Batch: 575699

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 572192

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
PCB-5/8	50.0	43.32		ug/Kg		87	50 - 150	1	25
PCB-18	50.0	34.79		ug/Kg		70	33 - 114	1	29
PCB-28	50.0	50.62		ug/Kg		101	40 - 132	1	29
PCB-44	50.0	47.54		ug/Kg		95	38 - 131	3	32
PCB-52	50.0	51.65		ug/Kg		103	38 - 131	0	32
PCB-66	50.0	54.65		ug/Kg		109	42 - 141	5	34
PCB-101	50.0	54.44		ug/Kg		109	40 - 132	2	34
PCB-105	50.0	51.39		ug/Kg		103	39 - 135	5	37
PCB-118	50.0	48.92		ug/Kg		98	38 - 131	0	35
PCB-128	50.0	54.15		ug/Kg		108	43 - 149	4	37
PCB-132/153	50.0	52.95		ug/Kg		106	37 - 164	0	38
PCB-138/158	50.0	44.98		ug/Kg		90	36 - 124	2	40
PCB-170	50.0	50.03		ug/Kg		100	35 - 134	3	31

Method: 8270C SIM CON - PCB Congeners (GC/MS) (Continued)

Lab Sample ID: LCSD 570-572192/3-A
Client Sample ID: Lab Control Sample Dup
Matrix: Solid
Prep Type: Total/NA
Analysis Batch: 575699
Prep Batch: 572192

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
PCB-180			50.0	61.91		ug/Kg		124	38 - 159	0	40
PCB-187			50.0	49.70		ug/Kg		99	41 - 147	3	40
PCB-195			50.0	51.69		ug/Kg		103	44 - 128	1	28
PCB-201			50.0	57.91		ug/Kg		116	40 - 156	3	40

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*59*		*20 - 139*
p-Terphenyl-d14	*108*		*37 - 165*

Lab Sample ID: 570-230772-1 MS
Client Sample ID: BWTPF-2025-DU1
Matrix: Solid
Prep Type: Total/NA
Analysis Batch: 575699
Prep Batch: 572192

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
PCB-5/8	ND		83.7	73.58		ug/Kg	☼	88	50 - 150
PCB-18	ND		83.7	59.74		ug/Kg	☼	71	29 - 127
PCB-28	ND		83.7	93.61		ug/Kg	☼	112	29 - 170
PCB-44	ND		83.7	88.59		ug/Kg	☼	106	33 - 150
PCB-52	0.30	J	83.7	95.78		ug/Kg	☼	114	23 - 159
PCB-66	0.34		83.7	99.44		ug/Kg	☼	118	29 - 166
PCB-101	1.4		83.7	94.93		ug/Kg	☼	112	30 - 159
PCB-105	ND		83.7	97.16		ug/Kg	☼	116	22 - 173
PCB-118	ND		83.7	95.79		ug/Kg	☼	114	24 - 162
PCB-128	ND		83.7	100.6		ug/Kg	☼	120	18 - 180
PCB-132/153	2.0		83.7	102.4		ug/Kg	☼	120	27 - 180
PCB-138/158	1.5		83.7	86.44		ug/Kg	☼	101	18 - 160
PCB-170	0.54		83.7	87.90		ug/Kg	☼	104	25 - 165
PCB-180	1.2		83.7	119.1		ug/Kg	☼	141	20 - 180
PCB-187	0.70		83.7	96.24		ug/Kg	☼	114	14 - 180
PCB-195	ND		83.7	88.06		ug/Kg	☼	105	44 - 128
PCB-201	ND		83.7	114.2		ug/Kg	☼	136	17 - 180

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*57*		*20 - 139*
p-Terphenyl-d14	*120*		*37 - 165*

Lab Sample ID: 570-230772-1 MSD
Client Sample ID: BWTPF-2025-DU1
Matrix: Solid
Prep Type: Total/NA
Analysis Batch: 575699
Prep Batch: 572192

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
PCB-5/8	ND		83.5	74.69		ug/Kg	☼	89	50 - 150	1	25
PCB-18	ND		83.5	60.19		ug/Kg	☼	72	29 - 127	1	40
PCB-28	ND		83.5	94.25		ug/Kg	☼	113	29 - 170	1	32
PCB-44	ND		83.5	90.20		ug/Kg	☼	108	33 - 150	2	40
PCB-52	0.30	J	83.5	94.48		ug/Kg	☼	113	23 - 159	1	40
PCB-66	0.34		83.5	98.02		ug/Kg	☼	117	29 - 166	1	40
PCB-101	1.4		83.5	93.90		ug/Kg	☼	111	30 - 159	1	40

Method: 8270C SIM CON - PCB Congeners (GC/MS) (Continued)

Lab Sample ID: 570-230772-1 MSD
Matrix: Solid
Analysis Batch: 575699

Client Sample ID: BWTPF-2025-DU1
Prep Type: Total/NA
Prep Batch: 572192

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
PCB-105	ND		83.5	91.24		ug/Kg	☼	109	22 - 173	6	40
PCB-118	ND		83.5	95.34		ug/Kg	☼	114	24 - 162	0	40
PCB-128	ND		83.5	96.73		ug/Kg	☼	116	18 - 180	4	40
PCB-132/153	2.0		83.5	99.71		ug/Kg	☼	117	27 - 180	3	40
PCB-138/158	1.5		83.5	84.48		ug/Kg	☼	99	18 - 160	2	40
PCB-170	0.54		83.5	88.63		ug/Kg	☼	105	25 - 165	1	22
PCB-180	1.2		83.5	114.5		ug/Kg	☼	136	20 - 180	4	40
PCB-187	0.70		83.5	95.21		ug/Kg	☼	113	14 - 180	1	40
PCB-195	ND		83.5	85.25		ug/Kg	☼	102	44 - 128	3	28
PCB-201	ND		83.5	111.6		ug/Kg	☼	134	17 - 180	2	40

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*57*		*20 - 139*
p-Terphenyl-d14	*116*		*37 - 165*

Method: Organotins SIM - Organotins (GC/MS SIM)

Lab Sample ID: MB 570-573582/1-A
Matrix: Solid
Analysis Batch: 574619

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 573582

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrabutyltin	ND		3.0	0.50	ug/Kg		05/20/25 14:41	05/22/25 19:09	1
Tributyltin	ND		3.0	0.45	ug/Kg		05/20/25 14:41	05/22/25 19:09	1
Dibutyltin	ND		3.0	0.49	ug/Kg		05/20/25 14:41	05/22/25 19:09	1
Monobutyltin	ND		3.0	0.54	ug/Kg		05/20/25 14:41	05/22/25 19:09	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tripentyltin	*65*		*39 - 150*	*05/20/25 14:41*	*05/22/25 19:09*	*1*

Lab Sample ID: LCS 570-573582/2-A
Matrix: Solid
Analysis Batch: 574619

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 573582

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Tetrabutyltin	20.0	8.900		ug/Kg		45	10 - 153
Tributyltin	17.8	8.608		ug/Kg		48	10 - 126
Dibutyltin	15.3	6.097		ug/Kg		40	14 - 174
Monobutyltin	12.5	ND	*-	ug/Kg		0	5 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tripentyltin	*41*		*39 - 150*

Method: Organotins SIM - Organotins (GC/MS SIM) (Continued)

Lab Sample ID: LCSD 570-573582/3-A
Client Sample ID: Lab Control Sample Dup
Matrix: Solid
Prep Type: Total/NA
Analysis Batch: 574619
Prep Batch: 573582

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Tetrabutyltin			20.0	14.77	*1	ug/Kg		74	10 - 153	50	30
Tributyltin			17.8	14.60	*1	ug/Kg		82	10 - 126	52	30
Dibutyltin			15.3	14.75	*1	ug/Kg		96	14 - 174	83	30
Monobutyltin			12.5	ND	*-	ug/Kg		0	5 - 120	NC	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Tripentyltin	*95*		*39 - 150*

Lab Sample ID: 570-230772-1 MS
Client Sample ID: BWTPF-2025-DU1
Matrix: Solid
Prep Type: Total/NA
Analysis Batch: 574619
Prep Batch: 573582

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Tetrabutyltin	ND	*1	33.4	32.27		ug/Kg	☼	97	10 - 140		
Tributyltin	ND	*1	29.8	29.28		ug/Kg	☼	98	10 - 135		
Dibutyltin	ND	*1	25.6	28.49		ug/Kg	☼	111	10 - 180		
Monobutyltin	ND	*- F1	20.8	ND	F1	ug/Kg	☼	0	5 - 125		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Tripentyltin	*75*		*39 - 150*

Lab Sample ID: 570-230772-1 MSD
Client Sample ID: BWTPF-2025-DU1
Matrix: Solid
Prep Type: Total/NA
Analysis Batch: 574619
Prep Batch: 573582

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Tetrabutyltin	ND	*1	33.1	36.13		ug/Kg	☼	109	10 - 140	11	40
Tributyltin	ND	*1	29.5	35.24		ug/Kg	☼	120	10 - 135	18	40
Dibutyltin	ND	*1	25.3	29.23		ug/Kg	☼	115	10 - 180	3	40
Monobutyltin	ND	*- F1	20.6	ND	F1	ug/Kg	☼	0	5 - 125	NC	40

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Tripentyltin	*86*		*39 - 150*

Lab Sample ID: MB 570-574411/1-A
Client Sample ID: Method Blank
Matrix: Solid
Prep Type: Total/NA
Analysis Batch: 576588
Prep Batch: 574411

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrabutyltin	ND		3.0	0.50	ug/Kg		05/22/25 08:18	05/28/25 15:34	1
Tributyltin	ND		3.0	0.45	ug/Kg		05/22/25 08:18	05/28/25 15:34	1
Dibutyltin	0.5607	J	3.0	0.49	ug/Kg		05/22/25 08:18	05/28/25 15:34	1
Monobutyltin	ND		3.0	0.54	ug/Kg		05/22/25 08:18	05/28/25 15:34	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tripentyltin	*58*		*39 - 150*	*05/22/25 08:18*	*05/28/25 15:34*	*1*

Method: Organotins SIM - Organotins (GC/MS SIM) (Continued)

Lab Sample ID: LCS 570-574411/2-A
Matrix: Solid
Analysis Batch: 576588

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 574411

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Tetrabutyltin			20.0	13.02		ug/Kg		65	10 - 153		
Tributyltin			17.8	13.94		ug/Kg		78	10 - 126		
Dibutyltin			15.3	13.12		ug/Kg		86	14 - 174		
Monobutyltin			12.5	ND	*-	ug/Kg		0	5 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tripentyltin	*86*		*39 - 150*

Lab Sample ID: LCSD 570-574411/3-A
Matrix: Solid
Analysis Batch: 576588

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 574411

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Tetrabutyltin			20.0	13.30		ug/Kg		66	10 - 153	2	30
Tributyltin			17.8	14.24		ug/Kg		80	10 - 126	2	30
Dibutyltin			15.3	15.03		ug/Kg		98	14 - 174	14	30
Monobutyltin			12.5	ND	*-	ug/Kg		0	5 - 120	NC	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Tripentyltin	*100*		*39 - 150*

Lab Sample ID: 400-276152-E-4-A MS
Matrix: Solid
Analysis Batch: 577675

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 574411

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Tetrabutyltin	ND		44.4	35.63	J	ug/Kg	☼	80	10 - 140		
Tributyltin	260		39.6	317.8	4	ug/Kg	☼	156	10 - 135		
Dibutyltin	160	B	34.1	150.8	4	ug/Kg	☼	-14	10 - 180		
Monobutyltin	ND	*- F1	27.7	ND	F1	ug/Kg	☼	0	5 - 125		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Tripentyltin	*91*		*39 - 150*

Lab Sample ID: 400-276152-E-4-B MSD
Matrix: Solid
Analysis Batch: 577675

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 574411

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Tetrabutyltin	ND		44.4	45.39	J	ug/Kg	☼	102	10 - 140	24	40
Tributyltin	260		39.6	471.1	4	ug/Kg	☼	543	10 - 135	39	40
Dibutyltin	160	B	34.1	187.4	4	ug/Kg	☼	93	10 - 180	22	40
Monobutyltin	ND	*- F1	27.7	ND	F1	ug/Kg	☼	0	5 - 125	NC	40

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Tripentyltin	*85*		*39 - 150*

Method: 8081A - Organochlorine Pesticides (GC)

Lab Sample ID: MB 570-572188/1-A
Matrix: Solid
Analysis Batch: 578599

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 572188

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4'-DDD	ND		1.0	0.064	ug/Kg		05/17/25 09:00	06/03/25 04:24	1
2,4'-DDE	ND		2.0	1.0	ug/Kg		05/17/25 09:00	06/03/25 04:24	1
2,4'-DDT	ND		1.0	0.092	ug/Kg		05/17/25 09:00	06/03/25 04:24	1
4,4'-DDD	ND		1.0	0.50	ug/Kg		05/17/25 09:00	06/03/25 04:24	1
4,4'-DDE	ND		1.0	0.27	ug/Kg		05/17/25 09:00	06/03/25 04:24	1
4,4'-DDT	ND		1.0	0.31	ug/Kg		05/17/25 09:00	06/03/25 04:24	1
Aldrin	ND		1.0	0.37	ug/Kg		05/17/25 09:00	06/03/25 04:24	1
alpha-BHC	ND		1.0	0.080	ug/Kg		05/17/25 09:00	06/03/25 04:24	1
alpha-Chlordane	ND		1.0	0.10	ug/Kg		05/17/25 09:00	06/03/25 04:24	1
beta-BHC	ND		1.0	0.19	ug/Kg		05/17/25 09:00	06/03/25 04:24	1
Chlordane	ND		5.0	0.71	ug/Kg		05/17/25 09:00	06/03/25 04:24	1
cis-Nonachlor	ND		1.0	0.047	ug/Kg		05/17/25 09:00	06/03/25 04:24	1
delta-BHC	ND		1.0	0.15	ug/Kg		05/17/25 09:00	06/03/25 04:24	1
Dieldrin	ND		0.20	0.066	ug/Kg		05/17/25 09:00	06/03/25 04:24	1
Endosulfan I	ND		1.0	0.12	ug/Kg		05/17/25 09:00	06/03/25 04:24	1
Endosulfan II	ND		1.0	0.23	ug/Kg		05/17/25 09:00	06/03/25 04:24	1
Endosulfan sulfate	ND		1.0	0.11	ug/Kg		05/17/25 09:00	06/03/25 04:24	1
Endrin	ND		1.0	0.19	ug/Kg		05/17/25 09:00	06/03/25 04:24	1
Endrin aldehyde	ND		1.0	0.98	ug/Kg		05/17/25 09:00	06/03/25 04:24	1
Endrin ketone	ND		1.0	0.19	ug/Kg		05/17/25 09:00	06/03/25 04:24	1
gamma-BHC	ND		1.0	0.11	ug/Kg		05/17/25 09:00	06/03/25 04:24	1
gamma-Chlordane	ND		1.0	0.35	ug/Kg		05/17/25 09:00	06/03/25 04:24	1
Heptachlor	ND		1.0	0.060	ug/Kg		05/17/25 09:00	06/03/25 04:24	1
Heptachlor epoxide	ND		1.0	0.085	ug/Kg		05/17/25 09:00	06/03/25 04:24	1
Oxychlordane	ND		1.0	0.15	ug/Kg		05/17/25 09:00	06/03/25 04:24	1
Toxaphene	ND		5.0	1.0	ug/Kg		05/17/25 09:00	06/03/25 04:24	1
trans-Nonachlor	ND		1.0	0.11	ug/Kg		05/17/25 09:00	06/03/25 04:24	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*122*		*20 - 180*	*05/17/25 09:00*	*06/03/25 04:24*	*1*
Tetrachloro-m-xylene	*107*		*20 - 131*	*05/17/25 09:00*	*06/03/25 04:24*	*1*

Lab Sample ID: LCS 570-572188/2-A
Matrix: Solid
Analysis Batch: 578599

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 572188

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
4,4'-DDD	5.00	5.675		ug/Kg		113	54 - 150
4,4'-DDE	5.00	5.502		ug/Kg		110	49 - 146
4,4'-DDT	5.00	5.698		ug/Kg		114	52 - 147
Aldrin	5.00	4.845		ug/Kg		97	28 - 116
alpha-BHC	5.00	4.564		ug/Kg		91	44 - 123
alpha-Chlordane	5.00	5.079		ug/Kg		102	48 - 125
beta-BHC	5.00	4.802		ug/Kg		96	48 - 127
delta-BHC	5.00	3.880		ug/Kg		78	10 - 149
Dieldrin	5.00	5.481		ug/Kg		110	48 - 132
Endosulfan I	5.00	4.944		ug/Kg		99	44 - 125
Endosulfan II	5.00	5.362		ug/Kg		107	47 - 136

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCS 570-572188/2-A
Matrix: Solid
Analysis Batch: 578599

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 572188

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Endosulfan sulfate	5.00	4.840		ug/Kg		97	46 - 133
Endrin	5.00	5.139		ug/Kg		103	43 - 142
Endrin aldehyde	5.00	4.999		ug/Kg		100	29 - 141
Endrin ketone	5.00	5.121		ug/Kg		102	52 - 135
gamma-BHC	5.00	5.186		ug/Kg		104	44 - 126
gamma-Chlordane	5.00	5.055		ug/Kg		101	29 - 153
Heptachlor	5.00	4.706		ug/Kg		94	50 - 123
Heptachlor epoxide	5.00	4.976		ug/Kg		100	49 - 125

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl (Surr)	*116*		*20 - 180*
Tetrachloro-m-xylene	*101*		*20 - 131*

Lab Sample ID: LCS 570-572188/4-A
Matrix: Solid
Analysis Batch: 578599

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 572188

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2,4'-DDD	5.00	5.141		ug/Kg		103	28 - 150
2,4'-DDE	5.00	5.049		ug/Kg		101	25 - 156
2,4'-DDT	5.00	5.512		ug/Kg		110	24 - 165
Oxychlordane	5.00	4.892		ug/Kg		98	20 - 144

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl (Surr)	*100*		*20 - 180*
Tetrachloro-m-xylene	*94*		*20 - 131*

Lab Sample ID: LCSD 570-572188/3-A
Matrix: Solid
Analysis Batch: 578599

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 572188

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
4,4'-DDD	5.00	5.547		ug/Kg		111	54 - 150	2	29
4,4'-DDE	5.00	5.477		ug/Kg		110	49 - 146	0	28
4,4'-DDT	5.00	5.624		ug/Kg		112	52 - 147	1	32
Aldrin	5.00	4.978		ug/Kg		100	28 - 116	3	30
alpha-BHC	5.00	4.804		ug/Kg		96	44 - 123	5	27
alpha-Chlordane	5.00	5.083		ug/Kg		102	48 - 125	0	27
beta-BHC	5.00	5.086		ug/Kg		102	48 - 127	6	28
delta-BHC	5.00	3.985		ug/Kg		80	10 - 149	3	27
Dieldrin	5.00	5.468		ug/Kg		109	48 - 132	0	28
Endosulfan I	5.00	4.886		ug/Kg		98	44 - 125	1	29
Endosulfan II	5.00	5.153		ug/Kg		103	47 - 136	4	29
Endosulfan sulfate	5.00	4.639		ug/Kg		93	46 - 133	4	28
Endrin	5.00	5.056		ug/Kg		101	43 - 142	2	27
Endrin aldehyde	5.00	4.796		ug/Kg		96	29 - 141	4	40
Endrin ketone	5.00	4.893		ug/Kg		98	52 - 135	5	26
gamma-BHC	5.00	5.503		ug/Kg		110	44 - 126	6	28

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCSD 570-572188/3-A
Matrix: Solid
Analysis Batch: 578599

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 572188

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
gamma-Chlordane			5.00	5.037		ug/Kg		101	29 - 153	0	40
Heptachlor			5.00	4.896		ug/Kg		98	50 - 123	4	28
Heptachlor epoxide			5.00	4.974		ug/Kg		99	49 - 125	0	28

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
DCB Decachlorobiphenyl (Surr)	*113*		*20 - 180*
Tetrachloro-m-xylene	*108*		*20 - 131*

Lab Sample ID: LCSD 570-572188/5-A
Matrix: Solid
Analysis Batch: 578599

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 572188

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
2,4'-DDD			5.00	5.690		ug/Kg		114	28 - 150	10	30
2,4'-DDE			5.00	5.486		ug/Kg		110	25 - 156	8	42
2,4'-DDT			5.00	5.919		ug/Kg		118	24 - 165	7	31
Oxychlordane			5.00	5.251		ug/Kg		105	20 - 144	7	36

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
DCB Decachlorobiphenyl (Surr)	*122*		*20 - 180*
Tetrachloro-m-xylene	*107*		*20 - 131*

Lab Sample ID: 570-230772-1 MS
Matrix: Solid
Analysis Batch: 578599

Client Sample ID: BWTPF-2025-DU1
Prep Type: Total/NA
Prep Batch: 572188

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
4,4'-DDD	ND		8.35	8.829		ug/Kg	☼	106	17 - 180
4,4'-DDE	0.72	J	8.35	8.911		ug/Kg	☼	98	20 - 180
4,4'-DDT	ND		8.35	9.779		ug/Kg	☼	117	10 - 180
Aldrin	ND		8.35	7.172		ug/Kg	☼	86	27 - 146
alpha-BHC	ND		8.35	7.624		ug/Kg	☼	91	33 - 160
alpha-Chlordane	ND		8.35	7.086		ug/Kg	☼	85	24 - 164
beta-BHC	ND		8.35	6.881		ug/Kg	☼	82	14 - 178
delta-BHC	ND		8.35	6.924		ug/Kg	☼	83	10 - 159
Dieldrin	0.26	J p	8.35	8.909		ug/Kg	☼	104	25 - 180
Endosulfan I	ND		8.35	6.869		ug/Kg	☼	82	31 - 146
Endosulfan II	ND		8.35	7.247		ug/Kg	☼	87	14 - 176
Endosulfan sulfate	ND		8.35	7.475	p	ug/Kg	☼	90	22 - 167
Endrin	ND		8.35	7.890		ug/Kg	☼	94	23 - 174
Endrin aldehyde	ND		8.35	5.663		ug/Kg	☼	68	10 - 180
Endrin ketone	ND		8.35	7.537		ug/Kg	☼	90	20 - 166
gamma-BHC	ND		8.35	8.816		ug/Kg	☼	106	27 - 160
gamma-Chlordane	ND		8.35	7.010		ug/Kg	☼	84	26 - 180
Heptachlor	ND		8.35	7.232		ug/Kg	☼	87	23 - 144
Heptachlor epoxide	ND		8.35	7.866		ug/Kg	☼	94	25 - 173

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: 570-230772-1 MS
Matrix: Solid
Analysis Batch: 578599

Client Sample ID: BWTPF-2025-DU1
Prep Type: Total/NA
Prep Batch: 572188

Surrogate	MS %Recovery	MS Qualifier	Limits
DCB Decachlorobiphenyl (Surr)	102		20 - 180
Tetrachloro-m-xylene	88		20 - 131

Lab Sample ID: 570-230772-1 MS
Matrix: Solid
Analysis Batch: 578599

Client Sample ID: BWTPF-2025-DU1
Prep Type: Total/NA
Prep Batch: 572188

Surrogate	MS %Recovery	MS Qualifier	Limits
DCB Decachlorobiphenyl (Surr)	88		20 - 180
Tetrachloro-m-xylene	73		20 - 131

Lab Sample ID: 570-230772-1 MSD
Matrix: Solid
Analysis Batch: 578599

Client Sample ID: BWTPF-2025-DU1
Prep Type: Total/NA
Prep Batch: 572188

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
4,4'-DDD	ND		8.39	9.321		ug/Kg	☼	111	17 - 180	5	40
4,4'-DDE	0.72	J	8.39	9.430		ug/Kg	☼	104	20 - 180	6	40
4,4'-DDT	ND		8.39	8.139		ug/Kg	☼	97	10 - 180	18	40
Aldrin	ND		8.39	6.382		ug/Kg	☼	76	27 - 146	12	40
alpha-BHC	ND		8.39	7.436		ug/Kg	☼	89	33 - 160	2	36
alpha-Chlordane	ND		8.39	7.967		ug/Kg	☼	95	24 - 164	12	40
beta-BHC	ND		8.39	4.958	p	ug/Kg	☼	59	14 - 178	32	40
delta-BHC	ND		8.39	4.500	p F2	ug/Kg	☼	54	10 - 159	42	40
Dieldrin	0.26	J p	8.39	7.682		ug/Kg	☼	88	25 - 180	15	40
Endosulfan I	ND		8.39	6.959		ug/Kg	☼	83	31 - 146	1	34
Endosulfan II	ND		8.39	7.595		ug/Kg	☼	91	14 - 176	5	40
Endosulfan sulfate	ND		8.39	6.074	p	ug/Kg	☼	72	22 - 167	21	40
Endrin	ND		8.39	7.595		ug/Kg	☼	91	23 - 174	4	40
Endrin aldehyde	ND		8.39	5.173		ug/Kg	☼	62	10 - 180	9	40
Endrin ketone	ND		8.39	7.697		ug/Kg	☼	92	20 - 166	2	40
gamma-BHC	ND		8.39	7.922		ug/Kg	☼	94	27 - 160	11	40
gamma-Chlordane	ND		8.39	7.271		ug/Kg	☼	87	26 - 180	4	40
Heptachlor	ND		8.39	6.146		ug/Kg	☼	73	23 - 144	16	40
Heptachlor epoxide	ND		8.39	7.409		ug/Kg	☼	88	25 - 173	6	40

Surrogate	MSD %Recovery	MSD Qualifier	Limits
DCB Decachlorobiphenyl (Surr)	104		20 - 180
Tetrachloro-m-xylene	80		20 - 131

Lab Sample ID: 570-230772-1 MSD
Matrix: Solid
Analysis Batch: 578599

Client Sample ID: BWTPF-2025-DU1
Prep Type: Total/NA
Prep Batch: 572188

Surrogate	MSD %Recovery	MSD Qualifier	Limits
DCB Decachlorobiphenyl (Surr)	73		20 - 180
Tetrachloro-m-xylene	72		20 - 131

Client: Pacific EcoRisk Inc
Job ID: 570-230772-1
Project/Site: Berkeley Water Transportation Pier Ferry (Sed)

Method: 8290A - Dioxins and Furans (HRGC/HRMS)

Lab Sample ID: MB 410-646946/1-A
Matrix: Solid
Analysis Batch: 649163

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 646946

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,6,7,8-HpCDD	0.3245	J I	5.0	0.0065	ng/Kg		05/21/25 07:43	05/27/25 20:20	1
1,2,3,4,6,7,8-HpCDF	0.2709	J	5.0	0.0060	ng/Kg		05/21/25 07:43	05/27/25 20:20	1
1,2,3,4,7,8-HxCDD	0.2840	J	5.0	0.0058	ng/Kg		05/21/25 07:43	05/27/25 20:20	1
1,2,3,4,7,8-HxCDF	0.2512	J	5.0	0.0064	ng/Kg		05/21/25 07:43	05/27/25 20:20	1
1,2,3,4,7,8,9-HpCDF	0.2448	J	5.0	0.0087	ng/Kg		05/21/25 07:43	05/27/25 20:20	1
1,2,3,6,7,8-HxCDD	0.2598	J	5.0	0.0056	ng/Kg		05/21/25 07:43	05/27/25 20:20	1
1,2,3,6,7,8-HxCDF	0.2362	J I	5.0	0.0065	ng/Kg		05/21/25 07:43	05/27/25 20:20	1
1,2,3,7,8-PeCDD	0.2837	J I	5.0	0.0096	ng/Kg		05/21/25 07:43	05/27/25 20:20	1
1,2,3,7,8-PeCDF	0.2134	J	5.0	0.0063	ng/Kg		05/21/25 07:43	05/27/25 20:20	1
1,2,3,7,8,9-HxCDD	0.2496	J I	5.0	0.0053	ng/Kg		05/21/25 07:43	05/27/25 20:20	1
1,2,3,7,8,9-HxCDF	0.3091	J I	5.0	0.0081	ng/Kg		05/21/25 07:43	05/27/25 20:20	1
2,3,4,6,7,8-HxCDF	0.2499	J	5.0	0.0053	ng/Kg		05/21/25 07:43	05/27/25 20:20	1
2,3,4,7,8-PeCDF	0.2823	J I	5.0	0.0052	ng/Kg		05/21/25 07:43	05/27/25 20:20	1
2,3,7,8-TCDD	ND		1.0	0.0075	ng/Kg		05/21/25 07:43	05/27/25 20:20	1
2,3,7,8-TCDF	0.09542	J	1.0	0.0065	ng/Kg		05/21/25 07:43	05/27/25 20:20	1
OCDD	0.9623	J	15	0.0065	ng/Kg		05/21/25 07:43	05/27/25 20:20	1
OCDF	0.5680	J	10	0.0058	ng/Kg		05/21/25 07:43	05/27/25 20:20	1
Total HxCDD	1.049	J I	5.0	0.0055	ng/Kg		05/21/25 07:43	05/27/25 20:20	1
Total HxCDF	1.046	J I	5.0	0.0066	ng/Kg		05/21/25 07:43	05/27/25 20:20	1
Total HpCDD	0.4352	J I	5.0	0.0065	ng/Kg		05/21/25 07:43	05/27/25 20:20	1
Total HpCDF	0.5436	J	5.0	0.0073	ng/Kg		05/21/25 07:43	05/27/25 20:20	1
Total PeCDD	0.2837	J I	5.0	0.0096	ng/Kg		05/21/25 07:43	05/27/25 20:20	1
Total PeCDF	0.4957	J I	5.0	0.0057	ng/Kg		05/21/25 07:43	05/27/25 20:20	1
Total TCDD	ND		1.0	0.048	ng/Kg		05/21/25 07:43	05/27/25 20:20	1
Total TCDF	0.1836	J	1.0	0.0065	ng/Kg		05/21/25 07:43	05/27/25 20:20	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-OCDF	*83*		*40 - 135*	*05/21/25 07:43*	*05/27/25 20:20*	*1*
13C-OCDD	*79*		*40 - 135*	*05/21/25 07:43*	*05/27/25 20:20*	*1*
13C-2,3,7,8-TCDF	*96*		*40 - 135*	*05/21/25 07:43*	*05/27/25 20:20*	*1*
13C-2,3,7,8-TCDD	*87*		*40 - 135*	*05/21/25 07:43*	*05/27/25 20:20*	*1*
13C-2,3,4,7,8-PeCDF	*73*		*40 - 135*	*05/21/25 07:43*	*05/27/25 20:20*	*1*
13C-2,3,4,6,7,8-HxCDF	*103*		*40 - 135*	*05/21/25 07:43*	*05/27/25 20:20*	*1*
13C-1,2,3,7,8,9-HxCDF	*98*		*40 - 135*	*05/21/25 07:43*	*05/27/25 20:20*	*1*
13C-1,2,3,7,8,9-HxCDD	*103*		*40 - 135*	*05/21/25 07:43*	*05/27/25 20:20*	*1*
13C-1,2,3,7,8-PeCDF	*74*		*40 - 135*	*05/21/25 07:43*	*05/27/25 20:20*	*1*
13C-1,2,3,7,8-PeCDD	*68*		*40 - 135*	*05/21/25 07:43*	*05/27/25 20:20*	*1*
13C-1,2,3,6,7,8-HxCDF	*102*		*40 - 135*	*05/21/25 07:43*	*05/27/25 20:20*	*1*
13C-1,2,3,6,7,8-HxCDD	*92*		*40 - 135*	*05/21/25 07:43*	*05/27/25 20:20*	*1*
13C-1,2,3,4,7,8,9-HpCDF	*93*		*40 - 135*	*05/21/25 07:43*	*05/27/25 20:20*	*1*
13C-1,2,3,4,7,8-HxCDF	*100*		*40 - 135*	*05/21/25 07:43*	*05/27/25 20:20*	*1*
13C-1,2,3,4,7,8-HxCDD	*95*		*40 - 135*	*05/21/25 07:43*	*05/27/25 20:20*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*97*		*40 - 135*	*05/21/25 07:43*	*05/27/25 20:20*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*99*		*40 - 135*	*05/21/25 07:43*	*05/27/25 20:20*	*1*

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCS 410-646946/2-A
Matrix: Solid
Analysis Batch: 649163

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 646946

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
1,2,3,4,6,7,8-HpCDD			100	110.2		ng/Kg		110	74 - 120		
1,2,3,4,6,7,8-HpCDF			100	103.9		ng/Kg		104	72 - 120		
1,2,3,4,7,8-HxCDD			100	108.7		ng/Kg		109	77 - 120		
1,2,3,4,7,8-HxCDF			100	106.0		ng/Kg		106	76 - 120		
1,2,3,4,7,8,9-HpCDF			100	106.9		ng/Kg		107	73 - 120		
1,2,3,6,7,8-HxCDD			100	104.7		ng/Kg		105	77 - 120		
1,2,3,6,7,8-HxCDF			100	107.2		ng/Kg		107	76 - 120		
1,2,3,7,8-PeCDD			100	114.4		ng/Kg		114	80 - 128		
1,2,3,7,8-PeCDF			100	109.8		ng/Kg		110	75 - 127		
1,2,3,7,8,9-HxCDD			100	106.5		ng/Kg		106	77 - 121		
1,2,3,7,8,9-HxCDF			100	105.3		ng/Kg		105	75 - 120		
2,3,4,6,7,8-HxCDF			100	104.6		ng/Kg		105	75 - 120		
2,3,4,7,8-PeCDF			100	107.3		ng/Kg		107	74 - 120		
2,3,7,8-TCDD			20.0	21.72		ng/Kg		109	66 - 120		
2,3,7,8-TCDF			20.0	24.08		ng/Kg		120	69 - 127		
OCDD			200	217.3		ng/Kg		109	75 - 120		
OCDF			200	206.9		ng/Kg		103	75 - 123		

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C-OCDF	*69*		*40 - 135*
13C-OCDD	*69*		*40 - 135*
13C-2,3,7,8-TCDF	*72*		*40 - 135*
13C-2,3,7,8-TCDD	*69*		*40 - 135*
13C-2,3,4,7,8-PeCDF	*59*		*40 - 135*
13C-2,3,4,6,7,8-HxCDF	*78*		*40 - 135*
13C-1,2,3,7,8,9-HxCDF	*73*		*40 - 135*
13C-1,2,3,7,8,9-HxCDD	*79*		*40 - 135*
13C-1,2,3,7,8-PeCDF	*60*		*40 - 135*
13C-1,2,3,7,8-PeCDD	*55*		*40 - 135*
13C-1,2,3,6,7,8-HxCDF	*79*		*40 - 135*
13C-1,2,3,6,7,8-HxCDD	*76*		*40 - 135*
13C-1,2,3,4,7,8,9-HpCDF	*70*		*40 - 135*
13C-1,2,3,4,7,8-HxCDF	*79*		*40 - 135*
13C-1,2,3,4,7,8-HxCDD	*74*		*40 - 135*
13C-1,2,3,4,6,7,8-HpCDF	*76*		*40 - 135*
13C-1,2,3,4,6,7,8-HpCDD	*73*		*40 - 135*

Lab Sample ID: LCSD 410-646946/3-A
Matrix: Solid
Analysis Batch: 649163

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 646946

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,2,3,4,6,7,8-HpCDD			100	111.4		ng/Kg		111	74 - 120	1	25
1,2,3,4,6,7,8-HpCDF			100	105.4		ng/Kg		105	72 - 120	1	25
1,2,3,4,7,8-HxCDD			100	108.0		ng/Kg		108	77 - 120	1	25
1,2,3,4,7,8-HxCDF			100	108.0		ng/Kg		108	76 - 120	2	25
1,2,3,4,7,8,9-HpCDF			100	109.2		ng/Kg		109	73 - 120	2	25
1,2,3,6,7,8-HxCDD			100	108.3		ng/Kg		108	77 - 120	3	25
1,2,3,6,7,8-HxCDF			100	104.6		ng/Kg		105	76 - 120	2	25

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCSD 410-646946/3-A
Client Sample ID: Lab Control Sample Dup
Matrix: Solid
Prep Type: Total/NA
Analysis Batch: 649163
Prep Batch: 646946

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,2,3,7,8-PeCDD			100	115.0		ng/Kg		115	80 - 128	1	25
1,2,3,7,8-PeCDF			100	110.7		ng/Kg		111	75 - 127	1	25
1,2,3,7,8,9-HxCDD			100	109.4		ng/Kg		109	77 - 121	3	25
1,2,3,7,8,9-HxCDF			100	106.6		ng/Kg		107	75 - 120	1	25
2,3,4,6,7,8-HxCDF			100	105.0		ng/Kg		105	75 - 120	0	25
2,3,4,7,8-PeCDF			100	111.0		ng/Kg		111	74 - 120	3	25
2,3,7,8-TCDD			20.0	22.11		ng/Kg		111	66 - 120	2	25
2,3,7,8-TCDF			20.0	23.32		ng/Kg		117	69 - 127	3	25
OCDD			200	214.9		ng/Kg		107	75 - 120	1	25
OCDF			200	210.1		ng/Kg		105	75 - 123	2	25

Isotope Dilution	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
13C-OCDF	*81*		*40 - 135*
13C-OCDD	*82*		*40 - 135*
13C-2,3,7,8-TCDF	*84*		*40 - 135*
13C-2,3,7,8-TCDD	*79*		*40 - 135*
13C-2,3,4,7,8-PeCDF	*67*		*40 - 135*
13C-2,3,4,6,7,8-HxCDF	*92*		*40 - 135*
13C-1,2,3,7,8,9-HxCDF	*86*		*40 - 135*
13C-1,2,3,7,8,9-HxCDD	*92*		*40 - 135*
13C-1,2,3,7,8-PeCDF	*68*		*40 - 135*
13C-1,2,3,7,8-PeCDD	*62*		*40 - 135*
13C-1,2,3,6,7,8-HxCDF	*96*		*40 - 135*
13C-1,2,3,6,7,8-HxCDD	*86*		*40 - 135*
13C-1,2,3,4,7,8,9-HpCDF	*81*		*40 - 135*
13C-1,2,3,4,7,8-HxCDF	*94*		*40 - 135*
13C-1,2,3,4,7,8-HxCDD	*89*		*40 - 135*
13C-1,2,3,4,6,7,8-HpCDF	*89*		*40 - 135*
13C-1,2,3,4,6,7,8-HpCDD	*84*		*40 - 135*

Lab Sample ID: 570-230772-1 MS
Client Sample ID: BWTPF-2025-DU1
Matrix: Solid
Prep Type: Total/NA
Analysis Batch: 648562
Prep Batch: 646946

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
1,2,3,4,6,7,8-HpCDD	3.7	J B	160	164.1		ng/Kg	☼	100	74 - 120		
1,2,3,4,6,7,8-HpCDF	0.93	J I B	160	153.7		ng/Kg	☼	95	72 - 120		
1,2,3,4,7,8-HxCDD	0.24	J B	160	157.4		ng/Kg	☼	98	77 - 120		
1,2,3,4,7,8-HxCDF	0.28	J B	160	157.4		ng/Kg	☼	98	76 - 120		
1,2,3,4,7,8,9-HpCDF	0.26	J I B	160	155.3		ng/Kg	☼	97	73 - 120		
1,2,3,6,7,8-HxCDD	0.40	J I B	160	160.4		ng/Kg	☼	100	77 - 120		
1,2,3,6,7,8-HxCDF	0.24	J I B	160	155.3		ng/Kg	☼	97	76 - 120		
1,2,3,7,8-PeCDD	0.21	J I B	160	169.2		ng/Kg	☼	105	80 - 128		
1,2,3,7,8-PeCDF	ND		160	163.2		ng/Kg	☼	102	75 - 127		
1,2,3,7,8,9-HxCDD	0.31	J B	160	157.9		ng/Kg	☼	98	77 - 121		
1,2,3,7,8,9-HxCDF	0.20	J I B	160	156.4		ng/Kg	☼	97	75 - 120		
2,3,4,6,7,8-HxCDF	0.26	J B	160	155.0		ng/Kg	☼	96	75 - 120		
2,3,4,7,8-PeCDF	0.48	J B	160	162.7		ng/Kg	☼	101	74 - 120		
2,3,7,8-TCDD	0.10	J I	32.1	33.01		ng/Kg	☼	103	66 - 120		

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: 570-230772-1 MS
Matrix: Solid
Analysis Batch: 648562

Client Sample ID: BWTPF-2025-DU1
Prep Type: Total/NA
Prep Batch: 646946

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
2,3,7,8-TCDF	0.69	J B	32.1	34.23		ng/Kg	☼	105	69 - 127
OCDD	23	J B	321	337.5		ng/Kg	☼	98	75 - 120
OCDF	1.7	J B	321	311.9		ng/Kg	☼	97	75 - 123

Isotope Dilution	*MS %Recovery*	*MS Qualifier*	*Limits*
13C-OCDF	*39*	**5-*	*40 - 135*
13C-OCDD	*34*	**5-*	*40 - 135*
13C-2,3,7,8-TCDF	*70*		*40 - 135*
13C-2,3,7,8-TCDD	*66*		*40 - 135*
13C-2,3,4,7,8-PeCDF	*57*		*40 - 135*
13C-2,3,4,6,7,8-HxCDF	*52*		*40 - 135*
13C-1,2,3,7,8,9-HxCDF	*56*		*40 - 135*
13C-1,2,3,7,8,9-HxCDD	*50*		*40 - 135*
13C-1,2,3,7,8-PeCDF	*61*		*40 - 135*
13C-1,2,3,7,8-PeCDD	*56*		*40 - 135*
13C-1,2,3,6,7,8-HxCDF	*53*		*40 - 135*
13C-1,2,3,6,7,8-HxCDD	*50*		*40 - 135*
13C-1,2,3,4,7,8,9-HpCDF	*51*		*40 - 135*
13C-1,2,3,4,7,8-HxCDF	*56*		*40 - 135*
13C-1,2,3,4,7,8-HxCDD	*57*		*40 - 135*
13C-1,2,3,4,6,7,8-HpCDF	*43*		*40 - 135*
13C-1,2,3,4,6,7,8-HpCDD	*45*		*40 - 135*

Lab Sample ID: 570-230772-1 MSD
Matrix: Solid
Analysis Batch: 648562

Client Sample ID: BWTPF-2025-DU1
Prep Type: Total/NA
Prep Batch: 646946

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,2,3,4,6,7,8-HpCDD	3.7	J B	164	168.3		ng/Kg	☼	100	74 - 120	3	25
1,2,3,4,6,7,8-HpCDF	0.93	J I B	164	160.2		ng/Kg	☼	97	72 - 120	4	25
1,2,3,4,7,8-HxCDD	0.24	J B	164	162.2		ng/Kg	☼	99	77 - 120	3	25
1,2,3,4,7,8-HxCDF	0.28	J B	164	160.6		ng/Kg	☼	98	76 - 120	2	25
1,2,3,4,7,8,9-HpCDF	0.26	J I B	164	158.3		ng/Kg	☼	96	73 - 120	2	25
1,2,3,6,7,8-HxCDD	0.40	J I B	164	167.8		ng/Kg	☼	102	77 - 120	4	25
1,2,3,6,7,8-HxCDF	0.24	J I B	164	158.7		ng/Kg	☼	97	76 - 120	2	25
1,2,3,7,8-PeCDD	0.21	J I B	164	173.1		ng/Kg	☼	105	80 - 128	2	25
1,2,3,7,8-PeCDF	ND		164	171.3		ng/Kg	☼	104	75 - 127	5	25
1,2,3,7,8,9-HxCDD	0.31	J B	164	171.2		ng/Kg	☼	104	77 - 121	8	25
1,2,3,7,8,9-HxCDF	0.20	J I B	164	158.7		ng/Kg	☼	97	75 - 120	1	25
2,3,4,6,7,8-HxCDF	0.26	J B	164	160.1		ng/Kg	☼	97	75 - 120	3	25
2,3,4,7,8-PeCDF	0.48	J B	164	168.0		ng/Kg	☼	102	74 - 120	3	25
2,3,7,8-TCDD	0.10	J I	32.8	33.73		ng/Kg	☼	102	66 - 120	2	25
2,3,7,8-TCDF	0.69	J B	32.8	36.73		ng/Kg	☼	110	69 - 127	7	25
OCDD	23	J B	328	345.2		ng/Kg	☼	98	75 - 120	2	25
OCDF	1.7	J B	328	319.7		ng/Kg	☼	97	75 - 123	2	25

Isotope Dilution	*MSD %Recovery*	*MSD Qualifier*	*Limits*
13C-OCDF	*42*		*40 - 135*
13C-OCDD	*40*		*40 - 135*

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: 570-230772-1 MSD
Matrix: Solid
Analysis Batch: 648562

Client Sample ID: BWTPF-2025-DU1
Prep Type: Total/NA
Prep Batch: 646946

Isotope Dilution	MSD %Recovery	MSD Qualifier	Limits
13C-2,3,7,8-TCDF	66		40 - 135
13C-2,3,7,8-TCDD	64		40 - 135
13C-2,3,4,7,8-PeCDF	49		40 - 135
13C-2,3,4,6,7,8-HxCDF	49		40 - 135
13C-1,2,3,7,8,9-HxCDF	53		40 - 135
13C-1,2,3,7,8,9-HxCDD	48		40 - 135
13C-1,2,3,7,8-PeCDF	51		40 - 135
13C-1,2,3,7,8-PeCDD	47		40 - 135
13C-1,2,3,6,7,8-HxCDF	52		40 - 135
13C-1,2,3,6,7,8-HxCDD	46		40 - 135
13C-1,2,3,4,7,8,9-HpCDF	55		40 - 135
13C-1,2,3,4,7,8-HxCDF	55		40 - 135
13C-1,2,3,4,7,8-HxCDD	52		40 - 135
13C-1,2,3,4,6,7,8-HpCDF	45		40 - 135
13C-1,2,3,4,6,7,8-HpCDD	49		40 - 135

Lab Sample ID: MB 410-649651/1-A
Matrix: Solid
Analysis Batch: 650400

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 649651

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,6,7,8-HpCDD	0.09382	J	5.0	0.0053	ng/Kg		05/28/25 10:59	05/30/25 03:14	1
1,2,3,4,6,7,8-HpCDF	0.03952	J I	5.0	0.00095	ng/Kg		05/28/25 10:59	05/30/25 03:14	1
1,2,3,4,7,8-HxCDD	0.03172	J I	5.0	0.0012	ng/Kg		05/28/25 10:59	05/30/25 03:14	1
1,2,3,4,7,8-HxCDF	0.04476	J I	5.0	0.00088	ng/Kg		05/28/25 10:59	05/30/25 03:14	1
1,2,3,4,7,8,9-HpCDF	0.03922	J I	5.0	0.0012	ng/Kg		05/28/25 10:59	05/30/25 03:14	1
1,2,3,6,7,8-HxCDD	0.03098	J	5.0	0.0011	ng/Kg		05/28/25 10:59	05/30/25 03:14	1
1,2,3,6,7,8-HxCDF	ND		5.0	0.00081	ng/Kg		05/28/25 10:59	05/30/25 03:14	1
1,2,3,7,8-PeCDD	0.06358	J	5.0	0.0015	ng/Kg		05/28/25 10:59	05/30/25 03:14	1
1,2,3,7,8-PeCDF	0.04913	J I	5.0	0.0011	ng/Kg		05/28/25 10:59	05/30/25 03:14	1
1,2,3,7,8,9-HxCDD	0.03963	J I	5.0	0.0013	ng/Kg		05/28/25 10:59	05/30/25 03:14	1
1,2,3,7,8,9-HxCDF	0.06618	J I	5.0	0.00093	ng/Kg		05/28/25 10:59	05/30/25 03:14	1
2,3,4,6,7,8-HxCDF	0.03780	J I	5.0	0.00074	ng/Kg		05/28/25 10:59	05/30/25 03:14	1
2,3,4,7,8-PeCDF	0.03044	J	5.0	0.00088	ng/Kg		05/28/25 10:59	05/30/25 03:14	1
2,3,7,8-TCDD	ND		1.0	0.0022	ng/Kg		05/28/25 10:59	05/30/25 03:14	1
2,3,7,8-TCDF	ND		1.0	0.0013	ng/Kg		05/28/25 10:59	05/30/25 03:14	1
OCDD	0.2678	J	15	0.0063	ng/Kg		05/28/25 10:59	05/30/25 03:14	1
OCDF	0.1114	J I	10	0.0025	ng/Kg		05/28/25 10:59	05/30/25 03:14	1
Total HxCDD	0.1023	J I	5.0	0.0012	ng/Kg		05/28/25 10:59	05/30/25 03:14	1
Total HxCDF	0.1672	J I	5.0	0.00084	ng/Kg		05/28/25 10:59	05/30/25 03:14	1
Total HpCDD	0.09382	J	5.0	0.0053	ng/Kg		05/28/25 10:59	05/30/25 03:14	1
Total HpCDF	0.07875	J I	5.0	0.0011	ng/Kg		05/28/25 10:59	05/30/25 03:14	1
Total PeCDD	0.06358	J	5.0	0.0015	ng/Kg		05/28/25 10:59	05/30/25 03:14	1
Total PeCDF	0.07958	J I	5.0	0.00097	ng/Kg		05/28/25 10:59	05/30/25 03:14	1
Total TCDD	0.006697	J	1.0	0.0022	ng/Kg		05/28/25 10:59	05/30/25 03:14	1
Total TCDF	ND		1.0	0.0084	ng/Kg		05/28/25 10:59	05/30/25 03:14	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-OCDF	101		40 - 135	05/28/25 10:59	05/30/25 03:14	1

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: MB 410-649651/1-A
Matrix: Solid
Analysis Batch: 650400

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 649651

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-OCDD	101		40 - 135	05/28/25 10:59	05/30/25 03:14	1
13C-2,3,7,8-TCDF	94		40 - 135	05/28/25 10:59	05/30/25 03:14	1
13C-2,3,7,8-TCDD	93		40 - 135	05/28/25 10:59	05/30/25 03:14	1
13C-2,3,4,7,8-PeCDF	100		40 - 135	05/28/25 10:59	05/30/25 03:14	1
13C-2,3,4,6,7,8-HxCDF	97		40 - 135	05/28/25 10:59	05/30/25 03:14	1
13C-1,2,3,7,8,9-HxCDF	97		40 - 135	05/28/25 10:59	05/30/25 03:14	1
13C-1,2,3,7,8,9-HxCDD	97		40 - 135	05/28/25 10:59	05/30/25 03:14	1
13C-1,2,3,7,8-PeCDF	95		40 - 135	05/28/25 10:59	05/30/25 03:14	1
13C-1,2,3,7,8-PeCDD	93		40 - 135	05/28/25 10:59	05/30/25 03:14	1
13C-1,2,3,6,7,8-HxCDF	96		40 - 135	05/28/25 10:59	05/30/25 03:14	1
13C-1,2,3,6,7,8-HxCDD	103		40 - 135	05/28/25 10:59	05/30/25 03:14	1
13C-1,2,3,4,7,8,9-HpCDF	98		40 - 135	05/28/25 10:59	05/30/25 03:14	1
13C-1,2,3,4,7,8-HxCDF	94		40 - 135	05/28/25 10:59	05/30/25 03:14	1
13C-1,2,3,4,7,8-HxCDD	93		40 - 135	05/28/25 10:59	05/30/25 03:14	1
13C-1,2,3,4,6,7,8-HpCDF	97		40 - 135	05/28/25 10:59	05/30/25 03:14	1
13C-1,2,3,4,6,7,8-HpCDD	100		40 - 135	05/28/25 10:59	05/30/25 03:14	1

Lab Sample ID: LCS 410-649651/2-A
Matrix: Solid
Analysis Batch: 650400

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 649651

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,2,3,4,6,7,8-HpCDD	100	96.32		ng/Kg		96	74 - 120
1,2,3,4,6,7,8-HpCDF	100	95.20		ng/Kg		95	72 - 120
1,2,3,4,7,8-HxCDD	100	101.1		ng/Kg		101	77 - 120
1,2,3,4,7,8-HxCDF	100	95.73		ng/Kg		96	76 - 120
1,2,3,4,7,8,9-HpCDF	100	94.68		ng/Kg		95	73 - 120
1,2,3,6,7,8-HxCDD	100	98.68		ng/Kg		99	77 - 120
1,2,3,6,7,8-HxCDF	100	95.50		ng/Kg		95	76 - 120
1,2,3,7,8-PeCDD	100	100.3		ng/Kg		100	80 - 128
1,2,3,7,8-PeCDF	100	101.3		ng/Kg		101	75 - 127
1,2,3,7,8,9-HxCDD	100	98.61		ng/Kg		99	77 - 121
1,2,3,7,8,9-HxCDF	100	93.48		ng/Kg		93	75 - 120
2,3,4,6,7,8-HxCDF	100	95.75		ng/Kg		96	75 - 120
2,3,4,7,8-PeCDF	100	103.8		ng/Kg		104	74 - 120
2,3,7,8-TCDD	20.0	18.93		ng/Kg		95	66 - 120
2,3,7,8-TCDF	20.0	18.83		ng/Kg		94	69 - 127
OCDD	200	203.2		ng/Kg		102	75 - 120
OCDF	200	192.0		ng/Kg		96	75 - 123

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C-OCDF	104		40 - 135
13C-OCDD	109		40 - 135
13C-2,3,7,8-TCDF	93		40 - 135
13C-2,3,7,8-TCDD	92		40 - 135
13C-2,3,4,7,8-PeCDF	101		40 - 135
13C-2,3,4,6,7,8-HxCDF	97		40 - 135
13C-1,2,3,7,8,9-HxCDF	100		40 - 135
13C-1,2,3,7,8,9-HxCDD	103		40 - 135

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCS 410-649651/2-A
Matrix: Solid
Analysis Batch: 650400

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 649651

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C-1,2,3,7,8-PeCDF	100		40 - 135
13C-1,2,3,7,8-PeCDD	98		40 - 135
13C-1,2,3,6,7,8-HxCDF	97		40 - 135
13C-1,2,3,6,7,8-HxCDD	102		40 - 135
13C-1,2,3,4,7,8,9-HpCDF	97		40 - 135
13C-1,2,3,4,7,8-HxCDF	99		40 - 135
13C-1,2,3,4,7,8-HxCDD	97		40 - 135
13C-1,2,3,4,6,7,8-HpCDF	99		40 - 135
13C-1,2,3,4,6,7,8-HpCDD	103		40 - 135

Lab Sample ID: LCSD 410-649651/3-A
Matrix: Solid
Analysis Batch: 650400

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 649651

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,2,3,4,6,7,8-HpCDD			100	96.47		ng/Kg		96	74 - 120	0	25
1,2,3,4,6,7,8-HpCDF			100	98.50		ng/Kg		99	72 - 120	3	25
1,2,3,4,7,8-HxCDD			100	101.9		ng/Kg		102	77 - 120	1	25
1,2,3,4,7,8-HxCDF			100	98.92		ng/Kg		99	76 - 120	3	25
1,2,3,4,7,8,9-HpCDF			100	96.81		ng/Kg		97	73 - 120	2	25
1,2,3,6,7,8-HxCDD			100	103.2		ng/Kg		103	77 - 120	5	25
1,2,3,6,7,8-HxCDF			100	97.70		ng/Kg		98	76 - 120	2	25
1,2,3,7,8-PeCDD			100	104.0		ng/Kg		104	80 - 128	4	25
1,2,3,7,8-PeCDF			100	108.3		ng/Kg		108	75 - 127	7	25
1,2,3,7,8,9-HxCDD			100	101.6		ng/Kg		102	77 - 121	3	25
1,2,3,7,8,9-HxCDF			100	95.50		ng/Kg		95	75 - 120	2	25
2,3,4,6,7,8-HxCDF			100	95.29		ng/Kg		95	75 - 120	0	25
2,3,4,7,8-PeCDF			100	107.9		ng/Kg		108	74 - 120	4	25
2,3,7,8-TCDD			20.0	20.01		ng/Kg		100	66 - 120	6	25
2,3,7,8-TCDF			20.0	19.26		ng/Kg		96	69 - 127	2	25
OCDD			200	206.0		ng/Kg		103	75 - 120	1	25
OCDF			200	199.0		ng/Kg		99	75 - 123	4	25

Isotope Dilution	LCSD %Recovery	LCSD Qualifier	Limits
13C-OCDF	100		40 - 135
13C-OCDD	101		40 - 135
13C-2,3,7,8-TCDF	91		40 - 135
13C-2,3,7,8-TCDD	90		40 - 135
13C-2,3,4,7,8-PeCDF	98		40 - 135
13C-2,3,4,6,7,8-HxCDF	95		40 - 135
13C-1,2,3,7,8,9-HxCDF	95		40 - 135
13C-1,2,3,7,8,9-HxCDD	99		40 - 135
13C-1,2,3,7,8-PeCDF	93		40 - 135
13C-1,2,3,7,8-PeCDD	94		40 - 135
13C-1,2,3,6,7,8-HxCDF	94		40 - 135
13C-1,2,3,6,7,8-HxCDD	96		40 - 135
13C-1,2,3,4,7,8,9-HpCDF	96		40 - 135
13C-1,2,3,4,7,8-HxCDF	93		40 - 135
13C-1,2,3,4,7,8-HxCDD	95		40 - 135

Method: 8290A - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCSD 410-649651/3-A
Matrix: Solid
Analysis Batch: 650400

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 649651

Isotope Dilution	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
13C-1,2,3,4,6,7,8-HpCDF	*97*		*40 - 135*
13C-1,2,3,4,6,7,8-HpCDD	*102*		*40 - 135*

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 570-573335/1-A
Matrix: Solid
Analysis Batch: 573673

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 573335

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.503	0.0633	mg/Kg		05/20/25 07:32	05/20/25 15:23	20
Chromium	ND		1.01	0.232	mg/Kg		05/20/25 07:32	05/20/25 15:23	20
Copper	0.4697	J	1.01	0.309	mg/Kg		05/20/25 07:32	05/20/25 15:23	20
Nickel	ND		1.01	0.268	mg/Kg		05/20/25 07:32	05/20/25 15:23	20
Lead	ND		0.503	0.0945	mg/Kg		05/20/25 07:32	05/20/25 15:23	20
Zinc	ND		10.1	1.10	mg/Kg		05/20/25 07:32	05/20/25 15:23	20

Lab Sample ID: LCS 570-573335/2-A
Matrix: Solid
Analysis Batch: 573673

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 573335

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	50.3	48.39		mg/Kg		96	80 - 120
Chromium	50.3	48.63		mg/Kg		97	80 - 120
Copper	50.3	49.56		mg/Kg		99	80 - 120
Nickel	50.3	48.85		mg/Kg		97	80 - 120
Lead	50.3	47.69		mg/Kg		95	80 - 120
Zinc	50.3	48.14		mg/Kg		96	80 - 120

Lab Sample ID: LCSD 570-573335/3-A
Matrix: Solid
Analysis Batch: 573673

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 573335

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Arsenic	50.3	49.00		mg/Kg		98	80 - 120	1	20
Chromium	50.3	50.38		mg/Kg		100	80 - 120	4	20
Copper	50.3	51.87		mg/Kg		103	80 - 120	5	20
Nickel	50.3	50.78		mg/Kg		101	80 - 120	4	20
Lead	50.3	50.36		mg/Kg		100	80 - 120	5	20
Zinc	50.3	49.80		mg/Kg		99	80 - 120	3	20

Lab Sample ID: 570-230772-1 MS
Matrix: Solid
Analysis Batch: 573673

Client Sample ID: BWTPF-2025-DU1
Prep Type: Total/NA
Prep Batch: 573335

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	7.51		83.1	80.83		mg/Kg	☼	88	75 - 125
Chromium	60.3	F1	66.4	137.6		mg/Kg	☼	116	75 - 125
Copper	28.4	B	66.4	102.1		mg/Kg	☼	111	75 - 125
Nickel	59.6	F1	66.4	134.7		mg/Kg	☼	113	75 - 125

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: 570-230772-1 MS
Matrix: Solid
Analysis Batch: 573673

Client Sample ID: BWTPF-2025-DU1
Prep Type: Total/NA
Prep Batch: 573335

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Lead	15.7		66.4	90.44		mg/Kg	☼	112	75 - 125
Zinc	74.2	F1	66.4	149.8		mg/Kg	☼	114	75 - 125

Lab Sample ID: 570-230772-1 MSD
Matrix: Solid
Analysis Batch: 573673

Client Sample ID: BWTPF-2025-DU1
Prep Type: Total/NA
Prep Batch: 573335

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Arsenic	7.51		83.1	85.49		mg/Kg	☼	94	75 - 125	6	20
Chromium	60.3	F1	66.4	147.8	F1	mg/Kg	☼	132	75 - 125	7	20
Copper	28.4	B	66.4	109.9		mg/Kg	☼	123	75 - 125	7	20
Nickel	59.6	F1	66.4	144.8	F1	mg/Kg	☼	128	75 - 125	7	20
Lead	15.7		66.4	97.36		mg/Kg	☼	123	75 - 125	7	20
Zinc	74.2	F1	66.4	161.4	F1	mg/Kg	☼	131	75 - 125	7	20

Lab Sample ID: 570-230772-1 DU
Matrix: Solid
Analysis Batch: 573673

Client Sample ID: BWTPF-2025-DU1
Prep Type: Total/NA
Prep Batch: 573335

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	7.51		8.032		mg/Kg	☼	7	20
Chromium	60.3	F1	62.96		mg/Kg	☼	4	20
Copper	28.4	B	30.39		mg/Kg	☼	7	22
Nickel	59.6	F1	62.46		mg/Kg	☼	5	15
Lead	15.7		16.63		mg/Kg	☼	6	23
Zinc	74.2	F1	78.54		mg/Kg	☼	6	18

Method: 7471A - Mercury (CVAA)

Lab Sample ID: MB 570-573442/1-A
Matrix: Solid
Analysis Batch: 573490

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 573442

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.0833	0.0230	mg/Kg		05/20/25 10:51	05/20/25 12:43	1

Lab Sample ID: LCS 570-573442/2-A
Matrix: Solid
Analysis Batch: 573490

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 573442

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.392	0.3767		mg/Kg		96	80 - 120

Lab Sample ID: LCSD 570-573442/3-A
Matrix: Solid
Analysis Batch: 573490

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 573442

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	0.408	0.3578		mg/Kg		88	80 - 120	5	20

Method: 7471A - Mercury (CVAA) (Continued)

Lab Sample ID: 570-230772-1 MS
Matrix: Solid
Analysis Batch: 573490

Client Sample ID: BWTPF-2025-DU1
Prep Type: Total/NA
Prep Batch: 573442

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Mercury	0.237		0.685	0.7618		mg/Kg	☼	77	75 - 125		

Lab Sample ID: 570-230772-1 MSD
Matrix: Solid
Analysis Batch: 573490

Client Sample ID: BWTPF-2025-DU1
Prep Type: Total/NA
Prep Batch: 573442

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	0.237		0.714	0.7711		mg/Kg	☼	75	75 - 125	1	20

Method: Moisture - Percent Moisture

Lab Sample ID: 570-231136-A-10 DU
Matrix: Solid
Analysis Batch: 572806

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Percent Solids	95.4			95.5		%				0.08	10

Lab Sample ID: 570-230772-1 DU
Matrix: Solid
Analysis Batch: 572821

Client Sample ID: BWTPF-2025-DU1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Percent Solids	59.6			61.0		%				2	10

Method: D4464 - Particle Size Distribution of Catalytic Material (Laser light scattering)

Lab Sample ID: 570-230772-1 DU
Matrix: Solid
Analysis Batch: 573593

Client Sample ID: BWTPF-2025-DU1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Clay (less than 0.00391 mm)	54.03			55.21		%				2	20
Coarse Sand (0.5mm to 1mm)	ND			ND		%				NC	20
Fine Sand (0.125 to 0.25mm)	ND			ND		%				NC	20
Gravel (greater than 2 mm)	ND			ND		%				NC	20
Medium Sand (0.25 to 0.5 mm)	ND			ND		%				NC	20
Silt (0.00391 to 0.0625mm)	45.97			44.79		%				3	20
Total Silt and Clay (0 to 0.0626mm)	100.00			100.00		%				0	20
Very Coarse Sand (1 to 2mm)	ND			ND		%				NC	20
Very Fine Sand (0.0625 to 0.125 mm)	ND			ND		%				NC	20

GC/MS Semi VOA

Prep Batch: 572192

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-230772-1	BWTPF-2025-DU1	Total/NA	Solid	3541	
570-230772-2	BWTPF-2025-DU2	Total/NA	Solid	3541	
570-230772-3	BWTPF-2025-DU3	Total/NA	Solid	3541	
570-230772-4	BWTPF-2025-DU4	Total/NA	Solid	3541	
570-230772-5	BWTPF-2025-DU5	Total/NA	Solid	3541	
MB 570-572192/1-A	Method Blank	Total/NA	Solid	3541	
LCS 570-572192/2-A	Lab Control Sample	Total/NA	Solid	3541	
LCSD 570-572192/3-A	Lab Control Sample Dup	Total/NA	Solid	3541	
570-230772-1 MS	BWTPF-2025-DU1	Total/NA	Solid	3541	
570-230772-1 MSD	BWTPF-2025-DU1	Total/NA	Solid	3541	

Prep Batch: 573582

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-230772-1	BWTPF-2025-DU1	Total/NA	Solid	Organotin Prep	
570-230772-2	BWTPF-2025-DU2	Total/NA	Solid	Organotin Prep	
570-230772-4	BWTPF-2025-DU4	Total/NA	Solid	Organotin Prep	
570-230772-5	BWTPF-2025-DU5	Total/NA	Solid	Organotin Prep	
MB 570-573582/1-A	Method Blank	Total/NA	Solid	Organotin Prep	
LCS 570-573582/2-A	Lab Control Sample	Total/NA	Solid	Organotin Prep	
LCSD 570-573582/3-A	Lab Control Sample Dup	Total/NA	Solid	Organotin Prep	
570-230772-1 MS	BWTPF-2025-DU1	Total/NA	Solid	Organotin Prep	
570-230772-1 MSD	BWTPF-2025-DU1	Total/NA	Solid	Organotin Prep	

Prep Batch: 574411

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-230772-3	BWTPF-2025-DU3	Total/NA	Solid	Organotin Prep	
MB 570-574411/1-A	Method Blank	Total/NA	Solid	Organotin Prep	
LCS 570-574411/2-A	Lab Control Sample	Total/NA	Solid	Organotin Prep	
LCSD 570-574411/3-A	Lab Control Sample Dup	Total/NA	Solid	Organotin Prep	
400-276152-E-4-A MS	Matrix Spike	Total/NA	Solid	Organotin Prep	
400-276152-E-4-B MSD	Matrix Spike Duplicate	Total/NA	Solid	Organotin Prep	

Analysis Batch: 574619

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-230772-1	BWTPF-2025-DU1	Total/NA	Solid	Organotins SIM	573582
570-230772-2	BWTPF-2025-DU2	Total/NA	Solid	Organotins SIM	573582
570-230772-4	BWTPF-2025-DU4	Total/NA	Solid	Organotins SIM	573582
570-230772-5	BWTPF-2025-DU5	Total/NA	Solid	Organotins SIM	573582
MB 570-573582/1-A	Method Blank	Total/NA	Solid	Organotins SIM	573582
LCS 570-573582/2-A	Lab Control Sample	Total/NA	Solid	Organotins SIM	573582
LCSD 570-573582/3-A	Lab Control Sample Dup	Total/NA	Solid	Organotins SIM	573582
570-230772-1 MS	BWTPF-2025-DU1	Total/NA	Solid	Organotins SIM	573582
570-230772-1 MSD	BWTPF-2025-DU1	Total/NA	Solid	Organotins SIM	573582

Analysis Batch: 575699

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-230772-1	BWTPF-2025-DU1	Total/NA	Solid	8270C SIM CON	572192
570-230772-2	BWTPF-2025-DU2	Total/NA	Solid	8270C SIM CON	572192
570-230772-3	BWTPF-2025-DU3	Total/NA	Solid	8270C SIM CON	572192
570-230772-4	BWTPF-2025-DU4	Total/NA	Solid	8270C SIM CON	572192
570-230772-5	BWTPF-2025-DU5	Total/NA	Solid	8270C SIM CON	572192

GC/MS Semi VOA (Continued)

Analysis Batch: 575699 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 570-572192/1-A	Method Blank	Total/NA	Solid	8270C SIM CON	572192
LCS 570-572192/2-A	Lab Control Sample	Total/NA	Solid	8270C SIM CON	572192
LCSD 570-572192/3-A	Lab Control Sample Dup	Total/NA	Solid	8270C SIM CON	572192
570-230772-1 MS	BWTPF-2025-DU1	Total/NA	Solid	8270C SIM CON	572192
570-230772-1 MSD	BWTPF-2025-DU1	Total/NA	Solid	8270C SIM CON	572192

Analysis Batch: 576588

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-230772-3	BWTPF-2025-DU3	Total/NA	Solid	Organotins SIM	574411
MB 570-574411/1-A	Method Blank	Total/NA	Solid	Organotins SIM	574411
LCS 570-574411/2-A	Lab Control Sample	Total/NA	Solid	Organotins SIM	574411
LCSD 570-574411/3-A	Lab Control Sample Dup	Total/NA	Solid	Organotins SIM	574411

Analysis Batch: 577675

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-276152-E-4-A MS	Matrix Spike	Total/NA	Solid	Organotins SIM	574411
400-276152-E-4-B MSD	Matrix Spike Duplicate	Total/NA	Solid	Organotins SIM	574411

Prep Batch: 579616

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-230772-1	BWTPF-2025-DU1	Total/NA	Solid	3541	
570-230772-2	BWTPF-2025-DU2	Total/NA	Solid	3541	
570-230772-3	BWTPF-2025-DU3	Total/NA	Solid	3541	
570-230772-4	BWTPF-2025-DU4	Total/NA	Solid	3541	
570-230772-5	BWTPF-2025-DU5	Total/NA	Solid	3541	
MB 570-579616/1-A	Method Blank	Total/NA	Solid	3541	
LCS 570-579616/2-A	Lab Control Sample	Total/NA	Solid	3541	
LCSD 570-579616/3-A	Lab Control Sample Dup	Total/NA	Solid	3541	
570-232661-A-17-J MS	Matrix Spike	Total/NA	Solid	3541	
570-232661-A-17-K MSD	Matrix Spike Duplicate	Total/NA	Solid	3541	

Analysis Batch: 580771

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-230772-1	BWTPF-2025-DU1	Total/NA	Solid	8270C SIM	579616
570-230772-2	BWTPF-2025-DU2	Total/NA	Solid	8270C SIM	579616
570-230772-3	BWTPF-2025-DU3	Total/NA	Solid	8270C SIM	579616
570-230772-4	BWTPF-2025-DU4	Total/NA	Solid	8270C SIM	579616
570-230772-5	BWTPF-2025-DU5	Total/NA	Solid	8270C SIM	579616
MB 570-579616/1-A	Method Blank	Total/NA	Solid	8270C SIM	579616
LCS 570-579616/2-A	Lab Control Sample	Total/NA	Solid	8270C SIM	579616
LCSD 570-579616/3-A	Lab Control Sample Dup	Total/NA	Solid	8270C SIM	579616
570-232661-A-17-J MS	Matrix Spike	Total/NA	Solid	8270C SIM	579616
570-232661-A-17-K MSD	Matrix Spike Duplicate	Total/NA	Solid	8270C SIM	579616

GC Semi VOA

Prep Batch: 572188

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-230772-1	BWTPF-2025-DU1	Total/NA	Solid	3541	
570-230772-2	BWTPF-2025-DU2	Total/NA	Solid	3541	
570-230772-3	BWTPF-2025-DU3	Total/NA	Solid	3541	

GC Semi VOA (Continued)

Prep Batch: 572188 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-230772-4	BWTPF-2025-DU4	Total/NA	Solid	3541	
570-230772-5	BWTPF-2025-DU5	Total/NA	Solid	3541	
MB 570-572188/1-A	Method Blank	Total/NA	Solid	3541	
LCS 570-572188/2-A	Lab Control Sample	Total/NA	Solid	3541	
LCS 570-572188/4-A	Lab Control Sample	Total/NA	Solid	3541	
LCSD 570-572188/3-A	Lab Control Sample Dup	Total/NA	Solid	3541	
LCSD 570-572188/5-A	Lab Control Sample Dup	Total/NA	Solid	3541	
570-230772-1 MS	BWTPF-2025-DU1	Total/NA	Solid	3541	
570-230772-1 MS	BWTPF-2025-DU1	Total/NA	Solid	3541	
570-230772-1 MSD	BWTPF-2025-DU1	Total/NA	Solid	3541	
570-230772-1 MSD	BWTPF-2025-DU1	Total/NA	Solid	3541	

Analysis Batch: 578599

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-230772-1	BWTPF-2025-DU1	Total/NA	Solid	8081A	572188
570-230772-2	BWTPF-2025-DU2	Total/NA	Solid	8081A	572188
570-230772-3	BWTPF-2025-DU3	Total/NA	Solid	8081A	572188
570-230772-4	BWTPF-2025-DU4	Total/NA	Solid	8081A	572188
570-230772-5	BWTPF-2025-DU5	Total/NA	Solid	8081A	572188
MB 570-572188/1-A	Method Blank	Total/NA	Solid	8081A	572188
LCS 570-572188/2-A	Lab Control Sample	Total/NA	Solid	8081A	572188
LCS 570-572188/4-A	Lab Control Sample	Total/NA	Solid	8081A	572188
LCSD 570-572188/3-A	Lab Control Sample Dup	Total/NA	Solid	8081A	572188
LCSD 570-572188/5-A	Lab Control Sample Dup	Total/NA	Solid	8081A	572188
570-230772-1 MS	BWTPF-2025-DU1	Total/NA	Solid	8081A	572188
570-230772-1 MS	BWTPF-2025-DU1	Total/NA	Solid	8081A	572188
570-230772-1 MSD	BWTPF-2025-DU1	Total/NA	Solid	8081A	572188
570-230772-1 MSD	BWTPF-2025-DU1	Total/NA	Solid	8081A	572188

Specialty Organics

Prep Batch: 646946

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-230772-1	BWTPF-2025-DU1	Total/NA	Solid	8290A	
570-230772-3	BWTPF-2025-DU3	Total/NA	Solid	8290A	
570-230772-4	BWTPF-2025-DU4	Total/NA	Solid	8290A	
570-230772-5	BWTPF-2025-DU5	Total/NA	Solid	8290A	
MB 410-646946/1-A	Method Blank	Total/NA	Solid	8290A	
LCS 410-646946/2-A	Lab Control Sample	Total/NA	Solid	8290A	
LCSD 410-646946/3-A	Lab Control Sample Dup	Total/NA	Solid	8290A	
570-230772-1 MS	BWTPF-2025-DU1	Total/NA	Solid	8290A	
570-230772-1 MSD	BWTPF-2025-DU1	Total/NA	Solid	8290A	

Analysis Batch: 648562

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-230772-1	BWTPF-2025-DU1	Total/NA	Solid	8290A	646946
570-230772-3	BWTPF-2025-DU3	Total/NA	Solid	8290A	646946
570-230772-4	BWTPF-2025-DU4	Total/NA	Solid	8290A	646946
570-230772-5	BWTPF-2025-DU5	Total/NA	Solid	8290A	646946
570-230772-1 MS	BWTPF-2025-DU1	Total/NA	Solid	8290A	646946
570-230772-1 MSD	BWTPF-2025-DU1	Total/NA	Solid	8290A	646946

Specialty Organics

Analysis Batch: 649163

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 410-646946/1-A	Method Blank	Total/NA	Solid	8290A	646946
LCS 410-646946/2-A	Lab Control Sample	Total/NA	Solid	8290A	646946
LCSD 410-646946/3-A	Lab Control Sample Dup	Total/NA	Solid	8290A	646946

Prep Batch: 649651

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-230772-2	BWTPF-2025-DU2	Total/NA	Solid	8290A	
MB 410-649651/1-A	Method Blank	Total/NA	Solid	8290A	
LCS 410-649651/2-A	Lab Control Sample	Total/NA	Solid	8290A	
LCSD 410-649651/3-A	Lab Control Sample Dup	Total/NA	Solid	8290A	

Analysis Batch: 650400

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-230772-2	BWTPF-2025-DU2	Total/NA	Solid	8290A	649651
MB 410-649651/1-A	Method Blank	Total/NA	Solid	8290A	649651
LCS 410-649651/2-A	Lab Control Sample	Total/NA	Solid	8290A	649651
LCSD 410-649651/3-A	Lab Control Sample Dup	Total/NA	Solid	8290A	649651

Metals

Prep Batch: 573335

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-230772-1	BWTPF-2025-DU1	Total/NA	Solid	3050B	
570-230772-2	BWTPF-2025-DU2	Total/NA	Solid	3050B	
570-230772-3	BWTPF-2025-DU3	Total/NA	Solid	3050B	
570-230772-4	BWTPF-2025-DU4	Total/NA	Solid	3050B	
570-230772-5	BWTPF-2025-DU5	Total/NA	Solid	3050B	
MB 570-573335/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 570-573335/2-A	Lab Control Sample	Total/NA	Solid	3050B	
LCSD 570-573335/3-A	Lab Control Sample Dup	Total/NA	Solid	3050B	
570-230772-1 MS	BWTPF-2025-DU1	Total/NA	Solid	3050B	
570-230772-1 MSD	BWTPF-2025-DU1	Total/NA	Solid	3050B	
570-230772-1 DU	BWTPF-2025-DU1	Total/NA	Solid	3050B	

Prep Batch: 573442

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-230772-1	BWTPF-2025-DU1	Total/NA	Solid	7471A	
570-230772-2	BWTPF-2025-DU2	Total/NA	Solid	7471A	
570-230772-3	BWTPF-2025-DU3	Total/NA	Solid	7471A	
570-230772-4	BWTPF-2025-DU4	Total/NA	Solid	7471A	
570-230772-5	BWTPF-2025-DU5	Total/NA	Solid	7471A	
MB 570-573442/1-A	Method Blank	Total/NA	Solid	7471A	
LCS 570-573442/2-A	Lab Control Sample	Total/NA	Solid	7471A	
LCSD 570-573442/3-A	Lab Control Sample Dup	Total/NA	Solid	7471A	
570-230772-1 MS	BWTPF-2025-DU1	Total/NA	Solid	7471A	
570-230772-1 MSD	BWTPF-2025-DU1	Total/NA	Solid	7471A	

Analysis Batch: 573490

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-230772-1	BWTPF-2025-DU1	Total/NA	Solid	7471A	573442
570-230772-2	BWTPF-2025-DU2	Total/NA	Solid	7471A	573442

Metals (Continued)

Analysis Batch: 573490 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-230772-3	BWTPF-2025-DU3	Total/NA	Solid	7471A	573442
570-230772-4	BWTPF-2025-DU4	Total/NA	Solid	7471A	573442
570-230772-5	BWTPF-2025-DU5	Total/NA	Solid	7471A	573442
MB 570-573442/1-A	Method Blank	Total/NA	Solid	7471A	573442
LCS 570-573442/2-A	Lab Control Sample	Total/NA	Solid	7471A	573442
LCSD 570-573442/3-A	Lab Control Sample Dup	Total/NA	Solid	7471A	573442
570-230772-1 MS	BWTPF-2025-DU1	Total/NA	Solid	7471A	573442
570-230772-1 MSD	BWTPF-2025-DU1	Total/NA	Solid	7471A	573442

Analysis Batch: 573673

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-230772-1	BWTPF-2025-DU1	Total/NA	Solid	6020	573335
570-230772-2	BWTPF-2025-DU2	Total/NA	Solid	6020	573335
570-230772-3	BWTPF-2025-DU3	Total/NA	Solid	6020	573335
570-230772-4	BWTPF-2025-DU4	Total/NA	Solid	6020	573335
570-230772-5	BWTPF-2025-DU5	Total/NA	Solid	6020	573335
MB 570-573335/1-A	Method Blank	Total/NA	Solid	6020	573335
LCS 570-573335/2-A	Lab Control Sample	Total/NA	Solid	6020	573335
LCSD 570-573335/3-A	Lab Control Sample Dup	Total/NA	Solid	6020	573335
570-230772-1 MS	BWTPF-2025-DU1	Total/NA	Solid	6020	573335
570-230772-1 MSD	BWTPF-2025-DU1	Total/NA	Solid	6020	573335
570-230772-1 DU	BWTPF-2025-DU1	Total/NA	Solid	6020	573335

General Chemistry

Analysis Batch: 572806

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-230772-2	BWTPF-2025-DU2	Total/NA	Solid	Moisture	
570-230772-5	BWTPF-2025-DU5	Total/NA	Solid	Moisture	
570-231136-A-10 DU	Duplicate	Total/NA	Solid	Moisture	

Analysis Batch: 572821

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-230772-1	BWTPF-2025-DU1	Total/NA	Solid	Moisture	
570-230772-3	BWTPF-2025-DU3	Total/NA	Solid	Moisture	
570-230772-4	BWTPF-2025-DU4	Total/NA	Solid	Moisture	
570-230772-1 DU	BWTPF-2025-DU1	Total/NA	Solid	Moisture	

Geotechnical

Analysis Batch: 573593

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-230772-1	BWTPF-2025-DU1	Total/NA	Solid	D4464	
570-230772-2	BWTPF-2025-DU2	Total/NA	Solid	D4464	
570-230772-3	BWTPF-2025-DU3	Total/NA	Solid	D4464	
570-230772-4	BWTPF-2025-DU4	Total/NA	Solid	D4464	
570-230772-5	BWTPF-2025-DU5	Total/NA	Solid	D4464	
LCS 570-573593/1	Lab Control Sample	Total/NA	Solid	D4464	
LCSD 570-573593/3	Lab Control Sample Dup	Total/NA	Solid	D4464	
570-230772-1 DU	BWTPF-2025-DU1	Total/NA	Solid	D4464	

Lab Chronicle

Client: Pacific EcoRisk Inc
Job ID: 570-230772-1
Project/Site: Berkeley Water Transportation Pier Ferry (Sed)

Client Sample ID: BWTPF-2025-DU1
Lab Sample ID: 570-230772-1

Date Collected: 05/06/25 08:35
Matrix: Solid
Date Received: 05/15/25 09:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3541			20.04 g	2 mL	579616	06/05/25 13:00	UM1W	EET CAL 4
Total/NA	Analysis	8270C SIM		1	1 mL	1 mL	580771	06/07/25 00:55	J7WE	EET CAL 4
	Instrument ID: GCMSMM									
Total/NA	Prep	3541			20.10 g	2 mL	572192	05/17/25 09:00	UM1W	EET CAL 4
Total/NA	Analysis	8270C SIM CON		1	1 mL	1 mL	575699	05/25/25 15:15	J7WE	EET CAL 4
	Instrument ID: GCMSHHH									
Total/NA	Prep	Organotin Prep			20.0 g	2 mL	573582	05/20/25 14:41	UWEZ	EET CAL 4
Total/NA	Analysis	Organotins SIM		1	1 mL	1 mL	574619	05/22/25 22:39	ULLI	EET CAL 4
	Instrument ID: GCMSY									
Total/NA	Prep	3541			20.05 g	2 mL	572188	05/17/25 09:00	UM1W	EET CAL 4
Total/NA	Analysis	8081A		1	1 mL	1 mL	578599	06/03/25 04:39	N5Y3	EET CAL 4
	Instrument ID: GC52A									
Total/NA	Prep	8290A			10.39 g	20 uL	646946	05/21/25 07:43	UJSZ	ELLE
Total/NA	Analysis	8290A		1	20 uL	0 mL	648562	05/26/25 13:50	AQ46	ELLE
	Instrument ID: DF18471									
Total/NA	Prep	3050B			2.02 g	50 mL	573335	05/20/25 07:32	GYR8	EET CAL 4
Total/NA	Analysis	6020		20			573673	05/20/25 15:35	P1R	EET CAL 4
	Instrument ID: ICPMS11									
Total/NA	Prep	7471A			0.53 g	50 mL	573442	05/20/25 10:51	VCN7	EET CAL 4
Total/NA	Analysis	7471A		1			573490	05/20/25 12:48	RL6Q	EET CAL 4
	Instrument ID: HG7									
Total/NA	Analysis	Moisture		1			572821	05/18/25 14:31	TP6R	EET CAL 4
	Instrument ID: MOI2									
Total/NA	Analysis	D4464		1			573593	05/24/25 12:35	EL8Q	EET CAL 4
	Instrument ID: NOEQUIP									

Client Sample ID: BWTPF-2025-DU2
Lab Sample ID: 570-230772-2

Date Collected: 05/06/25 09:35
Matrix: Solid
Date Received: 05/15/25 09:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3541			20.08 g	2 mL	579616	06/05/25 13:00	UM1W	EET CAL 4
Total/NA	Analysis	8270C SIM		1	1 mL	1 mL	580771	06/07/25 01:17	J7WE	EET CAL 4
	Instrument ID: GCMSMM									
Total/NA	Prep	3541			20.05 g	2 mL	572192	05/17/25 09:00	UM1W	EET CAL 4
Total/NA	Analysis	8270C SIM CON		1	1 mL	1 mL	575699	05/25/25 15:41	J7WE	EET CAL 4
	Instrument ID: GCMSHHH									
Total/NA	Prep	Organotin Prep			20.1 g	2 mL	573582	05/20/25 14:41	UWEZ	EET CAL 4
Total/NA	Analysis	Organotins SIM		1	1 mL	1 mL	574619	05/22/25 22:56	ULLI	EET CAL 4
	Instrument ID: GCMSY									
Total/NA	Prep	3541			20.09 g	2 mL	572188	05/17/25 09:00	UM1W	EET CAL 4
Total/NA	Analysis	8081A		1	1 mL	1 mL	578599	06/03/25 04:54	N5Y3	EET CAL 4
	Instrument ID: GC52A									

Lab Chronicle

Client: Pacific EcoRisk Inc
Job ID: 570-230772-1
Project/Site: Berkeley Water Transportation Pier Ferry (Sed)

Client Sample ID: BWTPF-2025-DU2
Lab Sample ID: 570-230772-2

Date Collected: 05/06/25 09:35
Matrix: Solid
Date Received: 05/15/25 09:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290A			10.10 g	20 uL	649651	05/28/25 10:59	HZ2S	ELLE
Total/NA	Analysis	8290A		1	20 uL	0 mL	650400	05/30/25 18:26	ABB4	ELLE
	Instrument ID: DF17611B									
Total/NA	Prep	3050B			2.02 g	50 mL	573335	05/20/25 07:32	GYR8	EET CAL 4
Total/NA	Analysis	6020		20			573673	05/20/25 16:04	P1R	EET CAL 4
	Instrument ID: ICPMS11									
Total/NA	Prep	7471A			0.53 g	50 mL	573442	05/20/25 10:51	VCN7	EET CAL 4
Total/NA	Analysis	7471A		1			573490	05/20/25 13:17	RL6Q	EET CAL 4
	Instrument ID: HG7									
Total/NA	Analysis	Moisture		1			572806	05/18/25 09:11	TP6R	EET CAL 4
	Instrument ID: MOI5									
Total/NA	Analysis	D4464		1			573593	05/24/25 13:13	EL8Q	EET CAL 4
	Instrument ID: NOEQUIP									

Client Sample ID: BWTPF-2025-DU3
Lab Sample ID: 570-230772-3

Date Collected: 05/09/25 06:40
Matrix: Solid
Date Received: 05/15/25 09:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3541			20.08 g	2 mL	579616	06/05/25 13:00	UM1W	EET CAL 4
Total/NA	Analysis	8270C SIM		1	1 mL	1 mL	580771	06/07/25 01:40	J7WE	EET CAL 4
	Instrument ID: GCMSMM									
Total/NA	Prep	3541			20.01 g	2 mL	572192	05/17/25 09:00	UM1W	EET CAL 4
Total/NA	Analysis	8270C SIM CON		1	1 mL	1 mL	575699	05/25/25 16:06	J7WE	EET CAL 4
	Instrument ID: GCMSHHH									
Total/NA	Prep	Organotin Prep			20.1 g	2 mL	574411	05/22/25 08:18	UWEZ	EET CAL 4
Total/NA	Analysis	Organotins SIM		1	1 mL	1 mL	576588	05/28/25 18:21	ULLI	EET CAL 4
	Instrument ID: GCMSY									
Total/NA	Prep	3541			20.04 g	2 mL	572188	05/17/25 09:00	UM1W	EET CAL 4
Total/NA	Analysis	8081A		1	1 mL	1 mL	578599	06/03/25 05:09	N5Y3	EET CAL 4
	Instrument ID: GC52A									
Total/NA	Prep	8290A			10.08 g	20 uL	646946	05/21/25 07:43	UJSZ	ELLE
Total/NA	Analysis	8290A		1	20 uL	0 mL	648562	05/26/25 10:26	AQ46	ELLE
	Instrument ID: DF18471									
Total/NA	Prep	3050B			2.04 g	50 mL	573335	05/20/25 07:32	GYR8	EET CAL 4
Total/NA	Analysis	6020		20			573673	05/20/25 16:07	P1R	EET CAL 4
	Instrument ID: ICPMS11									
Total/NA	Prep	7471A			0.52 g	50 mL	573442	05/20/25 10:51	VCN7	EET CAL 4
Total/NA	Analysis	7471A		1			573490	05/20/25 13:18	RL6Q	EET CAL 4
	Instrument ID: HG7									
Total/NA	Analysis	Moisture		1			572821	05/18/25 14:31	TP6R	EET CAL 4
	Instrument ID: MOI2									
Total/NA	Analysis	D4464		1			573593	05/24/25 13:25	EL8Q	EET CAL 4
	Instrument ID: NOEQUIP									

Lab Chronicle

Client: Pacific EcoRisk Inc
Job ID: 570-230772-1
Project/Site: Berkeley Water Transportation Pier Ferry (Sed)

Client Sample ID: BWTPF-2025-DU4
Lab Sample ID: 570-230772-4

Date Collected: 05/07/25 12:15
Matrix: Solid
Date Received: 05/15/25 09:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3541			20.03 g	2 mL	579616	06/05/25 13:00	UM1W	EET CAL 4
Total/NA	Analysis	8270C SIM		1	1 mL	1 mL	580771	06/07/25 02:03	J7WE	EET CAL 4
	Instrument ID: GCMSMM									
Total/NA	Prep	3541			20.04 g	2 mL	572192	05/17/25 09:00	UM1W	EET CAL 4
Total/NA	Analysis	8270C SIM CON		1	1 mL	1 mL	575699	05/25/25 16:32	J7WE	EET CAL 4
	Instrument ID: GCMSHHH									
Total/NA	Prep	Organotin Prep			20.0 g	2 mL	573582	05/20/25 14:41	UWEZ	EET CAL 4
Total/NA	Analysis	Organotins SIM		1	1 mL	1 mL	574619	05/22/25 23:13	ULLI	EET CAL 4
	Instrument ID: GCMSY									
Total/NA	Prep	3541			20.06 g	2 mL	572188	05/17/25 09:00	UM1W	EET CAL 4
Total/NA	Analysis	8081A		1	1 mL	1 mL	578599	06/03/25 05:24	N5Y3	EET CAL 4
	Instrument ID: GC52A									
Total/NA	Prep	8290A			10.04 g	20 uL	646946	05/21/25 07:43	UJSZ	ELLE
Total/NA	Analysis	8290A		1	20 uL	0 mL	648562	05/26/25 11:17	AQ46	ELLE
	Instrument ID: DF18471									
Total/NA	Prep	3050B			1.99 g	50 mL	573335	05/20/25 07:32	GYR8	EET CAL 4
Total/NA	Analysis	6020		20			573673	05/20/25 16:10	P1R	EET CAL 4
	Instrument ID: ICPMS11									
Total/NA	Prep	7471A			0.53 g	50 mL	573442	05/20/25 10:51	VCN7	EET CAL 4
Total/NA	Analysis	7471A		1			573490	05/20/25 13:20	RL6Q	EET CAL 4
	Instrument ID: HG7									
Total/NA	Analysis	Moisture		1			572821	05/18/25 14:31	TP6R	EET CAL 4
	Instrument ID: MOI2									
Total/NA	Analysis	D4464		1			573593	05/24/25 13:36	EL8Q	EET CAL 4
	Instrument ID: NOEQUIP									

Client Sample ID: BWTPF-2025-DU5
Lab Sample ID: 570-230772-5

Date Collected: 05/07/25 06:30
Matrix: Solid
Date Received: 05/15/25 09:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3541			20.03 g	2 mL	579616	06/05/25 13:00	UM1W	EET CAL 4
Total/NA	Analysis	8270C SIM		1	1 mL	1 mL	580771	06/07/25 02:25	J7WE	EET CAL 4
	Instrument ID: GCMSMM									
Total/NA	Prep	3541			20.09 g	2 mL	572192	05/17/25 09:00	UM1W	EET CAL 4
Total/NA	Analysis	8270C SIM CON		1	1 mL	1 mL	575699	05/25/25 16:57	J7WE	EET CAL 4
	Instrument ID: GCMSHHH									
Total/NA	Prep	Organotin Prep			20.3 g	2 mL	573582	05/20/25 14:41	UWEZ	EET CAL 4
Total/NA	Analysis	Organotins SIM		1	1 mL	1 mL	574619	05/22/25 23:29	ULLI	EET CAL 4
	Instrument ID: GCMSY									
Total/NA	Prep	3541			20.05 g	2 mL	572188	05/17/25 09:00	UM1W	EET CAL 4
Total/NA	Analysis	8081A		1	1 mL	1 mL	578599	06/03/25 05:39	N5Y3	EET CAL 4
	Instrument ID: GC52A									

Lab Chronicle

Client: Pacific EcoRisk Inc
Job ID: 570-230772-1
Project/Site: Berkeley Water Transportation Pier Ferry (Sed)

Client Sample ID: BWTPF-2025-DU5
Lab Sample ID: 570-230772-5
Date Collected: 05/07/25 06:30
Matrix: Solid
Date Received: 05/15/25 09:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290A			10.21 g	20 uL	646946	05/21/25 07:43	UJSZ	ELLE
Total/NA	Analysis	8290A		1	20 uL	0 mL	648562	05/26/25 12:08	AQ46	ELLE
	Instrument ID:	DF18471								
Total/NA	Prep	3050B			2.03 g	50 mL	573335	05/20/25 07:32	GYR8	EET CAL 4
Total/NA	Analysis	6020		20			573673	05/20/25 16:13	P1R	EET CAL 4
	Instrument ID:	ICPMS11								
Total/NA	Prep	7471A			0.49 g	50 mL	573442	05/20/25 10:51	VCN7	EET CAL 4
Total/NA	Analysis	7471A		1			573490	05/20/25 13:22	RL6Q	EET CAL 4
	Instrument ID:	HG7								
Total/NA	Analysis	Moisture		1			572806	05/18/25 09:11	TP6R	EET CAL 4
	Instrument ID:	MOI5								
Total/NA	Analysis	D4464		1			573593	05/24/25 13:48	EL8Q	EET CAL 4
	Instrument ID:	NOEQUIP								

Laboratory References:

EET CAL 4 = Eurofins Calscience Tustin, 2841 Dow Avenue, Tustin, CA 92780, TEL (714)895-5494

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Accreditation/Certification Summary

Client: Pacific EcoRisk Inc
Job ID: 570-230772-1
Project/Site: Berkeley Water Transportation Pier Ferry (Sed)

Laboratory: Eurofins Calscience

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
California	Los Angeles County Sanitation Districts	9257304	07-31-26

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
6020	3050B	Solid	Arsenic
6020	3050B	Solid	Chromium
6020	3050B	Solid	Copper
6020	3050B	Solid	Lead
6020	3050B	Solid	Nickel
6020	3050B	Solid	Zinc
7471A	7471A	Solid	Mercury
8081A	3541	Solid	2,4'-DDD
8081A	3541	Solid	2,4'-DDE
8081A	3541	Solid	2,4'-DDT
8081A	3541	Solid	4,4'-DDD
8081A	3541	Solid	4,4'-DDE
8081A	3541	Solid	4,4'-DDT
8081A	3541	Solid	Aldrin
8081A	3541	Solid	alpha-BHC
8081A	3541	Solid	alpha-Chlordane
8081A	3541	Solid	beta-BHC
8081A	3541	Solid	Chlordane
8081A	3541	Solid	cis-Nonachlor
8081A	3541	Solid	delta-BHC
8081A	3541	Solid	Dieldrin
8081A	3541	Solid	Endosulfan I
8081A	3541	Solid	Endosulfan II
8081A	3541	Solid	Endosulfan sulfate
8081A	3541	Solid	Endrin
8081A	3541	Solid	Endrin aldehyde
8081A	3541	Solid	Endrin ketone
8081A	3541	Solid	gamma-BHC
8081A	3541	Solid	gamma-Chlordane
8081A	3541	Solid	Heptachlor
8081A	3541	Solid	Heptachlor epoxide
8081A	3541	Solid	Oxychlordane
8081A	3541	Solid	Toxaphene
8081A	3541	Solid	trans-Nonachlor
8270C SIM	3541	Solid	1,6,7-Trimethylnaphthalene
8270C SIM	3541	Solid	1-Methylnaphthalene
8270C SIM	3541	Solid	1-Methylphenanthrene
8270C SIM	3541	Solid	2,6-Dimethylnaphthalene
8270C SIM	3541	Solid	2-Methylnaphthalene
8270C SIM	3541	Solid	Acenaphthene
8270C SIM	3541	Solid	Acenaphthylene
8270C SIM	3541	Solid	Anthracene
8270C SIM	3541	Solid	Benzo[a]anthracene
8270C SIM	3541	Solid	Benzo[a]pyrene
8270C SIM	3541	Solid	Benzo[b]fluoranthene

Laboratory: Eurofins Calscience (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8270C SIM	3541	Solid	Benzo[e]pyrene
8270C SIM	3541	Solid	Benzo[g,h,i]perylene
8270C SIM	3541	Solid	Benzo[k]fluoranthene
8270C SIM	3541	Solid	Biphenyl
8270C SIM	3541	Solid	Chrysene
8270C SIM	3541	Solid	Dibenz(a,h)anthracene
8270C SIM	3541	Solid	Dibenzothiophene
8270C SIM	3541	Solid	Fluoranthene
8270C SIM	3541	Solid	Fluorene
8270C SIM	3541	Solid	Indeno[1,2,3-cd]pyrene
8270C SIM	3541	Solid	Naphthalene
8270C SIM	3541	Solid	Perylene
8270C SIM	3541	Solid	Phenanthrene
8270C SIM	3541	Solid	Pyrene
8270C SIM CON	3541	Solid	PCB-101
8270C SIM CON	3541	Solid	PCB-105
8270C SIM CON	3541	Solid	PCB-110
8270C SIM CON	3541	Solid	PCB-118
8270C SIM CON	3541	Solid	PCB-128
8270C SIM CON	3541	Solid	PCB-132/153
8270C SIM CON	3541	Solid	PCB-138/158
8270C SIM CON	3541	Solid	PCB-141
8270C SIM CON	3541	Solid	PCB-149
8270C SIM CON	3541	Solid	PCB-151
8270C SIM CON	3541	Solid	PCB-156
8270C SIM CON	3541	Solid	PCB-170
8270C SIM CON	3541	Solid	PCB-174
8270C SIM CON	3541	Solid	PCB-177
8270C SIM CON	3541	Solid	PCB-18
8270C SIM CON	3541	Solid	PCB-180
8270C SIM CON	3541	Solid	PCB-183
8270C SIM CON	3541	Solid	PCB-187
8270C SIM CON	3541	Solid	PCB-194
8270C SIM CON	3541	Solid	PCB-195
8270C SIM CON	3541	Solid	PCB-201
8270C SIM CON	3541	Solid	PCB-203
8270C SIM CON	3541	Solid	PCB-28
8270C SIM CON	3541	Solid	PCB-31
8270C SIM CON	3541	Solid	PCB-33
8270C SIM CON	3541	Solid	PCB-44
8270C SIM CON	3541	Solid	PCB-49
8270C SIM CON	3541	Solid	PCB-5/8
8270C SIM CON	3541	Solid	PCB-52
8270C SIM CON	3541	Solid	PCB-56
8270C SIM CON	3541	Solid	PCB-60
8270C SIM CON	3541	Solid	PCB-66
8270C SIM CON	3541	Solid	PCB-70

Accreditation/Certification Summary

Client: Pacific EcoRisk Inc
Job ID: 570-230772-1
Project/Site: Berkeley Water Transportation Pier Ferry (Sed)

Laboratory: Eurofins Calscience (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8270C SIM CON	3541	Solid	PCB-74
8270C SIM CON	3541	Solid	PCB-87
8270C SIM CON	3541	Solid	PCB-95
8270C SIM CON	3541	Solid	PCB-97
8270C SIM CON	3541	Solid	PCB-99
D4464		Solid	Clay (less than 0.00391 mm)
D4464		Solid	Coarse Sand (0.5mm to 1mm)
D4464		Solid	Fine Sand (0.125 to 0.25mm)
D4464		Solid	Gravel (greater than 2 mm)
D4464		Solid	Medium Sand (0.25 to 0.5 mm)
D4464		Solid	Silt (0.00391 to 0.0625mm)
D4464		Solid	Total Silt and Clay (0 to 0.0626mm)
D4464		Solid	Very Coarse Sand (1 to 2mm)
D4464		Solid	Very Fine Sand (0.0625 to 0.125 mm)
Moisture		Solid	Percent Solids
Organotins SIM	Organotin Prep	Solid	Dibutyltin
Organotins SIM	Organotin Prep	Solid	Monobutyltin
Organotins SIM	Organotin Prep	Solid	Tetrabutyltin
Organotins SIM	Organotin Prep	Solid	Tributyltin

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	0001.01	11-30-26
A2LA	Dept. of Energy	0001.01	11-30-26
A2LA	ISO/IEC 17025	0001.01	11-30-26
Alabama	State	43200	01-31-26
Alaska	State	PA00009	06-30-25
Alaska (UST)	State	17-027	12-30-26
Arizona	State	AZ0780	03-12-26
Arkansas DEQ	State	88-00660	08-09-25
California	State	2792	01-31-26
Colorado	State	PA00009	06-30-25
Connecticut	State	PH-0746	06-30-25
DE Haz. Subst. Cleanup Act (HSCA)	State	019-006 (PA cert)	01-31-26
Delaware (DW)	State	N/A	01-31-26
Florida	NELAP	E87997	06-30-25
Georgia (DW)	State	C048	01-31-26
Illinois	NELAP	200027	01-31-26
Iowa	State	361	03-01-26
Kansas	NELAP	E-10151	10-31-25
Kentucky (DW)	State	KY90088	12-31-25
Kentucky (UST)	State	0001.01	11-30-26
Kentucky (WW)	State	KY90088	12-31-25
Louisiana (All)	NELAP	02055	06-30-25
Maine	State	2019012	03-12-27

Accreditation/Certification Summary

Client: Pacific EcoRisk Inc
Job ID: 570-230772-1
Project/Site: Berkeley Water Transportation Pier Ferry (Sed)

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Maryland	State	100	06-30-25
Massachusetts	State	M-PA009	06-30-26
Michigan	State	9930	01-31-26
Minnesota	NELAP	042-999-487	12-31-25
Mississippi	State	023	01-31-26
Missouri	State	450	01-31-28
Montana (DW)	State	0098	01-01-26
Nebraska	State	NE-OS-32-17	01-31-26
New Hampshire	NELAP	2730	06-03-25
New Jersey	NELAP	PA011	06-30-25
New York	NELAP	10670	04-01-26
North Carolina (DW)	State	42705	07-31-25
North Carolina (WW/SW)	State	521	12-31-25
North Dakota	State	R-205	01-31-24 *
Oklahoma	NELAP	9804	08-31-25
Oregon	NELAP	PA200001	09-11-25
Pennsylvania	NELAP	36-00037	01-31-26
Quebec Ministry of Environment and Fight against Climate Change	PALA	507	09-16-29
Rhode Island	State	LAO00338	12-30-25
South Carolina	State	89002	01-31-26
Tennessee	State	02838	01-31-26
Texas	NELAP	T104704194-23-46	08-31-25
USDA	US Federal Programs	525-22-298-19481	10-25-25
Vermont	State	VT - 36037	10-28-25
Virginia	NELAP	460182	06-14-26
Washington	State	C457	04-11-26
West Virginia (DW)	State	9906 C	03-31-26
West Virginia DEP	State	055	07-31-25
Wyoming	State	8TMS-L	01-31-26
Wyoming (UST)	A2LA	0001.01	11-30-26

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Method Summary

Client: Pacific EcoRisk Inc
Job ID: 570-230772-1
Project/Site: Berkeley Water Transportation Pier Ferry (Sed)

Method	Method Description	Protocol	Laboratory
8270C SIM	PAHs (GC/MS SIM)	SW846	EET CAL 4
8270C SIM CON	PCB Congeners (GC/MS)	SW846	EET CAL 4
Organotins SIM	Organotins (GC/MS SIM)	Lab SOP	EET CAL 4
8081A	Organochlorine Pesticides (GC)	SW846	EET CAL 4
8290A	Dioxins and Furans (HRGC/HRMS)	SW846	ELLE
6020	Metals (ICP/MS)	SW846	EET CAL 4
7471A	Mercury (CVAA)	SW846	EET CAL 4
Moisture	Percent Moisture	EPA	EET CAL 4
D4464	Particle Size Distribution of Catalytic Material (Laser light scattering)	ASTM	EET CAL 4
3050B	Preparation, Metals	SW846	EET CAL 4
3541	Automated Soxhlet Extraction	SW846	EET CAL 4
7471A	Preparation, Mercury	SW846	EET CAL 4
8290A	Soxhlet Extraction of Dioxins and Furans	SW846	ELLE
Organotin Prep	Extraction (Organotins)	None	EET CAL 4

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

Lab SOP = Laboratory Standard Operating Procedure

None = None

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET CAL 4 = Eurofins Calscience Tustin, 2841 Dow Avenue, Tustin, CA 92780, TEL (714)895-5494

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Sample Summary

Client: Pacific EcoRisk Inc
Job ID: 570-230772-1
Project/Site: Berkeley Water Transportation Pier Ferry (Sed)

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
570-230772-1	BWTPF-2025-DU1	Solid	05/06/25 08:35	05/15/25 09:40
570-230772-2	BWTPF-2025-DU2	Solid	05/06/25 09:35	05/15/25 09:40
570-230772-3	BWTPF-2025-DU3	Solid	05/09/25 06:40	05/15/25 09:40
570-230772-4	BWTPF-2025-DU4	Solid	05/07/25 12:15	05/15/25 09:40
570-230772-5	BWTPF-2025-DU5	Solid	05/07/25 06:30	05/15/25 09:40

EUROFINS CONCORD

Eurofins Calscience CHAIN-OF-CUSTODY RECORD

Pacific EcoRisk
ENVIRONMENTAL CONSULTING & TESTING
2250 Cordelia Rd., Fairfield, CA 94534
(707)207-7760

Client Name:	PER
Client Address:	2250 Cordelia Rd. Faifield, CA 94534
Sampled By:	PER
Phone:	(707) 207-7760
FAX:	(707) 207-7916
Project Manager:	Mike McElroy
Project Name:	Berkeley Water Transportation Pier Ferry
PO Number:	39995

570-230772 Chain of Custody

Loc: 570
230772

REQUESTED ANALYSIS

	Station Code	Client Sample ID	Sample Date	Sample Time	Sample Matrix*	Container Number	Container Type	* See Analyte List
1	BWTPF-2025-DU1	BWTPF-2025-DU1	5/6/25	8:35	Sed	1	poly bag	X
2	BWTPF-2025-DU1	BWTPF-2025-DU1	5/6/25	8:35	Sed	2	glass jar	X
3	BWTPF-2025-DU2	BWTPF-2025-DU2	5/6/25	9:35	Sed	1	poly bag	X
4	BWTPF-2025-DU2	BWTPF-2025-DU2	5/6/25	9:35	Sed	2	glass jar	X
5	BWTPF-2025-DU3	BWTPF-2025-DU3	5/9/25	6:40	Sed	1	poly bag	X
6	BWTPF-2025-DU3	BWTPF-2025-DU3	5/9/25	6:40	Sed	2	glass jar	X
7	BWTPF-2025-DU4	BWTPF-2025-DU4	5/7/25	12:15	Sed	1	poly bag	X
8	BWTPF-2025-DU4	BWTPF-2025-DU4	5/7/25	12:15	Sed	2	glass jar	X
9	BWTPF-2025-DU5	BWTPF-2025-DU5	5/7/25	6:30	Sed	1	poly bag	X
10	BWTPF-2025-DU5	BWTPF-2025-DU5	5/7/25	6:30	Sed	2	glass jar	X

Correct Containers:	Yes	No	
Sample Temperature:	Ambient	Cold	Warm
Sample Preservative:	Yes	No	
Turnaround Time:	STD	Specify:	

Comments:

Standard TAT

Perform duplicate, MS/MSD, etc. on BWTPF-2025-DU1.

RELINQUISHED BY

Signature	Zach Quigley	**Signature:**	N Cachuela
Print:	Zach Quigley	**Print:**	N Cachuela
Organization:	PER	**Organization:**	ECS
DATE:	5/14/25 **TIME:** 1033	**DATE:**	5/14/25 **TIME** 1033

RECEIVED BY

Signature	NCachuela	**Signature:**	
Print:	Noel Cachuela	**Print:**	
Organization:	ECS	**Organization:**	FedEx
DATE:	05/14/25 **TIME:** 1034	**DATE:**	**TIME**

***MATRIX CODES**: (**SED** = Sediment); (**FW** = Freshwater); (**WW** = Wastewater); (**STRMW** = Stormwater)

Rel. By: FedEx

Temp 1.6/2.6 (Bags) Rec'd by: [illegible] 5/15/25 0940
-3.0/-2.0 (Jars)

ANALYTE LIST

Pacific EcoRisk
2250 Cordelia Rd.
Fairfield, CA 94534

Project Proponent: Berkeley BWTPF
Project #: 39995
Site #: BWTPF-2025-DU1, BWTPF-2025-DU2, BWTPF-2025-DU3, BWTPF-2025-DU4, & BWTPF-2025-DU5

ANALYTE	METHOD	TARGETED MRL	ANALYSIS REQUESTED
Solids, Total	SM 2540B/USEPA 160.3	0.10%	X
Total Organic Carbon	EPA 9060	0.10%	X
Grain Size	ASTM D4464/D422	0.10%	X
Arsenic	EPA 6020	2 mg/kg	X
Cadmium	EPA 6020	0.3 mg/kg	X
Chromium	EPA 6020	5 mg/kg	X
Copper	EPA 6020	5 mg/kg	X
Lead	EPA 6020	5 mg/kg	X
Mercury	EPA 7471B	0.02 mg/kg	X
Nickel	EPA 6020	5 mg/kg	X
Selenium	EPA 7742 or EPA 6020B Mod	0.1 mg/kg	X
Silver	EPA 6020	0.2 mg/kg	X
Zinc	EPA 6020	1 mg/kg	X
2,4'-DDD	EPA 8081B	1 µg/kg	X
2,4'-DDE	EPA 8081B	1 µg/kg	X
2,4'-DDT	EPA 8081B	1 µg/kg	X
4,4'-DDD	EPA 8081B	1 µg/kg	X
4,4'-DDE	EPA 8081B	1 µg/kg	X
4,4'-DDT	EPA 8081B	1 µg/kg	X
Total DDTs	EPA 8081B	-	X
Aldrin	EPA 8081B	1 µg/kg	X
alpha-BHC	EPA 8081B	1 µg/kg	X
beta-BHC	EPA 8081B	1 µg/kg	X
gamma-BHC (Lindane)	EPA 8081B	1 µg/kg	X
delta-BHC	EPA 8081B	1 µg/kg	X
Total BHCs	EPA 8081B	-	X
Chlordane	EPA 8081B	20 µg/kg	X
Cis-nonachlor	EPA 8081B	2 µg/kg	X
Alpha Chlrodane	EPA 8081B	2 µg/kg	X
Gamma Chlordane	EPA 8081B	2 µg/kg	X
Trans-nonachlor	EPA 8081B	2 µg/kg	X
Oxychlordane	EPA 8081B	2 µg/kg	X
Heptachlor	EPA 8081B	1 µg/kg	X
Heptachlor epoxide	EPA 8081B	1 µg/kg	X
Total Chlordanes	EPA 8081B	20 µg/kg	X
Dieldrin	EPA 8081B	1 µg/kg	X
Endosulfan I	EPA 8081B	1 µg/kg	X
Endosulfan II	EPA 8081B	1 µg/kg	X
Endosulfan sulfate	EPA 8081B	1 µg/kg	X
Endrin	EPA 8081B	1 µg/kg	X
Endrin aldehyde	EPA 8081B	1 µg/kg	X
Endrin ketone	EPA 8081B	1 µg/kg	X
Toxaphene	EPA 8081B	20 µg/kg	X
PCB 008	EPA 8270C	1 µg/kg	X
PCB 018	EPA 8270C	1 µg/kg	X
PCB 028	EPA 8270C	1 µg/kg	X
PCB 031	EPA 8270C	1 µg/kg	X
PCB 033	EPA 8270C	1 µg/kg	X
PCB 044	EPA 8270C	1 µg/kg	X
PCB 049	EPA 8270C	1 µg/kg	X
PCB 052	EPA 8270C	1 µg/kg	X
PCB 056	EPA 8270C	1 µg/kg	X
PCB 060	EPA 8270C	1 µg/kg	X
PCB 066	EPA 8270C	1 µg/kg	X
PCB 070	EPA 8270C	1 µg/kg	X
PCB 074	EPA 8270C	1 µg/kg	X
PCB 087	EPA 8270C	1 µg/kg	X
PCB 095	EPA 8270C	1 µg/kg	X
PCB 097	EPA 8270C	1 µg/kg	X
PCB 099	EPA 8270C	1 µg/kg	X
PCB 101	EPA 8270C	1 µg/kg	X
PCB 105	EPA 8270C	1 µg/kg	X
PCB 110	EPA 8270C	1 µg/kg	X
PCB 118	EPA 8270C	1 µg/kg	X
PCB 128	EPA 8270C	1 µg/kg	X
PCB 132	EPA 8270C	1 µg/kg	X
PCB 138	EPA 8270C	1 µg/kg	X

EUROFINS CONCORD

ANALYTE LIST

Pacific EcoRisk
2250 Cordelia Rd.
Fairfield, CA 94534

Project Proponent: **Berkeley BWTPF**
Project #: 39995
Site #: BWTPF-2025-DU1, BWTPF-2025-DU2, BWTPF-2025-DU3, BWTPF-2025-DU4, & BWTPF-2025-DU5

ANALYTE	METHOD	TARGETED MRL	ANALYSIS REQUESTED
PCB 141	EPA 8270C	1 µg/kg	X
PCB 149	EPA 8270C	1 µg/kg	X
PCB 151	EPA 8270C	1 µg/kg	X
PCB 153	EPA 8270C	1 µg/kg	X
PCB 156	EPA 8270C	1 µg/kg	X
PCB 158	EPA 8270C	1 µg/kg	X
PCB 170	EPA 8270C	1 µg/kg	X
PCB 174	EPA 8270C	1 µg/kg	X
PCB 177	EPA 8270C	1 µg/kg	X
PCB 180	EPA 8270C	1 µg/kg	X
PCB 183	EPA 8270C	1 µg/kg	X
PCB 187	EPA 8270C	1 µg/kg	X
PCB 194	EPA 8270C	1 µg/kg	X
PCB 195	EPA 8270C	1 µg/kg	X
PCB 201	EPA 8270C	1 µg/kg	X
PCB 203	EPA 8270C	1 µg/kg	X
Total PCBs	EPA 8270C	-	X
Acenaphthalene	EPA 8270C	10 µg/kg	X
Acenaphthylene	EPA 8270C	10 µg/kg	X
Anthracene	EPA 8270C	10 µg/kg	X
Benz(a)anthracene	EPA 8270C	10 µg/kg	X
Benzo(a)pyrene	EPA 8270C	10 µg/kg	X
Benzo(e)pyrene	EPA 8270C	10 µg/kg	X
Benzo(b)fluoranthene	EPA 8270C	10 µg/kg	X
Benzo(g,h,i)perylene	EPA 8270C	10 µg/kg	X
Benzo(k)fluoranthene	EPA 8270C	10 µg/kg	X
Biphenyl	EPA 8270C	10 µg/kg	X
Chrysene	EPA 8270C	10 µg/kg	X
Dibenz(a,h)anthracene	EPA 8270C	10 µg/kg	X
Dibenzothiophene	EPA 8270C	10 µg/kg	X
Dimethylnapthalene 2, 6-	EPA 8270C	10 µg/kg	X
Fluoranthene	EPA 8270C	10 µg/kg	X
Fluorene	EPA 8270C	10 µg/kg	X
Indeno(1,2,3-cd)pyrene	EPA 8270C	10 µg/kg	X
Methylnapthalene, 1-	EPA 8270C	10 µg/kg	X
Methylnapthalene, 2-	EPA 8270C	10 µg/kg	X
Methylphenanthrene, 1-	EPA 8270C	10 µg/kg	X
Naphthalene	EPA 8270C	10 µg/kg	X
Perylene	EPA 8270C	10 µg/kg	X
Phenanthrene	EPA 8270C	10 µg/kg	X
Pyrene	EPA 8270C	10 µg/kg	X
Trimethylnapthalene, 2, 3, 5-	EPA 8270C	10 µg/kg	X
Total PAHs	EPA 8270C	-	X
Mono-Butyltin	Krone 1989	10 µg/kg	X
Di-butyltin	Krone 1989	10 µg/kg	X
Tri-butyltin	Krone 1989	10 µg/kg	X
Tetra-butyltin	Krone 1989	10 µg/kg	X
Total Butyltins	Krone 1989	10 µg/kg	X
Dioxins/Furans	EPA 8290	1 ng/kg	X

QA/QC
Standard TAT.
Samples frozen (except TOC & grain size).
Perform duplicate, MS/MSD, etc. on BWTPF-2025-DU1.
If you have any questions regarding this request as checked, please call Jeff Cotsifas at (707)207-7760

EUROFINS CONCORD

Eurofins Calscience
2841 Dow Avenue, Suite 100
Tustin, CA 92780
Phone: 714-895-5494

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler: N/A	Lab PM: Hollowell, Carla	Carrier Tracking No(s): N/A	COC No: 570-445037.1
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail: Carla.Hollowell@et.eurofinsus.com	State of Origin: California	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): Los Angeles County Sanitation Di - California		Job #: 570-230772-1
Address: 4955 Yarrow Street, ,	Due Date Requested: 5/28/2025			
City: Arvada	TAT Requested (days): N/A			
State, Zip: CO, 80002				
Phone: 303-736-0100(Tel) 303-431-7171(Fax)	PO #: N/A			
Email: N/A	WO #: N/A			
Project Name: Berkeley Water Transportation Pier Ferry (Sed)	Project #: 57000505			
Site: N/A	SSOW#: N/A			

Analysis Requested

Preservation Codes: -

Other: N/A

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	90060A/ Solids - TOC	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
BWTPF-2025-DU1 (570-230772-1)	5/6/25	08:35 Pacific	G	Solid			X	1	
BWTPF-2025-DU1 (570-230772-1MS)	5/6/25	08:35 Pacific	G	Solid			X	1	
BWTPF-2025-DU1 (570-230772-1MSD)	5/6/25	08:35 Pacific	G	Solid			X	1	
BWTPF-2025-DU2 (570-230772-2)	5/6/25	09:35 Pacific	G	Solid			X	1	
BWTPF-2025-DU3 (570-230772-3)	5/9/25	06:40 Pacific	G	Solid			X	1	
BWTPF-2025-DU4 (570-230772-4)	5/7/25	12:15 Pacific	G	Solid			X	1	
BWTPF-2025-DU5 (570-230772-5)	5/7/25	06:30 Pacific	G	Solid			X	1	

Note: Since laboratory accreditations are subject to change, Eurofins Calscience places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Calscience laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Calscience attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Calscience.

Possible Hazard Identification	*Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:
Empty Kit Relinquished by:	Date: Time: Method of Shipment:

Relinquished by:	Date/Time: 5-16 11-	Company EC	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Eurofins Calscience
2841 Dow Avenue, Suite 100
Tustin, CA 92780
Phone: 714-895-5494

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler: N/A	Lab PM: Hollowell, Carla	Carrier Tracking No(s): N/A	COC No: 570-445062.1
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail: Carla.Hollowell@et.eurofinsus.com	State of Origin: California	Page: Page 1 of 1
Company: Eurofins Lancaster Laboratories Environm		Accreditations Required (See note): Los Angeles County Sanitation Di - California		Job #: 570-230772-1
Address: 2425 New Holland Pike, ,	Due Date Requested: 6/6/2025			
City: Lancaster	TAT Requested (days): N/A			
State, Zip: PA, 17601				
Phone: 717-656-2300(Tel)	PO #: N/A			
Email: N/A	WO #: N/A			
Project Name: Berkeley Water Transportation Pier Ferry (Sed)	Project #: 57000505			
Site: N/A	SSOW#: N/A			

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8290A/8290_P_Sox 8290 17 + Totals	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
BWTPF-2025-DU1 (570-230772-1)	5/6/25	08:35 Pacific	G	Solid			X	1	Sediment HT = 6 mo from collection date; remove H qualifier from data before
BWTPF-2025-DU1 (570-230772-1MS)	5/6/25	08:35 Pacific	G	Solid			X	1	Sediment HT = 6 mo from collection date; remove H qualifier from data before
BWTPF-2025-DU1 (570-230772-1MSD)	5/6/25	08:35 Pacific	G	Solid			X	1	Sediment HT = 6 mo from collection date; remove H qualifier from data before
BWTPF-2025-DU2 (570-230772-2)	5/6/25	09:35 Pacific	G	Solid			X	1	Sediment HT = 6 mo from collection date; remove H qualifier from data before
BWTPF-2025-DU3 (570-230772-3)	5/9/25	06:40 Pacific	G	Solid			X	1	Sediment HT = 6 mo from collection date; remove H qualifier from data before
BWTPF-2025-DU4 (570-230772-4)	5/7/25	12:15 Pacific	G	Solid			X	1	Sediment HT = 6 mo from collection date; remove H qualifier from data before
BWTPF-2025-DU5 (570-230772-5)	5/7/25	06:30 Pacific	G	Solid			X	1	Sediment HT = 6 mo from collection date; remove H qualifier from data before

Preservation Codes: -

Other: N/A

Analysis Requested

Note: Since laboratory accreditations are subject to change, Eurofins Calscience places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Calscience laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Calscience attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Calscience.

Possible Hazard Identification	*Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time: 5-16 12-	Company EC	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Eurofins Calscience
2841 Dow Avenue, Suite 100
Tustin, CA 92780
Phone: 714-895-5494

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler: N/A	Lab PM: Hollowell, Carla	Carrier Tracking No(s): N/A	COC No: 570-445088.1
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail: Carla.Hollowell@et.eurofinsus.com	State of Origin: California	Page: Page 1 of 1
Company: Eurofins Environment Testing Northwest L		Accreditations Required (See note): Los Angeles County Sanitation Di - California		Job #: 570-230772-1
Address: 5755 8th Street East, ,	Due Date Requested: 6/5/2025			Preservation Codes: -
City: Tacoma	TAT Requested (days): N/A			
State, Zip: WA, 98424				
Phone: 253-922-2310(Tel)	PO #: N/A			
Email: N/A	WO #: N/A			
Project Name: Berkeley Water Transportation Pier Ferry (Sed)	Project #: 57000505			
Site: N/A	SSOW#: N/A			Other: N/A

Analysis Requested

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020B_ULL/3051A (MOD) Local Method	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
BWTPF-2025-DU1 (570-230772-1)	5/6/25	08:35 Pacific	G	Solid			X	1	
BWTPF-2025-DU1 (570-230772-1MS)	5/6/25	08:35 Pacific	G	Solid			X	1	
BWTPF-2025-DU1 (570-230772-1MSD)	5/6/25	08:35 Pacific	G	Solid			X	1	
BWTPF-2025-DU2 (570-230772-2)	5/6/25	09:35 Pacific	G	Solid			X	1	
BWTPF-2025-DU3 (570-230772-3)	5/9/25	06:40 Pacific	G	Solid			X	1	
BWTPF-2025-DU4 (570-230772-4)	5/7/25	12:15 Pacific	G	Solid			X	1	
BWTPF-2025-DU5 (570-230772-5)	5/7/25	06:30 Pacific	G	Solid			X	1	

Note: Since laboratory accreditations are subject to change, Eurofins Calscience places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Calscience laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Calscience attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Calscience.

Possible Hazard Identification	*Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	5-16 13	EC			
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

ORIGIN ID:CCRA (925) 786-8606
EUROFINS CONCORD
EUROFINS SOUTHWEST CONCORD
5063 COMMERCIAL CIR
SUITE H
CONCORD, CA 94520
UNITED STATES US

SHIP DATE: 07MAY25
ACTWGT: 23.00 LB
CAD: 258088030/INET4535
DIMS: 24x12x12 IN

BILL RECIPIENT

TO **SAMPLE CONTROL**
EUROFINS CALSCIENCE
2841 DOW AVENUE
SUITE 100
TUSTIN CA 92780
(714) 895-5494 REF:
INV:
PO: DEPT:

58CJ3/630D/C6C4

FedEx Express

12 of 30

MPS# 0263 8810 8781 8766
Mstr# 8810 8781 8652

THU - 08 MAY 10:30A
PRIORITY OVERNIGHT

0201

92780
CA-US SNA

92 DTHA

570-230772 Waybill

After printing this label:
CONSIGNEE COPY - PLEASE PLACE IN FRONT OF POUCH
1. Fold the printed page along the horizontal line.
2. Place label in shipping pouch and affix it to your shipment.

Eurofins Calscience
2841 Dow Avenue, Suite 100
Tustin, CA 92780
Phone: 714-895-5494

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler: N/A	Lab PM: Hollowell, Carla	Carrier Tracking No(s): N/A	COC No: 570-445037.1
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail: Carla.Hollowell@et.eurofinsus.com	State of Origin: California	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): Los Angeles County Sanitation Di - California		Job #: 570-230772-1
Address: 4955 Yarrow Street, ,	Due Date Requested: 5/28/2025			Preservation Codes: -
City: Arvada	TAT Requested (days): N/A			
State, Zip: CO, 80002				
Phone: 303-736-0100(Tel) 303-431-7171(Fax)	PO #: N/A			
Email: N/A	WO #: N/A			
Project Name: Berkeley Water Transportation Pier Ferry (Sed)	Project #: 57000505			
Site: N/A	SSOW#: N/A			Other: N/A

Analysis Requested

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9060A/ Solids - TOC	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
BWTPF-2025-DU1 (570-230772-1)	5/6/25	08:35 Pacific	G	Solid			X	1	
BWTPF-2025-DU1 (570-230772-1MS)	5/6/25	08:35 Pacific	G	Solid			X	1	
BWTPF-2025-DU1 (570-230772-1MSD)	5/6/25	08:35 Pacific	G	Solid			X	1	
BWTPF-2025-DU2 (570-230772-2)	5/6/25	09:35 Pacific	G	Solid			X	1	
BWTPF-2025-DU3 (570-230772-3)	5/9/25	06:40 Pacific	G	Solid			X	1	
BWTPF-2025-DU4 (570-230772-4)	5/7/25	12:15 Pacific	G	Solid			X	1	
BWTPF-2025-DU5 (570-230772-5)	5/7/25	06:30 Pacific	G	Solid			X	1	

Note: Since laboratory accreditations are subject to change, Eurofins Calscience places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Calscience laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Calscience attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Calscience.

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1		5.16 11-	EC		5/17/25 0950	EETDEN
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 0.0° CF0.2 IR PABU

Ver: 10/10/2024

Eurofins Calscience
2841 Dow Avenue, Suite 100
Tustin, CA 92780
Phone: 714-895-5494

Chain of Custody Record

eurofins | Environment Testing

6/11/2025

Client Information (Sub Contract Lab)	Sampler: N/A	Lab PM: Hollowell, Carla	Carrier Tracking No(s): N/A	COC No: 570-445088.1
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail: Carla.Hollowell@et.eurofinsus.com	State of Origin: California	Page: Page 1 of 1
Company: Eurofins Environment Testing Northwest L		Accreditations Required (See note): Los Angeles County Sanitation Di - California		Job #: 570-230772-1
Address: 5755 8th Street East, ,	Due Date Requested: 6/5/2025			Preservation Codes: -
City: Tacoma	TAT Requested (days): N/A			
State, Zip: WA, 98424				
Phone: 253-922-2310(Tel)	PO #: N/A			
Email: N/A	WO #: N/A			
Project Name: Berkeley Water Transportation Pier Ferry (Sed)	Project #: 57000505			
Site: N/A	SSOW#: N/A			Other: N/A

Analysis Requested

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020B_ULL/3051A (MOD) Local Method	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
BWTPF-2025-DU1 (570-230772-1)	5/6/25	08:35 Pacific	G	Solid			X		
BWTPF-2025-DU1 (570-230772-1MS)	5/6/25	08:35 Pacific	G	Solid			X		
BWTPF-2025-DU1 (570-230772-1MSD)	5/6/25	08:35 Pacific	G	Solid			X		
BWTPF-2025-DU2 (570-230772-2)	5/6/25	09:35 Pacific	G	Solid			X		
BWTPF-2025-DU3 (570-230772-3)	5/9/25	06:40 Pacific	G	Solid			X		
BWTPF-2025-DU4 (570-230772-4)	5/7/25	12:15 Pacific	G	Solid			X		
BWTPF-2025-DU5 (570-230772-5)	5/7/25	06:30 Pacific	G	Solid			X		

Note: Since laboratory accreditations are subject to change, Eurofins Calscience places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under ... maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Calscience laboratory or other instructions will be provided. Any changes to ac... attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Calscience.

Therm. ID: SC01 Cust. Seal: (Y) / N
Uncorr./Corr. Temp: 4.1 / 3.3 °C
Delivery: UPS / FedEx / Other: ____
Ice Type: Blue / Dry / (Wet) / None
Label Ver.: ____ Packing: B

Possible Hazard Identification Unconfirmed 4596 3971 8526	*Sample Disposal (A fee may be assessed if samples ar...* ☐ *Return To Client* ☐ *Disposal By Lab* ☐
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time: 5-16 13	Company EC	Received by:	Date/Time: 5/17/25 9:10	Company ELIN
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 10/10/2024

Eurofins Calscience
2841 Dow Avenue, Suite 100
Tustin, CA 92780
Phone: 714-895-5494

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler: N/A	Lab PM: Hollowell, Carla	Carrier Tracking No(s): N/A	COC No: 570-445062.1
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail: Carla.Hollowell@et.eurofinsus.com	State of Origin: California	Page: Page 1 of 1
Company: Eurofins Lancaster Laboratories Environm		Accreditations Required (See note): Los Angeles County Sanitation Di - California		Job #: 570-230772-1
Address: 2425 New Holland Pike, ,	Due Date Requested: 6/6/2025			Preservation Codes: -
City: Lancaster	TAT Requested (days): N/A			
State, Zip: PA, 17601				
Phone: 717-656-2300(Tel)	PO #: N/A			
Email: N/A	WO #: N/A			
Project Name: Berkeley Water Transportation Pier Ferry (Sed)	Project #: 57000505			
Site: N/A	SSOW#: N/A			Other: N/A

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8290A/8290_P_Sox 8290 17 + Totals	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
BWTPF-2025-DU1 (570-230772-1)	5/6/25	08:35 Pacific	G	Solid			X	1	Sediment HT = 6 mo from collection date; remove H qualifier from data before
BWTPF-2025-DU1 (570-230772-1MS)	5/6/25	08:35 Pacific	G	Solid			X	1	Sediment HT = 6 mo from collection date; remove H qualifier from data before
BWTPF-2025-DU1 (570-230772-1MSD)	5/6/25	08:35 Pacific	G	Solid			X	1	Sediment HT = 6 mo from collection date; remove H qualifier from data before
BWTPF-2025-DU2 (570-230772-2)	5/6/25	09:35 Pacific	G	Solid			X	1	Sediment HT = 6 mo from collection date; remove H qualifier from data before
BWTPF-2025-DU3 (570-230772-3)	5/9/25	06:40 Pacific	G	Solid			X	1	Sediment HT = 6 mo from collection date; remove H qualifier from data before
BWTPF-2025-DU4 (570-230772-4)	5/7/25	12:15 Pacific	G	Solid			X	1	Sediment HT = 6 mo from collection date; remove H qualifier from data before
BWTPF-2025-DU5 (570-230772-5)	5/7/25	06:30 Pacific	G	Solid			X	1	Sediment HT = 6 mo from collection date; remove H qualifier from data before

Note: Since laboratory accreditations are subject to change, Eurofins Calscience places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Calscience laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Calscience attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Calscience.

Possible Hazard Identification: Unconfirmed	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): ☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time: 5-16 12-	Company EC	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time: 5/17/25 0930	Company

Custody Seals Intact: ~~Δ Yes~~ Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: R:4.5 C:4.4

Login Sample Receipt Checklist

Client: Pacific EcoRisk Inc

Job Number: 570-230772-1

Login Number: 230772

List Source: Eurofins Calscience

List Number: 1

Creator: Cruise, Noel

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

This receipt checklist is generated for all samples received in this Login. It may not be applicable to all Jobs associated with this Login.

Login Sample Receipt Checklist

Client: Pacific EcoRisk Inc

Job Number: 570-230772-1

Login Number: 230772
List Number: 3
Creator: Reynolds, Benjamin

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC
List Creation: 05/17/25 08:13 PM

Question	Answer	Comment
The cooler's custody seal is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature acceptable,where thermal pres is required(</=6C, not frozen).	True	
Cooler Temperature is recorded.	True	
WV:Container Temp acceptable,where thermal pres is required (</=6C, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
Sample custody seals are intact.	N/A	
VOA sample vials do not have headspace >6mm in diameter (none, if from WV)?	N/A	

This receipt checklist is generated for all samples received in this Login. It may not be applicable to all Jobs associated with this Login.

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ANALYTICAL REPORT

PREPARED FOR

Attn: Jeff Cotsifas
Pacific EcoRisk Inc
2250 Cordelia Rd
Fairfield, California 94534

Generated 6/4/2025 10:22:13 AM

JOB DESCRIPTION

Berkeley Water Transportation Pier Ferry (Sed)

JOB NUMBER

570-230772-2

Eurofins Calscience
2841 Dow Avenue, Suite 100
Tustin CA 92780

See page two for job notes and contact information.

my EOL

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Calscience Project Manager.

Authorization



Generated
6/4/2025 10:22:13 AM

Authorized for release by
Carla Hollowell, Project Manager I
Carla.Hollowell@et.eurofinsus.com
(714)895-5494

Table of Contents

Cover Page 1
Table of Contents 3
Definitions/Glossary 4
Case Narrative 5
Client Sample Results 6
QC Sample Results 8
QC Association Summary 10
Lab Chronicle 11
Certification Summary 13
Method Summary 15
Sample Summary 16
Chain of Custody 17
Receipt Checklists 24

Definitions/Glossary

Client: Pacific EcoRisk Inc
Job ID: 570-230772-2
Project/Site: Berkeley Water Transportation Pier Ferry (Sed)

Qualifiers

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 570-230772-2 Eurofins Calscience

Job Narrative
570-230772-2

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

The samples were frozen after collection (prior to holding time expiration and/or pursuant to information obtained from the client) at -18C, and remained frozen until the laboratory was ready to prepare the samples for analysis. Eurofins Calscience, Inc. follows SWAMP criteria and the Puget Sound Protocol (USEPA/PSWQAT, 1997, Table 2) for holding times in marine tissues and / or sediment samples, which states holding times may be extended up to six months to one year (two years for metals) for most analyses if stored frozen at -18C after collection. Therefore, the sample results have not been flagged as exceeding the EPA Method recommended holding times.

Receipt
The samples were received on 5/15/2025 9:40 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were -2.0°C and 2.6°C.

Metals
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

General Chemistry
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Client: Pacific EcoRisk Inc
Job ID: 570-230772-2
Project/Site: Berkeley Water Transportation Pier Ferry (Sed)

Method: SW846 6020B - Metals (ICP/MS)

Client Sample ID: BWTPF-2025-DU1
Date Collected: 05/06/25 08:35
Date Received: 05/15/25 09:40
Lab Sample ID: 570-230772-1
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ag	0.181		0.0313	0.00250	mg/Kg	☼	05/20/25 19:34	05/23/25 20:01	1
Se	0.321	J	0.501	0.119	mg/Kg	☼	05/20/25 19:34	05/23/25 20:01	1
Cd	0.182		0.0313	0.00548	mg/Kg	☼	05/20/25 19:34	05/23/25 20:01	1

Client Sample ID: BWTPF-2025-DU2
Date Collected: 05/06/25 09:35
Date Received: 05/15/25 09:40
Lab Sample ID: 570-230772-2
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ag	0.148		0.0323	0.00259	mg/Kg	☼	05/20/25 19:34	05/23/25 20:12	1
Se	0.331	J	0.517	0.123	mg/Kg	☼	05/20/25 19:34	05/23/25 20:12	1
Cd	0.176		0.0323	0.00566	mg/Kg	☼	05/20/25 19:34	05/23/25 20:12	1

Client Sample ID: BWTPF-2025-DU3
Date Collected: 05/09/25 06:40
Date Received: 05/15/25 09:40
Lab Sample ID: 570-230772-3
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ag	0.193		0.0370	0.00296	mg/Kg	☼	05/20/25 19:34	05/23/25 20:23	1
Se	0.338	J	0.592	0.141	mg/Kg	☼	05/20/25 19:34	05/23/25 20:23	1
Cd	0.239		0.0370	0.00648	mg/Kg	☼	05/20/25 19:34	05/23/25 20:23	1

Client Sample ID: BWTPF-2025-DU4
Date Collected: 05/07/25 12:15
Date Received: 05/15/25 09:40
Lab Sample ID: 570-230772-4
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ag	0.208		0.0325	0.00260	mg/Kg	☼	05/20/25 19:34	05/23/25 20:27	1
Se	0.276	J	0.521	0.124	mg/Kg	☼	05/20/25 19:34	05/23/25 20:27	1
Cd	0.135		0.0325	0.00570	mg/Kg	☼	05/20/25 19:34	05/23/25 20:27	1

Client Sample ID: BWTPF-2025-DU5
Date Collected: 05/07/25 06:30
Date Received: 05/15/25 09:40
Lab Sample ID: 570-230772-5
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ag	0.176		0.0318	0.00255	mg/Kg	☼	05/20/25 19:34	05/23/25 20:30	1
Se	0.257	J	0.510	0.121	mg/Kg	☼	05/20/25 19:34	05/23/25 20:30	1
Cd	0.224		0.0318	0.00557	mg/Kg	☼	05/20/25 19:34	05/23/25 20:30	1

General Chemistry

Client Sample ID: BWTPF-2025-DU1
Date Collected: 05/06/25 08:35
Date Received: 05/15/25 09:40
Lab Sample ID: 570-230772-1
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon (SW846 9060A)	0.697		0.400	0.250	%			05/22/25 15:17	1

Client Sample ID: BWTPF-2025-DU2
Date Collected: 05/06/25 09:35
Date Received: 05/15/25 09:40
Lab Sample ID: 570-230772-2
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon (SW846 9060A)	0.780		0.400	0.250	%			05/22/25 15:49	1

Client Sample ID: BWTPF-2025-DU3
Date Collected: 05/09/25 06:40
Date Received: 05/15/25 09:40
Lab Sample ID: 570-230772-3
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon (SW846 9060A)	0.810		0.400	0.250	%			05/22/25 15:59	1

Client Sample ID: BWTPF-2025-DU4
Date Collected: 05/07/25 12:15
Date Received: 05/15/25 09:40
Lab Sample ID: 570-230772-4
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon (SW846 9060A)	0.710		0.400	0.250	%			05/22/25 16:10	1

Client Sample ID: BWTPF-2025-DU5
Date Collected: 05/07/25 06:30
Date Received: 05/15/25 09:40
Lab Sample ID: 570-230772-5
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon (SW846 9060A)	0.585		0.400	0.250	%			05/22/25 16:24	1

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 350-6926/1-A
Matrix: Solid
Analysis Batch: 7073

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 6926

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ag	ND		0.0200	0.00160	mg/Kg		05/20/25 19:34	05/23/25 19:50	1
Se	ND		0.320	0.0760	mg/Kg		05/20/25 19:34	05/23/25 19:50	1
Cd	ND		0.0200	0.00350	mg/Kg		05/20/25 19:34	05/23/25 19:50	1

Lab Sample ID: LCS 350-6926/2-A
Matrix: Solid
Analysis Batch: 7073

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 6926

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ag	2.00	1.955		mg/Kg		98	80 - 120
Se	10.0	9.603		mg/Kg		96	80 - 120
Cd	2.00	1.846		mg/Kg		92	80 - 120

Lab Sample ID: LCSD 350-6926/3-A
Matrix: Solid
Analysis Batch: 7073

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 6926

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Ag	2.00	1.985		mg/Kg		99	80 - 120	2	20
Se	10.0	9.678		mg/Kg		97	80 - 120	1	20
Cd	2.00	1.881		mg/Kg		94	80 - 120	2	20

Lab Sample ID: 570-230772-1 MS
Matrix: Solid
Analysis Batch: 7073

Client Sample ID: BWTPF-2025-DU1
Prep Type: Total/NA
Prep Batch: 6926

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ag	0.181		3.07	3.197		mg/Kg	☼	98	75 - 125
Se	0.321	J	15.3	15.44		mg/Kg	☼	99	75 - 125
Cd	0.182		3.07	3.028		mg/Kg	☼	93	75 - 125

Lab Sample ID: 570-230772-1 MSD
Matrix: Solid
Analysis Batch: 7073

Client Sample ID: BWTPF-2025-DU1
Prep Type: Total/NA
Prep Batch: 6926

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Ag	0.181		3.13	3.375		mg/Kg	☼	102	75 - 125	5	20
Se	0.321	J	15.6	15.81		mg/Kg	☼	99	75 - 125	2	20
Cd	0.182		3.13	3.239		mg/Kg	☼	98	75 - 125	7	20

Method: 9060A - Organic Carbon, Total (TOC)

Lab Sample ID: MB 280-697174/4
Matrix: Solid
Analysis Batch: 697174

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		0.400	0.250	%			05/22/25 15:04	1

Method: 9060A - Organic Carbon, Total (TOC) (Continued)

Lab Sample ID: LCS 280-697174/3
Matrix: Solid
Analysis Batch: 697174

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Organic Carbon	0.325	ND		%		72	41 - 120

Lab Sample ID: 570-230772-1 MS
Matrix: Solid
Analysis Batch: 697174

Client Sample ID: BWTPF-2025-DU1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Total Organic Carbon	0.697		1.20	1.838		%		95	41 - 120

Lab Sample ID: 570-230772-1 MSD
Matrix: Solid
Analysis Batch: 697174

Client Sample ID: BWTPF-2025-DU1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Total Organic Carbon	0.697		1.20	1.863		%		97	41 - 120	1	20

QC Association Summary

Client: Pacific EcoRisk Inc
Job ID: 570-230772-2
Project/Site: Berkeley Water Transportation Pier Ferry (Sed)

Metals

Prep Batch: 6926

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-230772-1	BWTPF-2025-DU1	Total/NA	Solid	3051A	
570-230772-2	BWTPF-2025-DU2	Total/NA	Solid	3051A	
570-230772-3	BWTPF-2025-DU3	Total/NA	Solid	3051A	
570-230772-4	BWTPF-2025-DU4	Total/NA	Solid	3051A	
570-230772-5	BWTPF-2025-DU5	Total/NA	Solid	3051A	
MB 350-6926/1-A	Method Blank	Total/NA	Solid	3051A	
LCS 350-6926/2-A	Lab Control Sample	Total/NA	Solid	3051A	
LCSD 350-6926/3-A	Lab Control Sample Dup	Total/NA	Solid	3051A	
570-230772-1 MS	BWTPF-2025-DU1	Total/NA	Solid	3051A	
570-230772-1 MSD	BWTPF-2025-DU1	Total/NA	Solid	3051A	

Analysis Batch: 7073

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-230772-1	BWTPF-2025-DU1	Total/NA	Solid	6020B	6926
570-230772-2	BWTPF-2025-DU2	Total/NA	Solid	6020B	6926
570-230772-3	BWTPF-2025-DU3	Total/NA	Solid	6020B	6926
570-230772-4	BWTPF-2025-DU4	Total/NA	Solid	6020B	6926
570-230772-5	BWTPF-2025-DU5	Total/NA	Solid	6020B	6926
MB 350-6926/1-A	Method Blank	Total/NA	Solid	6020B	6926
LCS 350-6926/2-A	Lab Control Sample	Total/NA	Solid	6020B	6926
LCSD 350-6926/3-A	Lab Control Sample Dup	Total/NA	Solid	6020B	6926
570-230772-1 MS	BWTPF-2025-DU1	Total/NA	Solid	6020B	6926
570-230772-1 MSD	BWTPF-2025-DU1	Total/NA	Solid	6020B	6926

General Chemistry

Analysis Batch: 697174

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-230772-1	BWTPF-2025-DU1	Total/NA	Solid	9060A	
570-230772-2	BWTPF-2025-DU2	Total/NA	Solid	9060A	
570-230772-3	BWTPF-2025-DU3	Total/NA	Solid	9060A	
570-230772-4	BWTPF-2025-DU4	Total/NA	Solid	9060A	
570-230772-5	BWTPF-2025-DU5	Total/NA	Solid	9060A	
MB 280-697174/4	Method Blank	Total/NA	Solid	9060A	
LCS 280-697174/3	Lab Control Sample	Total/NA	Solid	9060A	
570-230772-1 MS	BWTPF-2025-DU1	Total/NA	Solid	9060A	
570-230772-1 MSD	BWTPF-2025-DU1	Total/NA	Solid	9060A	

Lab Chronicle

Client: Pacific EcoRisk Inc
Job ID: 570-230772-2
Project/Site: Berkeley Water Transportation Pier Ferry (Sed)

Client Sample ID: BWTPF-2025-DU1
Lab Sample ID: 570-230772-1
Date Collected: 05/06/25 08:35
Matrix: Solid
Date Received: 05/15/25 09:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3051A			0.2680 g	50 mL	6926	05/20/25 19:34	JS	EET SSM
Total/NA	Analysis	6020B		1			7073	05/23/25 20:01	COW	EET SSM
	Instrument ID: ICPMS9									
Total/NA	Analysis	9060A		1	99.8 mg	99.8 mg	697174	05/22/25 15:17	GMW	EET DEN
	Instrument ID: WC_SHI6									

Client Sample ID: BWTPF-2025-DU2
Lab Sample ID: 570-230772-2
Date Collected: 05/06/25 09:35
Matrix: Solid
Date Received: 05/15/25 09:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3051A			0.2718 g	50 mL	6926	05/20/25 19:34	JS	EET SSM
Total/NA	Analysis	6020B		1			7073	05/23/25 20:12	COW	EET SSM
	Instrument ID: ICPMS9									
Total/NA	Analysis	9060A		1	99.9 mg	99.9 mg	697174	05/22/25 15:49	GMW	EET DEN
	Instrument ID: WC_SHI6									

Client Sample ID: BWTPF-2025-DU3
Lab Sample ID: 570-230772-3
Date Collected: 05/09/25 06:40
Matrix: Solid
Date Received: 05/15/25 09:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3051A			0.2524 g	50 mL	6926	05/20/25 19:34	JS	EET SSM
Total/NA	Analysis	6020B		1			7073	05/23/25 20:23	COW	EET SSM
	Instrument ID: ICPMS9									
Total/NA	Analysis	9060A		1	99.9 mg	99.9 mg	697174	05/22/25 15:59	GMW	EET DEN
	Instrument ID: WC_SHI6									

Client Sample ID: BWTPF-2025-DU4
Lab Sample ID: 570-230772-4
Date Collected: 05/07/25 12:15
Matrix: Solid
Date Received: 05/15/25 09:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3051A			0.2635 g	50 mL	6926	05/20/25 19:34	JS	EET SSM
Total/NA	Analysis	6020B		1			7073	05/23/25 20:27	COW	EET SSM
	Instrument ID: ICPMS9									
Total/NA	Analysis	9060A		1	100.0 mg	100.0 mg	697174	05/22/25 16:10	GMW	EET DEN
	Instrument ID: WC_SHI6									

Lab Chronicle

Client: Pacific EcoRisk Inc
Job ID: 570-230772-2
Project/Site: Berkeley Water Transportation Pier Ferry (Sed)

Client Sample ID: BWTPF-2025-DU5
Lab Sample ID: 570-230772-5
Date Collected: 05/07/25 06:30
Matrix: Solid
Date Received: 05/15/25 09:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3051A			0.2520 g	50 mL	6926	05/20/25 19:34	JS	EET SSM
Total/NA	Analysis	6020B		1			7073	05/23/25 20:30	COW	EET SSM
	Instrument ID: ICPMS9									
Total/NA	Analysis	9060A		1	100.0 mg	100.0 mg	697174	05/22/25 16:24	GMW	EET DEN
	Instrument ID: WC_SHI6									

Laboratory References:

EET DEN = Eurofins Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

EET SSM = Eurofins Seattle Specialty Metals, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Accreditation/Certification Summary

Client: Pacific EcoRisk Inc
Job ID: 570-230772-2
Project/Site: Berkeley Water Transportation Pier Ferry (Sed)

Laboratory: Eurofins Denver

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	2907.01	10-31-26
A2LA	ISO/IEC 17025	2907.01	10-31-26
Alabama	State Program	40730	09-30-12 *
Alaska (UST)	State	18-001	11-30-25
Arizona	State	AZ0713	12-20-25
Arkansas DEQ	State	88-00687	04-02-26
California	State	2513	01-08-26
Colorado	Petroleum Storage Tank Program	2907.01 (A2LA)	10-31-26
Colorado	State	CO00026	06-30-25
Connecticut	State	PH-0686	09-30-26
Florida	NELAP	E87667	06-30-25
Georgia	State	4025	01-08-26
Illinois	NELAP	200017	05-31-26
Iowa	State	370	12-01-26
Kansas	NELAP	E-10166	06-01-25
Kentucky (WW)	State	KY98047	12-31-25
Louisiana	NELAP	30785	06-30-14 *
Louisiana (All)	NELAP	30785	06-30-25
Minnesota	NELAP	1788752	12-31-25
Montana (DW)	State	CERT0117	01-01-26
Nevada	State	CO00026	07-31-25
New Hampshire	NELAP	2053	04-28-26
New Jersey	NELAP	230001	06-30-25
New York	NELAP	11964	04-01-26
North Dakota	State	R-034	01-08-25 *
Oklahoma	NELAP	8614	08-31-25
Oregon	NELAP	4025	01-08-26
Pennsylvania	NELAP	68-00664	07-31-25
South Carolina	State	72002001	01-18-25 *
Texas	NELAP	TX104704183-08-TX	09-30-09 *
Texas	NELAP	T104704183	09-30-25
US Fish & Wildlife	US Federal Programs	058448	07-31-25
USDA	US Federal Programs	P330-20-00065	12-19-25
Utah	NELAP	QUAN5	06-30-13 *
Utah	NELAP	CO00026	07-31-25
Virginia	NELAP	460232	06-14-25
Washington	State	C583	08-03-25
West Virginia DEP	State	354	11-30-25
Wisconsin	State	999615430	08-31-25
Wyoming (UST)	A2LA	2907.01	10-31-26

Laboratory: Eurofins Seattle Specialty Metals

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-004	02-19-27
ANAB	Dept. of Defense ELAP	L2236	01-19-27
ANAB	Dept. of Energy	L2236.01	01-19-27
ANAB	ISO/IEC 17025	L2236	01-19-27
California	State	2954	07-08-26

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Accreditation/Certification Summary

Client: Pacific EcoRisk Inc
Job ID: 570-230772-2
Project/Site: Berkeley Water Transportation Pier Ferry (Sed)

Laboratory: Eurofins Seattle Specialty Metals (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Florida	NELAP	E87575	06-30-25
Louisiana (All)	NELAP	03073	06-30-25
Maine	State	WA01273	05-02-26
New Jersey	NELAP	WA014	06-30-25
New York	NELAP	11662	04-01-26
Oregon	NELAP	4167-008	07-07-25
US Fish & Wildlife	US Federal Programs	A20571	06-30-25
USDA	US Federal Programs	525-23-4-22573	01-24-28
Washington	State	C788-23a	07-13-25
Wisconsin	State	399133460	07-31-25

Method Summary

Client: Pacific EcoRisk Inc
Job ID: 570-230772-2
Project/Site: Berkeley Water Transportation Pier Ferry (Sed)

Method	Method Description	Protocol	Laboratory
6020B	Metals (ICP/MS)	SW846	EET SSM
9060A	Organic Carbon, Total (TOC)	SW846	EET DEN
3051A	Preparation, Metals, Microwave Assisted	SW846	EET SSM

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET DEN = Eurofins Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

EET SSM = Eurofins Seattle Specialty Metals, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Sample Summary

Client: Pacific EcoRisk Inc
Job ID: 570-230772-2
Project/Site: Berkeley Water Transportation Pier Ferry (Sed)

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
570-230772-1	BWTPF-2025-DU1	Solid	05/06/25 08:35	05/15/25 09:40
570-230772-2	BWTPF-2025-DU2	Solid	05/06/25 09:35	05/15/25 09:40
570-230772-3	BWTPF-2025-DU3	Solid	05/09/25 06:40	05/15/25 09:40
570-230772-4	BWTPF-2025-DU4	Solid	05/07/25 12:15	05/15/25 09:40
570-230772-5	BWTPF-2025-DU5	Solid	05/07/25 06:30	05/15/25 09:40

EUROFINS CONCORD

Eurofins Calscience CHAIN-OF-CUSTODY RECORD

Pacific EcoRisk
ENVIRONMENTAL CONSULTING & TESTING
2250 Cordelia Rd., Fairfield, CA 94534
(707)207-7760

Client Name:	PER
Client Address:	2250 Cordelia Rd. Faifield, CA 94534
Sampled By:	PER
Phone:	(707) 207-7760
FAX:	(707) 207-7916
Project Manager:	Mike McElroy
Project Name:	Berkeley Water Transportation Pier Ferry
PO Number:	39995

REQUESTED ANALYSIS

570-230772 Chain of Custody

Loc: 570
230772

	Station Code	Client Sample ID	Sample Date	Sample Time	Sample Matrix*	Container Number	Container Type	* See Analyte List
1	BWTPF-2025-DU1	BWTPF-2025-DU1	5/6/25	8:35	Sed	1	poly bag	X
2	BWTPF-2025-DU1	BWTPF-2025-DU1	5/6/25	8:35	Sed	2	glass jar	X
3	BWTPF-2025-DU2	BWTPF-2025-DU2	5/6/25	9:35	Sed	1	poly bag	X
4	BWTPF-2025-DU2	BWTPF-2025-DU2	5/6/25	9:35	Sed	2	glass jar	X
5	BWTPF-2025-DU3	BWTPF-2025-DU3	5/9/25	6:40	Sed	1	poly bag	X
6	BWTPF-2025-DU3	BWTPF-2025-DU3	5/9/25	6:40	Sed	2	glass jar	X
7	BWTPF-2025-DU4	BWTPF-2025-DU4	5/7/25	12:15	Sed	1	poly bag	X
8	BWTPF-2025-DU4	BWTPF-2025-DU4	5/7/25	12:15	Sed	2	glass jar	X
9	BWTPF-2025-DU5	BWTPF-2025-DU5	5/7/25	6:30	Sed	1	poly bag	X
10	BWTPF-2025-DU5	BWTPF-2025-DU5	5/7/25	6:30	Sed	2	glass jar	X

Correct Containers:	Yes	No	
Sample Temperature:	Ambient	Cold	Warm
Sample Preservative:	Yes	No	
Turnaround Time:	STD	Specify:	

Comments:

Standard TAT

Perform duplicate, MS/MSD, etc. on BWTPF-2025-DU1.

RELINQUISHED BY

Signature	Zach Quigley	**Signature:**	N Cachuela
Print:	Zach Quigley	**Print:**	N Cachuela
Organization:	PER	**Organization:**	ECS
DATE:	5/14/25 **TIME:** 1033	**DATE:**	5/14/25 **TIME** 1033

RECEIVED BY

Signature	NCachuela	**Signature:**	
Print:	Noel Cachuela	**Print:**	
Organization:	ECS	**Organization:**	FedEx
DATE:	05/14/25 **TIME:** 1034	**DATE:**	**TIME**

***MATRIX CODES**: (**SED** = Sediment); (**FW** = Freshwater); (**WW** = Wastewater); (**STRMW** = Stormwater)

Rel. By: FedEx

Temp 1.6/2.6 (Bags) Rec'd by: [illegible] 5/15/25 0940
-3.0/-2.0 (Jars)

ANALYTE LIST

Pacific EcoRisk
2250 Cordelia Rd.
Fairfield, CA 94534

Project Proponent: Berkeley BWTPF
Project #: 39995
Site #: BWTPF-2025-DU1, BWTPF-2025-DU2, BWTPF-2025-DU3, BWTPF-2025-DU4, & BWTPF-2025-DU5

ANALYTE	METHOD	TARGETED MRL	ANALYSIS REQUESTED
Solids, Total	SM 2540B/USEPA 160.3	0.10%	X
Total Organic Carbon	EPA 9060	0.10%	X
Grain Size	ASTM D4464/D422	0.10%	X
Arsenic	EPA 6020	2 mg/kg	X
Cadmium	EPA 6020	0.3 mg/kg	X
Chromium	EPA 6020	5 mg/kg	X
Copper	EPA 6020	5 mg/kg	X
Lead	EPA 6020	5 mg/kg	X
Mercury	EPA 7471B	0.02 mg/kg	X
Nickel	EPA 6020	5 mg/kg	X
Selenium	EPA 7742 or EPA 6020B Mod	0.1 mg/kg	X
Silver	EPA 6020	0.2 mg/kg	X
Zinc	EPA 6020	1 mg/kg	X
2,4'-DDD	EPA 8081B	1 µg/kg	X
2,4'-DDE	EPA 8081B	1 µg/kg	X
2,4'-DDT	EPA 8081B	1 µg/kg	X
4,4'-DDD	EPA 8081B	1 µg/kg	X
4,4'-DDE	EPA 8081B	1 µg/kg	X
4,4'-DDT	EPA 8081B	1 µg/kg	X
Total DDTs	EPA 8081B	-	X
Aldrin	EPA 8081B	1 µg/kg	X
alpha-BHC	EPA 8081B	1 µg/kg	X
beta-BHC	EPA 8081B	1 µg/kg	X
gamma-BHC (Lindane)	EPA 8081B	1 µg/kg	X
delta-BHC	EPA 8081B	1 µg/kg	X
Total BHCs	EPA 8081B	-	X
Chlordane	EPA 8081B	20 µg/kg	X
Cis-nonachlor	EPA 8081B	2 µg/kg	X
Alpha Chlrodane	EPA 8081B	2 µg/kg	X
Gamma Chlordane	EPA 8081B	2 µg/kg	X
Trans-nonachlor	EPA 8081B	2 µg/kg	X
Oxychlordane	EPA 8081B	2 µg/kg	X
Heptachlor	EPA 8081B	1 µg/kg	X
Heptachlor epoxide	EPA 8081B	1 µg/kg	X
Total Chlordanes	EPA 8081B	20 µg/kg	X
Dieldrin	EPA 8081B	1 µg/kg	X
Endosulfan I	EPA 8081B	1 µg/kg	X
Endosulfan II	EPA 8081B	1 µg/kg	X
Endosulfan sulfate	EPA 8081B	1 µg/kg	X
Endrin	EPA 8081B	1 µg/kg	X
Endrin aldehyde	EPA 8081B	1 µg/kg	X
Endrin ketone	EPA 8081B	1 µg/kg	X
Toxaphene	EPA 8081B	20 µg/kg	X
PCB 008	EPA 8270C	1 µg/kg	X
PCB 018	EPA 8270C	1 µg/kg	X
PCB 028	EPA 8270C	1 µg/kg	X
PCB 031	EPA 8270C	1 µg/kg	X
PCB 033	EPA 8270C	1 µg/kg	X
PCB 044	EPA 8270C	1 µg/kg	X
PCB 049	EPA 8270C	1 µg/kg	X
PCB 052	EPA 8270C	1 µg/kg	X
PCB 056	EPA 8270C	1 µg/kg	X
PCB 060	EPA 8270C	1 µg/kg	X
PCB 066	EPA 8270C	1 µg/kg	X
PCB 070	EPA 8270C	1 µg/kg	X
PCB 074	EPA 8270C	1 µg/kg	X
PCB 087	EPA 8270C	1 µg/kg	X
PCB 095	EPA 8270C	1 µg/kg	X
PCB 097	EPA 8270C	1 µg/kg	X
PCB 099	EPA 8270C	1 µg/kg	X
PCB 101	EPA 8270C	1 µg/kg	X
PCB 105	EPA 8270C	1 µg/kg	X
PCB 110	EPA 8270C	1 µg/kg	X
PCB 118	EPA 8270C	1 µg/kg	X
PCB 128	EPA 8270C	1 µg/kg	X
PCB 132	EPA 8270C	1 µg/kg	X
PCB 138	EPA 8270C	1 µg/kg	X

EUROFINS CONCORD

ANALYTE LIST

Pacific EcoRisk
2250 Cordelia Rd.
Fairfield, CA 94534

Project Proponent: **Berkeley BWTPF**
Project #: 39995
Site #: BWTPF-2025-DU1, BWTPF-2025-DU2, BWTPF-2025-DU3, BWTPF-2025-DU4, & BWTPF-2025-DU5

ANALYTE	METHOD	TARGETED MRL	ANALYSIS REQUESTED
PCB 141	EPA 8270C	1 µg/kg	X
PCB 149	EPA 8270C	1 µg/kg	X
PCB 151	EPA 8270C	1 µg/kg	X
PCB 153	EPA 8270C	1 µg/kg	X
PCB 156	EPA 8270C	1 µg/kg	X
PCB 158	EPA 8270C	1 µg/kg	X
PCB 170	EPA 8270C	1 µg/kg	X
PCB 174	EPA 8270C	1 µg/kg	X
PCB 177	EPA 8270C	1 µg/kg	X
PCB 180	EPA 8270C	1 µg/kg	X
PCB 183	EPA 8270C	1 µg/kg	X
PCB 187	EPA 8270C	1 µg/kg	X
PCB 194	EPA 8270C	1 µg/kg	X
PCB 195	EPA 8270C	1 µg/kg	X
PCB 201	EPA 8270C	1 µg/kg	X
PCB 203	EPA 8270C	1 µg/kg	X
Total PCBs	EPA 8270C	-	X
Acenaphthalene	EPA 8270C	10 µg/kg	X
Acenaphthylene	EPA 8270C	10 µg/kg	X
Anthracene	EPA 8270C	10 µg/kg	X
Benz(a)anthracene	EPA 8270C	10 µg/kg	X
Benzo(a)pyrene	EPA 8270C	10 µg/kg	X
Benzo(e)pyrene	EPA 8270C	10 µg/kg	X
Benzo(b)fluoranthene	EPA 8270C	10 µg/kg	X
Benzo(g,h,i)perylene	EPA 8270C	10 µg/kg	X
Benzo(k)fluoranthene	EPA 8270C	10 µg/kg	X
Biphenyl	EPA 8270C	10 µg/kg	X
Chrysene	EPA 8270C	10 µg/kg	X
Dibenz(a,h)anthracene	EPA 8270C	10 µg/kg	X
Dibenzothiophene	EPA 8270C	10 µg/kg	X
Dimethylnapthalene 2, 6-	EPA 8270C	10 µg/kg	X
Fluoranthene	EPA 8270C	10 µg/kg	X
Fluorene	EPA 8270C	10 µg/kg	X
Indeno(1,2,3-cd)pyrene	EPA 8270C	10 µg/kg	X
Methylnapthalene, 1-	EPA 8270C	10 µg/kg	X
Methylnapthalene, 2-	EPA 8270C	10 µg/kg	X
Methylphenanthrene, 1-	EPA 8270C	10 µg/kg	X
Naphthalene	EPA 8270C	10 µg/kg	X
Perylene	EPA 8270C	10 µg/kg	X
Phenanthrene	EPA 8270C	10 µg/kg	X
Pyrene	EPA 8270C	10 µg/kg	X
Trimethylnapthalene, 2, 3, 5-	EPA 8270C	10 µg/kg	X
Total PAHs	EPA 8270C	-	X
Mono-Butyltin	Krone 1989	10 µg/kg	X
Di-butyltin	Krone 1989	10 µg/kg	X
Tri-butyltin	Krone 1989	10 µg/kg	X
Tetra-butyltin	Krone 1989	10 µg/kg	X
Total Butyltins	Krone 1989	10 µg/kg	X
Dioxins/Furans	EPA 8290	1 ng/kg	X

QA/QC
Standard TAT.
Samples frozen (except TOC & grain size).
Perform duplicate, MS/MSD, etc. on BWTPF-2025-DU1.
If you have any questions regarding this request as checked, please call Jeff Cotsifas at (707)207-7760

EUROFINS CONCORD

Eurofins Calscience
2841 Dow Avenue, Suite 100
Tustin, CA 92780
Phone: 714-895-5494

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler: N/A	Lab PM: Hollowell, Carla	Carrier Tracking No(s): N/A	COC No: 570-445037.1
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail: Carla.Hollowell@et.eurofinsus.com	State of Origin: California	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): Los Angeles County Sanitation Di - California		Job #: 570-230772-1
Address: 4955 Yarrow Street, ,	Due Date Requested: 5/28/2025			
City: Arvada	TAT Requested (days): N/A			
State, Zip: CO, 80002				
Phone: 303-736-0100(Tel) 303-431-7171(Fax)	PO #: N/A			
Email: N/A	WO #: N/A			
Project Name: Berkeley Water Transportation Pier Ferry (Sed)	Project #: 57000505			
Site: N/A	SSOW#: N/A			

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	90060A/ Solids - TOC	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
BWTPF-2025-DU1 (570-230772-1)	5/6/25	08:35 Pacific	G	Solid			X	1	
BWTPF-2025-DU1 (570-230772-1MS)	5/6/25	08:35 Pacific	G	Solid			X	1	
BWTPF-2025-DU1 (570-230772-1MSD)	5/6/25	08:35 Pacific	G	Solid			X	1	
BWTPF-2025-DU2 (570-230772-2)	5/6/25	09:35 Pacific	G	Solid			X	1	
BWTPF-2025-DU3 (570-230772-3)	5/9/25	06:40 Pacific	G	Solid			X	1	
BWTPF-2025-DU4 (570-230772-4)	5/7/25	12:15 Pacific	G	Solid			X	1	
BWTPF-2025-DU5 (570-230772-5)	5/7/25	06:30 Pacific	G	Solid			X	1	

Analysis Requested

Preservation Codes: -

Other: N/A

Note: Since laboratory accreditations are subject to change, Eurofins Calscience places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Calscience laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Calscience attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Calscience.

Possible Hazard Identification	*Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time: 5-16 11-	Company EC	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Eurofins Calscience
2841 Dow Avenue, Suite 100
Tustin, CA 92780
Phone: 714-895-5494

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler: N/A	Lab PM: Hollowell, Carla	Carrier Tracking No(s): N/A	COC No: 570-445062.1
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail: Carla.Hollowell@et.eurofinsus.com	State of Origin: California	Page: Page 1 of 1
Company: Eurofins Lancaster Laboratories Environm		Accreditations Required (See note): Los Angeles County Sanitation Di - California		Job #: 570-230772-1
Address: 2425 New Holland Pike, ,	Due Date Requested: 6/6/2025			
City: Lancaster	TAT Requested (days): N/A			
State, Zip: PA, 17601				
Phone: 717-656-2300(Tel)	PO #: N/A			
Email: N/A	WO #: N/A			
Project Name: Berkeley Water Transportation Pier Ferry (Sed)	Project #: 57000505			
Site: N/A	SSOW#: N/A			

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8290A/8290_P_Sox 8290 17 + Totals	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
BWTPF-2025-DU1 (570-230772-1)	5/6/25	08:35 Pacific	G	Solid			X	1	Sediment HT = 6 mo from collection date; remove H qualifier from data before
BWTPF-2025-DU1 (570-230772-1MS)	5/6/25	08:35 Pacific	G	Solid			X	1	Sediment HT = 6 mo from collection date; remove H qualifier from data before
BWTPF-2025-DU1 (570-230772-1MSD)	5/6/25	08:35 Pacific	G	Solid			X	1	Sediment HT = 6 mo from collection date; remove H qualifier from data before
BWTPF-2025-DU2 (570-230772-2)	5/6/25	09:35 Pacific	G	Solid			X	1	Sediment HT = 6 mo from collection date; remove H qualifier from data before
BWTPF-2025-DU3 (570-230772-3)	5/9/25	06:40 Pacific	G	Solid			X	1	Sediment HT = 6 mo from collection date; remove H qualifier from data before
BWTPF-2025-DU4 (570-230772-4)	5/7/25	12:15 Pacific	G	Solid			X	1	Sediment HT = 6 mo from collection date; remove H qualifier from data before
BWTPF-2025-DU5 (570-230772-5)	5/7/25	06:30 Pacific	G	Solid			X	1	Sediment HT = 6 mo from collection date; remove H qualifier from data before

Preservation Codes: -

Other: N/A

Note: Since laboratory accreditations are subject to change, Eurofins Calscience places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Calscience laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Calscience attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Calscience.

Possible Hazard Identification	*Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time: 5-16 12-	Company EC	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Eurofins Calscience
2841 Dow Avenue, Suite 100
Tustin, CA 92780
Phone: 714-895-5494

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler: N/A	Lab PM: Hollowell, Carla	Carrier Tracking No(s): N/A	COC No: 570-445088.1
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail: Carla.Hollowell@et.eurofinsus.com	State of Origin: California	Page: Page 1 of 1
Company: Eurofins Environment Testing Northwest L		Accreditations Required (See note): Los Angeles County Sanitation Di - California		Job #: 570-230772-1
Address: 5755 8th Street East, ,	Due Date Requested: 6/5/2025			Preservation Codes: -
City: Tacoma	TAT Requested (days): N/A			
State, Zip: WA, 98424				
Phone: 253-922-2310(Tel)	PO #: N/A			
Email: N/A	WO #: N/A			
Project Name: Berkeley Water Transportation Pier Ferry (Sed)	Project #: 57000505			
Site: N/A	SSOW#: N/A			Other: N/A

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020B_ULL/3051A (MOD) Local Method	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
BWTPF-2025-DU1 (570-230772-1)	5/6/25	08:35 Pacific	G	Solid			X	1	
BWTPF-2025-DU1 (570-230772-1MS)	5/6/25	08:35 Pacific	G	Solid			X	1	
BWTPF-2025-DU1 (570-230772-1MSD)	5/6/25	08:35 Pacific	G	Solid			X	1	
BWTPF-2025-DU2 (570-230772-2)	5/6/25	09:35 Pacific	G	Solid			X	1	
BWTPF-2025-DU3 (570-230772-3)	5/9/25	06:40 Pacific	G	Solid			X	1	
BWTPF-2025-DU4 (570-230772-4)	5/7/25	12:15 Pacific	G	Solid			X	1	
BWTPF-2025-DU5 (570-230772-5)	5/7/25	06:30 Pacific	G	Solid			X	1	

Note: Since laboratory accreditations are subject to change, Eurofins Calscience places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Calscience laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Calscience attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Calscience.

Possible Hazard Identification	*Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	5-16 13	EC			
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

ORIGIN ID:CCRA (925) 786-8606
EUROFINS CONCORD
EUROFINS SOUTHWEST CONCORD
5063 COMMERCIAL CIR
SUITE H
CONCORD, CA 94520
UNITED STATES US

SHIP DATE: 07MAY25
ACTWGT: 23.00 LB
CAD: 258088030/INET4535
DIMS: 24x12x12 IN

BILL RECIPIENT

TO **SAMPLE CONTROL**
EUROFINS CALSCIENCE
2841 DOW AVENUE
SUITE 100
TUSTIN CA 92780
(714) 895-5494 REF:
INV:
PO: DEPT:

58CJ3/630D/C6C4

FedEx Express

12 of 30

MPS# 0263 8810 8781 8766
Mstr# 8810 8781 8652

THU - 08 MAY 10:30A
PRIORITY OVERNIGHT

0201

92780
CA-US SNA

92 DTHA

570-230772 Waybill

After printing this label:
CONSIGNEE COPY - PLEASE PLACE IN FRONT OF POUCH
1. Fold the printed page along the horizontal line.
2. Place label in shipping pouch and affix it to your shipment.

Login Sample Receipt Checklist

Client: Pacific EcoRisk Inc

Job Number: 570-230772-2

Login Number: 230772
List Number: 1
Creator: Cruise, Noel

List Source: Eurofins Calscience

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

This receipt checklist is generated for all samples received in this Login. It may not be applicable to all Jobs associated with this Login.

Login Sample Receipt Checklist

Client: Pacific EcoRisk Inc

Job Number: 570-230772-2

Login Number: 230772
List Number: 2
Creator: Padgett, Dylan T

List Source: Eurofins Denver
List Creation: 05/17/25 04:15 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

This receipt checklist is generated for all samples received in this Login. It may not be applicable to all Jobs associated with this Login.

Login Sample Receipt Checklist

Client: Pacific EcoRisk Inc

Job Number: 570-230772-2

Login Number: 230772
List Number: 4
Creator: Miller, Darren R

List Source: Eurofins Seattle Specialty Metals
List Creation: 05/19/25 01:48 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	True	

This receipt checklist is generated for all samples received in this Login. It may not be applicable to all Jobs associated with this Login.

Appendix C

Eurofins Data Report for the Z-Layer Composite Sediment

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Jeff Cotsifas
Pacific EcoRisk Inc
2250 Cordelia Rd
Fairfield, California 94534

Generated 7/3/2025 2:48:46 PM

JOB DESCRIPTION

Berkeley Water Transportation Pier Ferry

JOB NUMBER

570-234876-1

Eurofins Calscience
2841 Dow Avenue, Suite 100
Tustin CA 92780

See page two for job notes and contact information.

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Calscience Project Manager.

Authorization



Generated
7/3/2025 2:48:46 PM

Authorized for release by
Carla Hollowell, Project Manager I
Carla.Hollowell@et.eurofinsus.com
(714)895-5494

Table of Contents

Cover Page 1
Table of Contents 3
Definitions/Glossary 4
Case Narrative 5
Client Sample Results 6
Surrogate Summary 8
QC Sample Results 9
QC Association Summary 13
Lab Chronicle 14
Certification Summary 15
Method Summary 17
Sample Summary 18
Chain of Custody 19
Receipt Checklists 23

Definitions/Glossary

Client: Pacific EcoRisk Inc
Job ID: 570-234876-1
Project/Site: Berkeley Water Transportation Pier Ferry

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job Narrative
570-234876-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

The samples were frozen after collection (prior to holding time expiration and/or pursuant to information obtained from the client) at -18C, and remained frozen until the laboratory was ready to prepare the samples for analysis. Eurofins Calscience, Inc. follows SWAMP criteria and the Puget Sound Protocol (USEPA/PSWQAT, 1997, Table 2) for holding times in marine tissues and / or sediment samples, which states holding times may be extended up to six months to one year (two years for metals) for most analyses if stored frozen at -18C after collection. Therefore, the sample results have not been flagged as exceeding the EPA Method recommended holding times.

Receipt
The sample was received on 6/17/2025 9:40 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.0°C.

Receipt Exceptions
The container for the following sample was received broken: BWTPF-2025-DU4 Z Layer Comp (570-234876-1).

PCBs
Method 8270C_SIM_CON: The following samples required a mercury clean-up, via EPA Method 3660A, to reduce matrix interferences caused by sulfur: BWTPF-2025-DU4 Z Layer Comp (570-234876-1), (570-234876-A-1 MS) and (570-234876-A-1 MSD). The reagent lot number used was: 6588024
Method:8270 Sim con

Method 8270C_SIM_CON: The following analyte(s) recovered outside control limits for the MSD associated with preparation batch 570-590041 and analytical batch 570-589364: PCB-5/8. This is not indicative of a systematic control problem because these were random marginal exceedances. Qualified results have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

General Chemistry
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Client: Pacific EcoRisk Inc
Job ID: 570-234876-1
Project/Site: Berkeley Water Transportation Pier Ferry

Method: SW846 8270C SIM CON - PCB Congeners (GC/MS)

Client Sample ID: BWTPF-2025-DU4 Z Layer Comp
Lab Sample ID: 570-234876-1
Date Collected: 05/07/25 12:15
Matrix: Solid
Date Received: 06/17/25 09:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-5/8	ND	F1	0.53	0.15	ug/Kg	☼	06/27/25 18:00	06/28/25 23:01	1
PCB-18	ND		0.26	0.12	ug/Kg	☼	06/27/25 18:00	06/28/25 23:01	1
PCB-28	ND		0.26	0.13	ug/Kg	☼	06/27/25 18:00	06/28/25 23:01	1
PCB-31	ND		0.26	0.12	ug/Kg	☼	06/27/25 18:00	06/28/25 23:01	1
PCB-33	ND		0.26	0.062	ug/Kg	☼	06/27/25 18:00	06/28/25 23:01	1
PCB-44	ND		0.26	0.16	ug/Kg	☼	06/27/25 18:00	06/28/25 23:01	1
PCB-49	ND		0.26	0.14	ug/Kg	☼	06/27/25 18:00	06/28/25 23:01	1
PCB-52	ND		0.26	0.10	ug/Kg	☼	06/27/25 18:00	06/28/25 23:01	1
PCB-56	ND		0.26	0.062	ug/Kg	☼	06/27/25 18:00	06/28/25 23:01	1
PCB-60	ND		0.26	0.17	ug/Kg	☼	06/27/25 18:00	06/28/25 23:01	1
PCB-66	ND		0.26	0.15	ug/Kg	☼	06/27/25 18:00	06/28/25 23:01	1
PCB-70	ND		0.26	0.12	ug/Kg	☼	06/27/25 18:00	06/28/25 23:01	1
PCB-74	ND		0.26	0.14	ug/Kg	☼	06/27/25 18:00	06/28/25 23:01	1
PCB-87	ND		0.26	0.16	ug/Kg	☼	06/27/25 18:00	06/28/25 23:01	1
PCB-95	ND		0.26	0.087	ug/Kg	☼	06/27/25 18:00	06/28/25 23:01	1
PCB-97	ND		0.26	0.18	ug/Kg	☼	06/27/25 18:00	06/28/25 23:01	1
PCB-99	**0.17**	**J**	0.26	0.11	ug/Kg	☼	06/27/25 18:00	06/28/25 23:01	1
PCB-101	**0.15**	**J**	0.26	0.14	ug/Kg	☼	06/27/25 18:00	06/28/25 23:01	1
PCB-105	ND		0.26	0.14	ug/Kg	☼	06/27/25 18:00	06/28/25 23:01	1
PCB-110	ND		0.26	0.12	ug/Kg	☼	06/27/25 18:00	06/28/25 23:01	1
PCB-118	ND		0.26	0.11	ug/Kg	☼	06/27/25 18:00	06/28/25 23:01	1
PCB-128	ND		0.26	0.18	ug/Kg	☼	06/27/25 18:00	06/28/25 23:01	1
PCB-132/153	ND		0.53	0.32	ug/Kg	☼	06/27/25 18:00	06/28/25 23:01	1
PCB-138/158	ND		0.53	0.32	ug/Kg	☼	06/27/25 18:00	06/28/25 23:01	1
PCB-141	ND		0.26	0.087	ug/Kg	☼	06/27/25 18:00	06/28/25 23:01	1
PCB-149	ND		0.26	0.14	ug/Kg	☼	06/27/25 18:00	06/28/25 23:01	1
PCB-151	ND		0.26	0.12	ug/Kg	☼	06/27/25 18:00	06/28/25 23:01	1
PCB-156	ND		0.26	0.13	ug/Kg	☼	06/27/25 18:00	06/28/25 23:01	1
PCB-170	**0.14**	**J**	0.26	0.14	ug/Kg	☼	06/27/25 18:00	06/28/25 23:01	1
PCB-174	ND		0.26	0.076	ug/Kg	☼	06/27/25 18:00	06/28/25 23:01	1
PCB-177	ND		0.26	0.12	ug/Kg	☼	06/27/25 18:00	06/28/25 23:01	1
PCB-180	**0.12**	**J**	0.26	0.11	ug/Kg	☼	06/27/25 18:00	06/28/25 23:01	1
PCB-183	ND		0.26	0.16	ug/Kg	☼	06/27/25 18:00	06/28/25 23:01	1
PCB-187	ND		0.26	0.12	ug/Kg	☼	06/27/25 18:00	06/28/25 23:01	1
PCB-194	ND		0.26	0.15	ug/Kg	☼	06/27/25 18:00	06/28/25 23:01	1
PCB-195	ND		0.26	0.082	ug/Kg	☼	06/27/25 18:00	06/28/25 23:01	1
PCB-201	ND		0.26	0.18	ug/Kg	☼	06/27/25 18:00	06/28/25 23:01	1
PCB-203	ND		0.26	0.092	ug/Kg	☼	06/27/25 18:00	06/28/25 23:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*60*		*20 - 139*	*06/27/25 18:00*	*06/28/25 23:01*	*1*
p-Terphenyl-d14	*115*		*37 - 165*	*06/27/25 18:00*	*06/28/25 23:01*	*1*

Client: Pacific EcoRisk Inc
Job ID: 570-234876-1
Project/Site: Berkeley Water Transportation Pier Ferry

General Chemistry

Client Sample ID: BWTPF-2025-DU4 Z Layer Comp
Lab Sample ID: 570-234876-1
Date Collected: 05/07/25 12:15
Matrix: Solid
Date Received: 06/17/25 09:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon (SW846 9060A)	0.466		0.400	0.250	%			06/27/25 13:23	1
Sample Homogenized (None Homogenization)	Yes				NONE			06/18/25 17:32	1
Percent Solids (EPA Moisture)	75.2		0.1	0.1	%			06/19/25 12:08	1

Surrogate Summary

Client: Pacific EcoRisk Inc
Job ID: 570-234876-1
Project/Site: Berkeley Water Transportation Pier Ferry

Method: 8270C SIM CON - PCB Congeners (GC/MS)

Matrix: Solid
Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)											
		FBP	TPHd14										
Lab Sample ID	Client Sample ID	(20-139)	(37-165)										
570-234876-1	BWTPF-2025-DU4 Z Layer Comp	60	115										
570-234876-1 MS	BWTPF-2025-DU4 Z Layer Comp	67	114										
570-234876-1 MSD	BWTPF-2025-DU4 Z Layer Comp	65	104										
LCS 570-590041/2-A	Lab Control Sample	72	109										
LCSD 570-590041/3-A	Lab Control Sample Dup	75	110										
MB 570-590041/1-A	Method Blank	69	118										

Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)
TPHd14 = p-Terphenyl-d14

Method: 8270C SIM CON - PCB Congeners (GC/MS)

Lab Sample ID: MB 570-590041/1-A
Matrix: Solid
Analysis Batch: 589364

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 590041

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-5/8	ND		0.40	0.11	ug/Kg		06/27/25 18:00	06/28/25 20:53	1
PCB-18	ND		0.20	0.094	ug/Kg		06/27/25 18:00	06/28/25 20:53	1
PCB-28	ND		0.20	0.10	ug/Kg		06/27/25 18:00	06/28/25 20:53	1
PCB-31	ND		0.20	0.089	ug/Kg		06/27/25 18:00	06/28/25 20:53	1
PCB-33	ND		0.20	0.047	ug/Kg		06/27/25 18:00	06/28/25 20:53	1
PCB-44	ND		0.20	0.12	ug/Kg		06/27/25 18:00	06/28/25 20:53	1
PCB-49	ND		0.20	0.11	ug/Kg		06/27/25 18:00	06/28/25 20:53	1
PCB-52	ND		0.20	0.079	ug/Kg		06/27/25 18:00	06/28/25 20:53	1
PCB-56	ND		0.20	0.047	ug/Kg		06/27/25 18:00	06/28/25 20:53	1
PCB-60	ND		0.20	0.13	ug/Kg		06/27/25 18:00	06/28/25 20:53	1
PCB-66	ND		0.20	0.11	ug/Kg		06/27/25 18:00	06/28/25 20:53	1
PCB-70	ND		0.20	0.093	ug/Kg		06/27/25 18:00	06/28/25 20:53	1
PCB-74	ND		0.20	0.10	ug/Kg		06/27/25 18:00	06/28/25 20:53	1
PCB-87	ND		0.20	0.12	ug/Kg		06/27/25 18:00	06/28/25 20:53	1
PCB-95	ND		0.20	0.066	ug/Kg		06/27/25 18:00	06/28/25 20:53	1
PCB-97	ND		0.20	0.14	ug/Kg		06/27/25 18:00	06/28/25 20:53	1
PCB-99	ND		0.20	0.086	ug/Kg		06/27/25 18:00	06/28/25 20:53	1
PCB-101	ND		0.20	0.11	ug/Kg		06/27/25 18:00	06/28/25 20:53	1
PCB-105	ND		0.20	0.11	ug/Kg		06/27/25 18:00	06/28/25 20:53	1
PCB-110	ND		0.20	0.089	ug/Kg		06/27/25 18:00	06/28/25 20:53	1
PCB-118	ND		0.20	0.080	ug/Kg		06/27/25 18:00	06/28/25 20:53	1
PCB-128	ND		0.20	0.14	ug/Kg		06/27/25 18:00	06/28/25 20:53	1
PCB-132/153	ND		0.40	0.24	ug/Kg		06/27/25 18:00	06/28/25 20:53	1
PCB-138/158	ND		0.40	0.24	ug/Kg		06/27/25 18:00	06/28/25 20:53	1
PCB-141	ND		0.20	0.066	ug/Kg		06/27/25 18:00	06/28/25 20:53	1
PCB-149	ND		0.20	0.11	ug/Kg		06/27/25 18:00	06/28/25 20:53	1
PCB-151	ND		0.20	0.092	ug/Kg		06/27/25 18:00	06/28/25 20:53	1
PCB-156	ND		0.20	0.095	ug/Kg		06/27/25 18:00	06/28/25 20:53	1
PCB-170	ND		0.20	0.10	ug/Kg		06/27/25 18:00	06/28/25 20:53	1
PCB-174	ND		0.20	0.057	ug/Kg		06/27/25 18:00	06/28/25 20:53	1
PCB-177	ND		0.20	0.094	ug/Kg		06/27/25 18:00	06/28/25 20:53	1
PCB-180	ND		0.20	0.083	ug/Kg		06/27/25 18:00	06/28/25 20:53	1
PCB-183	ND		0.20	0.12	ug/Kg		06/27/25 18:00	06/28/25 20:53	1
PCB-187	ND		0.20	0.089	ug/Kg		06/27/25 18:00	06/28/25 20:53	1
PCB-194	ND		0.20	0.11	ug/Kg		06/27/25 18:00	06/28/25 20:53	1
PCB-195	ND		0.20	0.062	ug/Kg		06/27/25 18:00	06/28/25 20:53	1
PCB-201	ND		0.20	0.14	ug/Kg		06/27/25 18:00	06/28/25 20:53	1
PCB-203	ND		0.20	0.070	ug/Kg		06/27/25 18:00	06/28/25 20:53	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*69*		*20 - 139*	*06/27/25 18:00*	*06/28/25 20:53*	*1*
p-Terphenyl-d14	*118*		*37 - 165*	*06/27/25 18:00*	*06/28/25 20:53*	*1*

Method: 8270C SIM CON - PCB Congeners (GC/MS) (Continued)

Lab Sample ID: LCS 570-590041/2-A
Matrix: Solid
Analysis Batch: 589364

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 590041

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
PCB-5/8			50.0	28.02		ug/Kg		56	50 - 150		
PCB-18			50.0	33.20		ug/Kg		66	33 - 114		
PCB-28			50.0	40.38		ug/Kg		81	40 - 132		
PCB-44			50.0	41.01		ug/Kg		82	38 - 131		
PCB-52			50.0	41.66		ug/Kg		83	38 - 131		
PCB-66			50.0	46.60		ug/Kg		93	42 - 141		
PCB-101			50.0	43.17		ug/Kg		86	40 - 132		
PCB-105			50.0	46.09		ug/Kg		92	39 - 135		
PCB-118			50.0	46.95		ug/Kg		94	38 - 131		
PCB-128			50.0	52.45		ug/Kg		105	43 - 149		
PCB-132/153			50.0	41.21		ug/Kg		82	37 - 164		
PCB-138/158			50.0	41.98		ug/Kg		84	36 - 124		
PCB-170			50.0	40.72		ug/Kg		81	35 - 134		
PCB-180			50.0	60.35		ug/Kg		121	38 - 159		
PCB-187			50.0	50.69		ug/Kg		101	41 - 147		
PCB-195			50.0	32.32		ug/Kg		65	44 - 128		
PCB-201			50.0	52.61		ug/Kg		105	40 - 156		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*72*		*20 - 139*
p-Terphenyl-d14	*109*		*37 - 165*

Lab Sample ID: LCSD 570-590041/3-A
Matrix: Solid
Analysis Batch: 589364

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 590041

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
PCB-5/8			50.0	28.20		ug/Kg		56	50 - 150	1	25
PCB-18			50.0	33.00		ug/Kg		66	33 - 114	1	29
PCB-28			50.0	40.99		ug/Kg		82	40 - 132	2	29
PCB-44			50.0	41.42		ug/Kg		83	38 - 131	1	32
PCB-52			50.0	41.46		ug/Kg		83	38 - 131	0	32
PCB-66			50.0	46.96		ug/Kg		94	42 - 141	1	34
PCB-101			50.0	42.36		ug/Kg		85	40 - 132	2	34
PCB-105			50.0	46.51		ug/Kg		93	39 - 135	1	37
PCB-118			50.0	46.50		ug/Kg		93	38 - 131	1	35
PCB-128			50.0	51.73		ug/Kg		103	43 - 149	1	37
PCB-132/153			50.0	40.15		ug/Kg		80	37 - 164	3	38
PCB-138/158			50.0	43.21		ug/Kg		86	36 - 124	3	40
PCB-170			50.0	38.20		ug/Kg		76	35 - 134	6	31
PCB-180			50.0	60.44		ug/Kg		121	38 - 159	0	40
PCB-187			50.0	50.92		ug/Kg		102	41 - 147	0	40
PCB-195			50.0	31.27		ug/Kg		63	44 - 128	3	28
PCB-201			50.0	51.29		ug/Kg		103	40 - 156	3	40

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*75*		*20 - 139*
p-Terphenyl-d14	*110*		*37 - 165*

Method: 8270C SIM CON - PCB Congeners (GC/MS)

Lab Sample ID: 570-234876-1 MS
Client Sample ID: BWTPF-2025-DU4 Z Layer Comp
Matrix: Solid
Prep Type: Total/NA
Analysis Batch: 589364
Prep Batch: 590041

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
PCB-5/8	ND	F1	66.3	35.19		ug/Kg	☼	53	50 - 150
PCB-18	ND		66.3	42.12		ug/Kg	☼	64	29 - 127
PCB-28	ND		66.3	54.86		ug/Kg	☼	83	29 - 170
PCB-44	ND		66.3	55.14		ug/Kg	☼	83	33 - 150
PCB-52	ND		66.3	56.30		ug/Kg	☼	85	23 - 159
PCB-66	ND		66.3	61.99		ug/Kg	☼	94	29 - 166
PCB-101	0.15	J	66.3	56.81		ug/Kg	☼	86	30 - 159
PCB-105	ND		66.3	62.38		ug/Kg	☼	94	22 - 173
PCB-118	ND		66.3	63.26		ug/Kg	☼	95	24 - 162
PCB-128	ND		66.3	68.77		ug/Kg	☼	104	18 - 180
PCB-132/153	ND		66.3	53.85		ug/Kg	☼	81	27 - 180
PCB-138/158	ND		66.3	55.79		ug/Kg	☼	84	18 - 160
PCB-170	0.14	J	66.3	52.91		ug/Kg	☼	80	25 - 165
PCB-180	0.12	J	66.3	76.76		ug/Kg	☼	116	20 - 180
PCB-187	ND		66.3	66.78		ug/Kg	☼	101	14 - 180
PCB-195	ND		66.3	41.44		ug/Kg	☼	63	44 - 128
PCB-201	ND		66.3	67.65		ug/Kg	☼	102	17 - 180

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*67*		*20 - 139*
p-Terphenyl-d14	*114*		*37 - 165*

Lab Sample ID: 570-234876-1 MSD
Client Sample ID: BWTPF-2025-DU4 Z Layer Comp
Matrix: Solid
Prep Type: Total/NA
Analysis Batch: 589364
Prep Batch: 590041

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
PCB-5/8	ND	F1	66.2	30.79	F1	ug/Kg	☼	47	50 - 150	13	25
PCB-18	ND		66.2	36.17		ug/Kg	☼	55	29 - 127	15	40
PCB-28	ND		66.2	49.95		ug/Kg	☼	75	29 - 170	9	32
PCB-44	ND		66.2	51.54		ug/Kg	☼	78	33 - 150	7	40
PCB-52	ND		66.2	52.81		ug/Kg	☼	80	23 - 159	6	40
PCB-66	ND		66.2	56.57		ug/Kg	☼	85	29 - 166	9	40
PCB-101	0.15	J	66.2	51.75		ug/Kg	☼	78	30 - 159	9	40
PCB-105	ND		66.2	56.99		ug/Kg	☼	86	22 - 173	9	40
PCB-118	ND		66.2	57.87		ug/Kg	☼	87	24 - 162	9	40
PCB-128	ND		66.2	63.72		ug/Kg	☼	96	18 - 180	8	40
PCB-132/153	ND		66.2	49.25		ug/Kg	☼	74	27 - 180	9	40
PCB-138/158	ND		66.2	52.27		ug/Kg	☼	79	18 - 160	7	40
PCB-170	0.14	J	66.2	48.77		ug/Kg	☼	74	25 - 165	8	22
PCB-180	0.12	J	66.2	72.56		ug/Kg	☼	109	20 - 180	6	40
PCB-187	ND		66.2	61.85		ug/Kg	☼	93	14 - 180	8	40
PCB-195	ND		66.2	38.69		ug/Kg	☼	58	44 - 128	7	28
PCB-201	ND		66.2	64.54		ug/Kg	☼	98	17 - 180	5	40

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*65*		*20 - 139*
p-Terphenyl-d14	*104*		*37 - 165*

Method: 9060A - Organic Carbon, Total (TOC)

Lab Sample ID: MB 280-702474/4
Matrix: Solid
Analysis Batch: 702474

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		0.400	0.250	%			06/27/25 11:47	1

Lab Sample ID: LCS 280-702474/3
Matrix: Solid
Analysis Batch: 702474

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Total Organic Carbon			0.325	0.3405	J	%		105	41 - 120		

Lab Sample ID: 280-209451-A-7 MS
Matrix: Solid
Analysis Batch: 702474

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Total Organic Carbon	1.52		1.20	2.725		%		100	41 - 120		

Lab Sample ID: 280-209451-A-7 MSD
Matrix: Solid
Analysis Batch: 702474

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Total Organic Carbon	1.52		1.20	2.530		%		84	41 - 120	7	20

Method: Moisture - Solids Total

Lab Sample ID: 570-235217-A-6 DU
Matrix: Solid
Analysis Batch: 586597

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Percent Solids	96.4			96.5		%				0	10

QC Association Summary

Client: Pacific EcoRisk Inc
Job ID: 570-234876-1
Project/Site: Berkeley Water Transportation Pier Ferry

GC/MS Semi VOA

Analysis Batch: 589364

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-234876-1	BWTPF-2025-DU4 Z Layer Comp	Total/NA	Solid	8270C SIM CON	590041
MB 570-590041/1-A	Method Blank	Total/NA	Solid	8270C SIM CON	590041
LCS 570-590041/2-A	Lab Control Sample	Total/NA	Solid	8270C SIM CON	590041
LCSD 570-590041/3-A	Lab Control Sample Dup	Total/NA	Solid	8270C SIM CON	590041
570-234876-1 MS	BWTPF-2025-DU4 Z Layer Comp	Total/NA	Solid	8270C SIM CON	590041
570-234876-1 MSD	BWTPF-2025-DU4 Z Layer Comp	Total/NA	Solid	8270C SIM CON	590041

Prep Batch: 590041

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-234876-1	BWTPF-2025-DU4 Z Layer Comp	Total/NA	Solid	3541	
MB 570-590041/1-A	Method Blank	Total/NA	Solid	3541	
LCS 570-590041/2-A	Lab Control Sample	Total/NA	Solid	3541	
LCSD 570-590041/3-A	Lab Control Sample Dup	Total/NA	Solid	3541	
570-234876-1 MS	BWTPF-2025-DU4 Z Layer Comp	Total/NA	Solid	3541	
570-234876-1 MSD	BWTPF-2025-DU4 Z Layer Comp	Total/NA	Solid	3541	

General Chemistry

Analysis Batch: 585957

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-234876-1	BWTPF-2025-DU4 Z Layer Comp	Total/NA	Solid	Homogenization	

Analysis Batch: 586597

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-234876-1	BWTPF-2025-DU4 Z Layer Comp	Total/NA	Solid	Moisture	
570-235217-A-6 DU	Duplicate	Total/NA	Solid	Moisture	

Analysis Batch: 702474

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-234876-1	BWTPF-2025-DU4 Z Layer Comp	Total/NA	Solid	9060A	
MB 280-702474/4	Method Blank	Total/NA	Solid	9060A	
LCS 280-702474/3	Lab Control Sample	Total/NA	Solid	9060A	
280-209451-A-7 MS	Matrix Spike	Total/NA	Solid	9060A	
280-209451-A-7 MSD	Matrix Spike Duplicate	Total/NA	Solid	9060A	

Lab Chronicle

Client: Pacific EcoRisk Inc
Job ID: 570-234876-1
Project/Site: Berkeley Water Transportation Pier Ferry

Client Sample ID: BWTPF-2025-DU4 Z Layer Comp
Lab Sample ID: 570-234876-1
Date Collected: 05/07/25 12:15
Matrix: Solid
Date Received: 06/17/25 09:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3541			20.11 g	2 mL	590041	06/27/25 18:00	UM1W	EET CAL 4
Total/NA	Analysis	8270C SIM CON		1	1 mL	1 mL	589364	06/28/25 23:01	J7WE	EET CAL 4
	Instrument ID: GCMSHHH									
Total/NA	Analysis	9060A		1	100.1 mg	100.1 mg	702474	06/27/25 13:23	GMW	EET DEN
	Instrument ID: WC_SHI5									
Total/NA	Analysis	Homogenization		1			585957	06/18/25 17:32	USUL	EET CAL 4
	Instrument ID: NOEQUIP									
Total/NA	Analysis	Moisture		1			586597	06/19/25 12:08	N9ZN	EET CAL 4
	Instrument ID: MOI4									

Laboratory References:

EET CAL 4 = Eurofins Calscience Tustin, 2841 Dow Avenue, Tustin, CA 92780, TEL (714)895-5494

EET DEN = Eurofins Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Accreditation/Certification Summary

Client: Pacific EcoRisk Inc
Job ID: 570-234876-1
Project/Site: Berkeley Water Transportation Pier Ferry

Laboratory: Eurofins Calscience

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
California	State	3082	07-31-25

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8270C SIM CON	3541	Solid	PCB-101
8270C SIM CON	3541	Solid	PCB-105
8270C SIM CON	3541	Solid	PCB-110
8270C SIM CON	3541	Solid	PCB-118
8270C SIM CON	3541	Solid	PCB-128
8270C SIM CON	3541	Solid	PCB-132/153
8270C SIM CON	3541	Solid	PCB-138/158
8270C SIM CON	3541	Solid	PCB-141
8270C SIM CON	3541	Solid	PCB-149
8270C SIM CON	3541	Solid	PCB-151
8270C SIM CON	3541	Solid	PCB-156
8270C SIM CON	3541	Solid	PCB-170
8270C SIM CON	3541	Solid	PCB-174
8270C SIM CON	3541	Solid	PCB-177
8270C SIM CON	3541	Solid	PCB-18
8270C SIM CON	3541	Solid	PCB-180
8270C SIM CON	3541	Solid	PCB-183
8270C SIM CON	3541	Solid	PCB-187
8270C SIM CON	3541	Solid	PCB-194
8270C SIM CON	3541	Solid	PCB-195
8270C SIM CON	3541	Solid	PCB-201
8270C SIM CON	3541	Solid	PCB-203
8270C SIM CON	3541	Solid	PCB-28
8270C SIM CON	3541	Solid	PCB-31
8270C SIM CON	3541	Solid	PCB-33
8270C SIM CON	3541	Solid	PCB-44
8270C SIM CON	3541	Solid	PCB-49
8270C SIM CON	3541	Solid	PCB-5/8
8270C SIM CON	3541	Solid	PCB-52
8270C SIM CON	3541	Solid	PCB-56
8270C SIM CON	3541	Solid	PCB-60
8270C SIM CON	3541	Solid	PCB-66
8270C SIM CON	3541	Solid	PCB-70
8270C SIM CON	3541	Solid	PCB-74
8270C SIM CON	3541	Solid	PCB-87
8270C SIM CON	3541	Solid	PCB-95
8270C SIM CON	3541	Solid	PCB-97
8270C SIM CON	3541	Solid	PCB-99
Homogenization		Solid	Sample Homogenized
Moisture		Solid	Percent Solids

Laboratory: Eurofins Denver

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	2907.01	10-31-26

Accreditation/Certification Summary

Client: Pacific EcoRisk Inc
Job ID: 570-234876-1
Project/Site: Berkeley Water Transportation Pier Ferry

Laboratory: Eurofins Denver (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
A2LA	ISO/IEC 17025	2907.01	10-31-26
Alabama	State Program	40730	09-30-12 *
Alaska (UST)	State	18-001	11-30-25
Arizona	State	AZ0713	12-20-25
Arkansas DEQ	State	88-00687	04-02-26
California	State	2513	01-08-26
Colorado	Petroleum Storage Tank Program	2907.01 (A2LA)	10-31-26
Colorado	State	CO00026	06-30-25
Connecticut	State	PH-0686	09-30-26
Florida	NELAP	E87667	06-30-25
Georgia	State	4025	01-08-26
Illinois	NELAP	200017	05-31-26
Iowa	State	370	12-01-26
Kansas	NELAP	E-10166	04-30-26
Kentucky (WW)	State	KY98047	12-31-25
Louisiana	NELAP	30785	06-30-14 *
Louisiana (All)	NELAP	30785	06-30-25
Minnesota	NELAP	1788752	06-30-25
Montana (DW)	State	CERT0117	01-01-26
Nevada	State	CO00026	07-31-25
New Hampshire	NELAP	2053	04-28-26
New Jersey	NELAP	CO004	06-30-25
New York	NELAP	11964	04-01-26
North Dakota	State	R-034	01-08-25 *
Oklahoma	NELAP	8614	08-31-25
Oregon	NELAP	4025	01-08-26
Pennsylvania	NELAP	68-00664	07-31-25
South Carolina	State	72002001	01-18-25 *
Texas	NELAP	TX104704183-08-TX	09-30-09 *
Texas	NELAP	T104704183	09-30-25
US Fish & Wildlife	US Federal Programs	058448	07-31-25
USDA	US Federal Programs	P330-20-00065	12-19-25
Utah	NELAP	QUAN5	06-30-13 *
Utah	NELAP	CO00026	07-31-25
Virginia	NELAP	460232	06-14-26
Washington	State	C583	08-03-25
West Virginia DEP	State	354	11-30-25
Wisconsin	State	999615430	08-31-25
Wyoming (UST)	A2LA	2907.01	06-09-26

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Method Summary

Client: Pacific EcoRisk Inc
Job ID: 570-234876-1
Project/Site: Berkeley Water Transportation Pier Ferry

Method	Method Description	Protocol	Laboratory
8270C SIM CON	PCB Congeners (GC/MS)	SW846	EET CAL 4
9060A	Organic Carbon, Total (TOC)	SW846	EET DEN
Homogenization	Homogenization	None	EET CAL 4
Moisture	Solids Total	EPA	EET CAL 4
3541	Automated Soxhlet Extraction	SW846	EET CAL 4

Protocol References:

EPA = US Environmental Protection Agency

None = None

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET CAL 4 = Eurofins Calscience Tustin, 2841 Dow Avenue, Tustin, CA 92780, TEL (714)895-5494

EET DEN = Eurofins Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Sample Summary

Client: Pacific EcoRisk Inc
Job ID: 570-234876-1
Project/Site: Berkeley Water Transportation Pier Ferry

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
570-234876-1	BWTPF-2025-DU4 Z Layer Comp	Solid	05/07/25 12:15	06/17/25 09:40

EUROFINS CONCORD

Pacific EcoRisk
ENVIRONMENTAL CONSULTING & TESTING

2250 Cordelia Rd., Fairfield, CA 94534
(707)207-7760

Eurofins Calscience CHAIN-

570-234876 Chain of Custody

Loc: 570
234876

Client Name:	PER
Client Address:	2250 Cordelia Rd. Faifield, CA 94534
Sampled By:	PER
Phone:	(707) 207-7760
FAX:	(707) 207-7916
Project Manager:	Mike McElroy
Project Name:	Berkeley Water Transportation Pier Ferry
PO Number:	39995

	Station Code	Client Sample ID	Sample Date	Sample Time	Sample Matrix*	Container Number	Container Type	TOC (EPA 9060)	Total Solids (SM 2540B/USEPA 160.3)	PCBs (see analyte list) - (EPA 8270C)								
								REQUESTED ANALYSIS										
1	BWTPF-2025-DU4	BWTPF-2025-DU4 Z Layer Comp	5/7/25	12:15	Sed	1	glass jar	X	X	X								
2																		
3																		
4																		
5																		
6																		
7																		
8																		
9																		
10																		

Correct Containers:	Yes	No	
Sample Temperature:	Ambient	Cold	Warm
Sample Preservative:	Yes	No	
Turnaround Time:	STD	Specify:	

Comments:

Standard TAT

RELINQUISHED BY

Signature	A. [illegible]	**Signature:**	V. Orve
Print:	Anthony Negaliza	**Print:**	Victor E. Orve
Organization:	PER	**Organization:**	ECS
DATE:	6/16/25 **TIME:** 1000	**DATE:**	6/16/25 **TIME:** 1630

RECEIVED BY

Signature	V. Orve	**Signature:**	
Print:	Victor E. Orve	**Print:**	
Organization:	ECS	**Organization:**	
DATE:	6/16/25 **TIME:** 1000	**DATE:**	**TIME**

***MATRIX CODES**: (**SED** = Sediment); (**FW** = Freshwater); (**WW** = Wastewater); (**STRMW** = Stormwater)

VU9Z

Revd. by: [illegible] 6/17/25 0915
2.0/3.0 IK9Z

ANALYTE LIST

Pacific EcoRisk
2250 Cordelia Rd.
Fairfield, CA 94534

Project Proponent: **Berkeley BWTPF**
Project #: 39995
Site #: BWTPF-2025-DU4 Z Layer Comp

ANALYTE	METHOD	TARGETED MRL	ANALYSIS REQUESTED
Solids, Total	SM 2540B/USEPA 160.3	0.10%	X
Total Organic Carbon	EPA 9060	0.10%	X
PCB 008	EPA 8270C	1 µg/kg	X
PCB 018	EPA 8270C	1 µg/kg	X
PCB 028	EPA 8270C	1 µg/kg	X
PCB 031	EPA 8270C	1 µg/kg	X
PCB 033	EPA 8270C	1 µg/kg	X
PCB 044	EPA 8270C	1 µg/kg	X
PCB 049	EPA 8270C	1 µg/kg	X
PCB 052	EPA 8270C	1 µg/kg	X
PCB 056	EPA 8270C	1 µg/kg	X
PCB 060	EPA 8270C	1 µg/kg	X
PCB 066	EPA 8270C	1 µg/kg	X
PCB 070	EPA 8270C	1 µg/kg	X
PCB 074	EPA 8270C	1 µg/kg	X
PCB 087	EPA 8270C	1 µg/kg	X
PCB 095	EPA 8270C	1 µg/kg	X
PCB 097	EPA 8270C	1 µg/kg	X
PCB 099	EPA 8270C	1 µg/kg	X
PCB 101	EPA 8270C	1 µg/kg	X
PCB 105	EPA 8270C	1 µg/kg	X
PCB 110	EPA 8270C	1 µg/kg	X
PCB 118	EPA 8270C	1 µg/kg	X
PCB 128	EPA 8270C	1 µg/kg	X
PCB 132	EPA 8270C	1 µg/kg	X
PCB 138	EPA 8270C	1 µg/kg	X
PCB 141	EPA 8270C	1 µg/kg	X
PCB 149	EPA 8270C	1 µg/kg	X
PCB 151	EPA 8270C	1 µg/kg	X
PCB 153	EPA 8270C	1 µg/kg	X
PCB 156	EPA 8270C	1 µg/kg	X
PCB 158	EPA 8270C	1 µg/kg	X
PCB 170	EPA 8270C	1 µg/kg	X
PCB 174	EPA 8270C	1 µg/kg	X
PCB 177	EPA 8270C	1 µg/kg	X
PCB 180	EPA 8270C	1 µg/kg	X
PCB 183	EPA 8270C	1 µg/kg	X
PCB 187	EPA 8270C	1 µg/kg	X
PCB 194	EPA 8270C	1 µg/kg	X
PCB 195	EPA 8270C	1 µg/kg	X
PCB 201	EPA 8270C	1 µg/kg	X
PCB 203	EPA 8270C	1 µg/kg	X
Total PCBs	EPA 8270C	-	X
QA/QC			

Standard TAT.
If you have any questions regarding this request as checked, please call Jeff Cotsifas at (707)207-7760

7/3/2025

Eurofins Calscience
2841 Dow Avenue, Suite 100
Tustin, CA 92780
Phone: 714-895-5494

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler: N/A	Lab PM: Hollowell, Carla	Carrier Tracking No(s): N/A	COC No: 570-451317.1
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail: Carla.Hollowell@et.eurofinsus.com	State of Origin: California	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): State - California		Job #: 570-234876-1
Address: 4955 Yarrow Street, ,	Due Date Requested: 6/27/2025			Preservation Codes: -
City: Arvada	TAT Requested (days): N/A			
State, Zip: CO, 80002				
Phone: 303-736-0100(Tel) 303-431-7171(Fax)	PO #: N/A			
Email: N/A	WO #: N/A			
Project Name: Berkeley Water Transportation Pier Ferry	Project #: 57000505			
Site: N/A	SSOW#: N/A			Other: N/A

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9060A Solids - TOC	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
BWTPF-2025-DU4 Z Layer Comp (570-234876-1)	5/7/25	12:15 Pacific	G	Solid			X	1	

Note: Since laboratory accreditations are subject to change, Eurofins Calscience places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Calscience laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Calscience attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Calscience.

Possible Hazard Identification	*Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
GP	6-20-25 10-	EC			
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 10/10/2024

Eurofins Calscience
2841 Dow Avenue, Suite 100
Tustin, CA 92780
Phone: 714-895-5494

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler: N/A	Lab PM: Hollowell, Carla	Carrier Tracking No(s): N/A	COC No: 570-451317.1
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail: Carla.Hollowell@et.eurofinsus.com	State of Origin: California	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): State - California		Job #: 570-234876-1
Address: 4955 Yarrow Street, ,	Due Date Requested: 6/27/2025			Preservation Codes: -
City: Arvada	TAT Requested (days): N/A			
State, Zip: CO, 80002				
Phone: 303-736-0100(Tel) 303-431-7171(Fax)	PO #: N/A			
Email: N/A	WO #: N/A			
Project Name: Berkeley Water Transportation Pier Ferry	Project #: 57000505			
Site: N/A	SSOW#: N/A			Other: N/A

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9060ASolids - TOC	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
BWTPF-2025-DU4 Z Layer Comp (570-234876-1)	5/7/25	12:15 Pacific	G	Solid			X	1	

Note: Since laboratory accreditations are subject to change, Eurofins Calscience places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Calscience laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Calscience attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Calscience.

Possible Hazard Identification	*Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	GH	6-20-25 10-	EC		6/21/25 0950	EETSEN
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 3.2 °C FO12 IRPABV

Ver: 10/10/2024

Login Sample Receipt Checklist

Client: Pacific EcoRisk Inc

Job Number: 570-234876-1

Login Number: 234876

List Source: Eurofins Calscience

List Number: 1

Creator: Ferreira, Bruno

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	False	Received broken. Transferred to new containers with minimal or no sample loss.
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Pacific EcoRisk Inc

Job Number: 570-234876-1

Login Number: 234876
List Number: 2
Creator: Padgett, Dylan T

List Source: Eurofins Denver
List Creation: 06/21/25 01:46 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Appendix D

Eurofins Data Report for the Sediment MET Elutriate Analyses

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Jeff Cotsifas
Pacific EcoRisk Inc
2250 Cordelia Rd
Fairfield, California 94534

Generated 6/16/2025 6:38:24 PM

JOB DESCRIPTION

Berkeley Water Transportation Pier Ferry (MET)

JOB NUMBER

570-231775-1

Eurofins Calscience
2841 Dow Avenue, Suite 100
Tustin CA 92780

See page two for job notes and contact information.

my EOL

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Calscience Project Manager.

Authorization



Generated
6/16/2025 6:38:24 PM

Authorized for release by
Carla Hollowell, Project Manager I
Carla.Hollowell@et.eurofinsus.com
(714)895-5494

Table of Contents

Cover Page 1
Table of Contents 3
Definitions/Glossary 4
Case Narrative 5
Client Sample Results 7
QC Sample Results 11
QC Association Summary 17
Lab Chronicle 19
Certification Summary 22
Method Summary 23
Sample Summary 24
Chain of Custody 25
Receipt Checklists 27

Definitions/Glossary

Client: Pacific EcoRisk Inc
Job ID: 570-231775-1
Project/Site: Berkeley Water Transportation Pier Ferry (MET)

Qualifiers

Metals

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job Narrative
570-231775-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

The samples were frozen after collection (prior to holding time expiration and/or pursuant to information obtained from the client) at -18C, and remained frozen until the laboratory was ready to prepare the samples for analysis. Eurofins Calscience, Inc. follows SWAMP criteria and the Puget Sound Protocol (USEPA/PSWQAT, 1997, Table 2) for holding times in marine tissues and / or sediment samples, which states holding times may be extended up to six months to one year (two years for metals) for most analyses if stored frozen at -18C after collection. Therefore, the sample results have not been flagged as exceeding the EPA Method recommended holding times.

Receipt
The samples were received on 5/23/2025 10:31 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice.

Metals
Method 1631E: The matrix spike (MS) recoveries for analytical batch 350-7267 were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 1640: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 350-6997 and 350-7217 and analytical batch 350-7354 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

Method 1640: The method blank for preparation batch 350-6997 and 350-7217 contained Zinc above the reporting limit (RL). There was insufficient sample to perform a re-extraction and/or re-analysis; therefore, the data have been reported.

Method 1640: The method blank for preparation batch 350-6997 and 350-7217 contained Zinc above the reporting limit (RL). None of the samples associated with this method blank contained the target compound; therefore, re-extraction and/or re-analysis of samples were not performed.

Method 1640: The method blank for preparation batch 350-6997 and 350-7363 contained Zinc above the reporting limit (RL). There was insufficient sample to perform a re-extraction and/or re-analysis; therefore, the data have been reported.

Method 1640 - Dissolved: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 350-6997 and 350-7217 and analytical batch 350-7354 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

Method 1640 - Dissolved: The method blank for preparation batch 350-6997 and 350-7217 contained Zinc above the reporting limit (RL). There was insufficient sample to perform a re-extraction and/or re-analysis; therefore, the data have been reported.

Method 1640 - Dissolved: The method blank for preparation batch 350-6997 and 350-7217 contained Zinc above the reporting limit (RL). None of the samples associated with this method blank contained the target compound; therefore, re-extraction and/or re-analysis of samples were not performed.

Method 1640 - Dissolved: The method blank for preparation batch 350-6997 and 350-7363 contained Zinc above the reporting limit (RL). There was insufficient sample to perform a re-extraction and/or re-analysis; therefore, the data have been reported.

Job ID: 570-231775-1 (Continued) Eurofins Calscience

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Client: Pacific EcoRisk Inc
Job ID: 570-231775-1
Project/Site: Berkeley Water Transportation Pier Ferry (MET)

Method: EPA 1631E - Mercury, Low Level (CVAFS)

Client Sample ID: BWTPF-2025-DU1 MET
Lab Sample ID: 570-231775-1
Date Collected: 05/22/25 11:10
Matrix: Water
Date Received: 05/23/25 10:31

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	4.03	F1	0.500	0.200	ng/L			06/06/25 15:21	1

Client Sample ID: BWTPF-2025-DU2 MET
Lab Sample ID: 570-231775-2
Date Collected: 05/22/25 11:12
Matrix: Water
Date Received: 05/23/25 10:31

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	3.74		0.500	0.200	ng/L			06/06/25 16:56	1

Client Sample ID: BWTPF-2025-DU3 MET
Lab Sample ID: 570-231775-3
Date Collected: 05/22/25 11:14
Matrix: Water
Date Received: 05/23/25 10:31

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	3.01		0.500	0.200	ng/L			06/06/25 15:04	1

Client Sample ID: BWTPF-2025-DU4 MET
Lab Sample ID: 570-231775-4
Date Collected: 05/22/25 11:16
Matrix: Water
Date Received: 05/23/25 10:31

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	3.79		0.500	0.200	ng/L			06/06/25 17:01	1

Client Sample ID: BWTPF-2025-DU5 MET
Lab Sample ID: 570-231775-5
Date Collected: 05/22/25 11:18
Matrix: Water
Date Received: 05/23/25 10:31

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	2.87		0.500	0.200	ng/L			06/06/25 15:13	1

Client: Pacific EcoRisk Inc
Job ID: 570-231775-1
Project/Site: Berkeley Water Transportation Pier Ferry (MET)

Method: EPA 1640 - Metals (ICPMS)

Client Sample ID: BWTPF-2025-DU1 MET
Lab Sample ID: 570-231775-1
Date Collected: 05/22/25 11:10
Matrix: Water
Date Received: 05/23/25 10:31

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Selenium	1.14		0.700	0.300	ug/L		06/12/25 15:04	06/13/25 06:52	1

Client Sample ID: BWTPF-2025-DU2 MET
Lab Sample ID: 570-231775-2
Date Collected: 05/22/25 11:12
Matrix: Water
Date Received: 05/23/25 10:31

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Selenium	1.84		0.700	0.300	ug/L		06/12/25 15:04	06/13/25 01:27	1

Client Sample ID: BWTPF-2025-DU3 MET
Lab Sample ID: 570-231775-3
Date Collected: 05/22/25 11:14
Matrix: Water
Date Received: 05/23/25 10:31

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Selenium	0.850		0.700	0.300	ug/L		06/12/25 15:04	06/13/25 01:41	1

Client Sample ID: BWTPF-2025-DU4 MET
Lab Sample ID: 570-231775-4
Date Collected: 05/22/25 11:16
Matrix: Water
Date Received: 05/23/25 10:31

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Selenium	0.643	J	0.700	0.300	ug/L		06/12/25 15:04	06/13/25 01:55	1

Client Sample ID: BWTPF-2025-DU5 MET
Lab Sample ID: 570-231775-5
Date Collected: 05/22/25 11:18
Matrix: Water
Date Received: 05/23/25 10:31

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Selenium	1.71		0.700	0.300	ug/L		06/12/25 15:04	06/13/25 02:09	1

Method: EPA 1640 - Metals (ICPMS) - Dissolved

Client Sample ID: BWTPF-2025-DU1 MET
Lab Sample ID: 570-231775-1
Date Collected: 05/22/25 11:10
Matrix: Water
Date Received: 05/23/25 10:31

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**7.50**		0.700	0.630	ug/L		06/12/25 15:04	06/13/25 06:09	1
Cadmium	ND		0.0200	0.0130	ug/L		06/04/25 17:17	06/04/25 22:11	1
Chromium	**1.02**		1.00	0.110	ug/L		06/04/25 17:17	06/04/25 22:11	1
Copper	**0.682**		0.500	0.430	ug/L		06/04/25 17:17	06/04/25 22:11	1
Lead	**0.0635**		0.0500	0.0230	ug/L		06/04/25 17:17	06/04/25 22:11	1
Nickel	**1.68**		0.500	0.150	ug/L		06/04/25 17:17	06/04/25 22:11	1
Silver	ND		1.00	0.0780	ug/L		06/04/25 17:17	06/04/25 22:11	1
Zinc	**1.16**		1.00	0.310	ug/L		06/04/25 17:17	06/04/25 22:11	1

Client Sample ID: BWTPF-2025-DU2 MET
Lab Sample ID: 570-231775-2
Date Collected: 05/22/25 11:12
Matrix: Water
Date Received: 05/23/25 10:31

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**10.0**		0.700	0.630	ug/L		06/12/25 15:04	06/13/25 02:23	1
Cadmium	**0.0137**	**J**	0.0200	0.0130	ug/L		06/04/25 17:17	06/04/25 22:54	1
Chromium	**1.21**		1.00	0.110	ug/L		06/04/25 17:17	06/04/25 22:54	1
Copper	**0.643**		0.500	0.430	ug/L		06/04/25 17:17	06/04/25 22:54	1
Lead	**0.0737**		0.0500	0.0230	ug/L		06/04/25 17:17	06/04/25 22:54	1
Nickel	**2.03**		0.500	0.150	ug/L		06/04/25 17:17	06/04/25 22:54	1
Silver	ND		1.00	0.0780	ug/L		06/04/25 17:17	06/04/25 22:54	1
Zinc	**0.934**	**J**	1.00	0.310	ug/L		06/04/25 17:17	06/04/25 22:54	1

Client Sample ID: BWTPF-2025-DU3 MET
Lab Sample ID: 570-231775-3
Date Collected: 05/22/25 11:14
Matrix: Water
Date Received: 05/23/25 10:31

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**4.78**		0.700	0.630	ug/L		06/12/25 15:04	06/13/25 02:37	1
Cadmium	ND		0.0200	0.0130	ug/L		06/04/25 17:17	06/04/25 23:08	1
Chromium	**0.978**	**J**	1.00	0.110	ug/L		06/04/25 17:17	06/04/25 23:08	1
Copper	**0.487**	**J**	0.500	0.430	ug/L		06/04/25 17:17	06/04/25 23:08	1
Lead	**0.0753**		0.0500	0.0230	ug/L		06/04/25 17:17	06/04/25 23:08	1
Nickel	**1.58**		0.500	0.150	ug/L		06/04/25 17:17	06/04/25 23:08	1
Silver	ND		1.00	0.0780	ug/L		06/04/25 17:17	06/04/25 23:08	1
Zinc	**0.902**	**J**	1.00	0.310	ug/L		06/04/25 17:17	06/04/25 23:08	1

Client Sample ID: BWTPF-2025-DU4 MET
Lab Sample ID: 570-231775-4
Date Collected: 05/22/25 11:16
Matrix: Water
Date Received: 05/23/25 10:31

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**4.54**		0.700	0.630	ug/L		06/12/25 15:04	06/13/25 02:52	1
Cadmium	ND		0.0200	0.0130	ug/L		06/04/25 17:17	06/04/25 23:22	1
Chromium	**0.855**	**J**	1.00	0.110	ug/L		06/04/25 17:17	06/04/25 23:22	1
Copper	**0.591**		0.500	0.430	ug/L		06/04/25 17:17	06/04/25 23:22	1
Lead	**0.0879**		0.0500	0.0230	ug/L		06/04/25 17:17	06/04/25 23:22	1
Nickel	**1.50**		0.500	0.150	ug/L		06/04/25 17:17	06/04/25 23:22	1
Silver	ND		1.00	0.0780	ug/L		06/04/25 17:17	06/04/25 23:22	1
Zinc	**0.843**	**J**	1.00	0.310	ug/L		06/04/25 17:17	06/04/25 23:22	1

Client: Pacific EcoRisk Inc
Job ID: 570-231775-1
Project/Site: Berkeley Water Transportation Pier Ferry (MET)

Method: EPA 1640 - Metals (ICPMS) - Dissolved

Client Sample ID: BWTPF-2025-DU5 MET
Lab Sample ID: 570-231775-5
Date Collected: 05/22/25 11:18
Matrix: Water
Date Received: 05/23/25 10:31

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**11.4**		0.700	0.630	ug/L		06/12/25 15:04	06/13/25 03:06	1
Cadmium	ND		0.0200	0.0130	ug/L		06/04/25 17:17	06/04/25 23:36	1
Chromium	**0.875**	**J**	1.00	0.110	ug/L		06/04/25 17:17	06/04/25 23:36	1
Copper	**0.631**		0.500	0.430	ug/L		06/04/25 17:17	06/04/25 23:36	1
Lead	**0.111**		0.0500	0.0230	ug/L		06/04/25 17:17	06/04/25 23:36	1
Nickel	**2.18**		0.500	0.150	ug/L		06/04/25 17:17	06/04/25 23:36	1
Silver	ND		1.00	0.0780	ug/L		06/04/25 17:17	06/04/25 23:36	1
Zinc	**0.705**	**J**	1.00	0.310	ug/L		06/04/25 17:17	06/04/25 23:36	1

Method: 1631E - Mercury, Low Level (CVAFS)

Lab Sample ID: MB 350-7267/11
Matrix: Water
Analysis Batch: 7267

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.500	0.200	ng/L			06/06/25 12:50	1

Lab Sample ID: MB 350-7267/12
Matrix: Water
Analysis Batch: 7267

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.500	0.200	ng/L			06/06/25 12:54	1

Lab Sample ID: MB 350-7267/13
Matrix: Water
Analysis Batch: 7267

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.500	0.200	ng/L			06/06/25 12:59	1

Lab Sample ID: LCS 350-7267/14
Matrix: Water
Analysis Batch: 7267

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Mercury			5.00	4.819		ng/L		96	77 - 123		

Lab Sample ID: LCSD 350-7267/15
Matrix: Water
Analysis Batch: 7267

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury			5.00	4.949		ng/L		99	77 - 123	3	24

Lab Sample ID: 570-231775-1 MS
Matrix: Water
Analysis Batch: 7267

Client Sample ID: BWTPF-2025-DU1 MET
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Mercury	4.03	F1	10.0	10.88	F1	ng/L		69	71 - 125		

Lab Sample ID: 570-231775-1 MSD
Matrix: Water
Analysis Batch: 7267

Client Sample ID: BWTPF-2025-DU1 MET
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	4.03	F1	10.0	11.26		ng/L		72	71 - 125	3	24

Lab Sample ID: 180-190435-C-38 MS
Matrix: Water
Analysis Batch: 7267

Client Sample ID: Matrix Spike
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Mercury	0.948		5.00	5.510		ng/L		91	71 - 125		

Method: 1631E - Mercury, Low Level (CVAFS)

Lab Sample ID: 180-190435-C-38 MSD
Matrix: Water
Analysis Batch: 7267

Client Sample ID: Matrix Spike Duplicate
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	0.948		5.00	5.658		ng/L		94	71 - 125	3	24

Method: 1640 - Metals (ICPMS)

Lab Sample ID: MB 350-7217/1-A
Matrix: Water
Analysis Batch: 7354

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 7217

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.0200	0.0130	ug/L		06/04/25 17:17	06/05/25 18:54	1
Chromium	ND		1.00	0.110	ug/L		06/04/25 17:17	06/05/25 18:54	1
Copper	ND		0.500	0.430	ug/L		06/04/25 17:17	06/05/25 18:54	1
Lead	ND		0.0500	0.0230	ug/L		06/04/25 17:17	06/05/25 18:54	1
Nickel	ND		0.500	0.150	ug/L		06/04/25 17:17	06/05/25 18:54	1
Silver	ND		1.00	0.0780	ug/L		06/04/25 17:17	06/05/25 18:54	1
Zinc	ND		1.00	0.310	ug/L		06/04/25 17:17	06/05/25 18:54	1

Lab Sample ID: MB 350-7217/2-A
Matrix: Water
Analysis Batch: 7354

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 7217

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.0200	0.0130	ug/L		06/04/25 17:17	06/04/25 20:18	1
Chromium	ND		1.00	0.110	ug/L		06/04/25 17:17	06/04/25 20:18	1
Copper	ND		0.500	0.430	ug/L		06/04/25 17:17	06/04/25 20:18	1
Lead	ND		0.0500	0.0230	ug/L		06/04/25 17:17	06/04/25 20:18	1
Nickel	ND		0.500	0.150	ug/L		06/04/25 17:17	06/04/25 20:18	1
Silver	ND		1.00	0.0780	ug/L		06/04/25 17:17	06/04/25 20:18	1
Zinc	ND		1.00	0.310	ug/L		06/04/25 17:17	06/04/25 20:18	1

Lab Sample ID: LCS 350-7217/3-A
Matrix: Water
Analysis Batch: 7354

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 7217

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Cadmium	1.25	1.208		ug/L		97	70 - 130
Chromium	12.5	12.22		ug/L		98	70 - 130
Copper	12.5	12.42		ug/L		99	70 - 130
Lead	2.50	2.516		ug/L		101	70 - 130
Nickel	12.5	12.28		ug/L		98	70 - 130
Silver	6.25	5.968		ug/L		95	70 - 130
Zinc	12.5	12.25		ug/L		98	70 - 130

Lab Sample ID: LCSD 350-7217/4-A
Matrix: Water
Analysis Batch: 7354

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 7217

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Cadmium	1.25	1.225		ug/L		98	70 - 130	1	20
Chromium	12.5	12.25		ug/L		98	70 - 130	0	20

Method: 1640 - Metals (ICPMS) (Continued)

Lab Sample ID: LCSD 350-7217/4-A
Matrix: Water
Analysis Batch: 7354

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 7217

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Copper	12.5	12.74		ug/L		102	70 - 130	3	20
Lead	2.50	2.503		ug/L		100	70 - 130	0	20
Nickel	12.5	12.38		ug/L		99	70 - 130	1	20
Silver	6.25	6.060		ug/L		97	70 - 130	2	20
Zinc	12.5	12.59		ug/L		101	70 - 130	3	20

Lab Sample ID: MB 350-7363/1-A
Matrix: Water
Analysis Batch: 7393

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 7363

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.700	0.630	ug/L		06/12/25 15:04	06/12/25 22:23	1
Selenium	ND		0.700	0.300	ug/L		06/12/25 15:04	06/12/25 22:23	1
Cadmium	ND		0.0200	0.0130	ug/L		06/12/25 15:04	06/12/25 22:23	1
Chromium	ND		1.00	0.110	ug/L		06/12/25 15:04	06/12/25 22:23	1
Copper	ND		0.500	0.430	ug/L		06/12/25 15:04	06/12/25 22:23	1
Lead	ND		0.0500	0.0230	ug/L		06/12/25 15:04	06/12/25 22:23	1
Nickel	ND		0.500	0.150	ug/L		06/12/25 15:04	06/12/25 22:23	1
Silver	ND		1.00	0.0780	ug/L		06/12/25 15:04	06/12/25 22:23	1
Zinc	ND		1.00	0.310	ug/L		06/12/25 15:04	06/12/25 22:23	1

Lab Sample ID: MB 350-7363/2-A
Matrix: Water
Analysis Batch: 7393

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 7363

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.700	0.630	ug/L		06/12/25 15:04	06/12/25 22:37	1
Selenium	ND		0.700	0.300	ug/L		06/12/25 15:04	06/12/25 22:37	1
Cadmium	ND		0.0200	0.0130	ug/L		06/12/25 15:04	06/12/25 22:37	1
Chromium	ND		1.00	0.110	ug/L		06/12/25 15:04	06/12/25 22:37	1
Copper	ND		0.500	0.430	ug/L		06/12/25 15:04	06/12/25 22:37	1
Lead	ND		0.0500	0.0230	ug/L		06/12/25 15:04	06/12/25 22:37	1
Nickel	ND		0.500	0.150	ug/L		06/12/25 15:04	06/12/25 22:37	1
Silver	ND		1.00	0.0780	ug/L		06/12/25 15:04	06/12/25 22:37	1
Zinc	ND		1.00	0.310	ug/L		06/12/25 15:04	06/12/25 22:37	1

Lab Sample ID: LCS 350-7363/4-A
Matrix: Water
Analysis Batch: 7393

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 7363

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	12.5	11.92		ug/L		95	70 - 130
Selenium	12.5	12.20		ug/L		98	70 - 130
Cadmium	1.25	1.231		ug/L		99	70 - 130
Chromium	12.5	12.30		ug/L		98	70 - 130
Copper	12.5	12.39		ug/L		99	70 - 130
Lead	2.50	2.386		ug/L		95	70 - 130
Nickel	12.5	12.49		ug/L		100	70 - 130
Silver	6.25	6.053		ug/L		97	70 - 130

Method: 1640 - Metals (ICPMS) (Continued)

Lab Sample ID: LCS 350-7363/4-A
Matrix: Water
Analysis Batch: 7393

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 7363

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Zinc			12.5	12.29		ug/L		98	70 - 130		

Lab Sample ID: LCSD 350-7363/5-A
Matrix: Water
Analysis Batch: 7393

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 7363

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Arsenic			12.5	11.80		ug/L		94	70 - 130	1	20
Selenium			12.5	12.24		ug/L		98	70 - 130	0	20
Cadmium			1.25	1.260		ug/L		101	70 - 130	2	20
Chromium			12.5	12.45		ug/L		100	70 - 130	1	20
Copper			12.5	12.48		ug/L		100	70 - 130	1	20
Lead			2.50	2.398		ug/L		96	70 - 130	0	20
Nickel			12.5	12.58		ug/L		101	70 - 130	1	20
Silver			6.25	6.091		ug/L		97	70 - 130	1	20
Zinc			12.5	12.68		ug/L		101	70 - 130	3	20

Lab Sample ID: 570-231775-1 MS
Matrix: Water
Analysis Batch: 7393

Client Sample ID: BWTPF-2025-DU1 MET
Prep Type: Total/NA
Prep Batch: 7363

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Selenium	1.14		12.5	16.09		ug/L		120	50 - 150		

Lab Sample ID: 570-231775-1 MSD
Matrix: Water
Analysis Batch: 7393

Client Sample ID: BWTPF-2025-DU1 MET
Prep Type: Total/NA
Prep Batch: 7363

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Selenium	1.14		12.5	16.16		ug/L		120	50 - 150	0	20

Lab Sample ID: MB 350-6997/1-B
Matrix: Water
Analysis Batch: 7354

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 7217

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.0200	0.0130	ug/L		06/04/25 17:17	06/04/25 21:01	1
Chromium	ND		1.00	0.110	ug/L		06/04/25 17:17	06/04/25 21:01	1
Copper	ND		0.500	0.430	ug/L		06/04/25 17:17	06/04/25 21:01	1
Lead	ND		0.0500	0.0230	ug/L		06/04/25 17:17	06/04/25 21:01	1
Nickel	ND		0.500	0.150	ug/L		06/04/25 17:17	06/04/25 21:01	1
Silver	ND		1.00	0.0780	ug/L		06/04/25 17:17	06/04/25 21:01	1
Zinc	1.066		1.00	0.310	ug/L		06/04/25 17:17	06/04/25 21:01	1

Lab Sample ID: 570-231775-1 MS
Matrix: Water
Analysis Batch: 7354

Client Sample ID: BWTPF-2025-DU1 MET
Prep Type: Dissolved
Prep Batch: 7217

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Cadmium	ND		1.25	1.401		ug/L		112	50 - 150		

Method: 1640 - Metals (ICPMS) (Continued)

Lab Sample ID: 570-231775-1 MS
Matrix: Water
Analysis Batch: 7354

Client Sample ID: BWTPF-2025-DU1 MET
Prep Type: Dissolved
Prep Batch: 7217

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chromium	1.02		12.5	13.92		ug/L		103	50 - 150
Copper	0.682		12.5	15.30		ug/L		117	50 - 150
Lead	0.0635		2.50	2.494		ug/L		97	50 - 150
Nickel	1.68		12.5	16.37		ug/L		118	50 - 150
Silver	ND		6.25	6.153		ug/L		98	50 - 150
Zinc	1.16		12.5	16.26		ug/L		121	50 - 150

Lab Sample ID: 570-231775-1 MSD
Matrix: Water
Analysis Batch: 7354

Client Sample ID: BWTPF-2025-DU1 MET
Prep Type: Dissolved
Prep Batch: 7217

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Cadmium	ND		1.25	1.367		ug/L		109	50 - 150	2	20
Chromium	1.02		12.5	14.26		ug/L		106	50 - 150	2	20
Copper	0.682		12.5	15.12		ug/L		116	50 - 150	1	20
Lead	0.0635		2.50	2.511		ug/L		98	50 - 150	1	20
Nickel	1.68		12.5	16.12		ug/L		116	50 - 150	2	20
Silver	ND		6.25	6.400		ug/L		102	50 - 150	4	20
Zinc	1.16		12.5	16.14		ug/L		120	50 - 150	1	20

Lab Sample ID: MB 350-6997/1-D
Matrix: Water
Analysis Batch: 7393

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 7363

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.700	0.630	ug/L		06/12/25 15:04	06/12/25 22:51	1
Selenium	ND		0.700	0.300	ug/L		06/12/25 15:04	06/12/25 22:51	1
Cadmium	ND		0.0200	0.0130	ug/L		06/12/25 15:04	06/12/25 22:51	1
Chromium	ND		1.00	0.110	ug/L		06/12/25 15:04	06/12/25 22:51	1
Copper	ND		0.500	0.430	ug/L		06/12/25 15:04	06/12/25 22:51	1
Lead	ND		0.0500	0.0230	ug/L		06/12/25 15:04	06/12/25 22:51	1
Nickel	ND		0.500	0.150	ug/L		06/12/25 15:04	06/12/25 22:51	1
Silver	ND		1.00	0.0780	ug/L		06/12/25 15:04	06/12/25 22:51	1
Zinc	1.083		1.00	0.310	ug/L		06/12/25 15:04	06/12/25 22:51	1

Lab Sample ID: 570-231775-1 MS
Matrix: Water
Analysis Batch: 7393

Client Sample ID: BWTPF-2025-DU1 MET
Prep Type: Dissolved
Prep Batch: 7363

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	7.50		12.5	23.88		ug/L		131	50 - 150
Cadmium	ND		1.25	1.235		ug/L		99	50 - 150
Chromium	0.790	J	12.5	14.42		ug/L		109	50 - 150
Copper	0.574		12.5	13.78		ug/L		106	50 - 150
Lead	0.0544		2.50	2.447		ug/L		96	50 - 150
Nickel	1.77		12.5	14.85		ug/L		105	50 - 150
Silver	ND		6.25	5.741		ug/L		92	50 - 150
Zinc	1.20	B	12.5	14.35		ug/L		105	50 - 150

Method: 1640 - Metals (ICPMS) (Continued)

Lab Sample ID: 570-231775-1 MSD
Client Sample ID: BWTPF-2025-DU1 MET
Matrix: Water
Prep Type: Dissolved
Analysis Batch: 7393
Prep Batch: 7363

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Arsenic	7.50		12.5	21.12		ug/L		109	50 - 150	12	20
Cadmium	ND		1.25	1.209		ug/L		97	50 - 150	2	20
Chromium	0.790	J	12.5	14.20		ug/L		107	50 - 150	2	20
Copper	0.574		12.5	13.50		ug/L		103	50 - 150	2	20
Lead	0.0544		2.50	2.274		ug/L		89	50 - 150	7	20
Nickel	1.77		12.5	14.48		ug/L		102	50 - 150	2	20
Silver	ND		6.25	5.854		ug/L		94	50 - 150	2	20
Zinc	1.20	B	12.5	14.17		ug/L		104	50 - 150	1	20

Metals

Filtration Batch: 6997

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-231775-1	BWTPF-2025-DU1 MET	Dissolved	Water	Filtration	
570-231775-2	BWTPF-2025-DU2 MET	Dissolved	Water	Filtration	
570-231775-3	BWTPF-2025-DU3 MET	Dissolved	Water	Filtration	
570-231775-4	BWTPF-2025-DU4 MET	Dissolved	Water	Filtration	
570-231775-5	BWTPF-2025-DU5 MET	Dissolved	Water	Filtration	
MB 350-6997/1-B	Method Blank	Dissolved	Water	Filtration	
MB 350-6997/1-D	Method Blank	Dissolved	Water	Filtration	
570-231775-1 MS	BWTPF-2025-DU1 MET	Dissolved	Water	Filtration	
570-231775-1 MSD	BWTPF-2025-DU1 MET	Dissolved	Water	Filtration	

Prep Batch: 7217

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-231775-1	BWTPF-2025-DU1 MET	Dissolved	Water	1640	6997
570-231775-2	BWTPF-2025-DU2 MET	Dissolved	Water	1640	6997
570-231775-3	BWTPF-2025-DU3 MET	Dissolved	Water	1640	6997
570-231775-4	BWTPF-2025-DU4 MET	Dissolved	Water	1640	6997
570-231775-5	BWTPF-2025-DU5 MET	Dissolved	Water	1640	6997
MB 350-6997/1-B	Method Blank	Dissolved	Water	1640	6997
MB 350-7217/1-A	Method Blank	Total/NA	Water	1640	
MB 350-7217/2-A	Method Blank	Total/NA	Water	1640	
LCS 350-7217/3-A	Lab Control Sample	Total/NA	Water	1640	
LCSD 350-7217/4-A	Lab Control Sample Dup	Total/NA	Water	1640	
570-231775-1 MS	BWTPF-2025-DU1 MET	Dissolved	Water	1640	6997
570-231775-1 MSD	BWTPF-2025-DU1 MET	Dissolved	Water	1640	6997

Analysis Batch: 7267

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-231775-1	BWTPF-2025-DU1 MET	Total/NA	Water	1631E	
570-231775-2	BWTPF-2025-DU2 MET	Total/NA	Water	1631E	
570-231775-3	BWTPF-2025-DU3 MET	Total/NA	Water	1631E	
570-231775-4	BWTPF-2025-DU4 MET	Total/NA	Water	1631E	
570-231775-5	BWTPF-2025-DU5 MET	Total/NA	Water	1631E	
MB 350-7267/11	Method Blank	Total/NA	Water	1631E	
MB 350-7267/12	Method Blank	Total/NA	Water	1631E	
MB 350-7267/13	Method Blank	Total/NA	Water	1631E	
LCS 350-7267/14	Lab Control Sample	Total/NA	Water	1631E	
LCSD 350-7267/15	Lab Control Sample Dup	Total/NA	Water	1631E	
180-190435-C-38 MS	Matrix Spike	Dissolved	Water	1631E	
180-190435-C-38 MSD	Matrix Spike Duplicate	Dissolved	Water	1631E	
570-231775-1 MS	BWTPF-2025-DU1 MET	Total/NA	Water	1631E	
570-231775-1 MSD	BWTPF-2025-DU1 MET	Total/NA	Water	1631E	

Analysis Batch: 7354

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-231775-1	BWTPF-2025-DU1 MET	Dissolved	Water	1640	7217
570-231775-2	BWTPF-2025-DU2 MET	Dissolved	Water	1640	7217
570-231775-3	BWTPF-2025-DU3 MET	Dissolved	Water	1640	7217
570-231775-4	BWTPF-2025-DU4 MET	Dissolved	Water	1640	7217
570-231775-5	BWTPF-2025-DU5 MET	Dissolved	Water	1640	7217
MB 350-6997/1-B	Method Blank	Dissolved	Water	1640	7217
MB 350-7217/1-A	Method Blank	Total/NA	Water	1640	7217

Metals (Continued)

Analysis Batch: 7354 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 350-7217/2-A	Method Blank	Total/NA	Water	1640	7217
LCS 350-7217/3-A	Lab Control Sample	Total/NA	Water	1640	7217
LCSD 350-7217/4-A	Lab Control Sample Dup	Total/NA	Water	1640	7217
570-231775-1 MS	BWTPF-2025-DU1 MET	Dissolved	Water	1640	7217
570-231775-1 MSD	BWTPF-2025-DU1 MET	Dissolved	Water	1640	7217

Prep Batch: 7363

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-231775-1	BWTPF-2025-DU1 MET	Dissolved	Water	1640	6997
570-231775-1	BWTPF-2025-DU1 MET	Total/NA	Water	1640	
570-231775-2	BWTPF-2025-DU2 MET	Dissolved	Water	1640	6997
570-231775-2	BWTPF-2025-DU2 MET	Total/NA	Water	1640	
570-231775-3	BWTPF-2025-DU3 MET	Dissolved	Water	1640	6997
570-231775-3	BWTPF-2025-DU3 MET	Total/NA	Water	1640	
570-231775-4	BWTPF-2025-DU4 MET	Dissolved	Water	1640	6997
570-231775-4	BWTPF-2025-DU4 MET	Total/NA	Water	1640	
570-231775-5	BWTPF-2025-DU5 MET	Dissolved	Water	1640	6997
570-231775-5	BWTPF-2025-DU5 MET	Total/NA	Water	1640	
MB 350-6997/1-D	Method Blank	Dissolved	Water	1640	6997
MB 350-7363/1-A	Method Blank	Total/NA	Water	1640	
MB 350-7363/2-A	Method Blank	Total/NA	Water	1640	
LCS 350-7363/4-A	Lab Control Sample	Total/NA	Water	1640	
LCSD 350-7363/5-A	Lab Control Sample Dup	Total/NA	Water	1640	
570-231775-1 MS	BWTPF-2025-DU1 MET	Dissolved	Water	1640	6997
570-231775-1 MS	BWTPF-2025-DU1 MET	Total/NA	Water	1640	
570-231775-1 MSD	BWTPF-2025-DU1 MET	Dissolved	Water	1640	6997
570-231775-1 MSD	BWTPF-2025-DU1 MET	Total/NA	Water	1640	

Analysis Batch: 7393

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-231775-1	BWTPF-2025-DU1 MET	Dissolved	Water	1640	7363
570-231775-1	BWTPF-2025-DU1 MET	Total/NA	Water	1640	7363
570-231775-2	BWTPF-2025-DU2 MET	Dissolved	Water	1640	7363
570-231775-2	BWTPF-2025-DU2 MET	Total/NA	Water	1640	7363
570-231775-3	BWTPF-2025-DU3 MET	Dissolved	Water	1640	7363
570-231775-3	BWTPF-2025-DU3 MET	Total/NA	Water	1640	7363
570-231775-4	BWTPF-2025-DU4 MET	Dissolved	Water	1640	7363
570-231775-4	BWTPF-2025-DU4 MET	Total/NA	Water	1640	7363
570-231775-5	BWTPF-2025-DU5 MET	Dissolved	Water	1640	7363
570-231775-5	BWTPF-2025-DU5 MET	Total/NA	Water	1640	7363
MB 350-6997/1-D	Method Blank	Dissolved	Water	1640	7363
MB 350-7363/1-A	Method Blank	Total/NA	Water	1640	7363
MB 350-7363/2-A	Method Blank	Total/NA	Water	1640	7363
LCS 350-7363/4-A	Lab Control Sample	Total/NA	Water	1640	7363
LCSD 350-7363/5-A	Lab Control Sample Dup	Total/NA	Water	1640	7363
570-231775-1 MS	BWTPF-2025-DU1 MET	Dissolved	Water	1640	7363
570-231775-1 MS	BWTPF-2025-DU1 MET	Total/NA	Water	1640	7363
570-231775-1 MSD	BWTPF-2025-DU1 MET	Dissolved	Water	1640	7363
570-231775-1 MSD	BWTPF-2025-DU1 MET	Total/NA	Water	1640	7363

Lab Chronicle

Client: Pacific EcoRisk Inc
Job ID: 570-231775-1
Project/Site: Berkeley Water Transportation Pier Ferry (MET)

Client Sample ID: BWTPF-2025-DU1 MET
Lab Sample ID: 570-231775-1
Date Collected: 05/22/25 11:10
Matrix: Water
Date Received: 05/23/25 10:31

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	1631E		1			7267	06/06/25 15:21	CL	EET SSM
	Instrument ID: 2600-4									
Dissolved	Filtration	Filtration			250 mL	250 mL	6997	05/23/25 13:29	DRM	EET SSM
Dissolved	Prep	1640			14 mL	14 mL	7217	06/04/25 17:17	COW	EET SSM
Dissolved	Analysis	1640		1			7354	06/04/25 22:11	COW	EET SSM
	Instrument ID: ICPMS11									
Dissolved	Filtration	Filtration			250 mL	250 mL	6997	05/23/25 13:29	DRM	EET SSM
Dissolved	Prep	1640			10 mL	10 mL	7363	06/12/25 15:04	V1R	EET SSM
Dissolved	Analysis	1640		1			7393	06/13/25 06:09	COW	EET SSM
	Instrument ID: ICPMS11									
Total/NA	Prep	1640			10 mL	10 mL	7363	06/12/25 15:04	V1R	EET SSM
Total/NA	Analysis	1640		1			7393	06/13/25 06:52	COW	EET SSM
	Instrument ID: ICPMS11									

Client Sample ID: BWTPF-2025-DU2 MET
Lab Sample ID: 570-231775-2
Date Collected: 05/22/25 11:12
Matrix: Water
Date Received: 05/23/25 10:31

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	1631E		1			7267	06/06/25 16:56	CL	EET SSM
	Instrument ID: 2600-4									
Dissolved	Filtration	Filtration			250 mL	250 mL	6997	05/23/25 13:29	DRM	EET SSM
Dissolved	Prep	1640			14 mL	14 mL	7217	06/04/25 17:17	COW	EET SSM
Dissolved	Analysis	1640		1			7354	06/04/25 22:54	COW	EET SSM
	Instrument ID: ICPMS11									
Dissolved	Filtration	Filtration			250 mL	250 mL	6997	05/23/25 13:29	DRM	EET SSM
Dissolved	Prep	1640			10 mL	10 mL	7363	06/12/25 15:04	V1R	EET SSM
Dissolved	Analysis	1640		1			7393	06/13/25 02:23	COW	EET SSM
	Instrument ID: ICPMS11									
Total/NA	Prep	1640			10 mL	10 mL	7363	06/12/25 15:04	V1R	EET SSM
Total/NA	Analysis	1640		1			7393	06/13/25 01:27	COW	EET SSM
	Instrument ID: ICPMS11									

Client Sample ID: BWTPF-2025-DU3 MET
Lab Sample ID: 570-231775-3
Date Collected: 05/22/25 11:14
Matrix: Water
Date Received: 05/23/25 10:31

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	1631E		1			7267	06/06/25 15:04	CL	EET SSM
	Instrument ID: 2600-4									
Dissolved	Filtration	Filtration			250 mL	250 mL	6997	05/23/25 13:29	DRM	EET SSM
Dissolved	Prep	1640			14 mL	14 mL	7217	06/04/25 17:17	COW	EET SSM
Dissolved	Analysis	1640		1			7354	06/04/25 23:08	COW	EET SSM
	Instrument ID: ICPMS11									

Client Sample ID: BWTPF-2025-DU3 MET
Lab Sample ID: 570-231775-3

Date Collected: 05/22/25 11:14
Matrix: Water
Date Received: 05/23/25 10:31

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Filtration	Filtration			250 mL	250 mL	6997	05/23/25 13:29	DRM	EET SSM
Dissolved	Prep	1640			10 mL	10 mL	7363	06/12/25 15:04	V1R	EET SSM
Dissolved	Analysis	1640		1			7393	06/13/25 02:37	COW	EET SSM
	Instrument ID: ICPMS11									
Total/NA	Prep	1640			10 mL	10 mL	7363	06/12/25 15:04	V1R	EET SSM
Total/NA	Analysis	1640		1			7393	06/13/25 01:41	COW	EET SSM
	Instrument ID: ICPMS11									

Client Sample ID: BWTPF-2025-DU4 MET
Lab Sample ID: 570-231775-4

Date Collected: 05/22/25 11:16
Matrix: Water
Date Received: 05/23/25 10:31

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	1631E		1			7267	06/06/25 17:01	CL	EET SSM
	Instrument ID: 2600-4									
Dissolved	Filtration	Filtration			250 mL	250 mL	6997	05/23/25 13:29	DRM	EET SSM
Dissolved	Prep	1640			14 mL	14 mL	7217	06/04/25 17:17	COW	EET SSM
Dissolved	Analysis	1640		1			7354	06/04/25 23:22	COW	EET SSM
	Instrument ID: ICPMS11									
Dissolved	Filtration	Filtration			250 mL	250 mL	6997	05/23/25 13:29	DRM	EET SSM
Dissolved	Prep	1640			10 mL	10 mL	7363	06/12/25 15:04	V1R	EET SSM
Dissolved	Analysis	1640		1			7393	06/13/25 02:52	COW	EET SSM
	Instrument ID: ICPMS11									
Total/NA	Prep	1640			10 mL	10 mL	7363	06/12/25 15:04	V1R	EET SSM
Total/NA	Analysis	1640		1			7393	06/13/25 01:55	COW	EET SSM
	Instrument ID: ICPMS11									

Client Sample ID: BWTPF-2025-DU5 MET
Lab Sample ID: 570-231775-5

Date Collected: 05/22/25 11:18
Matrix: Water
Date Received: 05/23/25 10:31

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	1631E		1			7267	06/06/25 15:13	CL	EET SSM
	Instrument ID: 2600-4									
Dissolved	Filtration	Filtration			250 mL	250 mL	6997	05/23/25 13:29	DRM	EET SSM
Dissolved	Prep	1640			14 mL	14 mL	7217	06/04/25 17:17	COW	EET SSM
Dissolved	Analysis	1640		1			7354	06/04/25 23:36	COW	EET SSM
	Instrument ID: ICPMS11									
Dissolved	Filtration	Filtration			250 mL	250 mL	6997	05/23/25 13:29	DRM	EET SSM
Dissolved	Prep	1640			10 mL	10 mL	7363	06/12/25 15:04	V1R	EET SSM
Dissolved	Analysis	1640		1			7393	06/13/25 03:06	COW	EET SSM
	Instrument ID: ICPMS11									
Total/NA	Prep	1640			10 mL	10 mL	7363	06/12/25 15:04	V1R	EET SSM
Total/NA	Analysis	1640		1			7393	06/13/25 02:09	COW	EET SSM
	Instrument ID: ICPMS11									

Client: Pacific EcoRisk Inc
Job ID: 570-231775-1
Project/Site: Berkeley Water Transportation Pier Ferry (MET)

Laboratory References:

EET SSM = Eurofins Seattle Specialty Metals, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Accreditation/Certification Summary

Client: Pacific EcoRisk Inc
Job ID: 570-231775-1
Project/Site: Berkeley Water Transportation Pier Ferry (MET)

Laboratory: Eurofins Seattle Specialty Metals

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-004	02-19-27
ANAB	Dept. of Defense ELAP	L2236	01-19-27
ANAB	Dept. of Energy	L2236.01	01-19-27
ANAB	ISO/IEC 17025	L2236	01-19-27
California	State	2954	07-08-26
Florida	NELAP	E87575	06-30-25
Louisiana (All)	NELAP	03073	06-30-25
Maine	State	WA01273	05-02-26
New Jersey	NELAP	WA014	06-30-25
New York	NELAP	11662	04-01-26
Oregon	NELAP	4167-008	07-07-25
US Fish & Wildlife	US Federal Programs	A20571	06-30-25
USDA	US Federal Programs	525-23-4-22573	01-24-28
Washington	State	C788-23a	07-13-25
Wisconsin	State	399133460	07-31-25

Method Summary

Client: Pacific EcoRisk Inc
Job ID: 570-231775-1
Project/Site: Berkeley Water Transportation Pier Ferry (MET)

Method	Method Description	Protocol	Laboratory
1631E	Mercury, Low Level (CVAFS)	EPA	EET SSM
1640	Metals (ICPMS)	EPA	EET SSM
1640	Preparation, Total Recoverable Metals	EPA	EET SSM
Filtration	Sample Filtration	None	EET SSM

Protocol References:

EPA = US Environmental Protection Agency

None = None

Laboratory References:

EET SSM = Eurofins Seattle Specialty Metals, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Sample Summary

Client: Pacific EcoRisk Inc
Job ID: 570-231775-1
Project/Site: Berkeley Water Transportation Pier Ferry (MET)

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
570-231775-1	BWTPF-2025-DU1 MET	Water	05/22/25 11:10	05/23/25 10:31
570-231775-2	BWTPF-2025-DU2 MET	Water	05/22/25 11:12	05/23/25 10:31
570-231775-3	BWTPF-2025-DU3 MET	Water	05/22/25 11:14	05/23/25 10:31
570-231775-4	BWTPF-2025-DU4 MET	Water	05/22/25 11:16	05/23/25 10:31
570-231775-5	BWTPF-2025-DU5 MET	Water	05/22/25 11:18	05/23/25 10:31

Pacific EcoRisk
ENVIRONMENTAL CONSULTING & TESTING
2250 Cordelia Rd., Fairfield, CA 94534
(707)207-7760

Eurofins FGS CHAIN-OF-CUSTODY RECORD

6/16/2025

Client Name:	PER
Client Address:	2250 Cordelia Rd. Faifield, CA 94534
Sampled By:	PER
Phone:	(707) 207-7760
Cell:	(707) 207-7916
Project Manager:	Mike McElroy
Project Name:	Berkeley Water Transportation Pier Ferry
PO Number:	39995

	Client Sample ID	Sample Date	Sample Time	Sample Matrix*	Container Number	Container Type	Dissolved Arsenic - EPA 1640 (RL = 1 ug/L ww)	Dissolved Cadmium - EPA 1640 (RL = 0.25 ug/L ww)	Dissolved Chromium - EPA 1640 (RL = 1 ug/L ww)	Dissolved Copper - EPA 1640 (RL = 1 ug/L ww)	Dissolved Lead - EPA 1640 (RL = 0.25 ug/L ww)	Total Mercury - EPA 1631E (RL = 0.005 ug/L ww)	Dissolved Nickel - EPA 1640 (RL = 5 ug/L ww)	Total Selenium - EPA 1640 (RL = 0.5 ug/L ww)	Dissolved Silver - EPA 1640 (RL = 0.02 ug/L ww)	Dissolved Zinc - EPA 1640 (RL = 10 ug/L ww)	
							REQUESTED ANALYSIS										
1	BWTPF-2025-DU1 MET	5/22/25	1110	MET	9	Multiple	X	X	X	X	X	X	X	X	X	X	
2	BWTPF-2025-DU2 MET	5/22/25	1112	MET	3	Multiple	X	X	X	X	X	X	X	X	X	X	
3	BWTPF-2025-DU3 MET	5/22/25	1114	MET	3	Multiple	X	X	X	X	X	X	X	X	X	X	
4	BWTPF-2025-DU4 MET	5/22/25	1116	MET	3	Multiple	X	X	X	X	X	X	X	X	X	X	
5	BWTPF-2025-DU5 MET	5/22/25	1118	MET	3	Multiple	X	X	X	X	X	X	X	X	X	X	
6																	
7																	
8																	
9																	
10																	

Correct Containers:	**Yes**	**No**	
Sample Temperature:	**Ambient**	**Cold**	**Warm**
Sample Preservative:	**Yes**	**No**	
Turnaround Time:	**STD**	**Specify:**	

Comments:
Sample date/time reflects collection date/time of MET after 24-hr settling period.

Standard TAT

Perform QAQC (MS/MSD) on BWTPF-2025-DU1 MET sample.

RELINQUISHED BY			
Signature:		**Signature:**	
Print:	Kiyan Lacaca	**Print:**	
Organization:	PER	**Organization:**	
DATE:	5/22/25 **TIME:** 1205	**DATE:**	**TIME**
RECEIVED BY			
Signature:		**Signature:**	
Print:		**Print:**	
Organization:		**Organization:**	
DATE:	**TIME:**	**DATE:**	**TIME**

*MATRIX CODES: (SED = Sediment); (FW = Freshwater); (WW = Wastewater); (STRMW = Stormwater)

Pacific EcoRisk
ENVIRONMENTAL CONSULTING & TESTING
2250 Cordelia Rd., Fairfield, CA 94534
(707)207-7760

Eurofins FGS CHAIN-OF-CUSTODY RECORD

Client Name:	PER
Client Address:	2250 Cordelia Rd Faifield, CA 94534
Sampled By:	PER
Phone:	(707) 207-7760
Cell:	(707) 207-7916
Project Manager:	Mike McElroy
Project Name:	Berkeley Water Transportation Pier Ferry
PO Number:	39995

	Client Sample ID	Sample Date	Sample Time	Sample Matrix*	Container Number	Container Type	Dissolved Arsenic - EPA 1640 (RL = 1 ug/L ww)	Dissolved Cadmium - EPA 1640 (RL = 0 25 ug/L ww)	Dissolved Chromium - EPA 1640 (RL = 1 ug/L ww)	Dissolved Copper - EPA 1640 (RL = 1 ug/L ww)	Dissolved Lead - EPA 1640 (RL = 0 25 ug/L ww)	Total Mercury - EPA 1631E (RL = 0 005 ug/L ww)	Dissolved Nickel - EPA 1640 (RL = 5 ug/L ww)	Total Selenium - EPA 1640 (RL = 0 5 ug/L ww)	Dissolved Silver - EPA 1640 (RL = 0 02 ug/L ww)	Dissolved Zinc - EPA 1640 (RL = 10 ug/L ww)	
							REQUESTED ANALYSIS										
1	BWTPF-2025-DU1 MET	5/22/25	1110	MET	9	Multiple	X	X	X	X	X	X	X	X	X	X	
2	BWTPF-2025-DU2 MET	5/22/25	1112	MET	3	Multiple	X	X	X	X	X	X	X	X	X	X	
3	BWTPF-2025-DU3 MET	5/22/25	1114	MET	3	Multiple	X	X	X	X	X	X	X	X	X	X	
4	BWTPF-2025-DU4 MET	5/22/25	1116	MET	3	Multiple	X	X	X	X	X	X	X	X	X	X	
5	BWTPF-2025-DU5 MET	5/22/25	1118	MET	3	Multiple	X	X	X	X	X	X	X	X	X	X	
6																	
7																	
8																	
9																	
10																	

Correct Containers:	**Yes**	**No**	
Sample Temperature:	**Ambient**	**Cold**	**Warm**
Sample Preservative:	**Yes**	**No**	
Turnaround Time:	**STD**	**Specify:**	

Comments:

e of MET after 24-hr settling period.

570-231775 Chain of Custody

I MET sample.

Therm. ID: SC03 Cust. Seal: (Y) / N
Uncorr./Corr. Temp 0.1 / 0.0 °C
Delivery: UPS / FedEx / Other ____
Ice Type: Blue / Dry / Wet / None
Label Ver. 2 Packing: B

Ls Blue

*MATRIX CODES (SED = Sediment ... W = Stormwater)

RELINQUISHED BY		RECEIVED BY	
Signature:		Signature:	
Print:	Ryan Lacara	Print:	Darren McEwen
Organization:	PER	Organization:	ECI
DATE:	5/22/25 TIME: 1205	DATE: 5/23/25 TIME: 9:45	
Signature:		Signature:	
Print:		Print:	
Organization:		Organization:	
DATE:	TIME	DATE:	TIME

8814 6611 1700

6/16/2025

Login Sample Receipt Checklist

Client: Pacific EcoRisk Inc

Job Number: 570-231775-1
SDG Number:

Login Number: 231775
List Number: 1
Creator: Hollowell, Carla

List Source: Eurofins Calscience

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.		
The cooler's custody seal, if present, is intact.		
Sample custody seals, if present, are intact.		
The cooler or samples do not appear to have been compromised or tampered with.		
Samples were received on ice.		
Cooler Temperature is acceptable.		
Cooler Temperature is recorded.		
COC is present.		
COC is filled out in ink and legible.		
COC is filled out with all pertinent information.		
Is the Field Sampler's name present on COC?		
There are no discrepancies between the containers received and the COC.		
Samples are received within Holding Time (excluding tests with immediate HTs)		
Sample containers have legible labels.		
Containers are not broken or leaking.		
Sample collection date/times are provided.		
Appropriate sample containers are used.		
Sample bottles are completely filled.		
Sample Preservation Verified.		
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs		
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").		
Multiphasic samples are not present.		
Samples do not require splitting or compositing.		
Residual Chlorine Checked.		

Login Sample Receipt Checklist

Client: Pacific EcoRisk Inc

Job Number: 570-231775-1
SDG Number:

Login Number: 231775
List Number: 2
Creator: Miller, Darren R

List Source: Eurofins Seattle Specialty Metals
List Creation: 05/23/25 02:13 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Appendix E

Ammonia and Sulfide Analyses Performed in Support of Bioassay Testing

Table E-1. Sediment Porewater Test Initiation Water Quality Characteristics for *Leptocheirus plumulosus* Toxicity Tests.

Sample ID	pH	Salinity (ppt)	Total Sulfide (mg/L)	Total Ammonia (mg/L N)
Lab Control	7.65	22.3	0.043	1.23
BWTPF-DU1	8.06	25.8	0.137	2.22
BWTPF-DU2	8.19	26.9	0.132	2.64
BWTPF-DU3	8.15	26.7	0.087	6.14
BWTPF-DU4	8.07	26.9	0.150	9.74
BWTPF-DU5	8.19	26.5	0.100	3.89

Table E-2. Sediment Porewater Test Termination Water Quality Characteristics for *Leptocheirus plumulosus* Toxicity Tests.

Sample ID	pH	Salinity (ppt)	Total Sulfide (mg/L)	Total Ammonia (mg/L N)
Lab Control	7.30	20.4	0.065	<1.00
BWTPF-DU1	7.65	21.4	0.089	1.15
BWTPF-DU2	7.82	22.2	0.121	<1.00
BWTPF-DU3	7.84	22.4	0.082	2.39
BWTPF-DU4	7.81	21.4	0..130	3.50
BWTPF-DU5	7.84	21.1	0.000	1.61

Table E-3. Sediment Overlying Water Total Ammonia Levels for *Leptocheirus plumulosus* Tests.

Sample ID	Total Ammonia (mg/L N)	
	Test Initiation	Test Termination
Lab Control	<1.00	<1.00
BWTPF-DU1	<1.00	<1.00
BWTPF-DU2	<1.00	<1.00
BWTPF-DU3	1.18	<1.00
BWTPF-DU4	1.52	<1.00
BWTPF-DU5	<1.00	<1.00

Table E-4. Sediment Porewater Test Initiation Water Quality Characteristics for *Neanthes arenacoedentata* Tests.

Sample ID	pH	Salinity (ppt)	Total Sulfide (mg/L)	Total Ammonia (mg/L N)
Lab Control	7.57	25.4	0.152	1.21
BWTPF-DU1	7.96	26.9	0.142	2.29
BWTPF-DU2	8.13	27.9	0.234	2.67
BWTPF-DU3	8.03	28.0	0.168	5.87
BWTPF-DU4	7.87	27.7	0.052	7.15
BWTPF-DU5	7.99	27.3	0.060	4.37

Table E-5. Sediment Porewater Test Termination Water Quality Characteristics for *Neanthes arenacoedentata* Tests.

Sample ID	pH	Salinity (ppt)	Total Sulfide (mg/L)	Total Ammonia (mg/L N)
Lab Control	7.37	27.8	0.118	<2.00
BWTPF-DU1	7.77	25.8	0.142	<2.00
BWTPF-DU2	7.78	29.4	0.102	<2.00
BWTPF-DU3	7.73	32.3	0.149	<2.00
BWTPF-DU4	7.64	34.3	0.094	3.92
BWTPF-DU5	7.82	32.0	0.156	<1000

Table E-6. Sediment Overlying Water Total Ammonia Levels for *Neanthes arenacoedentata* Tests.

Sample ID	Total Ammonia (mg/L N)	
	Test Initiation	Test Termination
Lab Control	<1.00	<2.00
BWTPF-DU1	<1.00	<2.00
BWTPF-DU2	<1.00	<2.00
BWTPF-DU3	<1.00	<2.00
BWTPF-DU4	1.04	<2.00
BWTPF-DU5	<1.00	<2.00

Table E-7. Total Ammonia Levels for Standard Elutriate Test (SET) and Modified Elutriate Test (MET) Samples.

Sample ID	Total Ammonia (mg/L N)	
	SET	MET
BWTPF-DU1	<2.00	<1.00
BWTPF-DU2	<2.00	<1.00
BWTPF-DU3	2.88	2.77
BWTPF-DU4	4.33	3.83
BWTPF-DU5	<2.00	1.26

Appendix F

Test Data and Summary of Statistics for the Evaluation of the Toxicity of Berkeley Water Transportation Pier Ferry Project Sediments to the Amphipod, *Leptocheirus plumulosus*

CETIS Summary Report

10 Day Marine/Estuarine Sediment Test — **Pacific EcoRisk**

Batch ID:	08-4447-3663	**Test Type:**	Survival (10d)	**Analyst:**	Robert Gee
Start Date:	19 May-25 07:40	**Protocol:**	ASTM E1367-03 (2014)	**Diluent:**	Not Applicable
Ending Date:	29 May-25 09:26	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Test Length:	10d 2h	**Taxon:**	Malacostraca	**Source:**	Aquatic Research Organis **Age:** NA

Sample ID:	07-8845-0038	**Code:**	BWTPF_2025LP_C1	**Project:**	39995
Sample Date:	19 May-25 07:40	**Material:**	Control Sediment	**Source:**	Berkeley Water Transportation Pier Fe
Receipt Date:	19 May-25 07:40	**CAS (PC):**		**Station:**	LABQA
Sample Age:	--- (25.3 °C)	**Client:**	City of Berkeley		

Sample Code	Sample ID	Sample Date	Receipt Date	Sample Age	Client Name	Project
BWTPF_2025LP_C	07-8845-0038	19 May-25 07:40	19 May-25 07:40	--- (25.3 °C)	City of Berkeley	39995
BWTPF-2025-DU1	20-1606-8620	06 May-25 08:35	07 May-25 16:45	12d 23h (0.1 °C)		
BWTPF-2025-DU2	15-0488-1916	08 May-25 09:35	10 May-25 08:30	10d 22h (3.7 °C)		
BWTPF-2025-DU3	15-4730-6453	09 May-25 06:40	10 May-25 08:30	10d 1h (3.7 °C)		
BWTPF-2025-DU4	01-9202-7641	07 May-25 12:15	07 May-25 16:45	11d 19h (1.3 °C)		
BWTPF-2025-DU5	16-9940-7949	07 May-25 06:30	07 May-25 16:45	12d 1h (0.9 °C)		

Sample Code	Material Type	Sample Source	Station Location	Lat/Long
BWTPF_2025LP_C	Control Sediment	Berkeley Water Transportation Pi	LABQA	
BWTPF-2025-DU1	Sediment/Elutriate	Berkeley Water Transportation Pi	BWTPF-2025-DU1	
BWTPF-2025-DU2	Sediment/Elutriate	Berkeley Water Transportation Pi	BWTPF-2025-DU2	
BWTPF-2025-DU3	Sediment/Elutriate	Berkeley Water Transportation Pi	BWTPF-2025-DU3	
BWTPF-2025-DU4	Sediment/Elutriate	Berkeley Water Transportation Pi	BWTPF-2025-DU4	
BWTPF-2025-DU5	Sediment/Elutriate	Berkeley Water Transportation Pi	BWTPF-2025-DU5	

Single Comparison Summary

Analysis ID	Endpoint	Comparison Method	P-Value	Comparison Result
20-9993-5695	10d Survival Rate	Equal Variance t Two-Sample Test	0.8820	BWTPF-2025-DU1 passed 10d survival rat
02-0746-9492	10d Survival Rate	Equal Variance t Two-Sample Test	0.3719	BWTPF-2025-DU2 passed 10d survival rat
00-5293-9203	10d Survival Rate	Equal Variance t Two-Sample Test	0.0234	BWTPF-2025-DU3 failed 10d survival rate
14-1789-2163	10d Survival Rate	Equal Variance t Two-Sample Test	0.9774	BWTPF-2025-DU4 passed 10d survival rat
01-6607-9760	10d Survival Rate	Equal Variance t Two-Sample Test	0.7659	BWTPF-2025-DU5 passed 10d survival rat

10d Survival Rate Summary

Sample	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
BWTPF_2025LP_C	CS	5	0.940	0.888	0.992	0.900	1.000	0.019	0.042	4.45%	0.00%
BWTPF-2025-DU1		5	0.970	0.936	1.000	0.950	1.000	0.012	0.027	2.82%	-3.19%
BWTPF-2025-DU2		5	0.930	0.874	0.986	0.900	1.000	0.020	0.045	4.81%	1.06%
BWTPF-2025-DU3		5	0.830	0.694	0.966	0.650	0.900	0.049	0.110	13.20%	11.70%
BWTPF-2025-DU4		5	0.990	0.962	1.000	0.950	1.000	0.010	0.022	2.26%	-5.32%
BWTPF-2025-DU5		5	0.960	0.908	1.000	0.900	1.000	0.019	0.042	4.36%	-2.13%

10d Survival Rate Detail — MD5: 5B8CFCA6C42FA1D3F7E8F52210208B13

Sample	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
BWTPF_2025LP_C	CS	0.950	0.900	0.900	1.000	0.950
BWTPF-2025-DU1		1.000	0.950	0.950	0.950	1.000
BWTPF-2025-DU2		0.900	1.000	0.900	0.950	0.900
BWTPF-2025-DU3		0.900	0.900	0.800	0.650	0.900
BWTPF-2025-DU4		1.000	1.000	1.000	1.000	0.950
BWTPF-2025-DU5		1.000	0.950	0.900	0.950	1.000

10 Day Marine/Estuarine Sediment Test

Pacific EcoRisk

10d Survival Rate Binomials

Sample	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
BWTPF_2025LP_C	CS	19/20	18/20	18/20	20/20	19/20
BWTPF-2025-DU1		20/20	19/20	19/20	19/20	20/20
BWTPF-2025-DU2		18/20	20/20	18/20	19/20	18/20
BWTPF-2025-DU3		18/20	18/20	16/20	13/20	18/20
BWTPF-2025-DU4		20/20	20/20	20/20	20/20	19/20
BWTPF-2025-DU5		21/21	19/20	18/20	19/20	20/20

10-Day Estuarine/Marine Sediment Toxicity Test Data

Client: Berkeley BWTPF Test ID#: multiple Date (Day 0): 5/19/25

Species: *Leptocheirus plumolosus* Project #: 39995 Organism Supplier: ARO

Organism Log # : 14906 / 14894

Day of Test	Test Replicate	Lab Control					Sign-Off
		Temp (°C)	pH	D.O. (mg/L)	Salinity (ppt)	# Alive	
Day 0	Rep A	25.3	8.04	7.5	20.4	20	Date: 5/19/25
	Rep B	25.3	8.03	7.5	21.2	20	Time: 0740
	Rep C	25.4	8.03	7.4	19.9	20	WQ: SK
	Rep D	25.2	8.04	7.4	20.1	20	Scientist Initiation:
	Rep E	25.2	8.04	7.4	20.8	20	Scientist Confirmation: MD
Day 1	Rep A	25.4	7.84	7.7	20.8		Date: 5/20/25 Time: 0811 WQ: SK
Day 2	Rep B	25.2	7.78	7.5	20.6		Date: 5/21/25 Time: 1107 WQ: MF
Day 3	Rep C	24.5	7.71	7.3	21.01		Date: 5/22/25 Time: 1437 WQ: ZQ
Day 4	Rep D	25.0	7.76	7.1	21.5		Date: 5/23/25 Time: 1612 WQ: ZQ
Day 5	Rep E	25.0	7.87	7.5	19.7		Date: 5/24/25 Time: 1501 WQ: KES
Day 6	Rep A	24.4	7.91	7.4	20.3		Date: 5/25/25 Time: 1122 WQ: GM
Day 7	Rep B	24.9	8.01	7.8	21.4		Date: 5/26/25 Time: 0819 WQ: EC
Day 8	Rep C	25.0	7.75	7.6	20.2		Date: 5/27/25 Time: 0924 WQ: KES
Day 9	Rep D	25.2	7.70	7.5	20.7		Date: 5/28/25 Time: 1127 WQ: EC
Day 10	Rep A	25.4	7.91	7.2	21.9	19	Date: 5/29/25
	Rep B	25.3	7.92	7.3	22.4	18	Time: 0926
	Rep C	25.3	7.89	7.3	21.3	18	WQ: IG
	Rep D	25.3	7.88	7.3	20.8	20	Scientist Counts: AN
	Rep E	25.3	7.90	7.4	23.2	19	

Day of Test	Matrix	pH	D.O. (mg/L)	Salinity (ppt)	Total Sulfide (mg/L)	Total Ammonia (mg/L)	Sign-Off
Day 0	Porewater	7.65	7.0	22.3	0.043	1.23	Date: 5/19/25 Time: 0848 WQ: SK
	Overlying Water					<1.00	Date: 5/19/25 Time: 0720 WQ: SK
	Meter ID	PH29	RD10	EC14	DR3900	DR3800	
Day 10	Porewater	7.30	6.8	20.4	0.065	<1.00	Date: 5/29/25 Time: 1118 WQ: IG
	Overlying Water					<1.00	Date: 5/29/25 Time: 1007 WQ: IG
	Meter ID	pH27	RD14	EC10	DR3900	DR3800	

10 Day Marine/Estuarine Sediment Test — **Pacific EcoRisk**

Analysis ID:	20-9993-5695	**Endpoint:**	10d Survival Rate	**CETIS Version:**	CETIS v2.1.6
Analyzed:	11 Jun-25 9:31	**Analysis:**	Parametric-Two Sample	**Status Level:**	1
Edit Date:	11 Jun-25 0:00	**MD5 Hash:**	ADC419FB0A11F6811F0636BF3054734C	**Editor ID:**	006-243-107-9

Data Transform	Alt Hyp	Comparison Result	PMSD
Angular (Corrected)	C > T	BWTPF-2025-DU1 passed 10d survival rate endpoint	4.79%

Equal Variance t Two-Sample Test

Sample I	vs	Sample II	df	Test Stat	Critical	MSD	P-Type	P-Value	Decision(α:5%)
Control Sed		BWTPF-2025-DU	8	-1.28	1.86	0.0888	CDF	0.8820	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.0093605	0.0093605	1	1.64	0.2359	Non-Significant Effect
Error	0.0456039	0.0057005	8			
Total	0.0549644		9			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Variance Ratio F Test	1.95	23.2	0.5332	Equal Variances
Distribution	Shapiro-Wilk W Normality Test	0.908	0.741	0.2660	Normal Distribution

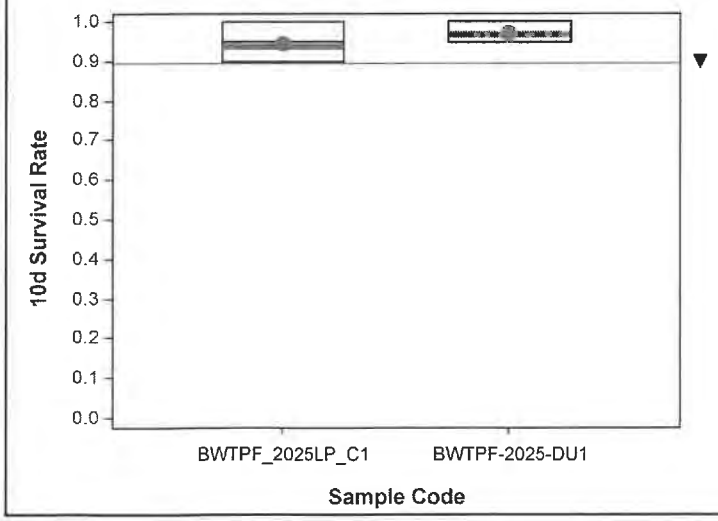
10d Survival Rate Summary

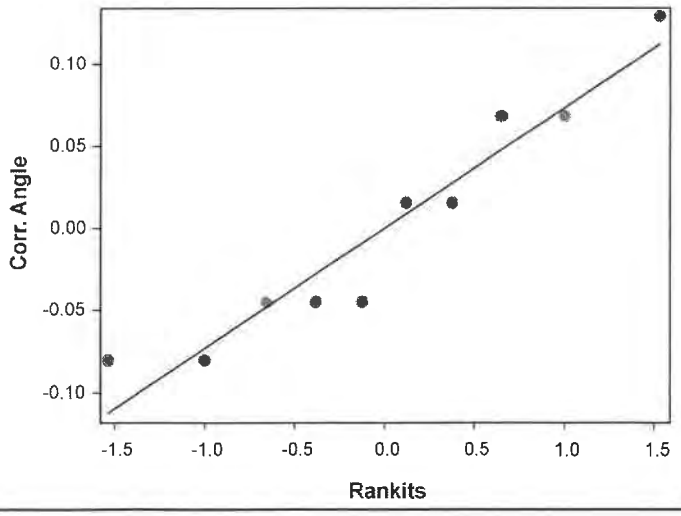
Sample	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
BWTPF_2025LP_C	CS	5	0.940	0.888	0.992	0.950	0.900	1.000	0.019	4.45%	0.00%
BWTPF-2025-DU1		5	0.970	0.936	1.000	0.950	0.950	1.000	0.012	2.82%	-3.19%

Angular (Corrected) Transformed Summary

Sample	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
BWTPF_2025LP_C	CS	5	1.330	1.220	1.440	1.350	1.250	1.460	0.039	6.53%	0.00%
BWTPF-2025-DU1		5	1.390	1.310	1.470	1.350	1.350	1.460	0.028	4.47%	-4.60%

Graphics





10-Day Estuarine/Marine Sediment Toxicity Test Data

Client: Berkeley BWTPF Test ID#: 109903 Date (Day 0): 5/19/25

Species: *Leptocheirus plumolosus* Project #: 39995 Organism Supplier: ARO

Organism Log # : 14906/14899

Day of Test	Test Replicate	BWTPF-DU1					Sign-Off
		Temp (°C)	pH	D.O. (mg/L)	Salinity (ppt)	# Alive	
Day 0	Rep A	25.2	8.01	7.4	21.7	20	Date: 5/19/25 Time: 0740 WQ: SK Scientist Initiation: Scientist Confirmation: MD
	Rep B	25.1	8.03	7.4	21.3	20	
	Rep C	25.2	8.05	7.4	21.4	20	
	Rep D	25.0	8.00	7.3	20.0	20	
	Rep E	25.2	8.06	7.4	21.2	20	
Day 1	Rep A	25.4	7.85	7.7	22.0		Date: 5/20/25 Time: 0811 WQ: SK
Day 2	Rep B	25.1	7.77	7.4	21.0		Date: 5/21/25 Time: 1109 WQ: MC
Day 3	Rep C	24.6	7.72	7.2	20.7		Date: 5/22/25 Time: 1442 WQ: ZO
Day 4	Rep D	24.7	7.81	7.1	20.8		Date: 5/23/25 Time: 1615 WQ: ZO
Day 5	Rep E	25.1	7.84	7.7	21.3		Date: 5/24/25 Time: 1503 WQ: KES
Day 6	Rep A	25.2	7.93	7.4	19.4		Date: 5/25/25 Time: 1125 WQ: GN
Day 7	Rep B	24.7	8.02	7.6	20.1		Date: 5/26/25 Time: 0821 WQ:
Day 8	Rep C	24.8	7.86	7.6	20.4		Date: 5/27/25 Time: 0926 WQ: KES
Day 9	Rep D	25.2	7.89	7.3	21.2		Date: 5/28/25 Time: 1228 WQ: EC
Day 10	Rep A	25.4	7.94	7.1	20.7	20	Date: 5/29/25 Time: 0933 WQ: JG Scientist Counts: AN
	Rep B	25.1	7.96	7.1	20.9	19	
	Rep C	25.1	7.97	7.2	20.9	19	
	Rep D	25.3	7.99	7.2	21.6	19	
	Rep E	25.7	7.98	7.2	20.1	20	

Day of Test	Matrix	pH	D.O. (mg/L)	Salinity (ppt)	Total Sulfide (mg/L)	Total Ammonia (mg/L)	Sign-Off
Day 0	Porewater	8.06	6.6	25.8	0.137	2.22	Date: 5/19/25 Time: 0848 WQ: SK
	Overlying Water					<1.00	Date: 5/19/25 Time: 0720 WQ: SK
	Meter ID	pH29	RD10	EC14	DR3900	DR3800	
Day 10	Porewater	7.65	7.0	21.4	~~0.065~~ 0.084 EC 5/29	1.15	Date: 5/29/25 Time: 1119 WQ: JG
	Overlying Water					<1.00	Date: 5/29/25 Time: 1007 WQ: JG
	Meter ID	pH27	RD14	EC10	DR3900	DR3800	

10 Day Marine/Estuarine Sediment Test — **Pacific EcoRisk**

Analysis ID:	02-0746-9492	**Endpoint:**	10d Survival Rate	**CETIS Version:**	CETIS v2.1.6
Analyzed:	11 Jun-25 9:31	**Analysis:**	Parametric-Two Sample	**Status Level:**	1
Edit Date:	11 Jun-25 0:00	**MD5 Hash:**	38970E57B90DEB6CB0528FF3022BE853	**Editor ID:**	006-243-107-9

Data Transform	Alt Hyp	Comparison Result	PMSD
Angular (Corrected)	C > T	BWTPF-2025-DU2 passed 10d survival rate endpoint	5.92%

Equal Variance t Two-Sample Test

Sample I	vs	Sample II	df	Test Stat	Critical	MSD	P-Type	P-Value	Decision(α:5%)
Control Sed		BWTPF-2025-DU	8	0.338	1.86	0.106	CDF	0.3719	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.0009262	0.0009262	1	0.115	0.7437	Non-Significant Effect
Error	0.0646718	0.008084	8			
Total	0.0655979		9			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Variance Ratio F Test	1.14	23.2	0.8988	Equal Variances
Distribution	Shapiro-Wilk W Normality Test	0.843	0.741	0.0482	Normal Distribution

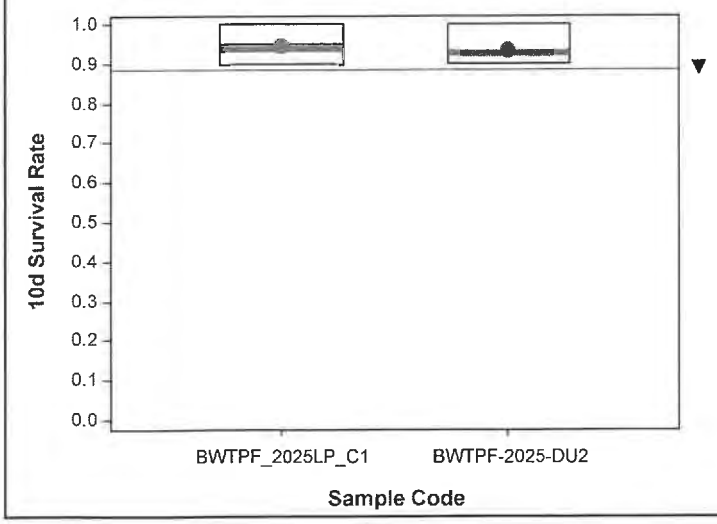
10d Survival Rate Summary

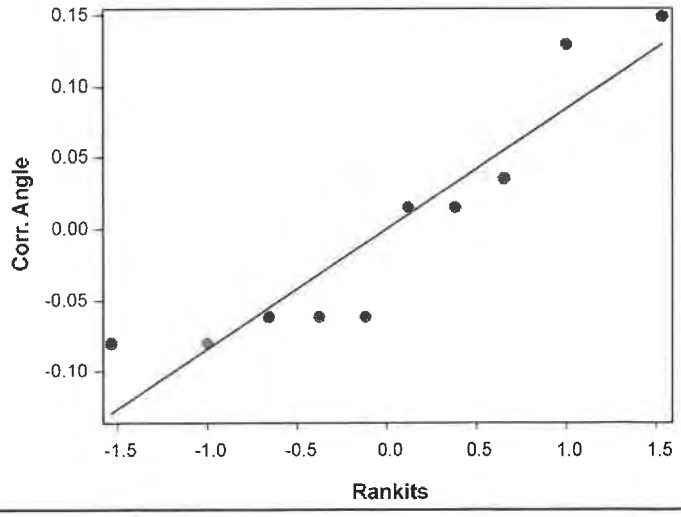
Sample	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
BWTPF_2025LP_C	CS	5	0.940	0.888	0.992	0.950	0.900	1.000	0.019	4.45%	0.00%
BWTPF-2025-DU2		5	0.930	0.874	0.986	0.900	0.900	1.000	0.020	4.81%	1.06%

Angular (Corrected) Transformed Summary

Sample	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
BWTPF_2025LP_C	CS	5	1.330	1.220	1.440	1.350	1.250	1.460	0.039	6.53%	0.00%
BWTPF-2025-DU2		5	1.310	1.190	1.430	1.250	1.250	1.460	0.042	7.09%	1.45%

Graphics





10-Day Estuarine/Marine Sediment Toxicity Test Data

Client: Berkeley BWTPF Test ID#: 109904 Date (Day 0): 5/19/25

Species: *Leptocheirus plumolosus* Project #: 39995 Organism Supplier: ARO

Organism Log # : 14906/14894

Day of Test	Test Replicate	BWTPF-DU2					Sign-Off
		Temp (°C)	pH	D.O. (mg/L)	Salinity (ppt)	# Alive	
Day 0	Rep A	25.3	8.02	7.4	20.6	20	Date: 5/19/25
	Rep B	25.1	7.98	7.4	20.6	20	Time: 0740
	Rep C	25.1	8.05	7.5	20.3	20	WQ: SK
	Rep D	25.0	8.05	7.4	20.8	20	Scientist Initiation:
	Rep E	25.0	8.04	7.4	20.8	20	Scientist Confirmation:
Day 1	Rep A	25.3	7.85	7.9	21.6		Date: 5/20/25 Time: 0811 WQ: SK
Day 2	Rep B	25.0	7.71	7.1	21.3		Date: 5/21/25 Time: 1110 WQ: MF
Day 3	Rep C	24.6	7.74	7.3	20.7		Date: 5/22/25 Time: 1444 WQ: ZQ
Day 4	Rep D	24.5	7.82	7.2	20.3		Date: 5/23/25 Time: 1617 WQ: ZQ
Day 5	Rep E	24.8	7.82	7.7	21.9		Date: 5/24/25 Time: 1504 WQ: KES
Day 6	Rep A	25.2	7.86	7.4	21.1		Date: 5/25/25 Time: 1129 WQ: EC
Day 7	Rep B	24.4	7.99	7.2	18.2		Date: 5/26/25 Time: 0822 WQ: EC
Day 8	Rep C	24.7	7.80	7.7	19.5		Date: 5/27/25 Time: 0927 WQ: KES
Day 9	Rep D	25.2	7.77	7.3	21.2		Date: 5/28/25 Time: 1230 WQ: EC
Day 10	Rep A	25.3	7.84	7.1	22.1	18	Date: 5/29/25
	Rep B	24.8	7.86	7.3	19.2	20	Time: 0938
	Rep C	24.8	7.85	7.3	20.0	18	WQ: IL
	Rep D	25.1	7.85	7.3	21.8	19	Scientist Counts:
	Rep E	25.6	7.90	7.2	25.3	18	

Day of Test	Matrix	pH	D.O. (mg/L)	Salinity (ppt)	Total Sulfide (mg/L)	Total Ammonia (mg/L)	Sign-Off
Day 0	Porewater	8.19	6.9	26.9	0.132	2.64	Date: 5/19/25 Time: 0848 WQ: SK
	Overlying Water					<1.00	Date: 5/19/25 Time: 0720 WQ: SK
	Meter ID	pH29	RD10	EC14	DR3900	DR3800	
Day 10	Porewater	7.82	7.0	22.2	~~0.084~~ 0.124 IL 5/29	<1.00	Date: 5/29/25 Time: 1120 WQ: IL
	Overlying Water					<1.00	Date: 5/29/25 Time: 1007 WQ: IL
	Meter ID	pH27	RD14	EC10	DR3900	DR3800	

10 Day Marine/Estuarine Sediment Test — **Pacific EcoRisk**

Analysis ID:	00-5293-9203	**Endpoint:**	10d Survival Rate	**CETIS Version:**	CETIS v2.1.6
Analyzed:	11 Jun-25 9:32	**Analysis:**	Parametric-Two Sample	**Status Level:**	1
Edit Date:	11 Jun-25 0:00	**MD5 Hash:**	DC029166A06D8FC58EA0AB1BF831E790	**Editor ID:**	006-243-107-9

Data Transform	Alt Hyp	Comparison Result	PMSD
Angular (Corrected)	C > T	BWTPF-2025-DU3 failed 10d survival rate endpoint	8.02%

Equal Variance t Two-Sample Test

Sample I	vs	Sample II	df	Test Stat	Critical	MSD	P-Type	P-Value	Decision(α:5%)
Control Sed		BWTPF-2025-DU	8	2.35	1.86	0.135	CDF	0.0234	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.0731684	0.0731684	1	5.52	0.0468	Significant Effect
Error	0.106117	0.0132647	8			
Total	0.179286		9			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Variance Ratio F Test	2.52	23.2	0.3926	Equal Variances
Distribution	Shapiro-Wilk W Normality Test	0.912	0.741	0.2969	Normal Distribution

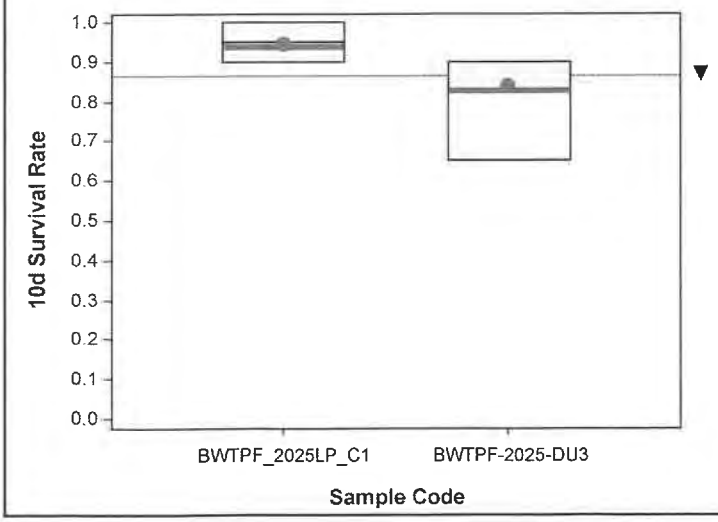
10d Survival Rate Summary

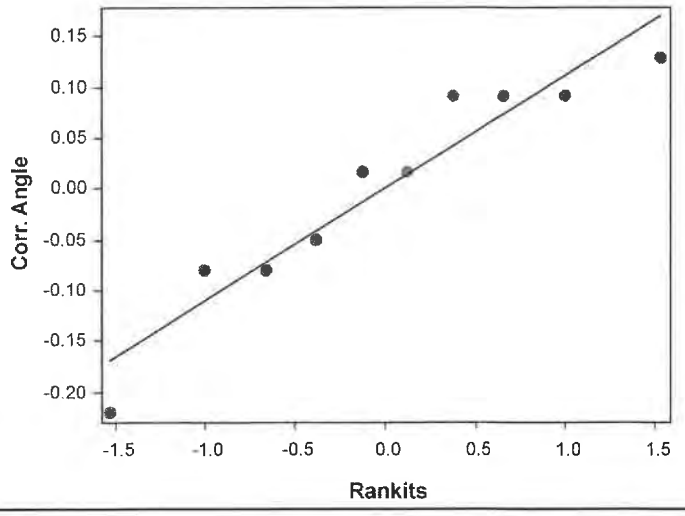
Sample	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
BWTPF_2025LP_C	CS	5	0.940	0.888	0.992	0.950	0.900	1.000	0.019	4.45%	0.00%
BWTPF-2025-DU3		5	0.830	0.694	0.966	0.900	0.650	0.900	0.049	13.20%	11.70%

Angular (Corrected) Transformed Summary

Sample	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
BWTPF_2025LP_C	CS	5	1.330	1.220	1.440	1.350	1.250	1.460	0.039	6.53%	0.00%
BWTPF-2025-DU3		5	1.160	0.987	1.330	1.250	0.938	1.250	0.062	11.90%	12.87%

Graphics





10-Day Estuarine/Marine Sediment Toxicity Test Data

Client: Berkeley BWTPF Test ID#: 109905 Date (Day 0): 5/19/25

Species: *Leptocheirus plumolosus* Project #: 39995 Organism Supplier: ARO

Organism Log # : 14306/14894

Day of Test	Test Replicate	BWTPF-DU3					Sign-Off
		Temp (°C)	pH	D.O. (mg/L)	Salinity (ppt)	# Alive	
Day 0	Rep A	25.1	8.07	7.4	20.5	20	Date: 5/19/25
	Rep B	25.0	8.05	7.4	20.7	20	Time: 0740
	Rep C	25.0	8.09	7.4	20.8	20	WQ: SK
	Rep D	24.9	8.07	7.4	20.0	20	Scientist Initiation:
	Rep E	24.8	8.09	7.4	19.5	20	Scientist Confirmation: HD
Day 1	Rep A	25.4	7.93	7.8	21.0		Date: 5/20/25 Time: 0811 WQ: SK
Day 2	Rep B	25.0	7.82	7.2	21.1		Date: 5/21/25 Time: 1111 WQ: MF
Day 3	Rep C	24.3	7.82	7.3	20.8		Date: 5/22/25 Time: 1448 WQ: ZQ
Day 4	Rep D	24.1	7.87	7.2	20.6		Date: 5/23/25 Time: 1619 WQ:
Day 5	Rep E	24.3	7.86	7.5	21.1		Date: 5/24/25 Time: 1505 WQ: KES
Day 6	Rep A	25.1	7.95	7.4	21.6		Date: 5/25/25 Time: 1120 WQ:
Day 7	Rep B	24.4	8.07	6.9	21.3		Date: 5/26/25 Time: 0824 WQ: EG
Day 8	Rep C	24.4	7.92	7.6	21.9		Date: 5/27/25 Time: 0928 WQ: ICS
Day 9	Rep D	24.7	7.87	7.3	21.1		Date: 5/28/25 Time: 1232 WQ: EC
Day 10	Rep A	25.1	7.98	7.3	22.8	18	Date: 5/29/25
	Rep B	24.7	7.94	7.2	22.3	18	Time: 0943
	Rep C	24.5	7.99	7.2	22.8	16	WQ: IG
	Rep D	24.8	7.95	7.3	21.4	13	Scientist Counts:
	Rep E	25.2	7.97	7.3	22.7	18	

Day of Test	Matrix	pH	D.O. (mg/L)	Salinity (ppt)	Total Sulfide (mg/L)	Total Ammonia (mg/L)	Sign-Off
Day 0	Porewater	8.15	7.4	26.7	0.087	6.14	Date: 5/19/25 Time: 0848 WQ: SK
	Overlying Water					1.18	Date: 5/19/25 Time: 0720 WQ: SK
	Meter ID	PH29	RDO	EC14	DR3900	DR3800	
Day 10	Porewater	7.84	6.7	22.4	~~0.124~~ 0.082	2.39	Date: 5/29/25 Time: 1121 WQ: IG
	Overlying Water					<1.00	Date: 5/29/25 Time: 1007 WQ: IG
	Meter ID	PH27	RDO14	EC10	DR3900	DR3800	

10 Day Marine/Estuarine Sediment Test — **Pacific EcoRisk**

Analysis ID:	14-1789-2163	**Endpoint:**	10d Survival Rate	**CETIS Version:**	CETIS v2.1.6
Analyzed:	11 Jun-25 9:32	**Analysis:**	Parametric-Two Sample	**Status Level:**	1
Edit Date:	11 Jun-25 0:00	**MD5 Hash:**	830C8FDD3734FC57F0C87CB1BE059D6A	**Editor ID:**	006-243-107-9

Data Transform	Alt Hyp	Comparison Result	PMSD
Angular (Corrected)	C > T	BWTPF-2025-DU4 passed 10d survival rate endpoint	4.46%

Equal Variance t Two-Sample Test

Sample I	vs	Sample II	df	Test Stat	Critical	MSD	P-Type	P-Value	Decision(α:5%)
Control Sed		BWTPF-2025-DU	8	-2.37	1.86	0.0836	CDF	0.9774	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.0283984	0.0283984	1	5.62	0.0453	Significant Effect
Error	0.0404532	0.0050567	8			
Total	0.0688516		9			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Variance Ratio F Test	2.93	23.2	0.3230	Equal Variances
Distribution	Shapiro-Wilk W Normality Test	0.832	0.741	0.0349	Normal Distribution

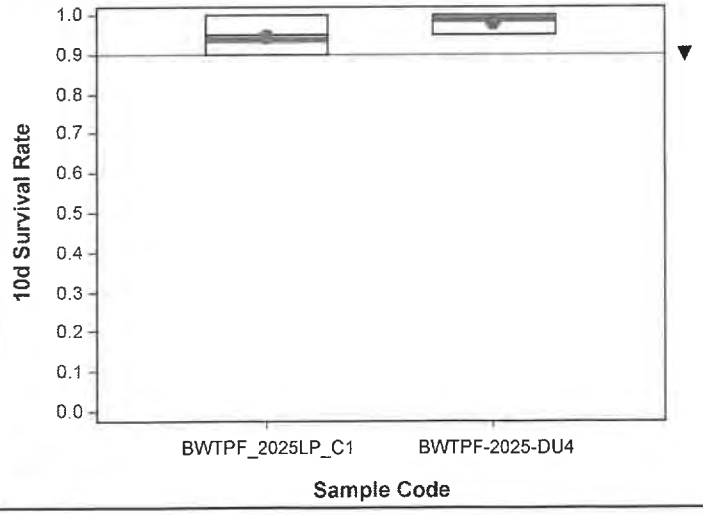
10d Survival Rate Summary

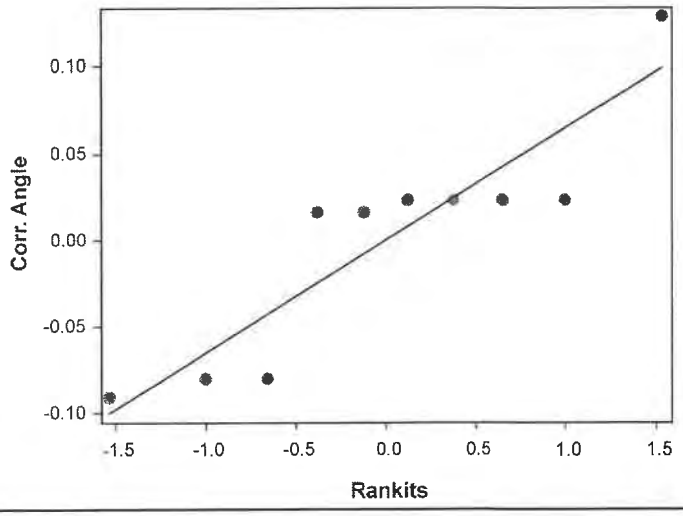
Sample	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
BWTPF_2025LP_C	CS	5	0.940	0.888	0.992	0.950	0.900	1.000	0.019	4.45%	0.00%
BWTPF-2025-DU4		5	0.990	0.962	1.000	1.000	0.950	1.000	0.010	2.26%	-5.32%

Angular (Corrected) Transformed Summary

Sample	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
BWTPF_2025LP_C	CS	5	1.330	1.220	1.440	1.350	1.250	1.460	0.039	6.53%	0.00%
BWTPF-2025-DU4		5	1.440	1.370	1.500	1.460	1.350	1.460	0.023	3.53%	-8.02%

Graphics





10-Day Estuarine/Marine Sediment Toxicity Test Data

Client: Berkeley BWTPF Test ID#: 109906 Date (Day 0): 5/19/25

Species: *Leptocheirus plumolosus* Project #: 39995 Organism Supplier: ARO

Organism Log # : 14906/14894

Day of Test	Test Replicate	BWTPF-DU4					Sign-Off
		Temp (°C)	pH	D.O. (mg/L)	Salinity (ppt)	# Alive	
Day 0	Rep A	25.2	8.06	7.5	20.0	20	Date: 5/19/25
	Rep B	25.2	8.08	7.4	18.8	20	Time: 0740
	Rep C	25.0	7.97	7.3	21.1	20	WQ: SK
	Rep D	25.1	8.06	7.3	20.8	20	Scientist Initiation:
	Rep E	25.0	8.08	7.4	21.2	20	Scientist Confirmation:
Day 1	Rep A	25.3	7.92	7.7	20.4		Date: 5/20/25 Time: 0811 WQ: SK
Day 2	Rep B	25.0	7.81	7.3	19.6		Date: 5/21/25 Time: 1112 WQ: ME
Day 3	Rep C	24.4	7.83	7.4	20.1		Date: 5/22/25 Time: 1449 WQ: ZQ
Day 4	Rep D	24.0	7.88	7.2	20.1		Date: 5/23/25 Time: 1620 WQ: ZQ
Day 5	Rep E	24.0	7.91	7.6	20.6		Date: 5/24/25 Time: 1507 WQ: KES
Day 6	Rep A	25.0	7.93	7.4	20.3		Date: 5/25/25 Time: 1132 WQ: GN
Day 7	Rep B	24.4	8.07	7.1	19.3		Date: 5/26/25 Time: 0825 WQ: EC
Day 8	Rep C	24.3	7.89	7.7	22.6		Date: 5/27/25 Time: 0929 WQ: KES
Day 9	Rep D	24.7	7.87	7.4	21.2		Date: 5/28/25 Time: 1233 WQ: EC
Day 10	Rep A	25.1	7.95	7.3	21.6	20	Date: 5/29/25
	Rep B	24.7	7.94	7.2	20.3	20	Time: 0947
	Rep C	24.4	7.93	7.3	23.4	20	WQ: IG
	Rep D	24.6	7.93	7.3	21.5	20	Scientist Counts: AN
	Rep E	24.9	7.94	7.3	22.0	19	

Day of Test	Matrix	pH	D.O. (mg/L)	Salinity (ppt)	Total Sulfide (mg/L)	Total Ammonia (mg/L)	Sign-Off
Day 0	Porewater	8.07	6.7	26.9	0.150	9.74	Date: 5/19/25 Time: 0848 WQ: SK
	Overlying Water					1.52	Date: 5/19/25 Time: 0720 WQ: SK
	Meter ID	pH29	RD10	EC14	DR3900	DR3800	
Day 10	Porewater	7.81	6.7	21.4	~~0.087~~ 0.130 IG 5/29	3.50	Date: 5/29/25 Time: 1122 WQ: IG
	Overlying Water					<1.00	Date: 5/29/25 Time: 1007 WQ: IG
	Meter ID	pH27	RD14	EC10	DR3900	DR3800	

10 Day Marine/Estuarine Sediment Test — Pacific EcoRisk

Analysis ID:	01-6607-9760	**Endpoint:**	10d Survival Rate	**CETIS Version:**	CETIS v2.1.6
Analyzed:	11 Jun-25 9:32	**Analysis:**	Parametric-Two Sample	**Status Level:**	1
Edit Date:	11 Jun-25 0:00	**MD5 Hash:**	0A131E4E1401F98CE9D01229822138F8	**Editor ID:**	006-243-107-9

Data Transform	Alt Hyp	Comparison Result	PMSD
Angular (Corrected)	C > T	BWTPF-2025-DU5 passed 10d survival rate endpoint	5.79%

Equal Variance t Two-Sample Test

Sample I	vs	Sample II	df	Test Stat	Critical	MSD	P-Type	P-Value	Decision(α:5%)
Control Sed		BWTPF-2025-DU	8	-0.762	1.86	0.104	CDF	0.7659	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.0045124	0.0045124	1	0.58	0.4681	Non-Significant Effect
Error	0.062229	0.0077786	8			
Total	0.0667414		9			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Variance Ratio F Test	1.06	23.2	0.9536	Equal Variances
Distribution	Shapiro-Wilk W Normality Test	0.952	0.741	0.6887	Normal Distribution

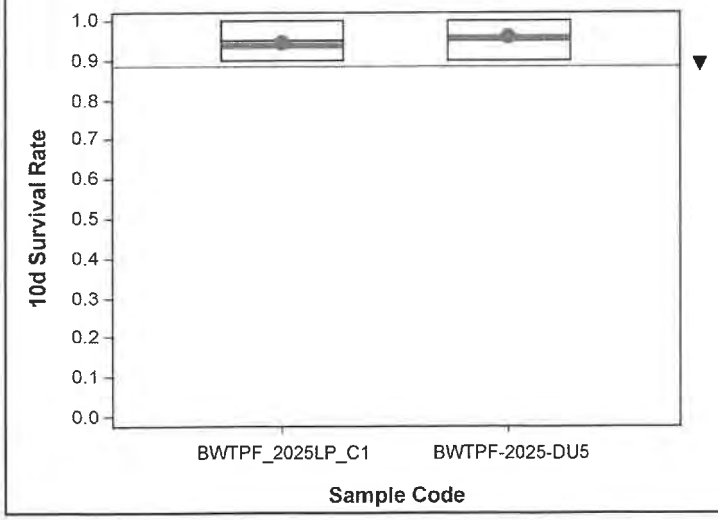
10d Survival Rate Summary

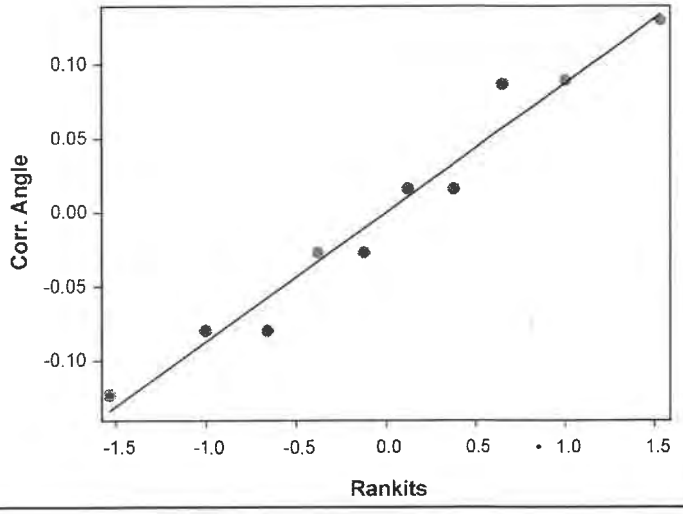
Sample	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
BWTPF_2025LP_C	CS	5	0.940	0.888	0.992	0.950	0.900	1.000	0.019	4.45%	0.00%
BWTPF-2025-DU5		5	0.960	0.908	1.000	0.950	0.900	1.000	0.019	4.36%	-2.13%

Angular (Corrected) Transformed Summary

Sample	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
BWTPF_2025LP_C	CS	5	1.330	1.220	1.440	1.350	1.250	1.460	0.039	6.53%	0.00%
BWTPF-2025-DU5		5	1.370	1.260	1.480	1.350	1.250	1.460	0.040	6.53%	-3.20%

Graphics





10-Day Estuarine/Marine Sediment Toxicity Test Data

Client: Berkeley BWTPF Test ID#: 109907 Date (Day 0): 5/19/25

Species: *Leptocheirus plumolosus* Project #: 39995 Organism Supplier: ARO

Organism Log # : 1496a/1485g

Day of Test	Test Replicate	BWTPF-DU5					Sign-Off
		Temp (°C)	pH	D.O. (mg/L)	Salinity (ppt)	# Alive	
Day 0	Rep A	25.3	8.02	7.4	19.1	~~30~~ 21	Date: 5/19/25
	Rep B	25.2	8.03	7.4	19.4	20	Time: 0740
	Rep C	25.1	8.04	7.4	20.3	20	WQ: SK
	Rep D	25.1	8.03	7.4	19.0	20	Scientist Initiation:
	Rep E	~~19.9~~ 24.9	8.03	7.5	18.9	20	Scientist Confirmation: HD
Day 1	Rep A	25.5	7.83	7.7	19.8		Date: 5/20/25 Time: 0811 WQ: SK
Day 2	Rep B	24.9	7.76	7.4	20.0		Date: 5/21/25 Time: 1114 WQ: NF
Day 3	Rep C	24.4	7.77	7.2	20.3		Date: 5/22/25 Time: 1453 WQ: LR
Day 4	Rep D	24.2	7.87	7.2	19.6		Date: 5/23/25 Time: 1625 WQ: ZH
Day 5	Rep E	24.6	7.83	7.6	20.5		Date: 5/24/25 Time: 1508 WQ: KES
Day 6	Rep A	24.9	7.89	7.4	20.5		Date: 5/25/25 Time: 1136 WQ: GM
Day 7	Rep B	24.4	8.06	7.5	20.3		Date: 5/26/25 Time: 0827 WQ: EG
Day 8	Rep C	24.4	7.88	7.7	21.8		Date: 5/27/25 Time: 0930 WQ: KES
Day 9	Rep D	24.6	7.79	7.3	21.3		Date: 5/28/25 Time: 1235 WQ: EC
Day 10	Rep A	25.1	7.84	7.1	22.0	21	Date: 5/29/25
	Rep B	24.9	7.87	7.1	21.3	19	Time: 0953
	Rep C	24.7	7.87	7.1	22.6	18	WQ: IG
	Rep D	24.8	7.89	7.2	21.7	19	Scientist Counts:
	Rep E	25.3	7.88	7.1	22.2	20	

Day of Test	Matrix	pH	D.O. (mg/L)	Salinity (ppt)	Total Sulfide (mg/L)	Total Ammonia (mg/L)	Sign-Off
Day 0	Porewater	8.19	7.4	26.5	0.100	3.89	Date: 5/19/25 Time: 0848 WQ: SK
	Overlying Water					<1.00	Date: 5/19/25 Time: 0720 WQ: SK
	Meter ID	pH29	RDO	EC14	DR3900	DR3800	
Day 10	Porewater	7.84	7.2	21.1	~~0.130~~ 0.000	1.61	Date: 5/29/25 Time: 1123 WQ: IG
	Overlying Water					<1.00	Date: 5/29/25 Time: 1007 WQ: IG
	Meter ID	pH27	RDO	EC10	DR3900	DR3800	

***Leptocheirus plumulosus* SF-11 Alcatraz Environs Data 2020-2022**

Project Name	Test Date	% Survival in Test Replicates					Mean % Survival
		Rep A	Rep B	Rep C	Rep D	Rep E	
Schoonmaker Point Marina	2/11/20	100	100	100	100	100	100
Oyster Cove Marina	2/18/20	100	100	100	100	100	100
Schnitzer Steel	5/30/20	100	100	100	100	100	100
Port of Oakland	6/3/21	100	95	100	100	100	99
Coyote Point Marina	10/6/21	90	95	85	95	80	89
Oyster Point Marina	12/21/21	100	100	95	100	90	97
Sausalito Yacht Harbor	2/21/22	90	100	95	95	100	96
						Mean	**97.3**

Appendix G

Test Data and Summary of Statistics for the Reference Toxicant Evaluation of the Amphipod, *Leptocheirus plumulosus*

CETIS Summary Report

Acute Amphipod Survival Test — **Pacific EcoRisk**

Batch ID:	10-7161-3399	**Test Type:**	Survival (96h)	**Analyst:**	Robert Gee
Start Date:	19 May-25 13:36	**Protocol:**	EPA/600/R-94/025 (1994)	**Diluent:**	Diluted Seawater
Ending Date:	23 May-25 12:30	**Species:**	Leptocheirus plumulosus	**Brine:**	Not Applicable
Test Length:	95h	**Taxon:**	Malacostraca	**Source:**	Aquatic Research Organis **Age:** NA

Sample ID:	04-4157-1761	**Code:**	KCl	**Project:**	40137
Sample Date:	19 May-25 13:36	**Material:**	Potassium chloride	**Source:**	Reference Toxicant
Receipt Date:	19 May-25 13:36	**CAS (PC):**		**Station:**	In House
Sample Age:	--- (25.1 °C)	**Client:**	Reference Toxicant		

Multiple Comparison Summary

Analysis ID	Endpoint	Comparison Method	NOEL	LOEL	TOEL	PMSD
14-5590-7138	96h Survival Rate	Dunnett Multiple Comparison Test	0.5	1	0.7071	10.0%

Point Estimate Summary

Analysis ID	Endpoint	Point Estimate Method	Level	g/L	95% LCL	95% UCL
00-5903-9444	96h Survival Rate	Spearman-Kärber	EC50	1.23	1.06	1.43

96h Survival Rate Summary

Conc-g/L	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	LW	2	1.000	1.000	1.000	1.000	1.000	0.000	0.000	0.00%	0.00%
0.25		2	1.000	1.000	1.000	1.000	1.000	0.000	0.000	0.00%	0.00%
0.5		2	1.000	1.000	1.000	1.000	1.000	0.000	0.000	0.00%	0.00%
1		2	0.750	0.115	1.000	0.700	0.800	0.050	0.071	9.43%	25.00%
2		2	0.050	0.000	0.685	0.000	0.100	0.050	0.071	141.42%	95.00%
4		2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	---	100.00%

96h Survival Rate Detail — MD5: 8DBDE1A6BFAA11513DFF431B96F87F03

Conc-g/L	Code	Rep 1	Rep 2
0	LW	1.000	1.000
0.25		1.000	1.000
0.5		1.000	1.000
1		0.800	0.700
2		0.000	0.100
4		0.000	0.000

96h Survival Rate Binomials

Conc-g/L	Code	Rep 1	Rep 2
0	LW	10/10	10/10
0.25		10/10	10/10
0.5		10/10	10/10
1		8/10	7/10
2		0/10	1/10
4		0/10	0/10

96 Hour *Leptocheirus plumulosus* Marine Reference Toxicant Test Data

Client: **Reference Toxicant** Organism Log #: 14906/14894

Test Material: Potassium Chloride Control/Diluent: 20 ppt Seawater (+/-1 ppt)

Test ID#: 109923 Project # 40137 Test Date: 5/19/25

Randomization: 2.6.4

Treatment (g KCl /L)	Temp (°C)	pH new	pH old	D.O. (mg/L) new	D.O. (mg/L) old	Salinity (ppt) new	Salinity (ppt) old	# Live Organisms A	# Live Organisms B	SIGN-OFF
Control	25.1	7.92		7.5		20.5		10	10	Date: 5/19/25
0.25	25.2	7.93		7.6		20.9		10	10	Test Solution Prep: KM
0.5	25.2	7.92		7.7		21.0		10	10	New WQ: CLP
1	25.1	7.89		7.7		21.5		10	10	Initiation Time: 1336
2	25.1	7.86		7.7		22.3		10	10	Initiation Signoff: KM
4	25.2	7.71		7.7		23.8		10	10	RT Stock Batch #: 57
Meter ID:	167A	pH27		RD12		EC13				+1hr Inspection: EJS
Control	25.3		7.68		6.7		20.5			Date: 5/20/25
0.25	25.3		7.65		6.8		21.0			Count Time: 1212
0.5	25.3		7.63		6.7		21.1			Count Signoff: MK
1	25.3		7.63		6.7		21.6			Old WQ: KF
2	25.4		7.61		6.7		22.4			PM Inspection: MK 5/20/25
4	25.4		7.57		6.5		23.8			
Meter ID:	193A		pH30		RD12		EC10			
Control	25.1		7.60		7.7		20.9			Date: 5/21/25
0.25	25.1		7.60		7.6		21.3			Count Time: 1415
0.5	25.2		7.61		7.5		21.5			Count Signoff: JG
1	25.3		7.62		7.4		22.0			Old WQ: EG
2	25.1		7.59		7.3		22.9			PM Inspection: JG
4	25.2		7.59		7.3		24.2			
Meter ID:	103A		pH27		RD13		EC11			
Control	25.4		7.65		7.7		21.6			Date: 5/22/25
0.25	25.4		7.66		7.7		21.8			Count Time: 1100
0.5	25.0		7.67		7.7		22.2			Count Signoff: JG
1	25.1		7.68		7.6		22.8			Old WQ: EC
2	25.1		7.65		7.5		23.5			PM Inspection: JK
4	25.1		7.66		7.7		25.1			
Meter ID:	185A		pH27		RD12		EC10			
Control	25.1		8.30		7.7		22.0	10	10	Date: 5/23/25
0.25	25.2		8.28		7.5		22.3	10	10	Termination Time: 1230
0.5	25.2		8.30		7.5		22.5	10	10	Termination Signoff: JK
1	25.1		8.28		7.4		23.1	8	7	Old WQ: IG
2	25.3		8.25		7.4		24.0	0	1	
4	25.2		8.25		7.3		25.2	0	0	
Meter ID:	185A		pH30		RD14		EC14			

Appendix H

Test Data and Summary of Statistics for the Evaluation of the Toxicity of Berkeley Water Transportation Pier Ferry Project Sediments to the Polychaete, *Neanthes arenaceodentata*

CETIS Summary Report

10 Day Marine/Estuarine Sediment Test — **Pacific EcoRisk**

Batch ID:	20-0310-2232	**Test Type:**	Survival	**Analyst:**	Robert Gee
Start Date:	21 May-25 07:45	**Protocol:**	ASTM E1611-00 (2007)	**Diluent:**	Not Applicable
Ending Date:	31 May-25 08:00	**Species:**	Neanthes arenaceodentata	**Brine:**	Not Applicable
Test Length:	10d 0h	**Taxon:**	Polychaeta	**Source:**	Aquatic Tox. Sup. **Age:** NA

Sample ID:	21-2939-9939	**Code:**	BWTPF_2025NA_C1	**Project:**	39995
Sample Date:	21 May-25 07:45	**Material:**	Control Sediment	**Source:**	Berkeley Water Transportation Pier Fe
Receipt Date:	21 May-25 07:45	**CAS (PC):**		**Station:**	LABQA
Sample Age:	--- (19.5 °C)	**Client:**	City of Berkeley		

Sample Code	Sample ID	Sample Date	Receipt Date	Sample Age	Client Name	Project
BWTPF_2025NA_C	21-2939-9939	21 May-25 07:45	21 May-25 07:45	--- (19.5 °C)	City of Berkeley	39995
BWTPF-2025-DU1	20-1606-8620	06 May-25 08:35	07 May-25 16:45	14d 23h (0.1 °C)		
BWTPF-2025-DU2	15-0488-1916	08 May-25 09:35	10 May-25 08:30	12d 22h (3.7 °C)		
BWTPF-2025-DU3	15-4730-6453	09 May-25 06:40	10 May-25 08:30	12d 1h (3.7 °C)		
BWTPF-2025-DU4	01-9202-7641	07 May-25 12:15	07 May-25 16:45	13d 20h (1.3 °C)		
BWTPF-2025-DU5	16-9940-7949	07 May-25 06:30	07 May-25 16:45	14d 1h (0.9 °C)		

Sample Code	Material Type	Sample Source	Station Location	Lat/Long
BWTPF_2025NA_C	Control Sediment	Berkeley Water Transportation Pi	LABQA	
BWTPF-2025-DU1	Sediment/Elutriate	Berkeley Water Transportation Pi	BWTPF-2025-DU1	
BWTPF-2025-DU2	Sediment/Elutriate	Berkeley Water Transportation Pi	BWTPF-2025-DU2	
BWTPF-2025-DU3	Sediment/Elutriate	Berkeley Water Transportation Pi	BWTPF-2025-DU3	
BWTPF-2025-DU4	Sediment/Elutriate	Berkeley Water Transportation Pi	BWTPF-2025-DU4	
BWTPF-2025-DU5	Sediment/Elutriate	Berkeley Water Transportation Pi	BWTPF-2025-DU5	

SIngle Comparison Summary

Analysis ID	Endpoint	Comparison Method	P-Value	Comparison Result
18-2720-9689	Survival Rate	Wilcoxon Rank Sum Two-Sample Test	0.5000	BWTPF-2025-DU1 passed survival rate
17-5996-9087	Survival Rate	Wilcoxon Rank Sum Two-Sample Test	1.0000	BWTPF-2025-DU2 passed survival rate
06-5199-5565	Survival Rate	Wilcoxon Rank Sum Two-Sample Test	1.0000	BWTPF-2025-DU3 passed survival rate
08-3596-6233	Survival Rate	Wilcoxon Rank Sum Two-Sample Test	1.0000	BWTPF-2025-DU4 passed survival rate
08-1680-6895	Survival Rate	Unequal Variance t Two-Sample Test	0.0889	BWTPF-2025-DU5 passed survival rate

Survival Rate Summary

Sample	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
BWTPF_2025NA_C	CS	5	1.000	1.000	1.000	1.000	1.000	0.000	0.000	0.00%	0.00%
BWTPF-2025-DU1		5	0.980	0.924	1.000	0.900	1.000	0.020	0.045	4.56%	2.00%
BWTPF-2025-DU2		5	1.000	1.000	1.000	1.000	1.000	0.000	0.000	0.00%	0.00%
BWTPF-2025-DU3		5	1.000	1.000	1.000	1.000	1.000	0.000	0.000	0.00%	0.00%
BWTPF-2025-DU4		5	1.000	1.000	1.000	1.000	1.000	0.000	0.000	0.00%	0.00%
BWTPF-2025-DU5		5	0.960	0.892	1.000	0.900	1.000	0.025	0.055	5.71%	4.00%

Survival Rate Detail — MD5: 2FC2C8821E46762F1944BEC1095EF8D9

Sample	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
BWTPF_2025NA_C	CS	1.000	1.000	1.000	1.000	1.000
BWTPF-2025-DU1		1.000	0.900	1.000	1.000	1.000
BWTPF-2025-DU2		1.000	1.000	1.000	1.000	1.000
BWTPF-2025-DU3		1.000	1.000	1.000	1.000	1.000
BWTPF-2025-DU4		1.000	1.000	1.000	1.000	1.000
BWTPF-2025-DU5		1.000	1.000	1.000	0.900	0.900

10 Day Marine/Estuarine Sediment Test

Pacific EcoRisk

Survival Rate Binomials

Sample	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
BWTPF_2025NA_C	CS	10/10	10/10	10/10	10/10	10/10
BWTPF-2025-DU1		10/10	9/10	10/10	10/10	10/10
BWTPF-2025-DU2		10/10	10/10	10/10	10/10	10/10
BWTPF-2025-DU3		10/10	10/10	10/10	10/10	10/10
BWTPF-2025-DU4		10/10	10/10	10/10	10/10	10/10
BWTPF-2025-DU5		10/10	10/10	10/10	9/10	9/10

10-Day Estuarine/Marine Sediment Toxicity Test Data

Client: Berkeley BWTPF Test ID#: multiple Date (Day 0): 5/21/25

Species: *Neanthes arenaceodentata* Project #: 39995 Organism Supplier: ATS

Organism Log # : 14910

Day of Test	Test Replicate	Sample ID: **Lab Control**					Sign-Off
		Temp (°C)	pH	D.O. (mg/L)	Salinity (ppt)	# Alive	
Day 0	Rep A	19.5	7.70	7.3	29.3	10	Date: 5/21/25
	Rep B	19.4	7.74	7.3	29.3	10	Time: 0745
	Rep C	19.4	7.74	7.3	29.4	10	WQ: SK
	Rep D	19.3	7.68	7.1	29.4	10	Scientist Initiation: AN
	Rep E	19.1	7.76	7.1	30.1	10	Scientist Confirmation: TF
Day 1	Rep A	19.4	7.63	7.5	30.4		Date: 5/22/25 Time: 1425 WQ: ZQ
Day 2	Rep B	19.4	7.75	7.5	30.2		Date: 5/23/25 Time: 1603 WQ: ZQ
Day 3	Rep C	19.5	7.69	7.5	30.8		Date: 5/24/25 Time: 1442 WQ: KES
Day 4	Rep D	19.5	7.85	7.7	31.1		Date: 5/25/25 Time: 1410 WQ: GM
Day 5	Rep E	19.1	7.86	7.6	30.4		Date: 5/26/25 Time: 0832 WQ: EC
Day 6	Rep A	19.4	7.89	7.7	30.9		Date: 5/27/25 Time: 0848 WQ: KES
Day 7	Rep B	18.9	7.73	7.6	30.9		Date: 5/28/25 Time: 1155 WQ: EC
Day 8	Rep C	19.6	7.81	6.7	29.8		Date: 5/29/25 Time: 1309 WQ: ZQ
Day 9	Rep D	19.0	7.66	7.4	29.4		Date: 5/30/25 Time: 1043 WQ: SK
Day 10	Rep A	~~18.8~~ 18.8	7.66	7.2	30.8	10	Date: 5/31/25
	Rep B	18.5	7.78	7.4	29.5	10	Time: 0860
	Rep C	18.8	7.76	7.2	30.3	10	WQ: DAC
	Rep D	18.9	7.69	6.7	30.3	10	Scientist: TF
	Rep E	18.8	7.75	7.2	30.8	10	

Day of Test	Matrix	pH	D.O. (mg/L)	Salinity (ppt)	Total Sulfide (mg/L)	Total Ammonia (mg/L)	Sign-Off
Day 0	Porewater	7.57	5.6	25.4	0.152	1.21	Date: 5/21/25 Time: 0830 WQ: SK
	Overlying Water					<1.00	Date: 5/21/25 Time: 0740 WQ: SK
	Meter ID	PH26	RD10	EC16	DR3900	DR3800	
Day 10	Porewater	7.37	6.0	27.8	0.118	<2.00	Date: 5/31/25 Time: 1030 WQ: DAC
	Overlying Water					<2.00	Date: 5/31/25 Time: 0840 WQ: DAC
	Meter ID	PH34	~~RD12~~ RD10	EC10	DR3900	DR3800	

CETIS Analytical Report

10 Day Marine/Estuarine Sediment Test — Pacific EcoRisk

Analysis ID:	18-2720-9689	**Endpoint:**	Survival Rate	**CETIS Version:**	CETIS v2.1.6
Analyzed:	11 Jun-25 9:57	**Analysis:**	Nonparametric-Two Sample	**Status Level:**	1
Edit Date:	11 Jun-25 0:00	**MD5 Hash:**	9EC13E929AA2FE62A9C249A7CE7E1489	**Editor ID:**	006-243-107-9

Data Transform	Alt Hyp	Comparison Result	PMSD
Angular (Corrected)	C > T	BWTPF-2025-DU1 passed survival rate endpoint	4.74%

Wilcoxon Rank Sum Two-Sample Test

Sample I	vs	Sample II	df	Test Stat	Critical	Ties	P-Type	P-Value	Decision(α:5%)
Control Sed		BWTPF-2025-DU	8	25	---	1	Exact	0.5000	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.0026559	0.0026559	1	1	0.3466	Non-Significant Effect
Error	0.0212475	0.0026559	8			
Total	0.0239034		9			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Variance Ratio F Test				Indeterminate
Distribution	Shapiro-Wilk W Normality Test	0.625	0.741	0.0001	Non-Normal Distribution

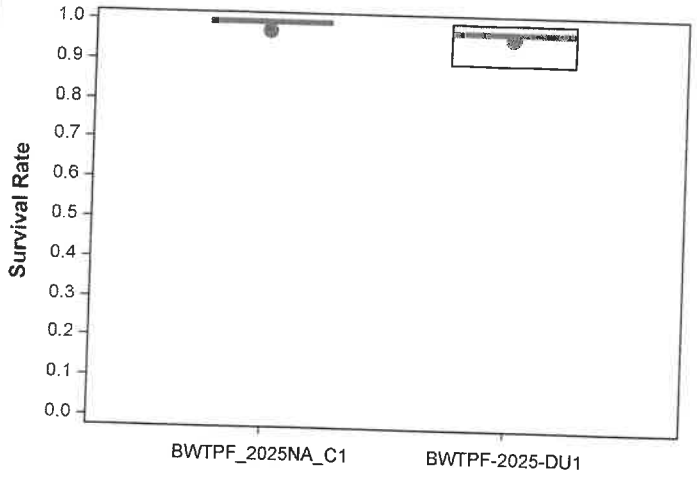
Survival Rate Summary

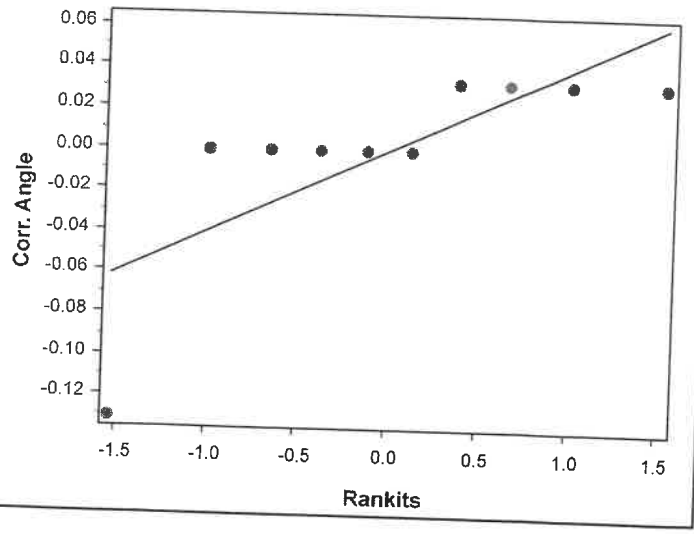
Sample	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
BWTPF_2025NA_C	CS	5	1.000	1.000	1.000	1.000	1.000	1.000	0.000	0.00%	0.00%
BWTPF-2025-DU1		5	0.980	0.924	1.000	1.000	0.900	1.000	0.020	4.56%	2.00%

Angular (Corrected) Transformed Summary

Sample	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
BWTPF_2025NA_C	CS	5	1.410	1.410	1.410	1.410	1.410	1.410	0.000	0.00%	0.00%
BWTPF-2025-DU1		5	1.380	1.290	1.470	1.410	1.250	1.410	0.033	5.28%	2.31%

Graphics





10-Day Estuarine/Marine Sediment Toxicity Test Data

Client: Berkeley BWTPF Test ID#: 109906 Date (Day 0): 5/21/25

Species: *Neanthes arenaceodentata* Project #: 39995 Organism Supplier: ATS

Organism Log # : 14910

Day of Test	Test Replicate	Sample ID: BWTPF-DU1					Sign-Off
		Temp (°C)	pH	D.O. (mg/L)	Salinity (ppt)	# Alive	
Day 0	Rep A	19.4	7.66	6.8	30.0	10	Date: 5/21/25
	Rep B	19.4	7.75	7.0	29.8	10	Time: 0745
	Rep C	19.4	7.77	7.1	29.9	10	WQ: SK
	Rep D	19.3	7.75	7.2	29.8	10	Scientist Initiation: AN
	Rep E	19.2	7.74	7.1	30.3	10	Scientist Confirmation: TF
Day 1	Rep A	18.9	7.67	7.6	30.1		Date: 5/22/25 Time: 1427 WQ: ZQ
Day 2	Rep B	19.1	7.76	7.5	30.1		Date: 5/23/25 Time: 1405 WQ: ZQ
Day 3	Rep C	19.3	7.72	7.6	29.8		Date: 5/24/25 Time: ~~1743~~ 1443 WQ: KES KES 5/24/25
Day 4	Rep D	19.2	7.86	7.6	31.2		Date: 5/25/25 Time: 1441 WQ: GN
Day 5	Rep E	18.7	7.92	7.8	31.7		Date: 5/26/25 Time: 0935 WQ: EG
Day 6	Rep A	18.9	7.91	7.8	28.2		Date: 5/27/25 Time: 0919 WQ: KES
Day 7	Rep B	18.9	7.70	7.9	28.3		Date: 5/28/25 Time: 1210 WQ: EG
Day 8	Rep C	19.2	7.56	7.1	30.5		Date: 5/29/25 Time: 1323 WQ: ZQ
Day 9	Rep D	19.1	7.78	7.5	31.6		Date: 5/30/25 Time: 1043 WQ: SK
Day 10	Rep A	18.4	7.82	7.4	30.2	10	Date: 5/31/25
	Rep B	18.4	7.82	7.5	29.2	9	Time: 0830
	Rep C	18.5	7.86	7.4	31.6	10	WQ: DAC
	Rep D	18.9	7.84	7.0	31.1	10	Scientist: TF
	Rep E	18.4	7.90	6.8	30.4	10	

Day of Test	Matrix	pH	D.O. (mg/L)	Salinity (ppt)	Total Sulfide (mg/L)	Total Ammonia (mg/L)	Sign-Off
Day 0	Porewater	7.96	6.0	26.9	0.142	2.29	Date: 5/21/25 Time: ~~0830~~ WQ: SK
	Overlying Water					<1.00	Date: 5/21/25 Time: 0740 WQ: SK
	Meter ID	PH26	RDO	EC16	DR3900	DR3800	
Day 10	Porewater	7.77	6.6	25.8	0.142	<2.00	Date: 5/31/25 Time: 1030 WQ: DAC
	Overlying Water					<2.00	Date: 5/31/25 Time: 0940 WQ: DAC
	Meter ID	pH29	RDO	EC10	DR3900	DR3800	

10 Day Marine/Estuarine Sediment Test — **Pacific EcoRisk**

Analysis ID:	17-5996-9087	**Endpoint:**	Survival Rate	**CETIS Version:**	CETIS v2.1.6
Analyzed:	11 Jun-25 9:57	**Analysis:**	Nonparametric-Two Sample	**Status Level:**	1
Edit Date:	11 Jun-25 0:00	**MD5 Hash:**	A52021A954ED68027F1BEE9A830DECF0	**Editor ID:**	006-243-107-9

Wilcoxon Rank Sum Two-Sample Test

Sample I	vs	Sample II	df	Test Stat	Critical	Ties	P-Type	P-Value	Decision(α:5%)
Control Sed		BWTPF-2025-DU	8	27.5	---	1	Exact	1.0000	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0	0	1			Indeterminate
Error	0	0	8			
Total	0		9			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Variance Ratio F Test				Indeterminate
Distribution	Shapiro-Wilk W Normality Test				Indeterminate

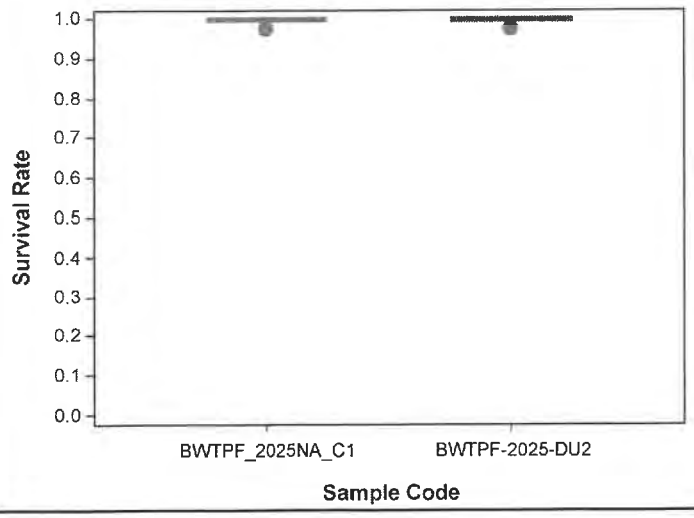
Survival Rate Summary

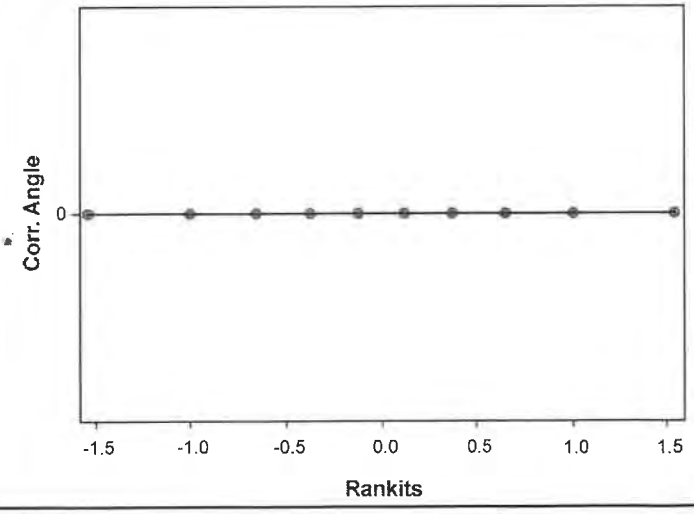
Sample	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
BWTPF_2025NA_C	CS	5	1.000	1.000	1.000	1.000	1.000	1.000	0.000	0.00%	0.00%
BWTPF-2025-DU2		5	1.000	1.000	1.000	1.000	1.000	1.000	0.000	0.00%	0.00%

Angular (Corrected) Transformed Summary

Sample	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
BWTPF_2025NA_C	CS	5	1.410	1.410	1.410	1.410	1.410	1.410	0.000	0.00%	0.00%
BWTPF-2025-DU2		5	1.410	1.410	1.410	1.410	1.410	1.410	0.000	0.00%	0.00%

Graphics





10-Day Estuarine/Marine Sediment Toxicity Test Data

Client: Berkeley BWTPF Test ID#: 109909 Date (Day 0): 5/21/25

Species: *Neanthes arenaceodentata* Project #: 39995 Organism Supplier: ATS

Organism Log # : 14910

Day of Test	Test Replicate	Sample ID: BWTPF-DU2					Sign-Off
		Temp (°C)	pH	D.O. (mg/L)	Salinity (ppt)	# Alive	
Day 0	Rep A	19.4	7.75 7.6 5/21 SK	7.2 6.8 SK 5/21	29.8 30.0 SK 5/21	10	Date: 5/21/25
	Rep B	19.2	7.31 7.75 SK 5/21	6.9 5/21 SK	30.0 29.8 SK 5/21	10	Time: 0745
	Rep C	19.1	7.60	6.4	29.6	10	WQ: SK
	Rep D	19.3	7.75	6.8	30.1	10	Scientist Initiation: AN
	Rep E	19.2	7.78	7.1	30.5	10	Scientist Confirmation: TK
Day 1	Rep A	19.2	7.69	7.6	29.99		Date: 5/22/25 Time: 1431 WQ: ZQ
Day 2	Rep B	19.2	7.77	7.5	30.1		Date: 5/23/25 Time: 1406 WQ: ZQ
Day 3	Rep C	19.2	7.73	7.6	30.8		Date: 5/24/25 Time: 1444 WQ: KES
Day 4	Rep D	19.4	7.89	7.8	29.4		Date: 5/25/25 Time: 1145 WQ: GN
Day 5	Rep E	18.7	7.98	7.9	29.6		Date: 5/26/25 Time: 0831 WQ: EC 0838 EC 5/26
Day 6	Rep A	19.2	7.92	7.7	28.8		Date: 5/27/25 Time: 0850 WQ: KES
Day 7	Rep B	18.8	7.72	7.9	29.0		Date: 5/28/25 Time: 1211 WQ: EC
Day 8	Rep C	19.1	7.56	7.2	29.2		Date: 5/29/25 Time: 1325 WQ: ZQ
Day 9	Rep D	19.0	7.75	7.6	31.9		Date: 5/30/25 Time: 1043 WQ: SK
Day 10	Rep A	18.7	7.82	7.3	29.9	10	Date: 5/31/25
	Rep B	18.5	7.82	7.5	29.8	10	Time: 0850
	Rep C	18.4	7.62	7.5	30.2	10	WQ: DAE
	Rep D	16.5	7.85	7.4	31.1	10	Scientist: TF
	Rep E	18.7	7.90	7.5	29.9	10	

Day of Test	Matrix	pH	D.O. (mg/L)	Salinity (ppt)	Total Sulfide (mg/L)	Total Ammonia (mg/L)	Sign-Off
Day 0	Porewater	8.13	6.3	27.9	0.234	2.67	Date: 5/21/25 Time: 0830 WQ: SK
	Overlying Water					<1.00	Date: 5/21/25 Time: 0740 WQ: SK
	Meter ID	PH26	RD10	EC16	DR3900	DR3800	
Day 10	Porewater	7.78	6.4	29.4	0.102	<2.00	Date: 5/31/25 Time: 1030 WQ: DAE
	Overlying Water					<2.00	Date: 5/31/25 Time: 0940 WQ: DAE
	Meter ID	PH29	RD10	EC10	DR3900	DR3800	

10 Day Marine/Estuarine Sediment Test — **Pacific EcoRisk**

Analysis ID:	06-5199-5565	**Endpoint:**	Survival Rate	**CETIS Version:**	CETIS v2.1.6
Analyzed:	11 Jun-25 9:57	**Analysis:**	Nonparametric-Two Sample	**Status Level:**	1
Edit Date:	11 Jun-25 0:00	**MD5 Hash:**	EF87EBAC5ADA111E97B6A789F2EC2E8	**Editor ID:**	006-243-107-9

Wilcoxon Rank Sum Two-Sample Test

Sample I	vs	Sample II	df	Test Stat	Critical	Ties	P-Type	P-Value	Decision(α:5%)
Control Sed		BWTPF-2025-DU	8	27.5	---	1	Exact	1.0000	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0	0	1			Indeterminate
Error	0	0	8			
Total	0		9			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Variance Ratio F Test				Indeterminate
Distribution	Shapiro-Wilk W Normality Test				Indeterminate

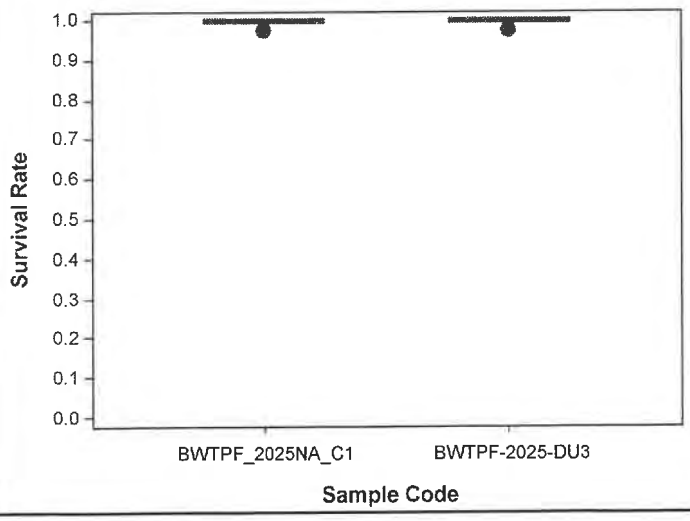
Survival Rate Summary

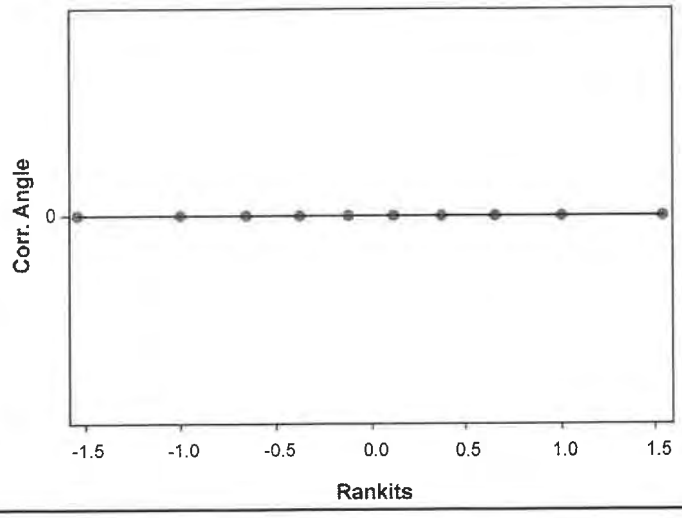
Sample	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
BWTPF_2025NA_C	CS	5	1.000	1.000	1.000	1.000	1.000	1.000	0.000	0.00%	0.00%
BWTPF-2025-DU3		5	1.000	1.000	1.000	1.000	1.000	1.000	0.000	0.00%	0.00%

Angular (Corrected) Transformed Summary

Sample	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
BWTPF_2025NA_C	CS	5	1.410	1.410	1.410	1.410	1.410	1.410	0.000	0.00%	0.00%
BWTPF-2025-DU3		5	1.410	1.410	1.410	1.410	1.410	1.410	0.000	0.00%	0.00%

Graphics





10-Day Estuarine/Marine Sediment Toxicity Test Data

Client: Berkeley BWTPF Test ID#: 109910 Date (Day 0): 5/21/25

Species: *Neanthes arenaceodentata* Project #: 39995 Organism Supplier: ATS

Organism Log # : 14910

Day of Test	Test Replicate	Sample ID: BWTPF-DU3					Sign-Off	
		Temp (°C)	pH	D.O. (mg/L)	Salinity (ppt)	# Alive		
Day 0	Rep A	19.6	7.73	7.1	29.2	10	Date: 5/21/25	
	Rep B	19.5	7.75	7.1	29.6	10	Time: 0745	
	Rep C	19.3	7.76	7.1	29.6	10	WQ: SK	
	Rep D	19.2	7.77	7.2	29.7	10	Scientist Initiation: AW	
	Rep E	19.1	7.74	7.1	30.3	10	Scientist Confirmation: TK	
Day 1	Rep A	19.4	7.71	7.5	30.8		Date: 5/22/25	Time: 1432
Day 2	Rep B	19.4	7.82	7.5	30.8		WQ: ZQ Date: 5/23/25	Time: 1407
Day 3	Rep C	19.3	7.79	7.6	31.3		WQ: KES Date: 5/24/25	Time: 1445
Day 4	Rep D	19.0	7.82	7.7	31.8		WQ: GN Date: 5/25/25	Time: 1446
Day 5	Rep E	18.8	8.05	7.9	31.8		WQ: EG Date: 5/26/25	Time: 0838
Day 6	Rep A	19.2	7.98	7.6	KES 5/27/25 31.7		WQ: KES Date: 5/27/25	Time: 0857
Day 7	Rep B	18.8	7.83	7.8	29.7		WQ: EC Date: 5/28/25	Time: 1213
Day 8	Rep C	19.1	7.56	7.1	29.9		WQ: ZQ Date: 5/29/25	Time: 1326
Day 9	Rep D	19.1	7.77	7.9	28.8		WQ: SK Date: 5/30/25	Time: 1043
Day 10	Rep A	18.9	7.87	7.3	31.9	10	Date: 5/31/25	
	Rep B	18.4	7.88	7.3	30.5	10	Time: 0852	
	Rep C	18.1	7.85	7.4	30.9	10	WQ: DAC	
	Rep D	18.2	7.85	7.5	28.4	10	Scientist: TF	
	Rep E	18.5	7.89	7.5	31.5	10		

Day of Test	Matrix	pH	D.O. (mg/L)	Salinity (ppt)	Total Sulfide (mg/L)	Total Ammonia (mg/L)	Sign-Off
Day 0	Porewater	8.03	6.3	28.0	0.168	5.87	Date: 5/21/25 Time: 0830 WQ: SK
	Overlying Water					<1.00	Date: 5/21/25 Time: 0740 WQ: AK
	Meter ID	PH26	RDO	EC16	DR3900	DR3800	
Day 10	Porewater	7.73	6.9	32.3	0.149	<2.00	Date: 5/31/25 Time: 1030 WQ: DAC
	Overlying Water					<2.00	Date: 5/31/25 Time: 0940 WQ: DAC
	Meter ID	PH24	RDO	EC10	DR3900	DR3600	

10 Day Marine/Estuarine Sediment Test — **Pacific EcoRisk**

Analysis ID:	08-3596-6233	**Endpoint:**	Survival Rate	**CETIS Version:**	CETIS v2.1.6
Analyzed:	11 Jun-25 9:57	**Analysis:**	Nonparametric-Two Sample	**Status Level:**	1
Edit Date:	11 Jun-25 0:00	**MD5 Hash:**	E4084E2236670944A60D34F73DA290AF	**Editor ID:**	006-243-107-9

Wilcoxon Rank Sum Two-Sample Test

Sample I	vs	Sample II	df	Test Stat	Critical	Ties	P-Type	P-Value	Decision(α:5%)
Control Sed		BWTPF-2025-DU	8	27.5	---	1	Exact	1.0000	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0	0	1			Indeterminate
Error	0	0	8			
Total	0		9			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Variance Ratio F Test				Indeterminate
Distribution	Shapiro-Wilk W Normality Test				Indeterminate

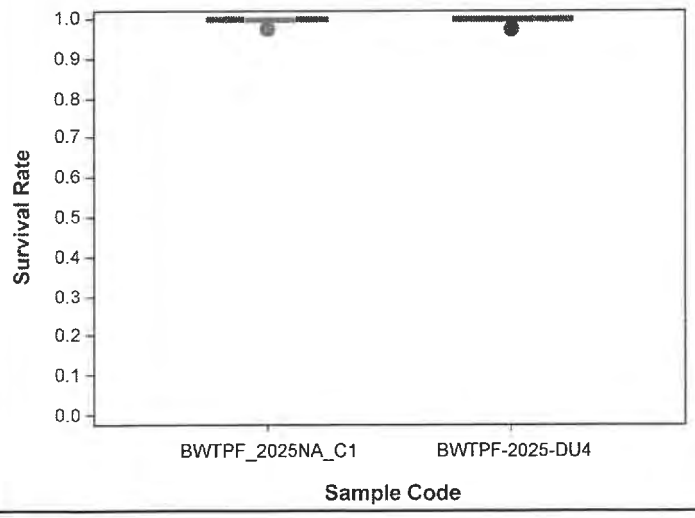
Survival Rate Summary

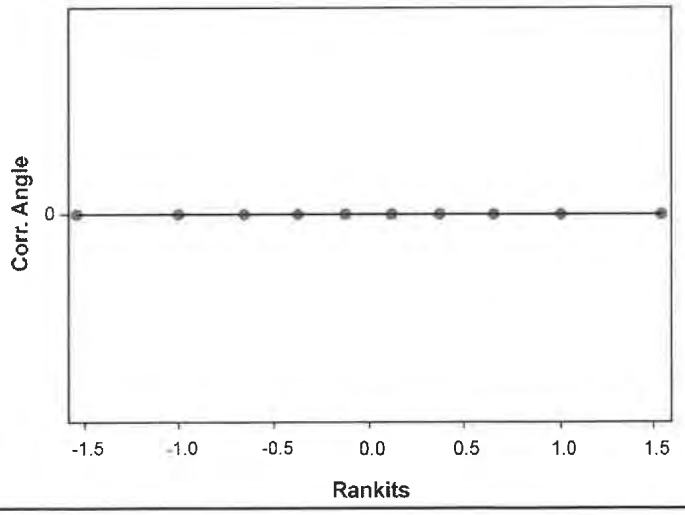
Sample	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
BWTPF_2025NA_C	CS	5	1.000	1.000	1.000	1.000	1.000	1.000	0.000	0.00%	0.00%
BWTPF-2025-DU4		5	1.000	1.000	1.000	1.000	1.000	1.000	0.000	0.00%	0.00%

Angular (Corrected) Transformed Summary

Sample	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
BWTPF_2025NA_C	CS	5	1.410	1.410	1.410	1.410	1.410	1.410	0.000	0.00%	0.00%
BWTPF-2025-DU4		5	1.410	1.410	1.410	1.410	1.410	1.410	0.000	0.00%	0.00%

Graphics





10-Day Estuarine/Marine Sediment Toxicity Test Data

Client: Berkeley BWTPF Test ID#: 109911 Date (Day 0): 5/21/25

Species: *Neanthes arenaceodentata* Project #: 39995 Organism Supplier: ATS

Organism Log # : 14910

Day of Test	Test Replicate	Sample ID: BWTPF-DU4					Sign-Off
		Temp (°C)	pH	D.O. (mg/L)	Salinity (ppt)	# Alive	
Day 0	Rep A	19.7	7.72	7.1	29.4	10	Date: 5/21/25
	Rep B	19.5	7.72	7.0	30.0	10	Time: 0745
	Rep C	19.3	7.75	7.0	29.6	10	WQ: SK
	Rep D	19.3	7.71	7.0	29.6	10	Scientist Initiation: dN
	Rep E	19.1	7.75	7.0	30.4	10	Scientist Confirmation: TK
Day 1	Rep A	19.5	7.73	7.4	30.8		Date: 5/22/25 Time: 1433 WQ: ZQ
Day 2	Rep B	19.5	7.83	7.4	30.7		Date: 5/23/25 Time: 1408 WQ: ZQ
Day 3	Rep C	19.5	7.80	7.5	30.8		Date: 5/24/25 Time: 1446 WQ: KES
Day 4	Rep D	19.0	7.91	7.7	31.5		Date: 5/25/25 Time: 1147 WQ: GM
Day 5	Rep E	18.9	8.08	7.9	31.0		Date: 5/26/25 Time: 0840 WQ: EG
Day 6	Rep A	19.0	8.02	7.8	28.0		Date: 5/27/25 Time: 0852 WQ: KES SMPEC
Day 7	Rep B	18.8	7.79	7.4	28.3		Date: 5/28/25 Time: 1214 WQ: EG
Day 8	Rep C	19.1	7.55	7.2	30.4		Date: 5/29/25 Time: 1327 WQ: ZQ
Day 9	Rep D	19.1	7.76	7.8	30.6		Date: 5/30/25 Time: 1643 WQ: SK
Day 10	Rep A	18.6	7.87	7.4	29.8	10	Date: 5/31/25
	Rep B	18.3	7.83	7.4	28.8	10	Time: 0856
	Rep C	18.5	7.88	7.5	30.7	10	WQ: DAC
	Rep D	18.4	7.86	7.4	30.4	10	Scientist: TF
	Rep E	18.5	7.88	7.4	31.0	10	

Day of Test	Matrix	pH	D.O. (mg/L)	Salinity (ppt)	Total Sulfide (mg/L)	Total Ammonia (mg/L)	Sign-Off
Day 0	Porewater	7.87	5.8	27.7	0.052	5.15 SK	Date: 5/21/25 Time: 0830 WQ: SK
	Overlying Water					1.04 SK	Date: 5/21/25 Time: 0740 WQ: SK
	Meter ID	PH26	KO10	EC16	DR3900	DR3800	
Day 10	Porewater	7.64	6.6	34.3	0.041	3.92	Date: 5/31/25 Time: 1030 WQ: DAC
	Overlying Water					<2.00	Date: 5/31/25 Time: 0840 WQ: DAC
	Meter ID	PH24	PA010	EC10	DR3900	DR3800	

10 Day Marine/Estuarine Sediment Test — **Pacific EcoRisk**

Analysis ID:	08-1680-6895	**Endpoint:**	Survival Rate	**CETIS Version:**	CETIS v2.1.6
Analyzed:	11 Jun-25 9:57	**Analysis:**	Parametric-Two Sample	**Status Level:**	1
Edit Date:	11 Jun-25 0:00	**MD5 Hash:**	9DFD7923317B5860CA0D552FCD9A3767	**Editor ID:**	006-243-107-9

Data Transform	Alt Hyp	Comparison Result	PMSD
Angular (Corrected)	C > T	BWTPF-2025-DU5 passed survival rate endpoint	5.83%

Unequal Variance t Two-Sample Test

Sample I	vs	Sample II	df	Test Stat	Critical	MSD	P-Type	P-Value	Decision(α:5%)
Control Sed		BWTPF-2025-DU	4	1.63	2.13	0.0851	CDF	0.0889	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.0106237	0.0106237	1	2.67	0.1411	Non-Significant Effect
Error	0.0318712	0.0039839	8			
Total	0.0424949		9			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Variance Ratio F Test				Indeterminate
Distribution	Shapiro-Wilk W Normality Test	0.814	0.741	0.0215	Normal Distribution

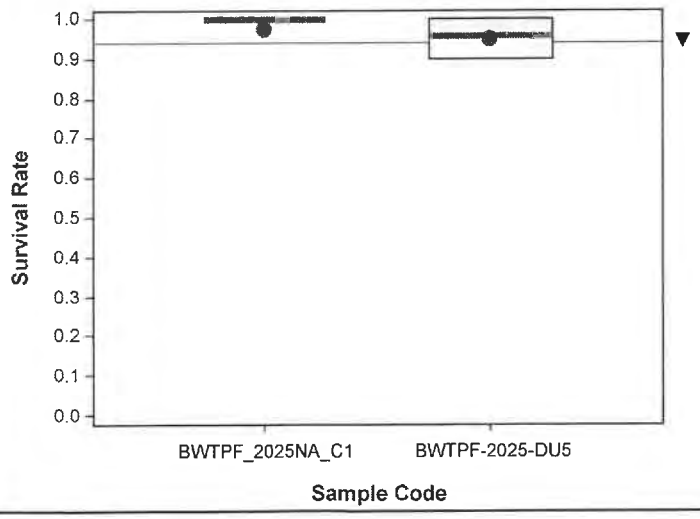
Survival Rate Summary

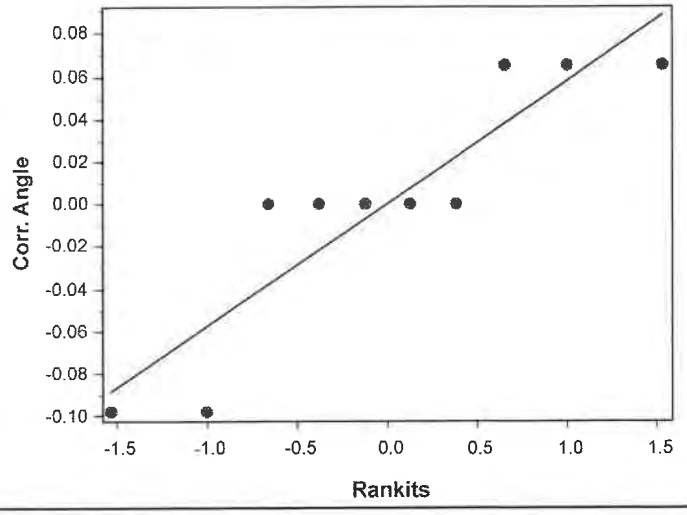
Sample	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
BWTPF_2025NA_C	CS	5	1.000	1.000	1.000	1.000	1.000	1.000	0.000	0.00%	0.00%
BWTPF-2025-DU5		5	0.960	0.892	1.000	1.000	0.900	1.000	0.025	5.71%	4.00%

Angular (Corrected) Transformed Summary

Sample	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
BWTPF_2025NA_C	CS	5	1.410	1.410	1.410	1.410	1.410	1.410	0.000	0.00%	0.00%
BWTPF-2025-DU5		5	1.350	1.240	1.460	1.410	1.250	1.410	0.040	6.63%	4.62%

Graphics





10-Day Estuarine/Marine Sediment Toxicity Test Data

Client: Berkeley BWTPF Test ID#: 109912 Date (Day 0): 5/21/25

Species: *Neanthes arenaceodentata* Project #: 39995 Organism Supplier: ATS

Organism Log # : 1491O

Day of Test	Test Replicate	Sample ID: BWTPF-DU5					Sign-Off
		Temp (°C)	pH	D.O. (mg/L)	Salinity (ppt)	# Alive	
Day 0	Rep A	19.6	7.74	7.2	29.4	10	Date: 5/21/25
	Rep B	19.4	7.75	7.2	29.8	10	Time: 0745
	Rep C	19.4	7.66	7.2	29.6	10	WQ: SK
	Rep D	19.5	7.71	7.1	29.8	10	Scientist Initiation: AN
	Rep E	19.3	7.65	6.8	30.3	10	Scientist Confirmation: TC
Day 1	Rep A	19.7	7.68	7.4	31.1		Date: 5/22/25 Time: 1434 WQ: ZQ
Day 2	Rep B	19.5	7.80	7.4	31.7		Date: 5/23/25 Time: 1410 WQ: ZQ
Day 3	Rep C	19.3	7.77	7.6	31.0		Date: 5/24/25 Time: 1447 WQ: KES
Day 4	Rep D	19.0	7.85	7.8	29.06		Date: 5/25/25 Time: 1150 WQ: GN
Day 5	Rep E	18.9	8.06	8.0	31.5		Date: 5/26/25 Time: 0842 WQ: EC
Day 6	Rep A	~~KES 5/27/25~~ 19.6 19.6	7.94	7.8	29.5		Date: 5/27/25 Time: ~~KES 5/27/25~~ 0853 0853 WQ: KES
Day 7	Rep B	19.6	7.75	7.4	30.6		Date: 5/28/25 Time: 1218 WQ: EC
Day 8	Rep C	19.4	7.60	7.1	30.7		Date: 5/29/25 Time: 1329 WQ: ZQ
Day 9	Rep D	19.2	7.73	7.7	28.7		Date: 5/30/25 Time: 1043 WQ: SK
Day 10	Rep A	18.5	7.82	7.4	29.7	10	Date: 5/31/25
	Rep B	18.6	7.84	7.4	30.4	10	Time: 0900
	Rep C	18.5	7.84	7.4	31.4	10	WQ: DAC
	Rep D	18.7	7.85	7.4	28.1	9	Scientist: TP
	Rep E	18.7	7.83	7.4	30.0	9	

Day of Test	Matrix	pH	D.O. (mg/L)	Salinity (ppt)	Total Sulfide (mg/L)	Total Ammonia (mg/L)	Sign-Off
Day 0	Porewater	7.99	6.4	27.3	0.060	~~4.37~~ 7.15 SK	Date: 5/21/25 Time: 0830 WQ: SK
	Overlying Water					<1.00	Date: 5/24/25 Time: 0740 WQ: SK
	Meter ID	PH26	RDO	EC16	DR3900	DR3800	
Day 10	Porewater	7.82	6.9	32.0	0.156	<2.00	Date: 9/31/25 Time: 1105 WQ: DAC
	Overlying Water					<2.00	Date: 5/31/25 Time: 0940 WQ: DAC
	Meter ID	PH24	RDO	EC10	DR3900	DR3800	

***Neanthes arenaceodentata* SF-11 Alcatraz Environs Data 2020-2022**

Project Name	Test Date	% Survival in Test Replicates					Mean % Survival
		Rep A	Rep B	Rep C	Rep D	Rep E	
Schoonmaker Point Marina	2/12/20	100	100	100	100	90	98
Oyster Cove Marina	2/19/20	100	100	100	100	100	100
Schnitzer Steel	5/30/20	100	100	100	100	100	100
Port of Oakland	6/13/21	100	100	100	100	100	100
Coyote Point Marina	10/7/21	90	100	100	100	100	98
Oyster Point Marina	12/22/21	100	90	100	100	100	98
Sausalito Yacht Harbor	2/22/22	100	90	100	100	100	98
Port of Oakland	4/6/22	100	100	100	100	100	100
						Mean	**99**

Appendix I

Test Data and Summary of Statistics for the Reference Toxicant Evaluation of the Polychaete, *Neanthes arenaceodentata*

CETIS Summary Report

Acute Polychaete Survival Test

Pacific EcoRisk

Batch ID:	05-9347-8807	**Test Type:**	Survival	**Analyst:**	Robert Gee
Start Date:	21 May-25 13:15	**Protocol:**	ASTM E1611-00 (2007)	**Diluent:**	Diluted Seawater
Ending Date:	25 May-25 11:30	**Species:**	Neanthes arenaceodentata	**Brine:**	Not Applicable
Test Length:	94h	**Taxon:**	Polychaeta	**Source:**	Aquatic Tox. Sup. **Age:** NA

Sample ID:	07-5014-7783	**Code:**	KCl	**Project:**	40138
Sample Date:	21 May-25 13:15	**Material:**	Potassium chloride	**Source:**	Reference Toxicant
Receipt Date:	21 May-25 13:15	**CAS (PC):**		**Station:**	In House
Sample Age:	--- (20.1 °C)	**Client:**	Reference Toxicant		

Multiple Comparison Summary

Analysis ID	Endpoint	Comparison Method	NOEL	LOEL	TOEL	PMSD
05-1698-4183	Survival Rate	Fisher Exact Test	1	2	1.414	---

Point Estimate Summary

Analysis ID	Endpoint	Point Estimate Method	Level	g/L	95% LCL	95% UCL
04-1439-3424	Survival Rate	Binomial/Graphical	EC50	1.41	1	2

Survival Rate Summary

Conc-g/L	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	LW	2	1.000	1.000	1.000	1.000	1.000	0.000	0.000	0.00%	0.00%
0.5		2	1.000	1.000	1.000	1.000	1.000	0.000	0.000	0.00%	0.00%
1		2	1.000	1.000	1.000	1.000	1.000	0.000	0.000	0.00%	0.00%
2		2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	---	100.00%
3		2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	---	100.00%
4		2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	---	100.00%

Survival Rate Detail

MD5: 936CA3A0311D4340274FCBDBF40E8839

Conc-g/L	Code	Rep 1	Rep 2
0	LW	1.000	1.000
0.5		1.000	1.000
1		1.000	1.000
2		0.000	0.000
3		0.000	0.000
4		0.000	0.000

Survival Rate Binomials

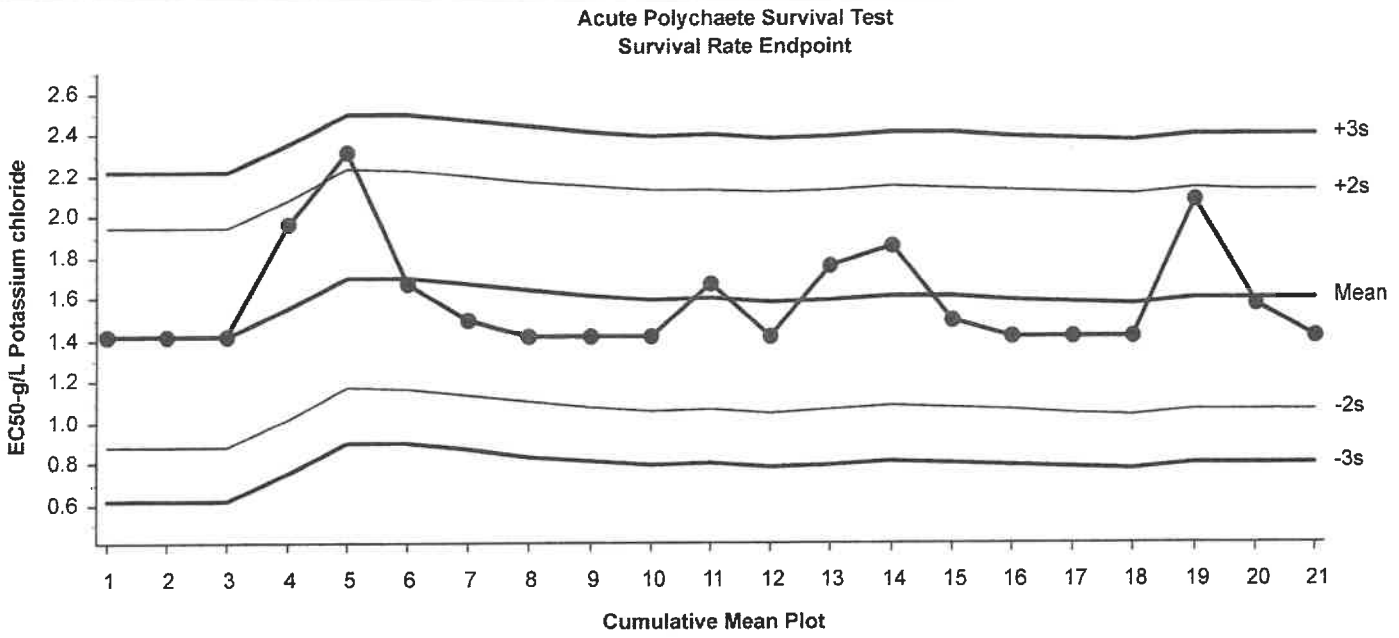
Conc-g/L	Code	Rep 1	Rep 2
0	LW	5/5	5/5
0.5		5/5	5/5
1		5/5	5/5
2		0/5	0/5
3		0/5	0/5
4		0/5	0/5

CETIS QC Plot

Report Date: 12 Jun-25 12:51 (1 of 1)

Acute Polychaete Survival Test — **Pacific EcoRisk**

Test Type:	Survival	**Organism:**	Neanthes arenaceodentata	**Material:**	Potassium chloride
Protocol:	ASTM E1611-00 (2007)	**Endpoint:**	Survival Rate	**Source:**	Reference Toxicant-REF



Mean:	1.601	**Count:**	20	**-2s Warning Limit:**	1.07	**-3s Action Limit:**	0.802
Sigma:	0.2665	**CV:**	16.60%	**+2s Warning Limit:**	2.13	**+3s Action Limit:**	2.4

Quality Control Data

Point	Year	Month	Day	Time	QC Data	Delta	Sigma	Warning	Action	Test ID	Analysis ID
1	2024	May	10	16:30	1.414	-0.1868	-0.7009			07-5534-5594	08-9908-4237
2			14	14:25	1.414	-0.1868	-0.7009			04-9383-0158	18-0407-2797
3			19	13:40	1.414	-0.1868	-0.7009			14-2778-1082	01-3561-2303
4			27	13:37	1.966	0.3653	1.371			01-2427-8875	15-3752-9415
5		Jun	18	14:22	2.319	0.7176	2.693	(+)		04-4011-6059	00-1786-7760
6		Aug	6	16:50	1.668	0.06657	0.2498			15-2814-3859	14-1238-1986
7			12	12:38	1.494	-0.1069	-0.4012			05-0729-1540	13-5191-7548
8			19	14:56	1.414	-0.1868	-0.7009			05-2473-8767	07-9681-0576
9			26	15:27	1.414	-0.1868	-0.7009			03-0451-3342	05-2736-0742
10		Sep	6	14:08	1.414	-0.1868	-0.7009			07-5141-3993	12-1583-7506
11		Oct	13	13:10	1.668	0.06657	0.2498			12-9668-0570	11-3149-0686
12			22	14:16	1.414	-0.1868	-0.7009			18-1603-4068	08-7102-0452
13			30	15:30	1.762	0.1607	0.6031			19-3688-5263	05-0142-8196
14		Dec	13	14:00	1.861	0.2602	0.9764			17-1231-9990	18-8854-6397
15	2025	Jan	7	13:20	1.494	-0.1069	-0.4012			03-6033-5851	00-3615-2717
16			30	14:03	1.414	-0.1868	-0.7009			02-9200-3739	17-4032-4158
17		Feb	15	13:39	1.414	-0.1868	-0.7009			17-9386-5129	03-6177-5944
18		Apr	7	10:40	1.414	-0.1868	-0.7009			06-1816-0829	17-7930-5328
19			29	14:15	2.077	0.4763	1.787			01-8879-7322	13-6677-3384
20		May	6	11:40	1.578	-0.02256	-0.08467			18-2917-7681	18-9003-9242
21			21	13:15	1.414	-0.1868	-0.7009			03-8325-8545	04-1439-3424

Analyst: RB QA: SBS

96 Hour *Neanthes arenaceodentata* Marine Reference Toxicant Test Data

Client: **Reference Toxicant** Organism Log #/Supplier: 14910/ATS

Test Material: Potassium Chloride Control/Diluent: 30 ppt Seawater (+/-1 ppt)

Test ID#: 109924 Project #: 40138 Test Date: 5/21/25

Randomization: 2.6.9

Treatment (g KCl /L)	Temp (°C)	pH new	pH old	D.O. (mg/L) new	D.O. (mg/L) old	Salinity (ppt) new	Salinity (ppt) old	# Live Organisms A	# Live Organisms B	SIGN-OFF
Control	20.1	7.71		7.5		29.3		5	5	Date: 5/21/25
0.5	20.1	7.70		7.4		30.1		5	5	Test Solution Prep: HD
1	20.1	7.70		7.4		30.4		5	5	RT Batch #: 79
2	20.1	7.69		7.4		31.1		5	5	New WQ: AP
3	20.1	7.67		7.5		31.7		5	5	Initiation Time: 1215
4	20.1	7.66		7.5		32.6		5	5	Initiation Signoff: AV
Meter ID:	194A	PH27		RD13		EC11				
Control	20.6		7.57		6.4		30.2	5	5	Date: 5/22/25
0.5	20.8		7.55		6.0		30.7	5	5	Count Time: 0953
1	20.9		7.57		5.9		31.2	5	5	Count Signoff: TF
2	20.8		7.58		5.9		31.8	5	5	Old WQ: GV
3	20.9		7.56		5.9		32.4	0	0	
4	20.8		7.53		5.7		33.2	0	0	
Meter ID:	194A		PH27		RD13		EC11			
Control	20.9		7.58		6.6		30.3	5	5	Date: 5/23/25
0.5	21.0		8.10		6.6		30.4	5	5	Count Time: 0900
1	21.0		8.16		6.8		30.8	5	5	Count Signoff: TK
2	21.0		8.15		6.7		31.4	5	5	Old WQ: DC
3	—		—		—		—	—	—	
4	—		—		—		—	—	—	
Meter ID:	185A		pH30		RD14		EC14			
Control	21.2		7.72		7.2		30.5	5	5	Date: 5/24/25
0.5	21.2		7.75		7.1		31.1	5	5	Count Time: 1437
1	21.2		7.74		7.1		31.7	5	5	Count Signoff: AG
2	21.2		7.69		7.1		32.4	0	0	Old WQ: KES
3	—		—		—		—	—	—	
4	—		—		—		—	—	—	
Meter ID:	167A		PH27		RD13		EC11			
Control	21.1		7.82		7.6		30.4	5	5	Date: 5/25/25
0.5	21.1		7.82		7.5		31.7	5	5	Termination Time: 1130
1	21.0		7.80		7.5		31.6	5	5	Termination Signoff: TK
2	—		—		—		—	—	—	Old WQ: KC
3	—		—		—		—	—	—	
4	—		—		—		—	—	—	
Meter ID:	135A		pH30		RD14		EC14			

Appendix J

Test Data and Summary of Statistics for the Evaluation of the Toxicity of Berkeley Water Transportation Pier Ferry Project Sediments Elutriate to Bivalve (*Mytilus galloprovincialis*) Embryos

Bivalve Larval Survival and Development Test

Pacific EcoRisk

Batch ID:	02-4111-1945	**Test Type:**	Development-Survival	**Analyst:**	Robert Gee
Start Date:	21 May-25 15:15	**Protocol:**	ASTM E724-98 (Bivalve)	**Diluent:**	Diluted Seawater
Ending Date:	23 May-25 15:35	**Species:**	Mytilus galloprovincialis	**Brine:**	Crystal Sea
Test Length:	48h	**Taxon:**		**Source:**	Alexi Gabriel **Age:** NA

Sample ID:	07-5447-9932	**Code:**	Elutriate SET	**Project:**	39995
Sample Date:	06 May-25 08:35	**Material:**	Elutriate	**Source:**	Berkeley Water Transportation Pier Fe
Receipt Date:	07 May-25 16:45	**CAS (PC):**		**Station:**	BWTPF-2025-DU1
Sample Age:	15d 7h (0.1 °C)	**Client:**	City of Berkeley		

Single Comparison Summary

Analysis ID	Endpoint	Comparison Method	P-Value	Comparison Result
06-9059-3237	Development Rate	Equal Variance t Two-Sample Test	0.0104	Salt Control failed development rate
12-7446-9290	Survival Rate	Equal Variance t Two-Sample Test	0.5683	Salt Control passed survival rate

Multiple Comparison Summary

Analysis ID	Endpoint	Comparison Method	NOEL	LOEL	TOEL	PMSD	TU
05-6838-8732	Development Rate	Dunnett Multiple Comparison Test	100	>100	---	1.59%	1
09-5171-9654	Survival Rate	Steel Many-One Rank Sum Test	100	>100	---	7.83%	1

Point Estimate Summary

Analysis ID	Endpoint	Point Estimate Method	Level	%	95% LCL	95% UCL	TU
09-1845-4044	Development Rate	Linear Interpolation (ICPIN)	EC10	>100	---	---	<1
			EC15	>100	---	---	<1
			EC20	>100	---	---	<1
			EC25	>100	---	---	<1
			EC40	>100	---	---	<1
			EC50	>100	---	---	<1
04-9440-3221	Survival Rate	Linear Interpolation (ICPIN)	EC10	>100	---	---	<1
			EC15	>100	---	---	<1
			EC20	>100	---	---	<1
			EC25	>100	---	---	<1
			EC40	>100	---	---	<1
			EC50	>100	---	---	<1

Development Rate Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	LW	5	0.987	0.972	1.000	0.967	0.995	0.005	0.012	1.17%	0.00%
0	SA	5	0.971	0.964	0.978	0.965	0.977	0.003	0.006	0.58%	1.57%
1		5	0.986	0.978	0.994	0.979	0.995	0.003	0.006	0.62%	0.07%
10		5	0.987	0.974	0.999	0.979	1.000	0.005	0.010	1.05%	0.00%
50		5	0.984	0.975	0.994	0.974	0.995	0.004	0.008	0.80%	0.22%
100		5	0.983	0.970	0.996	0.975	1.000	0.005	0.010	1.04%	0.38%

Survival Rate Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	LW	5	0.956	0.875	1.000	0.845	1.000	0.029	0.065	6.82%	0.00%
0	SA	5	0.961	0.895	1.000	0.893	1.000	0.024	0.053	5.54%	-0.56%
1		5	0.948	0.867	1.000	0.877	1.000	0.029	0.065	6.84%	0.89%
10		5	0.966	0.885	1.000	0.850	1.000	0.029	0.065	6.75%	-1.01%
50		5	1.000	1.000	1.000	1.000	1.000	0.000	0.000	0.00%	-4.59%
100		5	0.987	0.961	1.000	0.952	1.000	0.009	0.021	2.12%	-3.24%

Bivalve Larval Survival and Development Test — **Pacific EcoRisk**

Development Rate Detail — MD5: 8137E7E6D6A335F22DBC3699FAAEDEEF

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	LW	0.989	0.989	0.967	0.994	0.995
0	SA	0.965	0.965	0.973	0.975	0.977
1		0.988	0.982	0.979	0.986	0.995
10		0.979	0.996	0.980	0.979	1.000
50		0.974	0.995	0.979	0.986	0.988
100		0.975	1.000	0.978	0.977	0.984

Survival Rate Detail — MD5: AB4417C3A64DB77D8B9DFAFEA097ED21

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	LW	0.984	0.952	1.000	0.845	1.000
0	SA	0.893	1.000	1.000	1.000	0.914
1		0.877	0.877	0.984	1.000	1.000
10		1.000	1.000	1.000	0.979	0.850
50		1.000	1.000	1.000	1.000	1.000
100		1.000	0.984	0.952	1.000	1.000

Development Rate Binomials

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	LW	184/186	178/180	202/209	158/159	193/194
0	SA	167/173	193/200	218/224	196/201	171/175
1		164/166	164/167	184/188	216/219	192/193
10		187/191	225/226	195/199	183/187	159/159
50		191/196	196/197	188/192	207/210	245/248
100		232/238	184/184	178/182	216/221	190/193

Survival Rate Binomials

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	LW	184/187	178/187	187/187	158/187	187/187
0	SA	167/187	187/187	187/187	187/187	171/187
1		164/187	164/187	184/187	187/187	187/187
10		187/187	187/187	187/187	183/187	159/187
50		187/187	187/187	187/187	187/187	187/187
100		187/187	184/187	178/187	187/187	187/187

Bivalve Larval Survival and Development Test — **Pacific EcoRisk**

Analysis ID:	09-5171-9654	**Endpoint:**	Survival Rate	**CETIS Version:**	CETIS v2.1.6
Analyzed:	11 Jun-25 10:13	**Analysis:**	Nonparametric-Control vs Treatments	**Status Level:**	1
Edit Date:	11 Jun-25 0:00	**MD5 Hash:**	D97CEFF23C9752C5FADB1E9DABD0B55	**Editor ID:**	006-243-107-9

Data Transform	Alt Hyp	NOEL	LOEL	TOEL	Tox Units	MSDu	PMSD
Angular (Corrected)	C > T	100	>100	---	1	0.0749	7.83%

Steel Many-One Rank Sum Test

Control	vs	Conc-%	df	Test Stat	Critical	Ties	P-Type	P-Value	Decision(α:5%)
Lab Water Control		1	8	27.5	17	3	CDF	0.8000	Non-Significant Effect
		10	8	30	17	2	CDF	0.9275	Non-Significant Effect
		50	8	35	17	2	CDF	0.9966	Non-Significant Effect
		100	8	31	17	4	CDF	0.9559	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.0696583	0.0174146	4	1.06	0.4005	Non-Significant Effect
Error	0.327626	0.0163813	20			
Total	0.397285		24			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Bartlett Equality of Variance Test	112	13.3	<1.0E-05	Unequal Variances
Distribution	Shapiro-Wilk W Normality Test	0.905	0.888	0.0232	Normal Distribution

Survival Rate Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	LW	5	0.956	0.875	1.000	0.984	0.845	1.000	0.029	6.82%	0.00%
1		5	0.948	0.867	1.000	0.984	0.877	1.000	0.029	6.84%	0.89%
10		5	0.966	0.885	1.000	1.000	0.850	1.000	0.029	6.75%	-1.01%
50		5	1.000	1.000	1.000	1.000	1.000	1.000	0.000	0.00%	-4.59%
100		5	0.987	0.961	1.000	1.000	0.952	1.000	0.009	2.12%	-3.24%

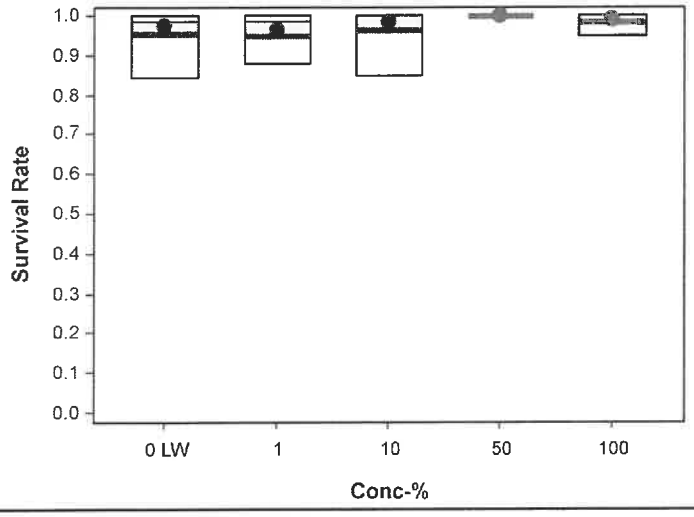
Angular (Corrected) Transformed Summary

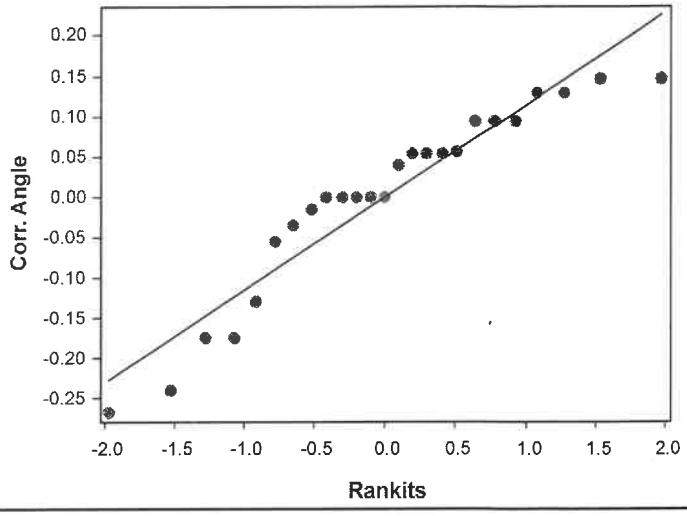
Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	LW	5	1.410	1.210	1.600	1.440	1.170	1.530	0.069	10.97%	0.00%
1		5	1.390	1.180	1.590	1.440	1.210	1.530	0.073	11.82%	1.29%
10		5	1.440	1.250	1.630	1.530	1.170	1.530	0.070	10.87%	-2.45%
50		5	1.530	1.530	1.530	1.530	1.530	1.530	0.000	0.00%	-9.15%
100		5	1.480	1.380	1.580	1.530	1.350	1.530	0.037	5.57%	-5.24%

Bivalve Larval Survival and Development Test — **Pacific EcoRisk**

Analysis ID:	09-5171-9654	**Endpoint:**	Survival Rate	**CETIS Version:**	CETIS v2.1.6
Analyzed:	11 Jun-25 10:13	**Analysis:**	Nonparametric-Control vs Treatments	**Status Level:**	1
Edit Date:	11 Jun-25 0:00	**MD5 Hash:**	D97CEFF23C9752C5FADB1E9DABD0B55	**Editor ID:**	006-243-107-9

Graphics





Bivalve Larval Survival and Development Test

Pacific EcoRisk

Analysis ID:	04-9440-3221	**Endpoint:**	Survival Rate	**CETIS Version:**	CETIS v2.1.6
Analyzed:	11 Jun-25 10:13	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Edit Date:	11 Jun-25 0:00	**MD5 Hash:**	D97CEFF23C9752C5FADB1E9DABD0B55	**Editor ID:**	006-243-107-9

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	1152792	200	Yes	Two-Point Interpolation

Point Estimates

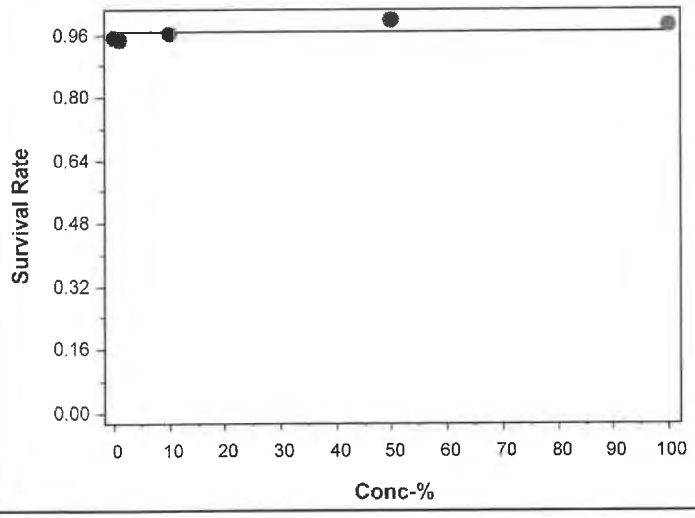
Level	%	95% LCL	95% UCL	Tox Units	95% LCL	95% UCL
EC10	>100	---	---	<1	---	---
EC15	>100	---	---	<1	---	---
EC20	>100	---	---	<1	---	---
EC25	>100	---	---	<1	---	---
EC40	>100	---	---	<1	---	---
EC50	>100	---	---	<1	---	---

Survival Rate Summary

Calculated Variate(A/B) | Isotonic Variate

Conc-%	Code	Count	Mean	Median	Min	Max	CV%	%Effect	ΣA/ΣB	Mean	%Effect
0	LW	5	0.956	0.984	0.845	1.000	6.82%	0.00%	894/935	0.971	0.00%
1		5	0.948	0.984	0.877	1.000	6.84%	0.89%	886/935	0.971	0.00%
10		5	0.966	1.000	0.850	1.000	6.75%	-1.01%	903/935	0.971	0.00%
50		5	1.000	1.000	1.000	1.000	0.00%	-4.59%	935/935	0.971	0.00%
100		5	0.987	1.000	0.952	1.000	2.12%	-3.24%	923/935	0.971	0.00%

Graphics



Mytilus sp. Development Toxicity Test Water Chemistry Data

Client: Berkeley BWTPF
Test Material: BWTPF-DU1
Test ID#: 109913 Project #: 39995
Test Date: 5/21/25 Randomization: —
Sample Salinity adjusted with : Crystal Sea

Organism Log#: 14915 Age: N/A
Organism Supplier: Aquatic
Control/Diluent: 30 ppt FSW

Day 0

Treatment	Temperature (°C)	pH	D.O. (mg/L)	Salinity (ppt)	NH_3	Signoff
Control	15.7	7.78	7.9	28.8		Test Solution Prep:
1.0%	15.7	7.77	8.1	28.9		New WQ:
10%	16.0	7.80	8.2	28.8		Innoculation Date: 5/21/25
50%	15.8	7.87	8.2	28.9		Innoculation Time: 1515
100%	15.9	7.97	7.8	29.0	42.00	Innoculation Signoff:
Meter ID	144A	PH27	RD13	EC11	923500	

Day 1

Treatment	Temperature (°C)	pH	D.O. (mg/L)	Salinity (ppt)	Signoff
Control	15.4				Date: 5/22/25
1.0%	15.4				Signoff:
10%	15.4				
50%	15.4				
100%	15.4				
Meter ID	178A				

Day 2

Treatment	Temperature (°C)	pH	D.O. (mg/L)	Salinity (ppt)	Signoff
Control	15.6	7.87	7.7	29.8	Termination Signoff:
1.0%	15.6	7.86	7.6	29.7	Termination Date: 5/23/25
10%	15.5	7.86	7.6	29.7	Termination Time: 1535
50%	15.5	7.88	7.6	29.7	Old WQ:
100%	15.4	7.96	7.7	29.9	Termination Spot Signoff:
Meter ID	185A	PH27	RD13	EC11	

Mytilus sp. Development Toxicity Test Count Data

Client: Berkeley BWTPF
Test Material: BWTPF-DU1
Test ID #: 109913
Project #: 39995
Sample Salinity adjusted with: Coffee Sea

Test Start Date: 5/21/25
Test End Date: 5/23/25
Enumeration Date: 6/1/25
Investigator: AP / Inv #3
Innoculation Count: 187

Concentration	Replicate	Number of Normal Larvae	Number of Abnormal Larvae	Total Number Larvae	Percent Normal Development	Percent Survival
Control	A	184	2	186		
	B	178	2	180		
	C	202	7	209		
	D	158	1	159		
	E	193	1	194		
1.0%	A	164	2	166		
	B	164	3	167		
	C	184	4	188		
	D	216	3	219		
	E	192	1	193		
10%	A	187	4	191		
	B	225	1	226		
	C	195	4	199		
	D	183	4	187		
	E	159	0	159		
50%	A	191	5	196		
	B	196	1	197		
	C	188	4	192		
	D	207	3	210		
	E	245	3	248		
100%	A	232	6	238		
	B	184	0	184		
	C	178	4	182		
	D	216	5	221		
	E	190	3	193		

CETIS Analytical Report

Bivalve Larval Survival and Development Test — **Pacific EcoRisk**

Analysis ID:	05-6838-8732	**Endpoint:**	Development Rate	**CETIS Version:**	CETIS v2.1.6
Analyzed:	11 Jun-25 13:26	**Analysis:**	Parametric-Control vs Treatments	**Status Level:**	1
Edit Date:	11 Jun-25 0:00	**MD5 Hash:**	029BD6BF5357AF6B75806C505B014428	**Editor ID:**	006-243-107-9

Data Transform	Alt Hyp	NOEL	LOEL	TOEL	Tox Units	MSDu	PMSD
Angular (Corrected)	C > T	100	>100	---	1	0.0157	1.59%

Dunnett Multiple Comparison Test

Control	vs	Conc-%	df	Test Stat	Critical	MSD	P-Type	P-Value	Decision(α:5%)
Lab Water Control		1	8	0.262	2.3	0.0623	CDF	0.7046	Non-Significant Effect
		10	8	-0.0317	2.3	0.0623	CDF	0.8101	Non-Significant Effect
		50	8	0.457	2.3	0.0623	CDF	0.6224	Non-Significant Effect
		100	8	0.565	2.3	0.0623	CDF	0.5747	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.0010376	0.0002594	4	0.142	0.9644	Non-Significant Effect
Error	0.0365099	0.0018255	20			
Total	0.0375474		24			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Bartlett Equality of Variance Test	1.74	13.3	0.7827	Equal Variances
Distribution	Shapiro-Wilk W Normality Test	0.959	0.888	0.3886	Normal Distribution

Development Rate Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	LW	5	0.987	0.972	1.000	0.989	0.967	0.995	0.005	1.17%	0.00%
1		5	0.986	0.978	0.994	0.986	0.979	0.995	0.003	0.62%	0.07%
10		5	0.987	0.974	0.999	0.980	0.979	1.000	0.005	1.05%	0.00%
50		5	0.984	0.975	0.994	0.986	0.974	0.995	0.004	0.80%	0.22%
100		5	0.983	0.970	0.996	0.978	0.975	1.000	0.005	1.04%	0.38%

Angular (Corrected) Transformed Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	LW	5	1.460	1.410	1.520	1.470	1.390	1.500	0.020	3.05%	0.00%
1		5	1.450	1.420	1.490	1.450	1.420	1.500	0.013	1.95%	0.48%
10		5	1.460	1.400	1.530	1.430	1.420	1.530	0.023	3.49%	-0.06%
50		5	1.450	1.410	1.490	1.450	1.410	1.500	0.015	2.37%	0.85%
100		5	1.450	1.380	1.510	1.420	1.410	1.530	0.023	3.49%	1.04%

Bivalve Larval Survival and Development Test

Pacific EcoRisk

Analysis ID:	06-9059-3237	**Endpoint:**	Development Rate	**CETIS Version:**	CETIS v2.1.6
Analyzed:	11 Jun-25 13:26	**Analysis:**	Parametric-Two Sample	**Status Level:**	1
Edit Date:	11 Jun-25 0:00	**MD5 Hash:**	E0F713F612D950BB11806262186E0818	**Editor ID:**	006-243-107-9

Data Transform	Alt Hyp	Comparison Result	PMSD
Angular (Corrected)	C > T	Salt Control failed development rate endpoint	0.87%

Equal Variance t Two-Sample Test

Control I	vs	Control II	df	Test Stat	Critical	MSD	P-Type	P-Value	Decision(α:5%)
Lab Water Control		Salt Control*	8	2.87	1.86	0.0396	CDF	0.0104	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.0093201	0.0093201	1	8.23	0.0208	Significant Effect
Error	0.0090561	0.0011320	8			
Total	0.0183761		9			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Variance Ratio F Test	7.02	23.2	0.0856	Equal Variances
Distribution	Shapiro-Wilk W Normality Test	0.869	0.741	0.0984	Normal Distribution

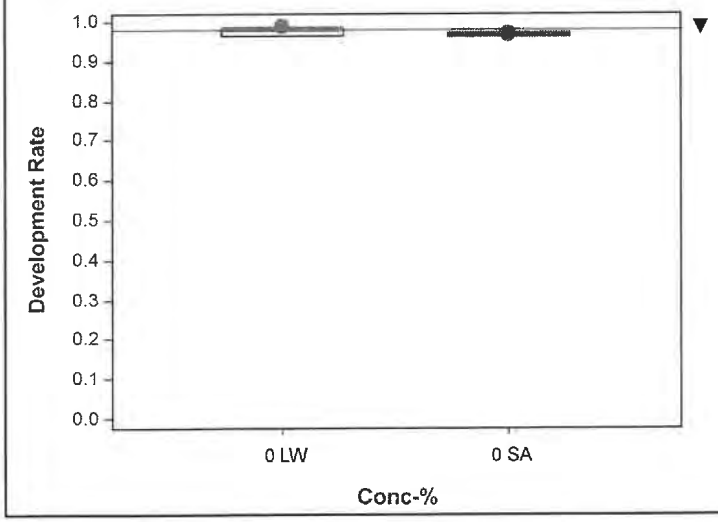
Development Rate Summary

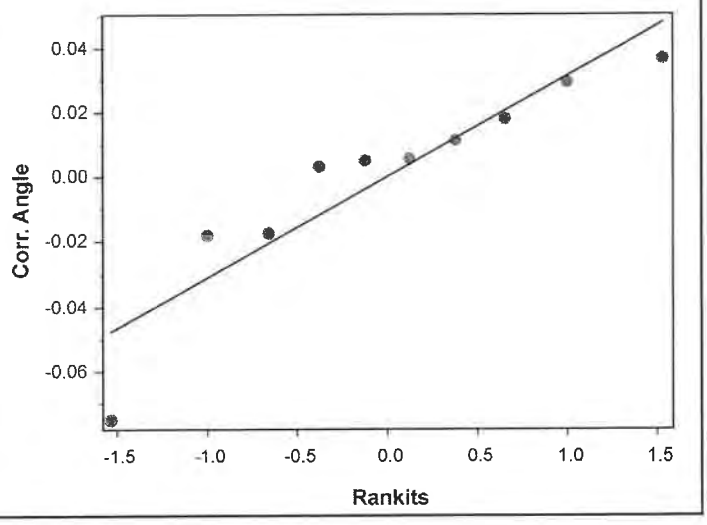
Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	LW	5	0.987	0.972	1.000	0.989	0.967	0.995	0.005	1.17%	0.00%
0	SA	5	0.971	0.964	0.978	0.973	0.965	0.977	0.003	0.58%	1.57%

Angular (Corrected) Transformed Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	LW	5	1.460	1.410	1.520	1.470	1.390	1.500	0.020	3.05%	0.00%
0	SA	5	1.400	1.380	1.420	1.410	1.380	1.420	0.008	1.20%	4.18%

Graphics





Bivalve Larval Survival and Development Test

Pacific EcoRisk

Analysis ID:	12-7446-9290	**Endpoint:**	Survival Rate	**CETIS Version:**	CETIS v2.1.6
Analyzed:	11 Jun-25 10:13	**Analysis:**	Parametric-Two Sample	**Status Level:**	1
Edit Date:	11 Jun-25 0:00	**MD5 Hash:**	4AADB1A665CC1DD827FD1E5527902950	**Editor ID:**	006-243-107-9

Data Transform	Alt Hyp	Comparison Result	PMSD
Angular (Corrected)	C > T	Salt Control passed survival rate endpoint	7.43%

Equal Variance t Two-Sample Test

Control I	vs	Control II	df	Test Stat	Critical	MSD	P-Type	P-Value	Decision(α:5%)
Lab Water Control		Salt Control	8	-0.178	1.86	0.181	CDF	0.5683	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.0007458	0.0007458	1	0.0316	0.8633	Non-Significant Effect
Error	0.188765	0.0235957	8			
Total	0.189511		9			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Variance Ratio F Test	1.01	23.2	0.9890	Equal Variances
Distribution	Shapiro-Wilk W Normality Test	0.821	0.741	0.0263	Normal Distribution

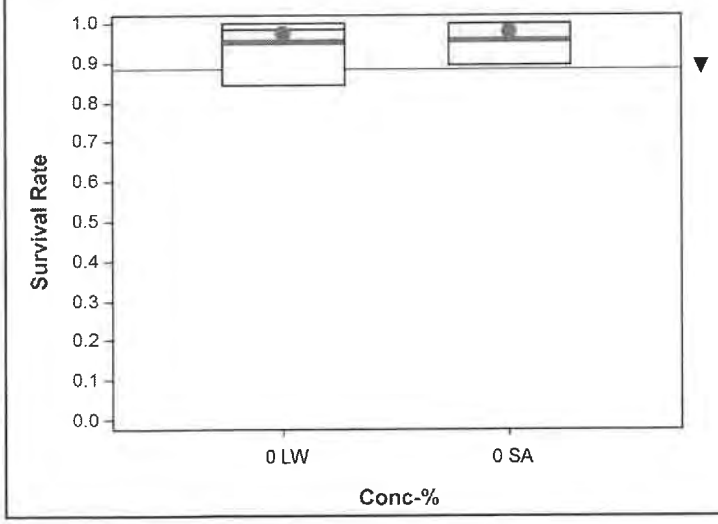
Survival Rate Summary

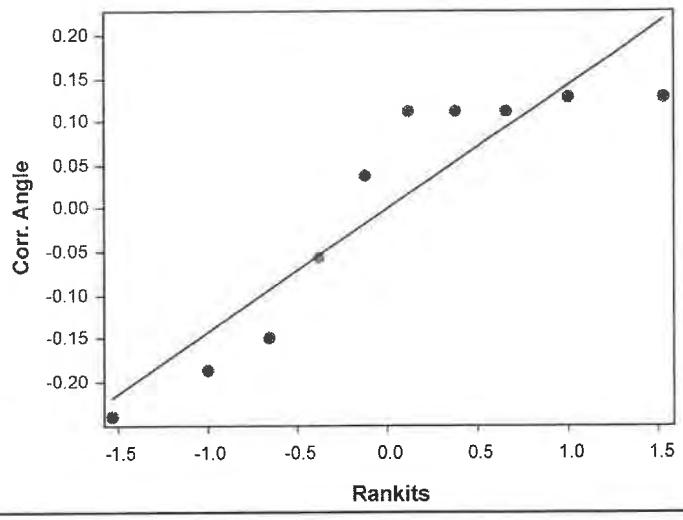
Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	LW	5	0.956	0.875	1.000	0.984	0.845	1.000	0.029	6.82%	0.00%
0	SA	5	0.961	0.895	1.000	1.000	0.893	1.000	0.024	5.54%	-0.56%

Angular (Corrected) Transformed Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	LW	5	1.410	1.210	1.600	1.440	1.170	1.530	0.069	10.97%	0.00%
0	SA	5	1.420	1.230	1.610	1.530	1.240	1.530	0.068	10.76%	-1.23%

Graphics





Mytilus sp. Development Toxicity Test Water Chemistry Data

Client: **Berkeley BWTPF**
Test Material: Salt Control
Test ID#: multiple Project #: 39995
Test Date: 5/21/25

Organism Log#: 14915 Age: N/A
Organism Supplier: ALS
Control/Diluent: FSW @ 30 ppt

Day 0					
Treatment	Temperature (°C)	pH	D.O. (mg/L)	Salinity (ppt)	Signoff
Salt Control	15.8	7.86	7.6	29.8	Date & Inoculation Time: 5/21/25
					Solution Prep/Inoculation: 1515
Meter ID	144A	PH27	RD13	EC11	New WQ:

Day 1					
Treatment	Temperature (°C)	pH	D.O. (mg/L)	Salinity (ppt)	Signoff
Salt Control	15.4				Date: 5/22/25
					Old WQ: TK
Meter ID	178A				

Day 2					
Treatment	Temperature (°C)	pH	D.O. (mg/L)	Salinity (ppt)	Signoff
Salt Control	15.4	7.91	7.5	30.6	Date & Termination Time: 5/23/25 1535
					Termination: JR
Meter ID	185A	pH27	RD13	EC11	Old WQ: SW

Mytilus sp. Development Toxicity Test Count Data

Client: Berkeley BWTPF
Test Material: Salt Control
Test ID #: multiple
Project #: 39995
Sample Salinity adjusted with: Coyote Spring

Test Start Date: 5/21/25
Test End Date: 5/23/25
Enumeration Date: 6/1/25
Investigator: AP / Lab #3
Innoculation Counts: 187

Concentration	Replicate	Number of Normal Larvae	Number of Abnormal Larvae	Total Number Larvae	Percent Normal Development	Percent Survival
Lab Control	A	184	2	186		
	B	178	2	180		
	C	202	7	209		
	D	158	1	159		
	E	193	1	194		
Salt Control	A	167	6	173		
	B	193	7	200		
	C	218	6	224		
	D	196	5	6/1/25 201		
	E	171	4	175		

CETIS Summary Report

Bivalve Larval Survival and Development Test — **Pacific EcoRisk**

Batch ID:	20-6592-2391	**Test Type:**	Development-Survival	**Analyst:**	Robert Gee
Start Date:	21 May-25 15:16	**Protocol:**	ASTM E724-98 (Bivalve)	**Diluent:**	Diluted Seawater
Ending Date:	23 May-25 15:38	**Species:**	Mytilus galloprovincialis	**Brine:**	Crystal Sea
Test Length:	48h	**Taxon:**		**Source:**	Alexi Gabriel **Age:** NA

Sample ID:	01-6656-8891	**Code:**	Elutriate SET	**Project:**	39995
Sample Date:	08 May-25 09:35	**Material:**	Elutriate	**Source:**	Berkeley Water Transportation Pier Fe
Receipt Date:	10 May-25 08:30	**CAS (PC):**		**Station:**	BWTPF-2025-DU2
Sample Age:	13d 6h (3.7 °C)	**Client:**	City of Berkeley		

Multiple Comparison Summary

Analysis ID	Endpoint	Comparison Method	NOEL	LOEL	TOEL	PMSD	TU
08-5340-6965	Development Rate	Dunnett Multiple Comparison Test	100	>100	---	2.1%	1
00-8789-5584	Survival Rate	Dunnett Multiple Comparison Test	100	>100	---	23.8%	1

Point Estimate Summary

Analysis ID	Endpoint	Point Estimate Method	Level	%	95% LCL	95% UCL	TU
01-4826-8814	Development Rate	Linear Interpolation (ICPIN)	EC10	>100	---	---	<1
			EC15	>100	---	---	<1
			EC20	>100	---	---	<1
			EC25	>100	---	---	<1
			EC40	>100	---	---	<1
			EC50	>100	---	---	<1
15-4374-7248	Survival Rate	Linear Interpolation (ICPIN)	EC10	>100	---	---	<1
			EC15	>100	---	---	<1
			EC20	>100	---	---	<1
			EC25	>100	---	---	<1
			EC40	>100	---	---	<1
			EC50	>100	---	---	<1

Development Rate Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	LW	5	0.980	0.966	0.994	0.962	0.994	0.005	0.012	1.17%	0.00%
1		5	0.982	0.968	0.996	0.973	1.000	0.005	0.011	1.16%	-0.16%
10		5	0.987	0.976	0.998	0.973	0.995	0.004	0.009	0.90%	-0.69%
50		5	0.984	0.972	0.996	0.976	1.000	0.004	0.010	0.98%	-0.38%
100		5	0.972	0.953	0.991	0.949	0.986	0.007	0.016	1.59%	0.84%

Survival Rate Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	LW	5	0.888	0.789	0.986	0.807	1.000	0.036	0.080	8.96%	0.00%
1		5	0.820	0.679	0.962	0.717	1.000	0.051	0.114	13.88%	7.59%
10		5	0.814	0.588	1.000	0.588	1.000	0.081	0.182	22.37%	8.31%
50		5	0.837	0.733	0.941	0.711	0.941	0.038	0.084	10.00%	5.66%
100		5	0.830	0.704	0.956	0.711	0.941	0.045	0.102	12.24%	6.51%

Bivalve Larval Survival and Development Test

Pacific EcoRisk

Development Rate Detail

MD5: E72DC5110BBE54655F3229311DF1D17B

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	LW	0.982	0.962	0.981	0.982	0.994
1		0.976	0.974	1.000	0.973	0.986
10		0.995	0.986	0.973	0.985	0.995
50		0.978	0.976	0.981	0.985	1.000
100		0.983	0.949	0.986	0.964	0.978

Survival Rate Detail

MD5: AC11612AF5832E49AA89E066614E366F

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	LW	1.000	0.818	0.807	0.888	0.925
1		0.861	1.000	0.717	0.775	0.749
10		1.000	0.770	0.588	0.711	1.000
50		0.941	0.872	0.824	0.711	0.840
100		0.941	0.797	0.770	0.711	0.930

Development Rate Binomials

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	LW	216/220	153/159	151/154	166/169	173/174
1		161/165	187/192	134/134	145/149	140/142
10		218/219	144/146	110/113	133/135	189/190
50		176/180	163/167	154/157	133/135	157/157
100		176/179	149/157	144/146	133/138	174/178

Survival Rate Binomials

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	LW	187/187	153/187	151/187	166/187	173/187
1		161/187	187/187	134/187	145/187	140/187
10		187/187	144/187	110/187	133/187	187/187
50		176/187	163/187	154/187	133/187	157/187
100		176/187	149/187	144/187	133/187	174/187

Bivalve Larval Survival and Development Test

Pacific EcoRisk

Analysis ID:	08-5340-6965	**Endpoint:**	Development Rate	**CETIS Version:**	CETIS v2.1.6
Analyzed:	11 Jun-25 11:07	**Analysis:**	Parametric-Control vs Treatments	**Status Level:**	1
Edit Date:	11 Jun-25 0:00	**MD5 Hash:**	E72DC5110BBE54655F3229311DF1D17B	**Editor ID:**	006-243-107-9

Data Transform	Alt Hyp	NOEL	LOEL	TOEL	Tox Units	MSDu	PMSD
Angular (Corrected)	C > T	100	>100	---	1	0.0206	2.10%

Dunnett Multiple Comparison Test

Control	vs	Conc-%	df	Test Stat	Critical	MSD	P-Type	P-Value	Decision(α:5%)
Lab Water Control		1	8	-0.245	2.3	0.0662	CDF	0.8697	Non-Significant Effect
		10	8	-0.954	2.3	0.0662	CDF	0.9730	Non-Significant Effect
		50	8	-0.52	2.3	0.0662	CDF	0.9252	Non-Significant Effect
		100	8	0.951	2.3	0.0662	CDF	0.4019	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.0083598	0.00209	4	1.01	0.4241	Non-Significant Effect
Error	0.0412423	0.0020621	20			
Total	0.0496021		24			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Bartlett Equality of Variance Test	0.292	13.3	0.9903	Equal Variances
Distribution	Shapiro-Wilk W Normality Test	0.957	0.888	0.3517	Normal Distribution

Development Rate Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	LW	5	0.980	0.966	0.994	0.982	0.962	0.994	0.005	1.17%	0.00%
1		5	0.982	0.968	0.996	0.976	0.973	1.000	0.005	1.16%	-0.16%
10		5	0.987	0.976	0.998	0.986	0.973	0.995	0.004	0.90%	-0.69%
50		5	0.984	0.972	0.996	0.981	0.976	1.000	0.004	0.98%	-0.38%
100		5	0.972	0.953	0.991	0.978	0.949	0.986	0.007	1.59%	0.84%

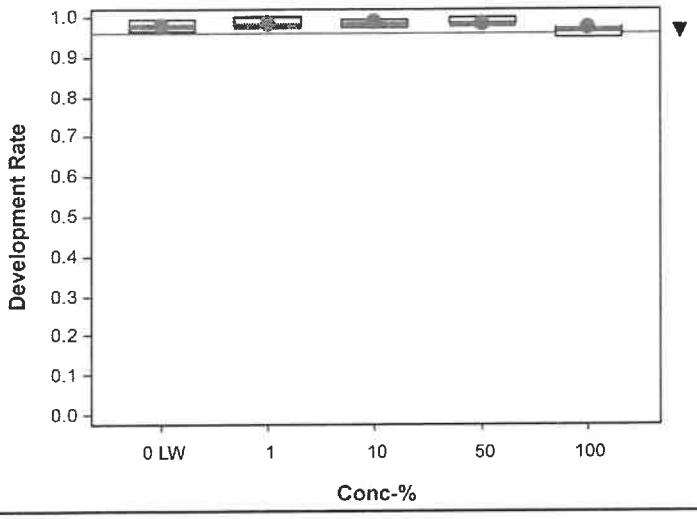
Angular (Corrected) Transformed Summary

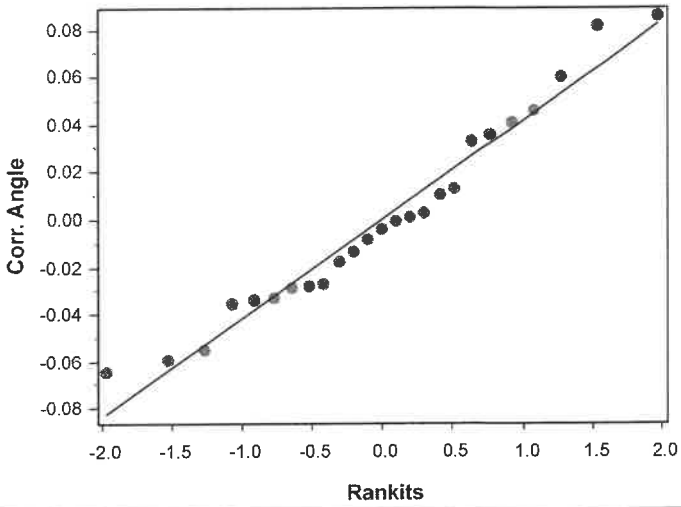
Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	LW	5	1.430	1.380	1.490	1.440	1.380	1.490	0.019	2.95%	0.00%
1		5	1.440	1.380	1.510	1.410	1.410	1.530	0.023	3.57%	-0.49%
10		5	1.460	1.410	1.510	1.450	1.410	1.500	0.018	2.71%	-1.91%
50		5	1.450	1.390	1.510	1.430	1.420	1.530	0.021	3.25%	-1.04%
100		5	1.410	1.350	1.460	1.420	1.340	1.450	0.020	3.24%	1.90%

Bivalve Larval Survival and Development Test — **Pacific EcoRisk**

Analysis ID:	08-5340-6965	**Endpoint:**	Development Rate	**CETIS Version:**	CETIS v2.1.6
Analyzed:	11 Jun-25 11:07	**Analysis:**	Parametric-Control vs Treatments	**Status Level:**	1
Edit Date:	11 Jun-25 0:00	**MD5 Hash:**	E72DC5110BBE54655F3229311DF1D17B	**Editor ID:**	006-243-107-9

Graphics





CETIS Analytical Report

Report Date: 11 Jun-25 11:08 (p 1 of 2)
Test Code/ID: 109914 / 08-7567-5435

Bivalve Larval Survival and Development Test

Pacific EcoRisk

Analysis ID:	01-4826-8814	**Endpoint:**	Development Rate	**CETIS Version:**	CETIS v2.1.6
Analyzed:	11 Jun-25 11:07	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Edit Date:	11 Jun-25 0:00	**MD5 Hash:**	E72DC5110BBE54655F3229311DF1D17B	**Editor ID:**	006-243-107-9

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	2144951	200	Yes	Two-Point Interpolation

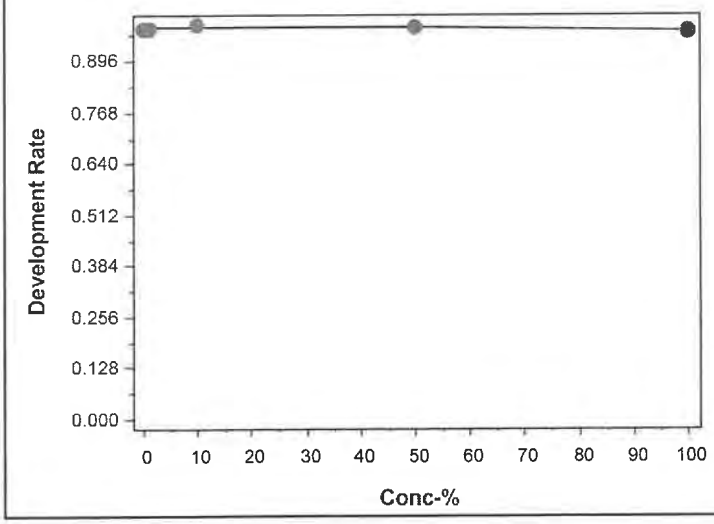
Point Estimates

Level	%	95% LCL	95% UCL	Tox Units	95% LCL	95% UCL
EC10	>100	---	---	<1	---	---
EC15	>100	---	---	<1	---	---
EC20	>100	---	---	<1	---	---
EC25	>100	---	---	<1	---	---
EC40	>100	---	---	<1	---	---
EC50	>100	---	---	<1	---	---

Development Rate Summary

			Calculated Variate(A/B)							Isotonic Variate	
Conc-%	Code	Count	Mean	Median	Min	Max	CV%	%Effect	ΣA/ΣB	Mean	%Effect
0	LW	5	0.980	0.982	0.962	0.994	1.17%	0.00%	859/876	0.983	0.00%
1		5	0.982	0.976	0.973	1.000	1.16%	-0.16%	767/782	0.983	0.00%
10		5	0.987	0.986	0.973	0.995	0.90%	-0.69%	794/803	0.983	0.00%
50		5	0.984	0.981	0.976	1.000	0.98%	-0.38%	783/796	0.983	0.00%
100		5	0.972	0.978	0.949	0.986	1.59%	0.84%	776/798	0.972	1.15%

Graphics



Bivalve Larval Survival and Development Test — Pacific EcoRisk

Analysis ID:	00-8789-5584	**Endpoint:**	Survival Rate	**CETIS Version:**	CETIS v2.1.6
Analyzed:	11 Jun-25 11:07	**Analysis:**	Parametric-Control vs Treatments	**Status Level:**	1
Edit Date:	11 Jun-25 0:00	**MD5 Hash:**	AC11612AF5832E49AA89E066614E366F	**Editor ID:**	006-243-107-9

Data Transform	Alt Hyp	NOEL	LOEL	TOEL	Tox Units	MSDu	PMSD
Angular (Corrected)	C > T	100	>100	---	1	0.211	23.82%

Dunnett Multiple Comparison Test

Control	vs	Conc-%	df	Test Stat	Critical	MSD	P-Type	P-Value	Decision(α:5%)
Lab Water Control		1	8	0.701	2.3	0.295	CDF	0.5133	Non-Significant Effect
		10	8	0.448	2.3	0.295	CDF	0.6265	Non-Significant Effect
		50	8	0.74	2.3	0.295	CDF	0.4954	Non-Significant Effect
		100	8	0.775	2.3	0.295	CDF	0.4795	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.0345546	0.0086387	4	0.211	0.9295	Non-Significant Effect
Error	0.820726	0.0410363	20			
Total	0.855281		24			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Bartlett Equality of Variance Test	4.27	13.3	0.3703	Equal Variances
Distribution	Shapiro-Wilk W Normality Test	0.928	0.888	0.0778	Normal Distribution

Survival Rate Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	LW	5	0.888	0.789	0.986	0.888	0.807	1.000	0.036	8.96%	0.00%
1		5	0.820	0.679	0.962	0.775	0.717	1.000	0.051	13.88%	7.59%
10		5	0.814	0.588	1.000	0.770	0.588	1.000	0.081	22.37%	8.31%
50		5	0.837	0.733	0.941	0.840	0.711	0.941	0.038	10.00%	5.66%
100		5	0.830	0.704	0.956	0.797	0.711	0.941	0.045	12.24%	6.51%

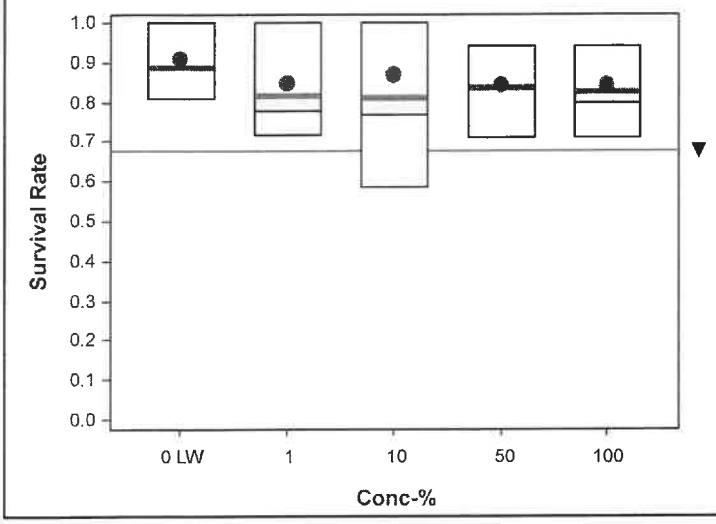
Angular (Corrected) Transformed Summary

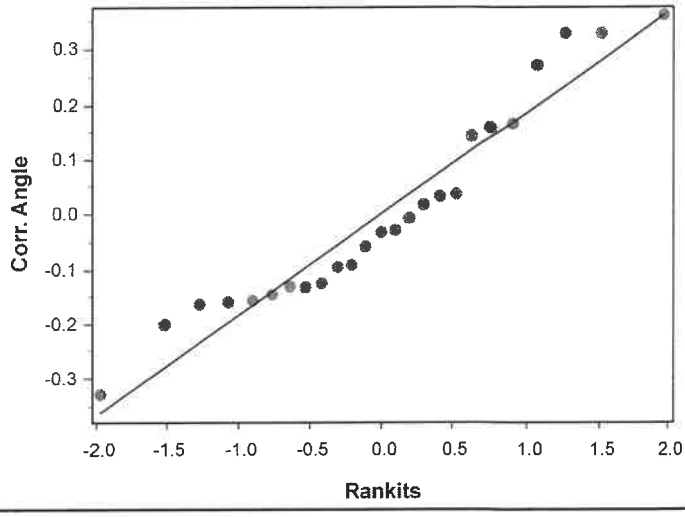
Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	LW	5	1.260	1.050	1.470	1.230	1.120	1.530	0.076	13.43%	0.00%
1		5	1.170	0.905	1.440	1.080	1.010	1.530	0.096	18.26%	7.12%
10		5	1.200	0.818	1.590	1.070	0.874	1.530	0.139	25.78%	4.55%
50		5	1.170	1.020	1.310	1.160	1.000	1.330	0.052	9.99%	7.52%
100		5	1.160	0.982	1.340	1.100	1.000	1.330	0.065	12.47%	7.88%

Bivalve Larval Survival and Development Test — **Pacific EcoRisk**

Analysis ID:	00-8789-5584	**Endpoint:**	Survival Rate	**CETIS Version:**	CETIS v2.1.6
Analyzed:	11 Jun-25 11:07	**Analysis:**	Parametric-Control vs Treatments	**Status Level:**	1
Edit Date:	11 Jun-25 0:00	**MD5 Hash:**	AC11612AF5832E49AA89E066614E366F	**Editor ID:**	006-243-107-9

Graphics





Bivalve Larval Survival and Development Test

Pacific EcoRisk

Analysis ID:	15-4374-7248	**Endpoint:**	Survival Rate	**CETIS Version:**	CETIS v2.1.6
Analyzed:	11 Jun-25 11:08	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Edit Date:	11 Jun-25 0:00	**MD5 Hash:**	AC11612AF5832E49AA89E066614E366F	**Editor ID:**	006-243-107-9

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	1266441	200	Yes	Two-Point Interpolation

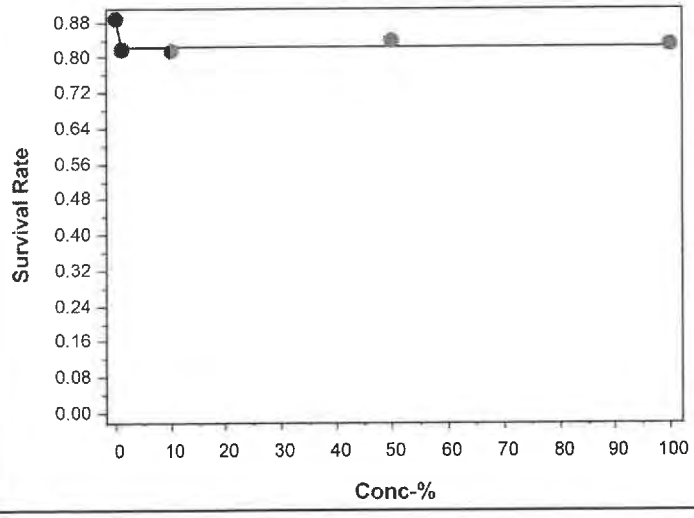
Point Estimates

Level	%	95% LCL	95% UCL	Tox Units	95% LCL	95% UCL
EC10	>100	---	---	<1	---	---
EC15	>100	---	---	<1	---	---
EC20	>100	---	---	<1	---	---
EC25	>100	---	---	<1	---	---
EC40	>100	---	---	<1	---	---
EC50	>100	---	---	<1	---	---

Survival Rate Summary

			Calculated Variate(A/B)							Isotonic Variate	
Conc-%	Code	Count	Mean	Median	Min	Max	CV%	%Effect	ΣA/ΣB	Mean	%Effect
0	LW	5	0.888	0.888	0.807	1.000	8.96%	0.00%	830/935	0.888	0.00%
1		5	0.820	0.775	0.717	1.000	13.88%	7.59%	767/935	0.825	7.02%
10		5	0.814	0.770	0.588	1.000	22.37%	8.31%	761/935	0.825	7.02%
50		5	0.837	0.840	0.711	0.941	10.00%	5.66%	783/935	0.825	7.02%
100		5	0.830	0.797	0.711	0.941	12.24%	6.51%	776/935	0.825	7.02%

Graphics



Mytilus sp. Development Toxicity Test Water Chemistry Data

Client: Berkeley BWTPF
Test Material: BWTPF-DU2
Test ID#: 109914 Project #: 39995
Test Date: 5/21/25 Randomization: —
Sample Salinity adjusted with : Crystal Sea

Organism Log#: 14915 Age: N/A
Organism Supplier: Aquil
Control/Diluent: 30 ppt FSW

Day 0

Treatment	Temperature (°C)	pH	D.O. (mg/L)	Salinity (ppt)	NH_3	Signoff
Control	15.6	7.74	8.1	28.5		Test Solution Prep:
1.0%	15.6	7.76	8.3	28.9		New WQ:
10%	15.6	7.78	8.2	29.0		Innoculation Date: 5/21/25
50%	15.5	7.92	8.1	29.6		Innoculation Time: 1516
100%	15.5	8.06	7.7	30.3	<2.00	Innoculation Signoff:
Meter ID	144A	PH27	RD13	EC11	DR3800	

Day 1

Treatment	Temperature (°C)	pH	D.O. (mg/L)	Salinity (ppt)	Signoff
Control	15.4				Date: 5/22/25
1.0%	15.5				Signoff: TK
10%	15.5				
50%	15.5				
100%	15.5				
Meter ID	178A				

Day 2

Treatment	Temperature (°C)	pH	D.O. (mg/L)	Salinity (ppt)	Signoff
Control	15.9	7.87	7.3	29.1	Termination Signoff: JR
1.0%	15.9	7.87	7.5	29.3	Termination Date: 5/23/25
10%	15.8	7.85	7.4	29.5	Termination Time: 1538
50%	15.7	7.84	7.1	30.2	Old WQ: SW
100%	15.6	7.80	6.1	31.0	Termination Spot Signoff: S
Meter ID	195	pH27	RD13	EC11	

Mytilus sp. Development Toxicity Test Count Data

Client: Berkeley BWTPF
Test Material: BWTPF-DU2
Test ID #: 109914
Project #: 39995
Sample Salinity adjusted with: Crystal Sea

Test Start Date: 5/21/25
Test End Date: 5/23/25
Enumeration Date: 5/28/25
Investigator: BP / Lav # 3
Innoculation Count: 187

Concentration	Replicate	Number of Normal Larvae	Number of Abnormal Larvae	Total Number Larvae	Percent Normal Development	Percent Survival
Control	A	216	4	220		
	B	153	6	159		
	C	151	3	154		
	D	166	3	169		
	E	173	1	174		
1.0%	A	161	4	165		
	B	187	5	192		
	C	134	0	134		
	D	145	4	149		
	E	140	2	142		
10%	A	218	1	219		
	B	144	2	146		
	C	110	3	113		
	D	133	2	135		
	E	189	1	190		
50%	A	176	4	180		
	B	163	4	167		
	C	154	3	157		
	D	133	2	135		
	E	157	0	157		
100%	A	176	3	179		
	B	149	8	5/28/25 ~~158~~ 157		
	C	144	2	146		
	D	133	5	138		
	E	174	4	178		

Bivalve Larval Survival and Development Test

Pacific EcoRisk

Batch ID:	13-7254-3207	**Test Type:**	Development-Survival	**Analyst:**	Robert Gee
Start Date:	21 May-25 15:17	**Protocol:**	ASTM E724-98 (Bivalve)	**Diluent:**	Diluted Seawater
Ending Date:	23 May-25 15:37	**Species:**	Mytilus galloprovincialis	**Brine:**	Crystal Sea
Test Length:	48h	**Taxon:**		**Source:**	Alexi Gabriel **Age:** NA

Sample ID:	01-3119-4546	**Code:**	Elutriate SET	**Project:**	39995
Sample Date:	09 May-25 06:40	**Material:**	Elutriate	**Source:**	Berkeley Water Transportation Pier Fe
Receipt Date:	10 May-25 08:30	**CAS (PC):**		**Station:**	BWTPF-2025-DU3
Sample Age:	12d 9h (3.7 °C)	**Client:**	City of Berkeley		

Multiple Comparison Summary

Analysis ID	Endpoint	Comparison Method	NOEL	LOEL	TOEL	PMSD	TU
08-8684-2578	Development Rate	Dunnett Multiple Comparison Test	50	100	70.71	2.22%	2
04-9337-5851	Survival Rate	Dunnett Multiple Comparison Test	100	>100	---	16.8%	1

Point Estimate Summary

Analysis ID	Endpoint	Point Estimate Method	Level	%	95% LCL	95% UCL	TU
15-7713-4527	Development Rate	Linear Interpolation (ICPIN)	EC10	>100	---	---	<1
			EC15	>100	---	---	<1
			EC20	>100	---	---	<1
			EC25	>100	---	---	<1
			EC40	>100	---	---	<1
			EC50	>100	---	---	<1
14-7125-4329	Survival Rate	Linear Interpolation (ICPIN)	EC10	>100	---	---	<1
			EC15	>100	---	---	<1
			EC20	>100	---	---	<1
			EC25	>100	---	---	<1
			EC40	>100	---	---	<1
			EC50	>100	---	---	<1

Development Rate Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	LW	5	0.981	0.973	0.988	0.973	0.988	0.003	0.006	0.62%	0.00%
1		5	0.979	0.961	0.998	0.960	0.994	0.007	0.015	1.52%	0.18%
10		5	0.988	0.976	1.000	0.975	1.000	0.004	0.009	0.96%	-0.74%
50		5	0.984	0.967	1.000	0.966	1.000	0.006	0.014	1.37%	-0.28%
100		5	0.927	0.905	0.950	0.902	0.953	0.008	0.019	1.99%	5.45%

Survival Rate Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	LW	5	0.909	0.794	1.000	0.781	1.000	0.042	0.093	10.21%	0.00%
1		5	0.824	0.732	0.915	0.706	0.898	0.033	0.074	8.96%	9.41%
10		5	0.891	0.781	1.000	0.765	1.000	0.040	0.088	9.91%	2.00%
50		5	0.914	0.846	0.983	0.856	1.000	0.025	0.055	6.06%	-0.59%
100		5	0.868	0.662	1.000	0.588	1.000	0.074	0.166	19.11%	4.47%

Bivalve Larval Survival and Development Test — **Pacific EcoRisk**

Development Rate Detail — MD5: A56B30346A02C6DDB4694654F190A57E

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	LW	0.976	0.985	0.982	0.988	0.973
1		0.994	0.960	0.992	0.981	0.968
10		0.993	1.000	0.975	0.983	0.990
50		1.000	0.966	0.994	0.982	0.976
100		0.902	0.932	0.920	0.953	0.930

Survival Rate Detail — MD5: D85B2C9B3712AC011971C9F064623525

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	LW	0.888	1.000	1.000	0.877	0.781
1		0.866	0.898	0.706	0.840	0.807
10		0.765	0.925	0.850	0.914	1.000
50		0.914	0.925	0.877	0.856	1.000
100		1.000	0.588	0.856	0.973	0.925

Development Rate Binomials

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	LW	166/170	201/204	213/217	164/166	146/150
1		162/163	168/175	132/133	157/160	151/156
10		143/144	173/173	159/163	171/174	193/195
50		171/171	173/179	164/165	160/163	205/210
100		222/246	110/118	160/174	182/191	173/186

Survival Rate Binomials

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	LW	166/187	187/187	187/187	164/187	146/187
1		162/187	168/187	132/187	157/187	151/187
10		143/187	173/187	159/187	171/187	187/187
50		171/187	173/187	164/187	160/187	187/187
100		187/187	110/187	160/187	182/187	173/187

Bivalve Larval Survival and Development Test — Pacific EcoRisk

Analysis ID:	08-8684-2578	**Endpoint:**	Development Rate	**CETIS Version:**	CETIS v2.1.6
Analyzed:	11 Jun-25 11:14	**Analysis:**	Parametric-Control vs Treatments	**Status Level:**	1
Edit Date:	11 Jun-25 0:00	**MD5 Hash:**	A56B30346A02C6DDB4694654F190A57E	**Editor ID:**	006-243-107-9

Data Transform	Alt Hyp	NOEL	LOEL	TOEL	Tox Units	MSDu	PMSD
Angular (Corrected)	C > T	50	100	70.71	2	0.0218	2.22%

Dunnett Multiple Comparison Test

Control	vs	Conc-%	df	Test Stat	Critical	MSD	P-Type	P-Value	Decision(α:5%)
Lab Water Control		1	8	-0.0127	2.3	0.0665	CDF	0.8041	Non-Significant Effect
		10	8	-1.21	2.3	0.0665	CDF	0.9861	Non-Significant Effect
		50	8	-0.655	2.3	0.0665	CDF	0.9445	Non-Significant Effect
		100*	8	4.64	2.3	0.0665	CDF	0.0003	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.0910471	0.0227618	4	10.9	7.2E-05	Significant Effect
Error	0.0415817	0.0020791	20			
Total	0.132629		24			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Bartlett Equality of Variance Test	3.64	13.3	0.4576	Equal Variances
Distribution	Shapiro-Wilk W Normality Test	0.968	0.888	0.6004	Normal Distribution

Development Rate Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	LW	5	0.981	0.973	0.988	0.982	0.973	0.988	0.003	0.62%	0.00%
1		5	0.979	0.961	0.998	0.981	0.960	0.994	0.007	1.52%	0.18%
10		5	0.988	0.976	1.000	0.990	0.975	1.000	0.004	0.96%	-0.74%
50		5	0.984	0.967	1.000	0.982	0.966	1.000	0.006	1.37%	-0.28%
100		5	0.927	0.905	0.950	0.930	0.902	0.953	0.008	1.99%	5.45%

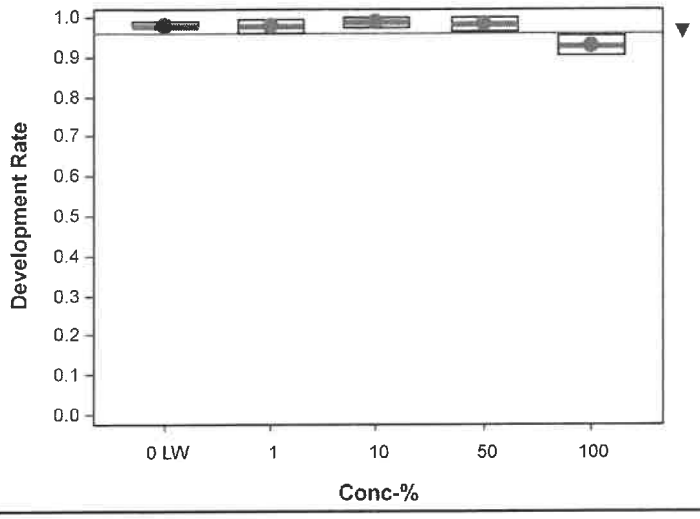
Angular (Corrected) Transformed Summary

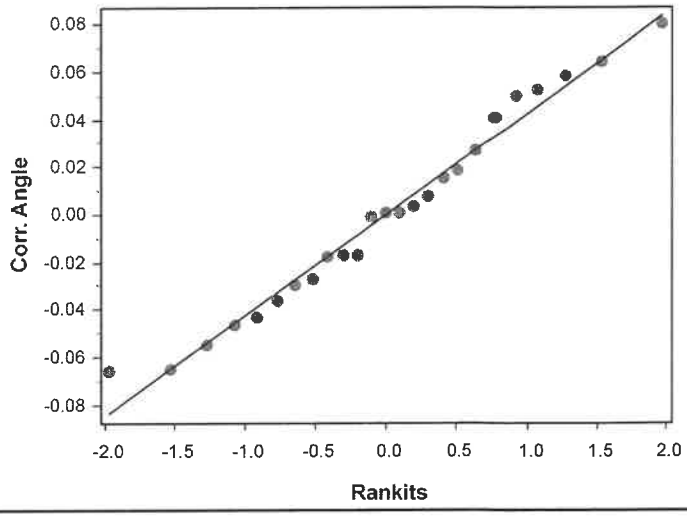
Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	LW	5	1.430	1.410	1.460	1.430	1.410	1.460	0.010	1.56%	0.00%
1		5	1.430	1.370	1.500	1.430	1.370	1.490	0.024	3.81%	-0.03%
10		5	1.470	1.410	1.530	1.470	1.410	1.530	0.021	3.12%	-2.43%
50		5	1.450	1.380	1.530	1.430	1.390	1.530	0.027	4.08%	-1.32%
100		5	1.300	1.250	1.340	1.300	1.250	1.350	0.016	2.79%	9.34%

Bivalve Larval Survival and Development Test — **Pacific EcoRisk**

Analysis ID:	08-8684-2578	**Endpoint:**	Development Rate	**CETIS Version:**	CETIS v2.1.6
Analyzed:	11 Jun-25 11:14	**Analysis:**	Parametric-Control vs Treatments	**Status Level:**	1
Edit Date:	11 Jun-25 0:00	**MD5 Hash:**	A56B30346A02C6DDB4694654F190A57E	**Editor ID:**	006-243-107-9

Graphics





Bivalve Larval Survival and Development Test

Pacific EcoRisk

Analysis ID:	15-7713-4527	**Endpoint:**	Development Rate	**CETIS Version:**	CETIS v2.1.6
Analyzed:	11 Jun-25 11:14	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Edit Date:	11 Jun-25 0:00	**MD5 Hash:**	A56B30346A02C6DDB4694654F190A57E	**Editor ID:**	006-243-107-9

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	1493380	200	Yes	Two-Point Interpolation

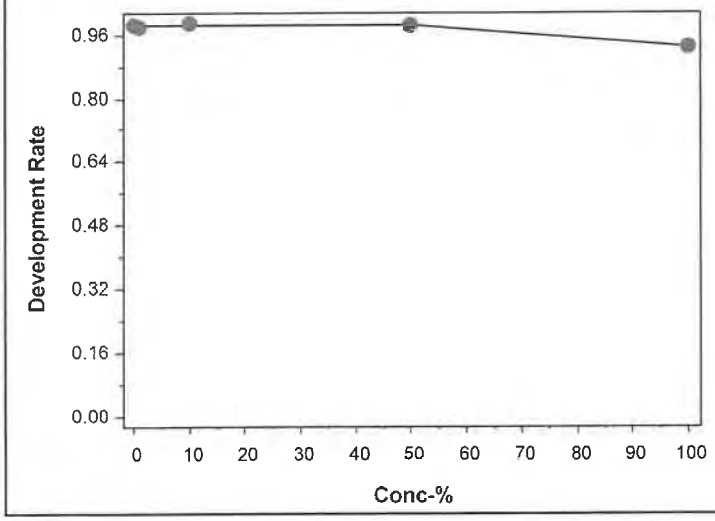
Point Estimates

Level	%	95% LCL	95% UCL	Tox Units	95% LCL	95% UCL
EC10	>100	---	---	<1	---	---
EC15	>100	---	---	<1	---	---
EC20	>100	---	---	<1	---	---
EC25	>100	---	---	<1	---	---
EC40	>100	---	---	<1	---	---
EC50	>100	---	---	<1	---	---

Development Rate Summary

			Calculated Variate(A/B)							Isotonic Variate	
Conc-%	Code	Count	Mean	Median	Min	Max	CV%	%Effect	ΣA/ΣB	Mean	%Effect
0	LW	5	0.981	0.982	0.973	0.988	0.62%	0.00%	890/907	0.983	0.00%
1		5	0.979	0.981	0.960	0.994	1.52%	0.18%	770/787	0.983	0.00%
10		5	0.988	0.990	0.975	1.000	0.96%	-0.74%	839/849	0.983	0.00%
50		5	0.984	0.982	0.966	1.000	1.37%	-0.28%	873/888	0.983	0.00%
100		5	0.927	0.930	0.902	0.953	1.99%	5.45%	847/915	0.927	5.65%

Graphics



Bivalve Larval Survival and Development Test — **Pacific EcoRisk**

Analysis ID:	04-9337-5851	**Endpoint:**	Survival Rate	**CETIS Version:**	CETIS v2.1.6
Analyzed:	11 Jun-25 11:14	**Analysis:**	Parametric-Control vs Treatments	**Status Level:**	1
Edit Date:	11 Jun-25 0:00	**MD5 Hash:**	D85B2C9B3712AC011971C9F064623525	**Editor ID:**	006-243-107-9

Data Transform	Alt Hyp	NOEL	LOEL	TOEL	Tox Units	MSDu	PMSD
Angular (Corrected)	C > T	100	>100	---	1	0.153	16.78%

Dunnett Multiple Comparison Test

Control	vs	Conc-%	df	Test Stat	Critical	MSD	P-Type	P-Value	Decision(α:5%)
Lab Water Control		1	8	1.53	2.3	0.264	CDF	0.1895	Non-Significant Effect
		10	8	0.443	2.3	0.264	CDF	0.6285	Non-Significant Effect
		50	8	0.171	2.3	0.264	CDF	0.7398	Non-Significant Effect
		100	8	0.531	2.3	0.264	CDF	0.5899	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.093292	0.023323	4	0.712	0.5936	Non-Significant Effect
Error	0.655487	0.0327744	20			
Total	0.748779		24			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Bartlett Equality of Variance Test	3.63	13.3	0.4579	Equal Variances
Distribution	Shapiro-Wilk W Normality Test	0.967	0.888	0.5677	Normal Distribution

Survival Rate Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	LW	5	0.909	0.794	1.000	0.888	0.781	1.000	0.042	10.21%	0.00%
1		5	0.824	0.732	0.915	0.840	0.706	0.898	0.033	8.96%	9.41%
10		5	0.891	0.781	1.000	0.914	0.765	1.000	0.040	9.91%	2.00%
50		5	0.914	0.846	0.983	0.914	0.856	1.000	0.025	6.06%	-0.59%
100		5	0.868	0.662	1.000	0.925	0.588	1.000	0.074	19.11%	4.47%

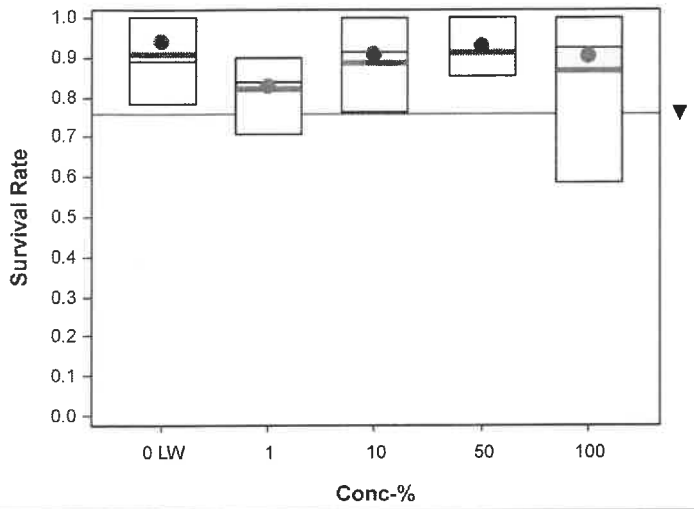
Angular (Corrected) Transformed Summary

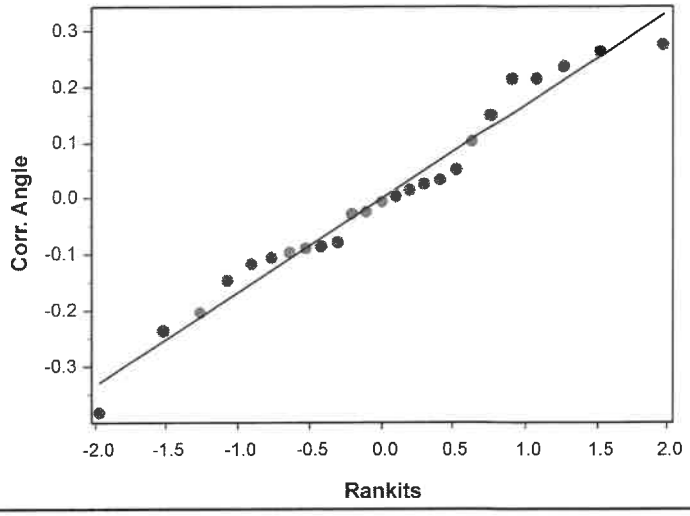
Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	LW	5	1.320	1.060	1.570	1.230	1.080	1.530	0.092	15.52%	0.00%
1		5	1.140	1.030	1.260	1.160	0.998	1.250	0.042	8.26%	13.31%
10		5	1.270	1.050	1.480	1.270	1.060	1.530	0.078	13.77%	3.85%
50		5	1.300	1.130	1.470	1.270	1.180	1.530	0.062	10.71%	1.49%
100		5	1.260	0.946	1.570	1.290	0.874	1.530	0.112	19.99%	4.61%

Bivalve Larval Survival and Development Test — **Pacific EcoRisk**

Analysis ID:	04-9337-5851	**Endpoint:**	Survival Rate	**CETIS Version:**	CETIS v2.1.6
Analyzed:	11 Jun-25 11:14	**Analysis:**	Parametric-Control vs Treatments	**Status Level:**	1
Edit Date:	11 Jun-25 0:00	**MD5 Hash:**	D85B2C9B3712AC011971C9F064623525	**Editor ID:**	006-243-107-9

Graphics





Bivalve Larval Survival and Development Test — **Pacific EcoRisk**

Analysis ID:	14-7125-4329	**Endpoint:**	Survival Rate	**CETIS Version:**	CETIS v2.1.6
Analyzed:	11 Jun-25 11:14	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Edit Date:	11 Jun-25 0:00	**MD5 Hash:**	D85B2C9B3712AC011971C9F064623525	**Editor ID:**	006-243-107-9

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	984966	200	Yes	Two-Point Interpolation

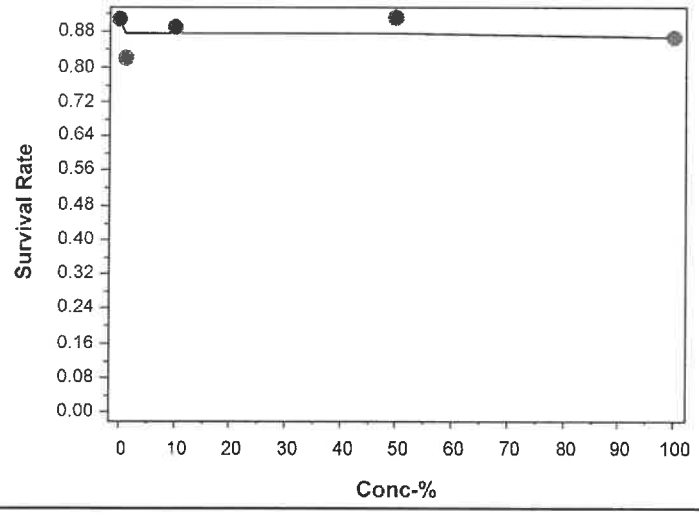
Point Estimates

Level	%	95% LCL	95% UCL	Tox Units	95% LCL	95% UCL
EC10	>100	---	---	<1	---	---
EC15	>100	---	---	<1	---	---
EC20	>100	---	---	<1	---	---
EC25	>100	---	---	<1	---	---
EC40	>100	---	---	<1	---	---
EC50	>100	---	---	<1	---	---

Survival Rate Summary — Calculated Variate(A/B) — Isotonic Variate

Conc-%	Code	Count	Mean	Median	Min	Max	CV%	%Effect	ΣA/ΣB	Mean	%Effect
0	LW	5	0.909	0.888	0.781	1.000	10.21%	0.00%	850/935	0.909	0.00%
1		5	0.824	0.840	0.706	0.898	8.96%	9.41%	770/935	0.876	3.61%
10		5	0.891	0.914	0.765	1.000	9.91%	2.00%	833/935	0.876	3.61%
50		5	0.914	0.914	0.856	1.000	6.06%	-0.59%	855/935	0.876	3.61%
100		5	0.868	0.925	0.588	1.000	19.11%	4.47%	812/935	0.868	4.47%

Graphics



Mytilus sp. Development Toxicity Test Water Chemistry Data

Client: Berkeley BWTPF
Test Material: BWTPF-DU3
Test ID#: 109915 Project #: 39995
Test Date: 5/21/25 Randomization: —
Sample Salinity adjusted with : Crystal Sea

Organism Log#: 14915 Age: N/A
Organism Supplier: Aqua
Control/Diluent: 30 ppt FSW

Day 0

Treatment	Temperature (°C)	pH	D.O. (mg/L)	Salinity (ppt)	NH_3	Signoff
Control	15.5	7.77	8.3	28.4		Test Solution Prep:
1.0%	15.5	7.80	8.5	28.7		New WQ:
10%	15.5	7.83	8.4	28.8		Innoculation Date: 5/21/25
50%	15.5	~~7.8~~ 7.93	7.9	29.1		Innoculation Time: 1517
100%	15.4	8.00	7.2	29.6	2.88	Innoculation Signoff:
Meter ID	144A	pH27	RDO13	EC11	DR3810	

Day 1

Treatment	Temperature (°C)	pH	D.O. (mg/L)	Salinity (ppt)	Signoff
Control	15.4				Date: 5/22/25
1.0%	15.4				Signoff: TK
10%	15.4				
50%	15.4				
100%	15.4				
Meter ID	178A				

Day 2

Treatment	Temperature (°C)	pH	D.O. (mg/L)	Salinity (ppt)	Signoff
Control	16.2	7.86	7.7	28.4	Termination Signoff:
1.0%	16.2	7.86	7.6	29.4	Termination Date: 5/23/25
10%	16.2	7.88	7.6	29.6	Termination Time: 1537
50%	16.2	7.96	7.5	29.9	Old WQs:
100%	16.2	8.01	7.3	30.3	Termination Spot Signoff:
Meter ID	185A	pH27	RDO13	EC11	

Mytilus sp. Development Toxicity Test Count Data

Client: Berkeley BWTPF
Test Material: BWTPF-DU3
Test ID #: 109915
Project #: 39995
Sample Salinity adjusted with: Crayfish Sea

Test Start Date: 5/21/25
Test End Date: 5/23/25
Enumeration Date: 5/24/25
Investigator: AP / Inv #3
Innoculation Count: 187

Concentration	Replicate	Number of Normal Larvae	Number of Abnormal Larvae	Total Number Larvae	Percent Normal Development	Percent Survival
Control	A	166	4	170		
	B	201	3	204		
	C	213	4	217		
	D	164	2	166		
	E	146	4	150		
1.0%	A	162	1	163		
	B	168	7	175		
	C	132	1	133		
	D	157	3	160		
	E	151	5	156		
10%	A	143	1	144		
	B	173	0	173		
	C	159	4	163		
	D	171	3	174		
	E	193	2	195		
50%	A	171	0	171		
	B	173	6	179		
	C	164	1	165		
	D	160	3	163		
	E	205	5	210		
100%	A	222	24	246		
	B	110	8	118		
	C	160	14	174		
	D	182	9	191		
	E	173	13	186		

Bivalve Larval Survival and Development Test — Pacific EcoRisk

Batch ID:	08-8531-0342	**Test Type:**	Development-Survival	**Analyst:**	Robert Gee
Start Date:	21 May-25 15:12	**Protocol:**	ASTM E724-98 (Bivalve)	**Diluent:**	Diluted Seawater
Ending Date:	23 May-25 15:36	**Species:**	Mytilus galloprovincialis	**Brine:**	Crystal Sea
Test Length:	48h	**Taxon:**		**Source:**	Alexi Gabriel **Age:** NA

Sample ID:	06-2742-0132	**Code:**	Elutriate SET	**Project:**	39995
Sample Date:	07 May-25 12:15	**Material:**	Elutriate	**Source:**	Berkeley Water Transportation Pier Fe
Receipt Date:	07 May-25 16:45	**CAS (PC):**		**Station:**	BWTPF-2025-DU4
Sample Age:	14d 3h (1.3 °C)	**Client:**	City of Berkeley		

Multiple Comparison Summary

Analysis ID	Endpoint	Comparison Method	NOEL	LOEL	TOEL	PMSD	TU
13-8363-3932	Development Rate	Dunnett Multiple Comparison Test	50	100	70.71	1.88%	2
14-9577-9488	Survival Rate	Dunnett Multiple Comparison Test	50	100	70.71	14.2%	2

Point Estimate Summary

Analysis ID	Endpoint	Point Estimate Method	Level	%	95% LCL	95% UCL	TU
09-6820-1408	Development Rate	Linear Interpolation (ICPIN)	EC10	59.4	57.7	60.8	1.7
			EC15	64.6	62.8	66.4	1.5
			EC20	69.7	67.8	71.8	1.4
			EC25	74.9	72.8	77.5	1.3
			EC40	90.4	87.5	94.8	1.1
			EC50	>100	---	---	<1
12-3707-9765	Survival Rate	Linear Interpolation (ICPIN)	EC10	58	47.2	63.1	1.7
			EC15	64	53.9	68.7	1.6
			EC20	70	60.6	75.5	1.4
			EC25	75.9	67.3	82.4	1.3
			EC40	93.8	85.7	102	1.1
			EC50	>100	---	---	<1

Development Rate Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	LW	5	0.979	0.965	0.993	0.962	0.989	0.005	0.011	1.15%	0.00%
1		5	0.980	0.968	0.993	0.966	0.994	0.005	0.010	1.03%	-0.16%
10		5	0.974	0.964	0.984	0.964	0.984	0.004	0.008	0.84%	0.47%
50		5	0.971	0.954	0.988	0.960	0.994	0.006	0.014	1.41%	0.75%
100		5	0.496	0.446	0.547	0.464	0.566	0.018	0.040	8.13%	49.27%

Survival Rate Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	LW	5	0.886	0.826	0.945	0.824	0.941	0.021	0.048	5.38%	0.00%
1		5	0.863	0.756	0.971	0.765	0.941	0.039	0.087	10.03%	2.54%
10		5	0.898	0.785	1.000	0.813	1.000	0.041	0.091	10.16%	-1.45%
50		5	0.857	0.795	0.918	0.786	0.914	0.022	0.050	5.78%	3.26%
100		5	0.486	0.426	0.545	0.412	0.529	0.021	0.048	9.83%	45.17%

Bivalve Larval Survival and Development Test — **Pacific EcoRisk**

Development Rate Detail — MD5: 615C7BFC5374D2F461326AED7BECDCB1

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	LW	0.982	0.989	0.972	0.988	0.962
1		0.980	0.994	0.982	0.966	0.978
10		0.964	0.968	0.975	0.979	0.984
50		0.963	0.974	0.966	0.994	0.960
100		0.474	0.464	0.566	0.495	0.484

Survival Rate Detail — MD5: 85F5ADC56CA6807DC6177ED36F8E9885

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	LW	0.866	0.941	0.925	0.872	0.824
1		0.775	0.936	0.898	0.765	0.941
10		0.850	0.813	0.834	0.995	1.000
50		0.834	0.786	0.914	0.861	0.888
100		0.492	0.412	0.529	0.524	0.471

Development Rate Binomials

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	LW	162/165	176/178	173/178	163/165	154/160
1		145/148	175/176	168/171	143/148	176/180
10		159/165	152/157	156/160	186/190	310/315
50		156/162	147/151	171/177	161/162	166/173
100		92/194	77/166	99/175	98/198	88/182

Survival Rate Binomials

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	LW	162/187	176/187	173/187	163/187	154/187
1		145/187	175/187	168/187	143/187	176/187
10		159/187	152/187	156/187	186/187	187/187
50		156/187	147/187	171/187	161/187	166/187
100		92/187	77/187	99/187	98/187	88/187

Bivalve Larval Survival and Development Test — Pacific EcoRisk

Analysis ID:	13-8363-3932	**Endpoint:**	Development Rate	**CETIS Version:**	CETIS v2.1.6
Analyzed:	11 Jun-25 13:41	**Analysis:**	Parametric-Control vs Treatments	**Status Level:**	1
Edit Date:	11 Jun-25 0:00	**MD5 Hash:**	615C7BFC5374D2F461326AED7BECDCB	**Editor ID:**	006-243-107-9

Data Transform	Alt Hyp	NOEL	LOEL	TOEL	Tox Units	MSDu	PMSD
Angular (Corrected)	C > T	50	100	70.71	2	0.0184	1.88%

Dunnett Multiple Comparison Test

Control	vs	Conc-%	df	Test Stat	Critical	MSD	P-Type	P-Value	Decision(α:5%)
Lab Water Control		1	8	-0.234	2.3	0.0578	CDF	0.8672	Non-Significant Effect
		10	8	0.693	2.3	0.0578	CDF	0.5168	Non-Significant Effect
		50	8	0.864	2.3	0.0578	CDF	0.4397	Non-Significant Effect
		100*	8	25.7	2.3	0.0578	CDF	<1.0E-05	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	1.62883	0.407209	4	259	<1.0E-05	Significant Effect
Error	0.0314907	0.0015745	20			
Total	1.66033		24			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Bartlett Equality of Variance Test	1.47	13.3	0.8325	Equal Variances
Distribution	Shapiro-Wilk W Normality Test	0.934	0.888	0.1069	Normal Distribution

Development Rate Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	LW	5	0.979	0.965	0.993	0.982	0.962	0.989	0.005	1.15%	0.00%
1		5	0.980	0.968	0.993	0.980	0.966	0.994	0.005	1.03%	-0.16%
10		5	0.974	0.964	0.984	0.975	0.964	0.984	0.004	0.84%	0.47%
50		5	0.971	0.954	0.988	0.966	0.960	0.994	0.006	1.41%	0.75%
100		5	0.496	0.446	0.547	0.484	0.464	0.566	0.018	8.13%	49.27%

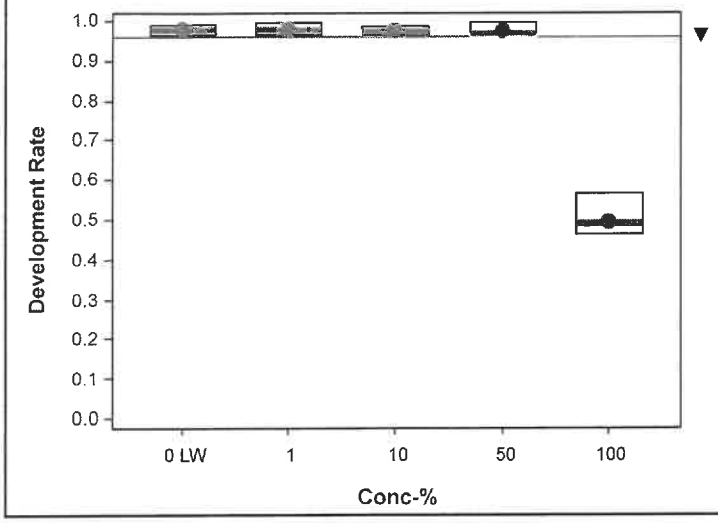
Angular (Corrected) Transformed Summary

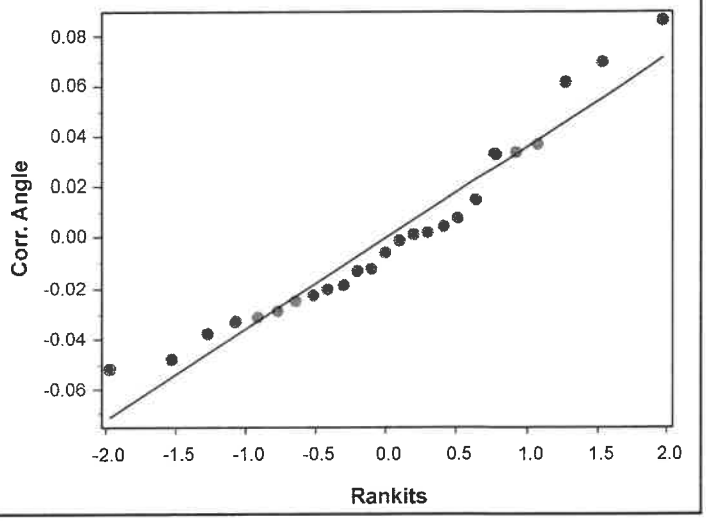
Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	LW	5	1.430	1.380	1.480	1.440	1.380	1.460	0.017	2.67%	0.00%
1		5	1.430	1.380	1.480	1.430	1.390	1.500	0.018	2.77%	-0.41%
10		5	1.410	1.380	1.440	1.410	1.380	1.440	0.012	1.85%	1.22%
50		5	1.410	1.340	1.470	1.390	1.370	1.490	0.023	3.57%	1.52%
100		5	0.782	0.732	0.832	0.769	0.749	0.851	0.018	5.18%	45.24%

Bivalve Larval Survival and Development Test — **Pacific EcoRisk**

Analysis ID:	13-8363-3932	**Endpoint:**	Development Rate	**CETIS Version:**	CETIS v2.1.6
Analyzed:	11 Jun-25 13:41	**Analysis:**	Parametric-Control vs Treatments	**Status Level:**	1
Edit Date:	11 Jun-25 0:00	**MD5 Hash:**	615C7BFC5374D2F461326AED7BECDCB	**Editor ID:**	006-243-107-9

Graphics





CETIS Analytical Report

Bivalve Larval Survival and Development Test — Pacific EcoRisk

Analysis ID:	09-6820-1408	**Endpoint:**	Development Rate	**CETIS Version:**	CETIS v2.1.6
Analyzed:	11 Jun-25 13:41	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Edit Date:	11 Jun-25 0:00	**MD5 Hash:**	615C7BFC5374D2F461326AED7BECDCB	**Editor ID:**	006-243-107-9

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	623906	200	Yes	Two-Point Interpolation

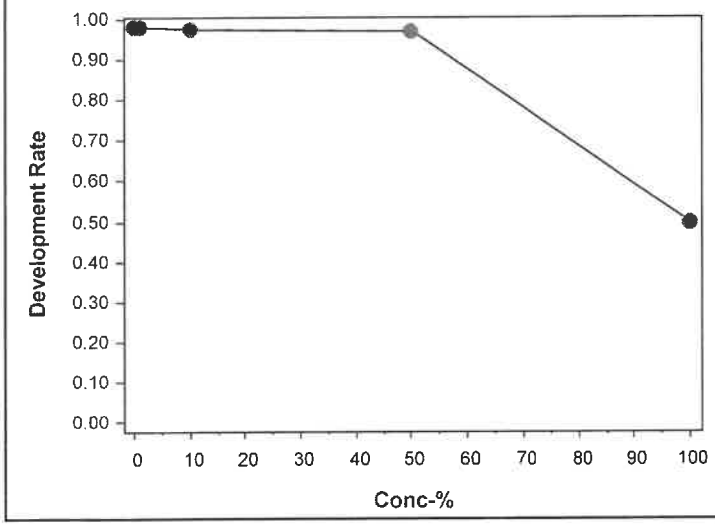
Point Estimates

Level	%	95% LCL	95% UCL	Tox Units	95% LCL	95% UCL
EC10	59.4	57.7	60.8	1.7	1.6	1.7
EC15	64.6	62.8	66.4	1.5	1.5	1.6
EC20	69.7	67.8	71.8	1.4	1.4	1.5
EC25	74.9	72.8	77.5	1.3	1.3	1.4
EC40	90.4	87.5	94.8	1.1	1.1	1.1
EC50	>100	---	---	<1	---	---

Development Rate Summary

			Calculated Variate(A/B)							Isotonic Variate	
Conc-%	Code	Count	Mean	Median	Min	Max	CV%	%Effect	ΣA/ΣB	Mean	%Effect
0	LW	5	0.979	0.982	0.962	0.989	1.15%	0.00%	828/846	0.979	0.00%
1		5	0.980	0.980	0.966	0.994	1.03%	-0.16%	807/823	0.979	0.00%
10		5	0.974	0.975	0.964	0.984	0.84%	0.47%	963/987	0.974	0.55%
50		5	0.971	0.966	0.960	0.994	1.41%	0.75%	801/825	0.971	0.83%
100		5	0.496	0.484	0.464	0.566	8.13%	49.27%	454/915	0.496	49.31%

Graphics



Bivalve Larval Survival and Development Test — Pacific EcoRisk

Analysis ID:	14-9577-9488	**Endpoint:**	Survival Rate	**CETIS Version:**	CETIS v2.1.6
Analyzed:	11 Jun-25 13:41	**Analysis:**	Parametric-Control vs Treatments	**Status Level:**	1
Edit Date:	11 Jun-25 0:00	**MD5 Hash:**	85F5ADC56CA6807DC6177ED36F8E9885	**Editor ID:**	006-243-107-9

Data Transform	Alt Hyp	NOEL	LOEL	TOEL	Tox Units	MSDu	PMSD
Angular (Corrected)	C > T	50	100	70.71	2	0.125	14.17%

Dunnett Multiple Comparison Test

Control	vs	Conc-%	df	Test Stat	Critical	MSD	P-Type	P-Value	Decision(α:5%)
Lab Water Control		1	8	0.345	2.3	0.173	CDF	0.6705	Non-Significant Effect
		10	8	-0.861	2.3	0.173	CDF	0.9660	Non-Significant Effect
		50	8	0.599	2.3	0.173	CDF	0.5591	Non-Significant Effect
		100*	8	6.15	2.3	0.173	CDF	1.0E-05	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.87724	0.21931	4	15.6	<1.0E-05	Significant Effect
Error	0.280377	0.0140188	20			
Total	1.15762		24			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Bartlett Equality of Variance Test	9.08	13.3	0.0591	Equal Variances
Distribution	Shapiro-Wilk W Normality Test	0.969	0.888	0.6254	Normal Distribution

Survival Rate Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	LW	5	0.886	0.826	0.945	0.872	0.824	0.941	0.021	5.38%	0.00%
1		5	0.863	0.756	0.971	0.898	0.765	0.941	0.039	10.03%	2.54%
10		5	0.898	0.785	1.000	0.850	0.813	1.000	0.041	10.16%	-1.45%
50		5	0.857	0.795	0.918	0.861	0.786	0.914	0.022	5.78%	3.26%
100		5	0.486	0.426	0.545	0.492	0.412	0.529	0.021	9.83%	45.17%

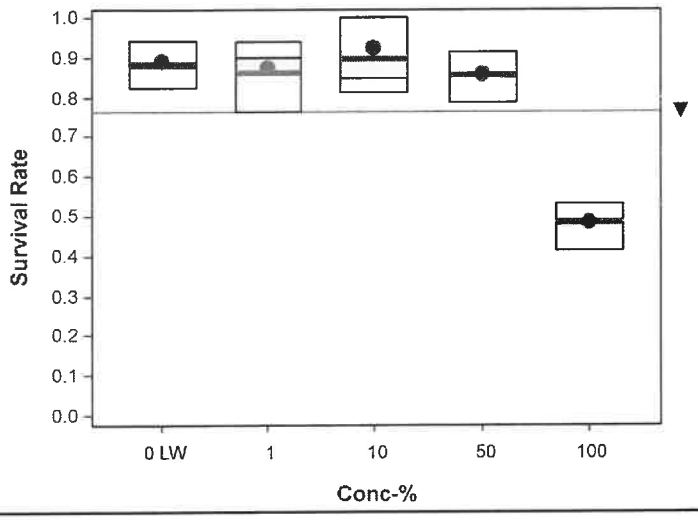
Angular (Corrected) Transformed Summary

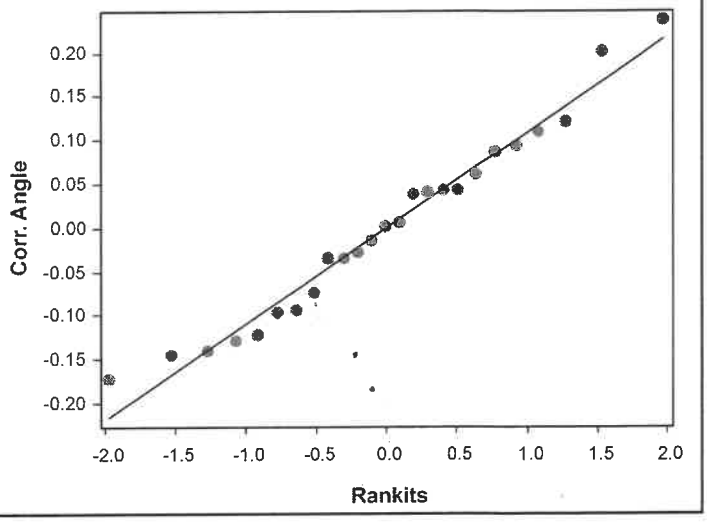
Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	LW	5	1.230	1.140	1.330	1.200	1.140	1.330	0.034	6.24%	0.00%
1		5	1.210	1.050	1.360	1.250	1.060	1.330	0.057	10.53%	2.10%
10		5	1.300	1.050	1.550	1.170	1.120	1.530	0.090	15.58%	-5.24%
50		5	1.190	1.100	1.270	1.190	1.090	1.270	0.032	5.96%	3.65%
100		5	0.771	0.711	0.830	0.777	0.697	0.815	0.021	6.22%	37.41%

Bivalve Larval Survival and Development Test — **Pacific EcoRisk**

Analysis ID:	14-9577-9488	**Endpoint:**	Survival Rate	**CETIS Version:**	CETIS v2.1.6
Analyzed:	11 Jun-25 13:41	**Analysis:**	Parametric-Control vs Treatments	**Status Level:**	1
Edit Date:	11 Jun-25 0:00	**MD5 Hash:**	85F5ADC56CA6807DC6177ED36F8E9885	**Editor ID:**	006-243-107-9

Graphics





Bivalve Larval Survival and Development Test

Pacific EcoRisk

Analysis ID:	12-3707-9765	**Endpoint:**	Survival Rate	**CETIS Version:**	CETIS v2.1.6
Analyzed:	11 Jun-25 13:41	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Edit Date:	11 Jun-25 0:00	**MD5 Hash:**	85F5ADC56CA6807DC6177ED36F8E9885	**Editor ID:**	006-243-107-9

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	54682	200	Yes	Two-Point Interpolation

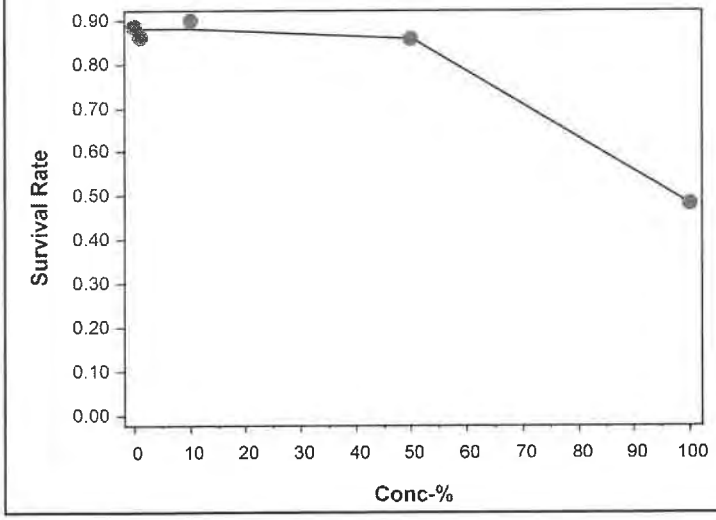
Point Estimates

Level	%	95% LCL	95% UCL	Tox Units	95% LCL	95% UCL
EC10	58	47.2	63.1	1.7	1.6	2.1
EC15	64	53.9	68.7	1.6	1.5	1.9
EC20	70	60.6	75.5	1.4	1.3	1.6
EC25	75.9	67.3	82.4	1.3	1.2	1.5
EC40	93.8	85.7	102	1.1	1	1.2
EC50	>100	---	---	<1	---	---

Survival Rate Summary

			Calculated Variate(A/B)							Isotonic Variate	
Conc-%	Code	Count	Mean	Median	Min	Max	CV%	%Effect	ΣA/ΣB	Mean	%Effect
0	LW	5	0.886	0.872	0.824	0.941	5.38%	0.00%	828/935	0.886	0.00%
1		5	0.863	0.898	0.765	0.941	10.03%	2.54%	807/935	0.881	0.54%
10		5	0.898	0.850	0.813	1.000	10.16%	-1.45%	840/935	0.881	0.54%
50		5	0.857	0.861	0.786	0.914	5.78%	3.26%	801/935	0.857	3.26%
100		5	0.486	0.492	0.412	0.529	9.83%	45.17%	454/935	0.486	45.17%

Graphics



Mytilus sp. Development Toxicity Test Water Chemistry Data

Client: Berkeley BWTPF
Test Material: BWTPF-DU4
Test ID#: 109916 Project #: 39995
Test Date: 5/21/25 Randomization: -
Sample Salinity adjusted with : Crystal Sea

Organism Log#: 14915 Age: N/A
Organism Supplier: Aquatic
Control/Diluent: 30 ppt FSW

Day 0

Treatment	Temperature (°C)	pH	D.O. (mg/L)	Salinity (ppt)	NH_3	Signoff
Control	15.4	7.76	8.3	28.5		Test Solution Prep: RA
1.0%	15.4	7.77	8.3	28.9		New WQ: AP
10%	15.4	7.79	8.3	29.1		Innoculation Date: 5/21/25
50%	15.4	7.86	8.2	29.8		Innoculation Time: 1512
100%	15.5	7.91	7.8	30.6	4.33	Innoculation Signoff: RA
Meter ID	144A	PH77	RD13	EC11	DR3900	

Day 1

Treatment	Temperature (°C)	pH	D.O. (mg/L)	Salinity (ppt)	Signoff
Control	15.4				Date: 5/22/25
1.0%	15.4				Signoff: TK
10%	15.4				
50%	15.4				
100%	15.4				
Meter ID	178A				

Day 2

Treatment	Temperature (°C)	pH	D.O. (mg/L)	Salinity (ppt)	Signoff
Control	16.2	7.86	7.1	29.3	Termination Signoff: SR
1.0%	16.2	7.87	7.4	29.4	Termination Date: 5/23/25
10%	16.2	7.89	7.4	29.6	Termination Time: 1536
50%	16.1	7.94	7.1	30.5	Old WQ: SW
100%	16.0	8.01	6.7	31.4	Termination Spot Signoff: SR
Meter ID	185 A	PH27	RD13	EC11	

Mytilus sp. Development Toxicity Test Count Data

Client: Berkeley BWTPF
Test Material: BWTPF-DU4
Test ID #: 109916
Project #: 39995
Sample Salinity adjusted with: Crystal Sea

Test Start Date: 5/21/25
Test End Date: 5/23/25
Enumeration Date: 6/1/25
Investigator: AP / Inv #3
Innoculation Count: 187

Concentration	Replicate	Number of Normal Larvae	Number of Abnormal Larvae	Total Number Larvae	Percent Normal Development	Percent Survival
Control	A	162	3	165		
	B	176	2	178		
	C	173	5	178		
	D	163	2	165		
	E	154	6	160		
1.0%	A	145	3	148		
	B	175	1	176		
	C	168	3	171		
	D	143	5	148		
	E	176	4	180		
10%	A	159	6	165		
	B	152	5	157		
	C	156	4	160		
	D	186	4	190		
	E	310	5	315		
50%	A	156	6	162		
	B	147	4	151		
	C	171	6	177		
	D	161	1	162		
	E	166	7	173		
100%	A	92	102	194		
	B	77	89	166		
	C	99	76	175		
	D	98	100	198		
	E	88	94	182		

Bivalve Larval Survival and Development Test — **Pacific EcoRisk**

Batch ID:	04-0371-0743	**Test Type:**	Development-Survival	**Analyst:**	Robert Gee
Start Date:	21 May-25 15:18	**Protocol:**	ASTM E724-98 (Bivalve)	**Diluent:**	Diluted Seawater
Ending Date:	23 May-25 15:39	**Species:**	Mytilus galloprovincialis	**Brine:**	Crystal Sea
Test Length:	48h	**Taxon:**		**Source:**	Alexi Gabriel **Age:** NA

Sample ID:	00-3651-7361	**Code:**	Elutriate SET	**Project:**	39995
Sample Date:	07 May-25 06:30	**Material:**	Elutriate	**Source:**	Berkeley Water Transportation Pier Fe
Receipt Date:	07 May-25 16:45	**CAS (PC):**		**Station:**	BWTPF-2025-DU5
Sample Age:	14d 9h (0.9 °C)	**Client:**	City of Berkeley		

Single Comparison Summary

Analysis ID	Endpoint	Comparison Method	P-Value	Comparison Result
02-6406-9426	Development Rate	Equal Variance t Two-Sample Test	0.6184	Site Water passed development rate
15-4506-2762	Survival Rate	Equal Variance t Two-Sample Test	0.1740	Site Water passed survival rate

Multiple Comparison Summary

Analysis ID	Endpoint	Comparison Method	NOEL	LOEL	TOEL	PMSD	TU
01-7064-0652	Development Rate	Dunnett Multiple Comparison Test	100	>100	---	1.23%	1
20-4594-0538	Survival Rate	Dunnett Multiple Comparison Test	100	>100	---	23.0%	1

Point Estimate Summary

Analysis ID	Endpoint	Point Estimate Method	Level	%	95% LCL	95% UCL	TU
06-1169-9184	Development Rate	Linear Interpolation (ICPIN)	EC10	>100	---	---	<1
			EC15	>100	---	---	<1
			EC20	>100	---	---	<1
			EC25	>100	---	---	<1
			EC40	>100	---	---	<1
			EC50	>100	---	---	<1
16-5141-0546	Survival Rate	Linear Interpolation (ICPIN)	EC10	>100	---	---	<1
			EC15	>100	---	---	<1
			EC20	>100	---	---	<1
			EC25	>100	---	---	<1
			EC40	>100	---	---	<1
			EC50	>100	---	---	<1

Development Rate Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	LW	5	0.988	0.982	0.994	0.982	0.994	0.002	0.005	0.49%	0.00%
0	SW	5	0.989	0.982	0.996	0.981	0.994	0.003	0.006	0.60%	-0.09%
1		5	0.987	0.979	0.996	0.980	0.994	0.003	0.007	0.68%	0.09%
10		5	0.988	0.973	1.000	0.968	1.000	0.005	0.012	1.21%	0.01%
50		5	0.974	0.959	0.988	0.954	0.985	0.005	0.012	1.19%	1.46%
100		5	0.981	0.976	0.986	0.977	0.987	0.002	0.004	0.40%	0.74%

Survival Rate Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	LW	5	0.837	0.688	0.987	0.717	1.000	0.054	0.121	14.41%	0.00%
0	SW	5	0.774	0.641	0.908	0.647	0.872	0.048	0.108	13.88%	7.54%
1		5	0.826	0.626	1.000	0.583	1.000	0.072	0.160	19.43%	1.40%
10		5	0.774	0.692	0.856	0.690	0.856	0.030	0.066	8.52%	7.54%
50		5	0.839	0.710	0.967	0.722	1.000	0.046	0.104	12.39%	-0.13%
100		5	0.819	0.737	0.902	0.727	0.914	0.030	0.067	8.12%	2.17%

Bivalve Larval Survival and Development Test — **Pacific EcoRisk**

Development Rate Detail — MD5: 04C08A8218F151F8328BCCED63B7C483

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	LW	0.993	0.985	0.994	0.982	0.986
0	SW	0.994	0.984	0.992	0.994	0.981
1		0.982	0.994	0.980	0.994	0.987
10		0.968	1.000	0.993	0.986	0.992
50		0.978	0.954	0.975	0.975	0.985
100		0.977	0.987	0.981	0.981	0.978

Survival Rate Detail — MD5: EE2FC15D3F8C8C5294A543A44EC669EB

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	LW	0.717	0.722	0.850	0.898	1.000
0	SW	0.872	0.668	0.647	0.850	0.834
1		0.583	0.925	0.770	0.850	1.000
10		0.818	0.856	0.733	0.775	0.690
50		0.722	0.781	0.840	0.850	1.000
100		0.914	0.829	0.813	0.813	0.727

Development Rate Binomials

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	LW	134/135	135/137	159/160	168/171	215/218
0	SW	163/164	125/127	121/122	159/160	156/159
1		109/111	173/174	144/147	159/160	369/374
10		153/158	160/160	137/138	145/147	129/130
50		135/138	146/153	157/161	159/163	329/334
100		171/175	155/157	152/155	152/155	136/139

Survival Rate Binomials

Conc-%	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
0	LW	134/187	135/187	159/187	168/187	187/187
0	SW	163/187	125/187	121/187	159/187	156/187
1		109/187	173/187	144/187	159/187	187/187
10		153/187	160/187	137/187	145/187	129/187
50		135/187	146/187	157/187	159/187	187/187
100		171/187	155/187	152/187	152/187	136/187

Bivalve Larval Survival and Development Test — **Pacific EcoRisk**

Analysis ID:	01-7064-0652	**Endpoint:**	Development Rate	**CETIS Version:**	CETIS v2.1.6
Analyzed:	11 Jun-25 10:50	**Analysis:**	Parametric-Control vs Treatments	**Status Level:**	1
Edit Date:	11 Jun-25 0:00	**MD5 Hash:**	4B0B39170E5BC15A706B5F1DC0BDF146	**Editor ID:**	006-243-107-9

Data Transform	Alt Hyp	NOEL	LOEL	TOEL	Tox Units	MSDu	PMSD
Angular (Corrected)	C > T	100	>100	---	1	0.0122	1.23%

Dunnett Multiple Comparison Test

Control	vs	Conc-%	df	Test Stat	Critical	MSD	P-Type	P-Value	Decision(α:5%)
Lab Water Control		1	8	0.114	2.3	0.0485	CDF	0.7608	Non-Significant Effect
		10	8	-0.271	2.3	0.0485	CDF	0.8761	Non-Significant Effect
		50*	8	2.52	2.3	0.0485	CDF	0.0327	Significant Effect
		100	8	1.47	2.3	0.0485	CDF	0.2079	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.0125118	0.003128	4	2.83	0.0520	Non-Significant Effect
Error	0.0221072	0.0011054	20			
Total	0.034619		24			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Bartlett Equality of Variance Test	5.5	13.3	0.2399	Equal Variances
Distribution	Shapiro-Wilk W Normality Test	0.977	0.888	0.8148	Normal Distribution

Development Rate Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	LW	5	0.988	0.982	0.994	0.986	0.982	0.994	0.002	0.49%	0.00%
1		5	0.987	0.979	0.996	0.987	0.980	0.994	0.003	0.68%	0.09%
10		5	0.988	0.973	1.000	0.992	0.968	1.000	0.005	1.21%	0.01%
50		5	0.974	0.959	0.988	0.975	0.954	0.985	0.005	1.19%	1.46%
100		5	0.981	0.976	0.986	0.981	0.977	0.987	0.002	0.40%	0.74%

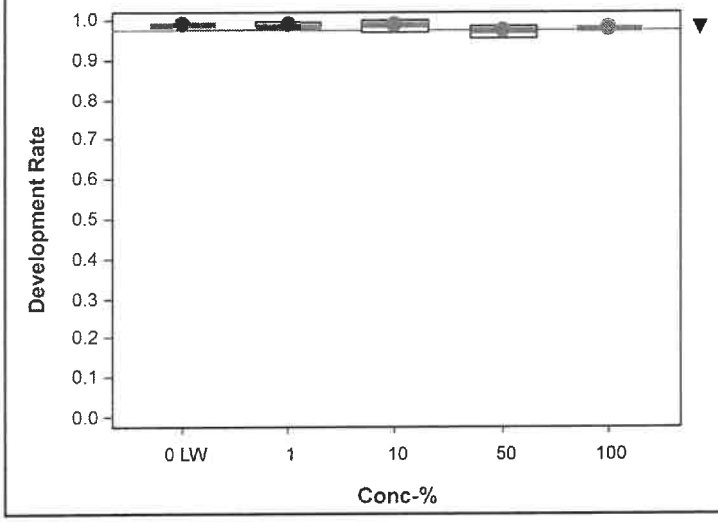
Angular (Corrected) Transformed Summary

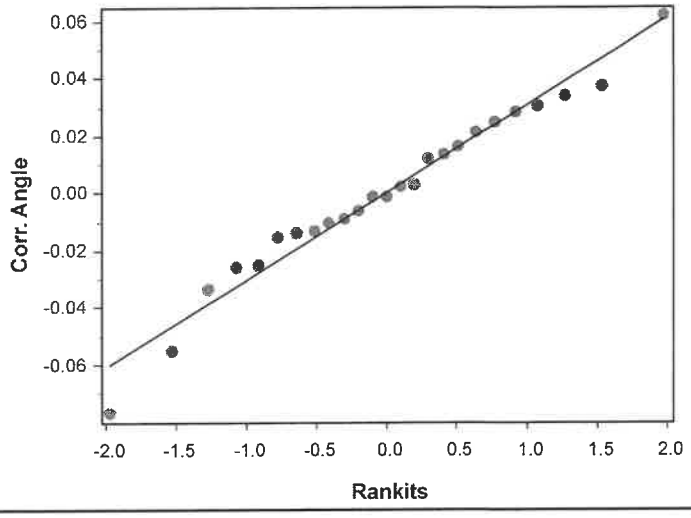
Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	LW	5	1.460	1.430	1.490	1.450	1.440	1.490	0.011	1.60%	0.00%
1		5	1.460	1.420	1.500	1.450	1.430	1.490	0.014	2.13%	0.16%
10		5	1.470	1.410	1.530	1.480	1.390	1.530	0.023	3.49%	-0.39%
50		5	1.410	1.370	1.450	1.410	1.360	1.450	0.015	2.41%	3.62%
100		5	1.430	1.410	1.450	1.430	1.420	1.460	0.007	1.05%	2.11%

Bivalve Larval Survival and Development Test — **Pacific EcoRisk**

Analysis ID:	01-7064-0652	**Endpoint:**	Development Rate	**CETIS Version:**	CETIS v2.1.6
Analyzed:	11 Jun-25 10:50	**Analysis:**	Parametric-Control vs Treatments	**Status Level:**	1
Edit Date:	11 Jun-25 0:00	**MD5 Hash:**	4B0B39170E5BC15A706B5F1DC0BDF146	**Editor ID:**	006-243-107-9

Graphics





Bivalve Larval Survival and Development Test

Pacific EcoRisk

Analysis ID:	06-1169-9184	**Endpoint:**	Development Rate	**CETIS Version:**	CETIS v2.1.6
Analyzed:	11 Jun-25 10:51	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Edit Date:	11 Jun-25 0:00	**MD5 Hash:**	4B0B39170E5BC15A706B5F1DC0BDF146	**Editor ID:**	006-243-107-9

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	1556463	200	Yes	Two-Point Interpolation

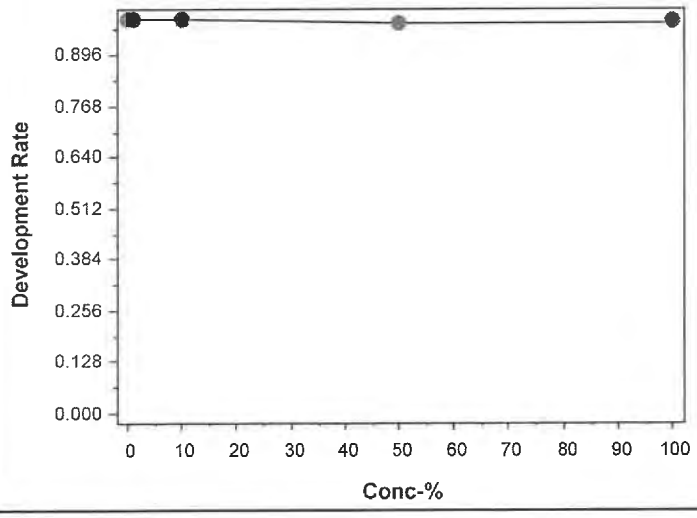
Point Estimates

Level	%	95% LCL	95% UCL	Tox Units	95% LCL	95% UCL
EC10	>100	---	---	<1	---	---
EC15	>100	---	---	<1	---	---
EC20	>100	---	---	<1	---	---
EC25	>100	---	---	<1	---	---
EC40	>100	---	---	<1	---	---
EC50	>100	---	---	<1	---	---

Development Rate Summary

			Calculated Variate(A/B)							Isotonic Variate	
Conc-%	Code	Count	Mean	Median	Min	Max	CV%	%Effect	ΣA/ΣB	Mean	%Effect
0	LW	5	0.988	0.986	0.982	0.994	0.49%	0.00%	811/821	0.988	0.00%
1		5	0.987	0.987	0.980	0.994	0.68%	0.09%	954/966	0.988	0.05%
10		5	0.988	0.992	0.968	1.000	1.21%	0.01%	724/733	0.988	0.05%
50		5	0.974	0.975	0.954	0.985	1.19%	1.46%	926/949	0.977	1.10%
100		5	0.981	0.981	0.977	0.987	0.40%	0.74%	766/781	0.977	1.10%

Graphics



Bivalve Larval Survival and Development Test — Pacific EcoRisk

Analysis ID:	20-4594-0538	**Endpoint:**	Survival Rate	**CETIS Version:**	CETIS v2.1.6
Analyzed:	11 Jun-25 10:51	**Analysis:**	Parametric-Control vs Treatments	**Status Level:**	1
Edit Date:	11 Jun-25 0:00	**MD5 Hash:**	1AD01363D538264F95634D990551A23A	**Editor ID:**	006-243-107-9

Data Transform	Alt Hyp	NOEL	LOEL	TOEL	Tox Units	MSDu	PMSD
Angular (Corrected)	C > T	100	>100	---	1	0.192	22.96%

Dunnett Multiple Comparison Test

Control	vs	Conc-%	df	Test Stat	Critical	MSD	P-Type	P-Value	Decision(α:5%)
Lab Water Control		1	8	0.0668	2.3	0.263	CDF	0.7776	Non-Significant Effect
		10	8	1.02	2.3	0.263	CDF	0.3717	Non-Significant Effect
		50	8	0.0238	2.3	0.263	CDF	0.7922	Non-Significant Effect
		100	8	0.512	2.3	0.263	CDF	0.5982	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.0510212	0.0127553	4	0.392	0.8122	Non-Significant Effect
Error	0.651468	0.0325734	20			
Total	0.702489		24			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Bartlett Equality of Variance Test	6.6	13.3	0.1588	Equal Variances
Distribution	Shapiro-Wilk W Normality Test	0.923	0.888	0.0611	Normal Distribution

Survival Rate Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	LW	5	0.837	0.688	0.987	0.850	0.717	1.000	0.054	14.41%	0.00%
1		5	0.826	0.626	1.000	0.850	0.583	1.000	0.072	19.43%	1.40%
10		5	0.774	0.692	0.856	0.775	0.690	0.856	0.030	8.52%	7.54%
50		5	0.839	0.710	0.967	0.840	0.722	1.000	0.046	12.39%	-0.13%
100		5	0.819	0.737	0.902	0.813	0.727	0.914	0.030	8.12%	2.17%

Angular (Corrected) Transformed Summary

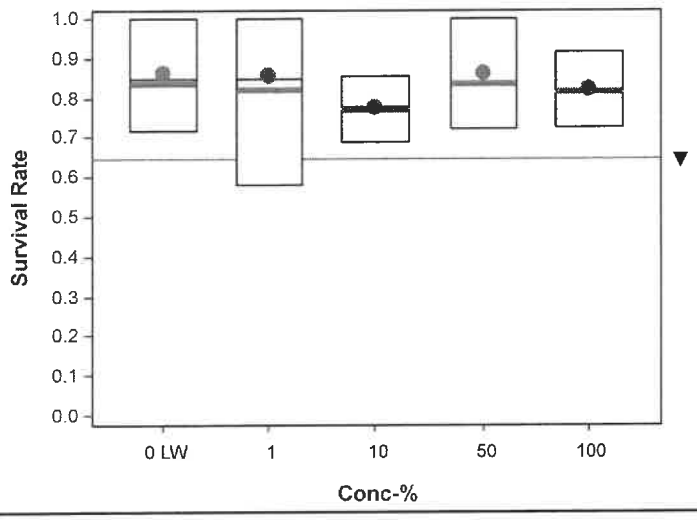
Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	LW	5	1.200	0.929	1.460	1.170	1.010	1.530	0.096	17.98%	0.00%
1		5	1.190	0.880	1.500	1.170	0.869	1.530	0.111	20.91%	0.64%
10		5	1.080	0.980	1.180	1.080	0.980	1.180	0.036	7.40%	9.75%
50		5	1.190	0.944	1.440	1.160	1.020	1.530	0.090	16.84%	0.23%
100		5	1.140	1.030	1.250	1.120	1.020	1.270	0.040	7.93%	4.89%

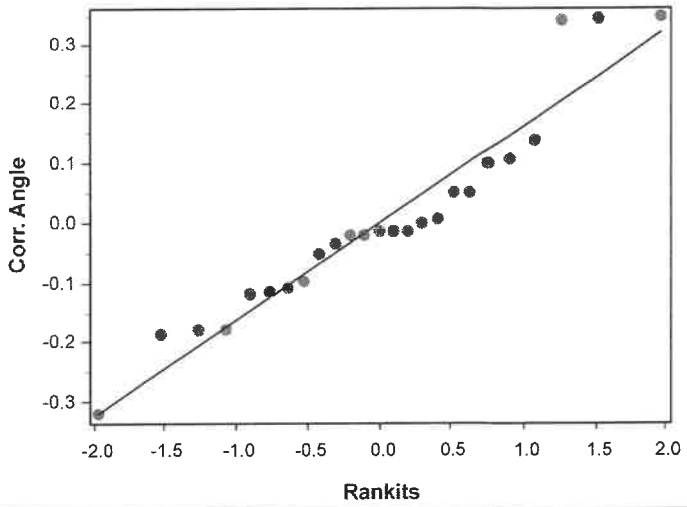
Bivalve Larval Survival and Development Test

Pacific EcoRisk

Analysis ID:	20-4594-0538	**Endpoint:**	Survival Rate	**CETIS Version:**	CETIS v2.1.6
Analyzed:	11 Jun-25 10:51	**Analysis:**	Parametric-Control vs Treatments	**Status Level:**	1
Edit Date:	11 Jun-25 0:00	**MD5 Hash:**	1AD01363D538264F95634D990551A23A	**Editor ID:**	006-243-107-9

Graphics





Bivalve Larval Survival and Development Test

Pacific EcoRisk

Analysis ID:	16-5141-0546	**Endpoint:**	Survival Rate	**CETIS Version:**	CETIS v2.1.6
Analyzed:	11 Jun-25 10:51	**Analysis:**	Linear Interpolation (ICPIN)	**Status Level:**	1
Edit Date:	11 Jun-25 0:00	**MD5 Hash:**	1AD01363D538264F95634D990551A23A	**Editor ID:**	006-243-107-9

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	1258255	200	Yes	Two-Point Interpolation

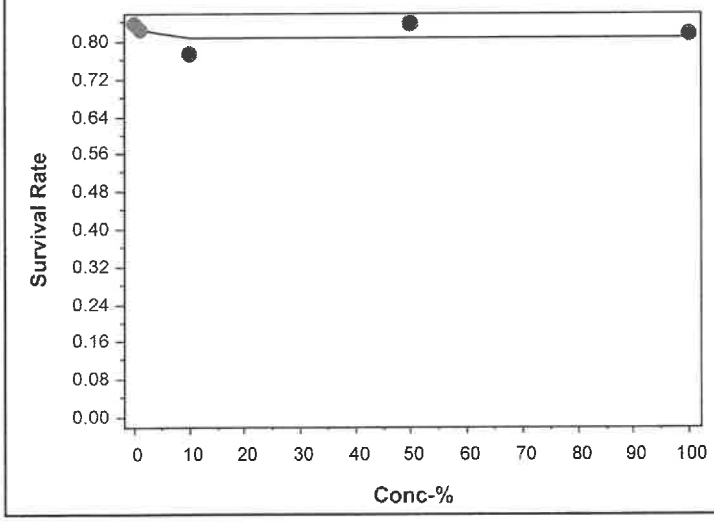
Point Estimates

Level	%	95% LCL	95% UCL	Tox Units	95% LCL	95% UCL
EC10	>100	---	---	<1	---	---
EC15	>100	---	---	<1	---	---
EC20	>100	---	---	<1	---	---
EC25	>100	---	---	<1	---	---
EC40	>100	---	---	<1	---	---
EC50	>100	---	---	<1	---	---

Survival Rate Summary

			Calculated Variate(A/B)							Isotonic Variate	
Conc-%	Code	Count	Mean	Median	Min	Max	CV%	%Effect	ΣA/ΣB	Mean	%Effect
0	LW	5	0.837	0.850	0.717	1.000	14.41%	0.00%	783/935	0.837	0.00%
1		5	0.826	0.850	0.583	1.000	19.43%	1.40%	772/935	0.826	1.40%
10		5	0.774	0.775	0.690	0.856	8.52%	7.54%	724/935	0.811	3.19%
50		5	0.839	0.840	0.722	1.000	12.39%	-0.13%	784/935	0.811	3.19%
100		5	0.819	0.813	0.727	0.914	8.12%	2.17%	766/935	0.811	3.19%

Graphics



Mytilus sp. Development Toxicity Test Water Chemistry Data

Client: Berkeley BWTPF
Test Material: BWTPF-DU5
Test ID#: 109917 Project #: 39995
Test Date: 5/21/25 Randomization: –
Sample Salinity adjusted with : Crystal Sea

Organism Log#: 1495 Age: N/A
Organism Supplier: Aquatic
Control/Diluent: 30 ppt FSW

Day 0

Treatment	Temperature (°C)	pH	D.O. (mg/L)	Salinity (ppt)	NH_3	Signoff
Control	15.4	7.77	8.3	28.4		Test Solution Prep:
1.0%	15.4	7.79	8.5	28.5		New WQ:
10%	15.3	7.84	8.5	28.7		Innoculation Date: 5/21/25
50%	15.3	7.99	7.9	28.8		Innoculation Time: 1518
100%	15.3	8.12	7.0	29.0	12.00	Innoculation Signoff:
Meter ID	144A	pH27	R013	EC11	012350	

Day 1

Treatment	Temperature (°C)	pH	D.O. (mg/L)	Salinity (ppt)	Signoff
Control	15.4				Date: 5/22/25
1.0%	15.4				Signoff: TK
10%	15.4				
50%	15.4				
100%	15.4				
Meter ID	178A				

Day 2

Treatment	Temperature (°C)	pH	D.O. (mg/L)	Salinity (ppt)	Signoff
Control	16.1	7.87	7.6	29.5	Termination Signoff:
1.0%	16.1	7.87	7.6	29.6	Termination Date: 5/23/25
10%	16.0	7.88	7.7	29.1	Termination Time: 1539
50%	16.0	7.88	7.6	29.6	Old WQ:
100%	15.9	7.91	7.5	29.8	Termination Spot Signoff:
Meter ID	185 A	pH27	R013	EC11	

Mytilus sp. Development Toxicity Test Count Data

Client: Berkeley BWTPF
Test Material: BWTPF-DU5
Test ID #: 109917
Project #: 39995
Sample Salinity adjusted with: Crystal Sea

Test Start Date: 5/21/25
Test End Date: 5/23/25
Enumeration Date: 6/1/25
Investigator: AR / Inv #3
Innoculation Count: 187

Concentration	Replicate	Number of Normal Larvae	Number of Abnormal Larvae	Total Number Larvae	Percent Normal Development	Percent Survival
Control	A	134	1	135		
	B	135	2	137		
	C	159	1	160		
	D	168	3	171		
	E	215	3	218		
1.0%	A	109	2	111		
	B	173	1	174		
	C	144	3	147		
	D	159	1	160		
	E	369	5	374		
10%	A	153	5	158		
	B	160	0	160		
	C	137	1	138		
	D	145	2	147		
	E	129	1	130		
50%	A	135	3	138		
	B	146	7	153		
	C	157	4	161		
	D	159	4	163		
	E	329	5	334		
100%	A	171	4	175		
	B	155	2	157		
	C	152	3	155		
	D	152	3	155		
	E	136	3	139		

Bivalve Larval Survival and Development Test

Pacific EcoRisk

Analysis ID:	02-6406-9426	**Endpoint:**	Development Rate	**CETIS Version:**	CETIS v2.1.6
Analyzed:	11 Jun-25 10:51	**Analysis:**	Parametric-Two Sample	**Status Level:**	1
Edit Date:	11 Jun-25 0:00	**MD5 Hash:**	CBEF72AD8E5024D48BFDA4C7A089EC2	**Editor ID:**	006-243-107-9

Data Transform	Alt Hyp	Comparison Result	PMSD
Angular (Corrected)	C > T	Site Water passed development rate endpoint	0.70%

Equal Variance t Two-Sample Test

Control I	vs	Control II	df	Test Stat	Critical	MSD	P-Type	P-Value	Decision(α:5%)
Lab Water Control		Site Water	8	-0.312	1.86	0.0301	CDF	0.6184	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	6.386E-05	6.386E-05	1	0.0972	0.7632	Non-Significant Effect
Error	0.0052561	0.0006570	8			
Total	0.00532		9			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Variance Ratio F Test	1.4	23.2	0.7515	Equal Variances
Distribution	Shapiro-Wilk W Normality Test	0.881	0.741	0.1342	Normal Distribution

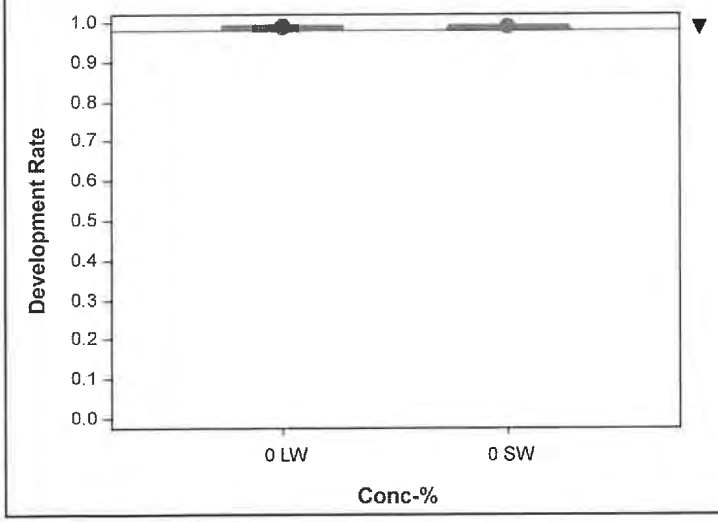
Development Rate Summary

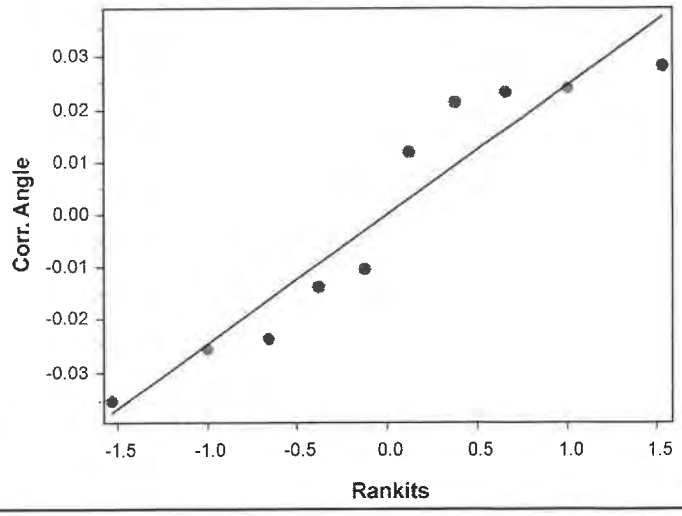
Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	LW	5	0.988	0.982	0.994	0.986	0.982	0.994	0.002	0.49%	0.00%
0	SW	5	0.989	0.982	0.996	0.992	0.981	0.994	0.003	0.60%	-0.09%

Angular (Corrected) Transformed Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	LW	5	1.460	1.430	1.490	1.450	1.440	1.490	0.011	1.60%	0.00%
0	SW	5	1.470	1.430	1.500	1.480	1.430	1.490	0.012	1.89%	-0.35%

Graphics





Bivalve Larval Survival and Development Test — Pacific EcoRisk

Analysis ID:	15-4506-2762	**Endpoint:**	Survival Rate	**CETIS Version:**	CETIS v2.1.6
Analyzed:	11 Jun-25 10:51	**Analysis:**	Parametric-Two Sample	**Status Level:**	1
Edit Date:	11 Jun-25 0:00	**MD5 Hash:**	80D0337B7779A85188D9206E79AF4CB8	**Editor ID:**	006-243-107-9

Data Transform	Alt Hyp	Comparison Result	PMSD
Angular (Corrected)	C > T	Site Water passed survival rate endpoint	16.79%

Equal Variance t Two-Sample Test

Control I	vs	Control II	df	Test Stat	Critical	MSD	P-Type	P-Value	Decision(α:5%)
Lab Water Control		Site Water	8	0.997	1.86	0.208	CDF	0.1740	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.0310925	0.0310925	1	0.994	0.3480	Non-Significant Effect
Error	0.25033	0.0312913	8			
Total	0.281423		9			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Variance Ratio F Test	2.83	23.2	0.3385	Equal Variances
Distribution	Shapiro-Wilk W Normality Test	0.913	0.741	0.2989	Normal Distribution

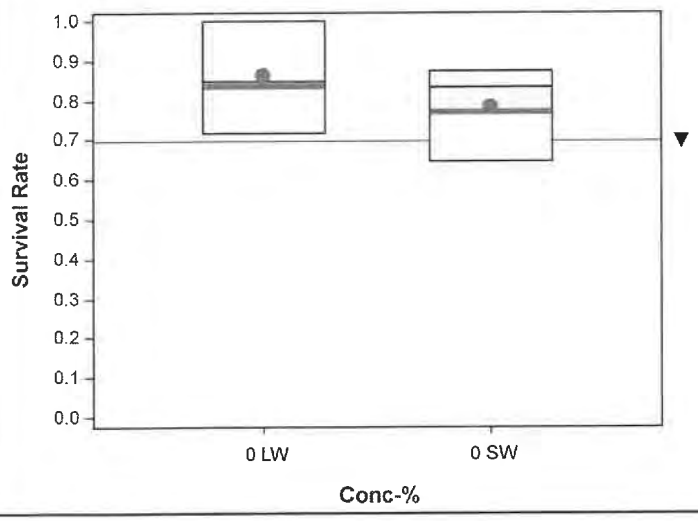
Survival Rate Summary

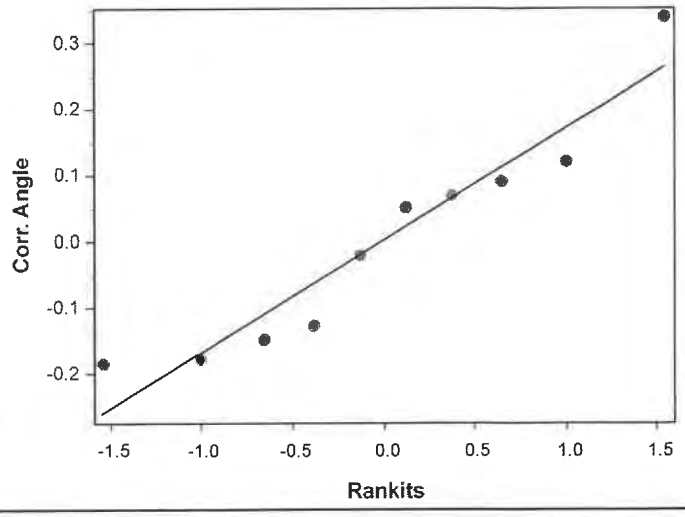
Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	LW	5	0.837	0.688	0.987	0.850	0.717	1.000	0.054	14.41%	0.00%
0	SW	5	0.774	0.641	0.908	0.834	0.647	0.872	0.048	13.88%	7.54%

Angular (Corrected) Transformed Summary

Conc-%	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	LW	5	1.200	0.929	1.460	1.170	1.010	1.530	0.096	17.98%	0.00%
0	SW	5	1.080	0.925	1.240	1.150	0.935	1.200	0.057	11.80%	9.33%

Graphics





Mytilus sp. Development Toxicity Test Water Chemistry Data

Client: Berkeley BWTPF
Test Material: Site Water
Test ID#: multiple Project #: 39995
Test Date: 5/21/25 Randomization: -
Sample Salinity adjusted with: Crystal Sea

Organism Log#: 14915 Age: N/A
Organism Supplier: Aleut
Control/Diluent: 30 ppt FSW

Day 0					
Treatment	Temperature (°C)	pH	D.O. (mg/L)	Salinity (ppt)	Signoff
Lab Control	15.4	7.77	8.3	28.4	Date & Inoculation Time: 5/21/25
Site Water	15.4	7.91	8.8	29.5	Test Solution Prep:
					Inoculation Signoff: 1518
Meter ID	144A	pH27	RDO3	EC11	New WQ:

Day 1					
Treatment	Temperature (°C)	pH	D.O. (mg/L)	Salinity (ppt)	Signoff
Lab Control	15.4				Date: 5/22/25
Site Water	15.5				Old WQ: TK
Meter ID	178A				

Day 2					
Treatment	Temperature (°C)	pH	D.O. (mg/L)	Salinity (ppt)	Signoff
Lab Control	16.1	7.87	7.6	29.5	Date: 5/23/25
Site Water	15.7	7.94	7.6	30.5	Termination: JR
					Old WQ: SV
Meter ID	185A	pH27	RDO3	EC11	Termination Spot Signoff:

Mytilus sp. Development Toxicity Test Count Data

Client: **Berkeley BWTPF**
Test Material: Site Water
Test ID #: multiple
Project #: 39995
Sample Salinity adjusted with: Crystal Sea

Test Start Date: 5/21/25
Test End Date: 5/23/25
Enumeration Date: 6/1/25
Investigator: DP / Inv #3
Innoculation Counts: 187

Concentration	Replicate	Number of Normal Larvae	Number of Abnormal Larvae	Total Number Larvae	Percent Normal Development	Percent Survival
Lab Control	A	134	1	135		
	B	135	2	137		
	C	159	1	160		
	D	168	3	171		
	E	215	3	218		
Site Water	A	163	1	164		
	B	125	2	127		
	C	121	1	122		
	D	159	1	160		
	E	156	3	159		

Appendix K

Test Data and Summary of Statistics for the Reference Toxicant Evaluation of the Bivalve (*Mytilus galloprovincialis*) Embryos

CETIS Summary Report

Bivalve Larval Survival and Development Test — **Pacific EcoRisk**

Batch ID:	13-3052-0789	**Test Type:**	Development-Survival	**Analyst:**	Robert Gee
Start Date:	21 May-25 15:23	**Protocol:**	EPA/600/R-95/136 (1995)	**Diluent:**	Diluted Seawater
Ending Date:	23 May-25 15:40	**Species:**	Mytilus galloprovincialis	**Brine:**	Not Applicable
Test Length:	48h	**Taxon:**		**Source:**	Alexi Gabriel **Age:** NA

Sample ID:	11-3358-7409	**Code:**	KCl	**Project:**	40139
Sample Date:	21 May-25 15:23	**Material:**	Potassium chloride	**Source:**	Reference Toxicant
Receipt Date:	21 May-25 15:23	**CAS (PC):**		**Station:**	In House
Sample Age:	--- (18.3 °C)	**Client:**	Reference Toxicant		

Multiple Comparison Summary

Analysis ID	Endpoint	Comparison Method	NOEL	LOEL	TOEL	PMSD
08-3961-8515	Development Rate	Steel Many-One Rank Sum Test	2	3	2.449	2.15%

Point Estimate Summary

Analysis ID	Endpoint	Point Estimate Method	Level	g/L	95% LCL	95% UCL
19-8172-0941	Development Rate	Linear Interpolation (ICPIN)	EC10	2.08	2.04	2.11
			EC15	2.13	2.09	2.16
			EC20	2.18	2.15	2.22
			EC25	2.24	2.2	2.27
			EC40	2.4	2.37	2.43
			EC50	2.51	2.48	2.53

Development Rate Summary

Conc-g/L	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	LW	4	0.982	0.953	1.000	0.957	0.995	0.009	0.018	1.85%	0.00%
0.5		4	0.994	0.985	1.000	0.986	1.000	0.003	0.006	0.59%	-1.26%
1		4	0.984	0.972	0.995	0.975	0.990	0.004	0.007	0.74%	-0.20%
2		4	0.961	0.921	1.000	0.927	0.985	0.013	0.025	2.62%	2.11%
3		4	0.043	0.016	0.070	0.025	0.066	0.008	0.017	39.11%	95.63%
4		4	0.000	0.000	0.000	0.000	0.000	0.000	0.000	---	100.00%

Development Rate Detail — MD5: 7FFA9F8C7A8533A9B4B2FFC7F29580FC

Conc-g/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	LW	0.981	0.995	0.957	0.995
0.5		0.996	0.995	1.000	0.986
1		0.990	0.990	0.980	0.975
2		0.960	0.927	0.985	0.973
3		0.041	0.066	0.040	0.025
4		0.000	0.000	0.000	0.000

Development Rate Binomials

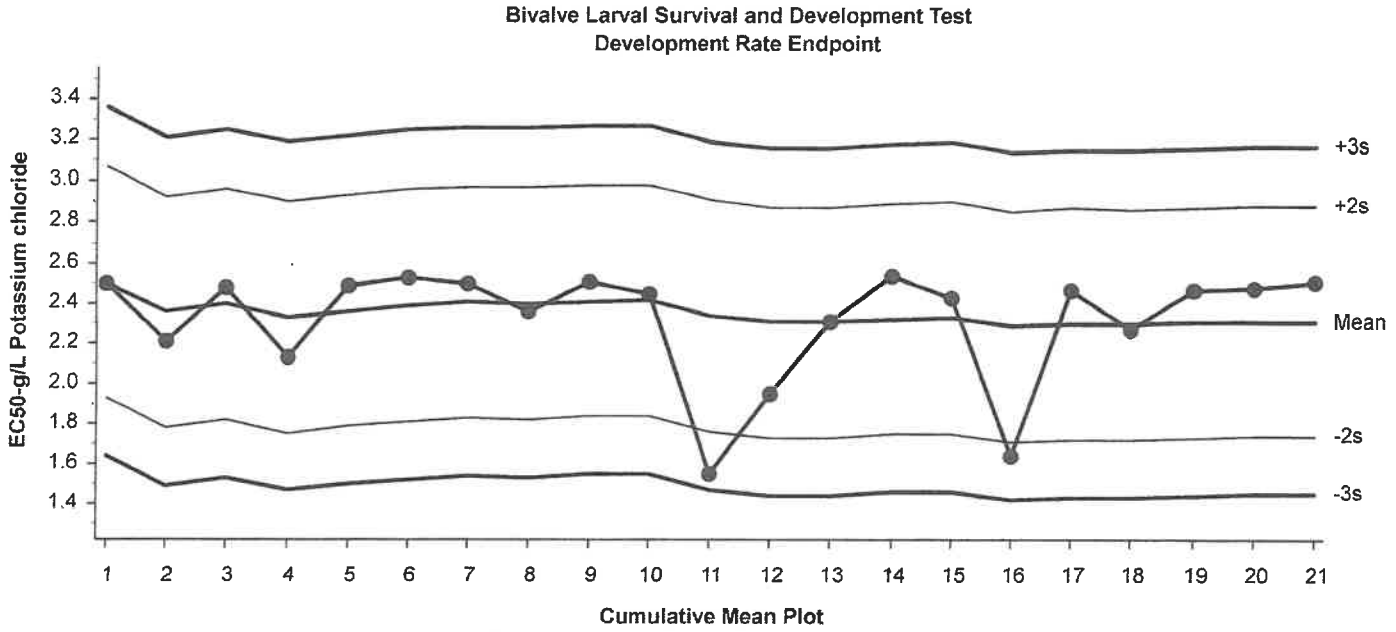
Conc-g/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	LW	204/208	206/207	176/184	202/203
0.5		234/235	209/210	204/204	211/214
1		197/199	196/198	200/204	197/202
2		215/224	215/232	199/202	216/222
3		7/173	10/152	8/199	4/158
4		0/172	0/188	0/168	0/144

CETIS QC Plot

Report Date: 10 Jun-25 08:37 (1 of 1)

Bivalve Larval Survival and Development Test — **Pacific EcoRisk**

Test Type:	Development-Survival	**Organism:**	Mytilus galloprovincialis	**Material:**	Potassium chloride
Protocol:	EPA/600/R-95/136 (1995)	**Endpoint:**	Development Rate	**Source:**	Reference Toxicant-REF



Mean:	2.312	**Count:**	20	**-2s Warning Limit:**	1.74	**-3s Action Limit:**	1.45
Sigma:	0.2863	**CV:**	12.40%	**+2s Warning Limit:**	2.88	**+3s Action Limit:**	3.17

Quality Control Data

Point	Year	Month	Day	Time	QC Data	Delta	Sigma	Warning	Action	Test ID	Analysis ID
1	2024	Oct	3	14:53	2.499	0.1865	0.6515			19-8139-5103	14-0375-3120
2			10	16:06	2.208	-0.1044	-0.3645			01-3651-7698	18-2959-9214
3			23	15:07	2.475	0.1632	0.5702			03-7810-3890	00-1763-4254
4			30	16:09	2.134	-0.1782	-0.6226			15-5667-0206	07-0911-6614
5		Nov	5	15:26	2.483	0.1715	0.599			11-8200-0803	12-3182-8567
6		Dec	4	12:45	2.524	0.2115	0.7389			14-6068-0704	13-9870-7358
7			11	13:23	2.494	0.1825	0.6374			05-7825-5559	03-7346-7887
8			19	14:59	2.362	0.0495	0.1729			01-3793-6615	00-8384-3044
9	2025	Jan	8	14:05	2.505	0.1932	0.675			02-3216-0382	05-2159-1226
10			14	14:04	2.451	0.1389	0.4852			14-9355-9507	12-6625-2092
11			16	16:50	1.556	-0.7557	-2.64	(-)		06-6039-3218	11-6063-9586
12			23	11:50	1.953	-0.3587	-1.253			13-1990-4655	15-8730-7818
13			29	15:03	2.306	-0.00561	-0.01961			11-7574-6011	08-6524-5583
14		Feb	6	15:24	2.536	0.2243	0.7835			13-8520-8508	19-0991-6180
15			13	13:51	2.43	0.1179	0.4119			14-8737-4237	02-1311-4666
16			20	14:31	1.644	-0.6681	-2.334	(-)		15-2165-6601	00-0365-8785
17		Apr	9	14:51	2.465	0.1532	0.5351			01-3833-2945	06-4330-5968
18			22	14:52	2.263	-0.04854	-0.1696			03-8401-2007	09-0670-9475
19			30	15:55	2.465	0.1526	0.5331			14-2574-9779	15-8054-4775
20		May	8	14:11	2.476	0.1645	0.5744			17-7695-0856	06-6513-3710
21			21	15:23	2.508	0.1958	0.684			13-4960-0457	19-8172-0941

Analyst: RG QA: _____

Mytilus sp. Development Toxicity Test Water Chemistry Data

Client: **Reference Toxicant**
Test Material: Potassium Chloride
Test ID#: 109925 Project #: 40139
Test Date: 5/21/25

Organism Log#: 14915 Age: N/A
Organism Supplier: Aloe
Control/Diluent: FSW @ 30±2 ppt

Day 0

Treatment (g/L)	Temperature (°C)	pH	D.O. (mg/L)	Salinity (ppt)	Signoff
Lab Water Control	18.3	7.74	8.2	28.5	Date: 5/21/25
0.5	18.1	7.75	8.2	29.3	Ref Tox Stock #: 4
1	18.2	7.76	8.2	29.9	Test Solution Prep:
2	18.1	7.75	8.1	30.8	New WQ:
3	18.2	7.73	7.9	31.8	Inoculation Time: 1523
4	18.2	7.72	7.5	32.8	Inoculation Signoff:
Meter ID	185A	PH27	RD13	EC11	

Day 1

Treatment	Temperature (°C)	pH	D.O. (mg/L)	Salinity (ppt)	Signoff
Lab Water Control	18.2				Date: 5/22/25
0.5	18.1				Old WQ:
1	18.1				
2	18.0				
3	18.0				
4	18.0				
Meter ID	178A				

Day 2

Treatment	Temperature (°C)	pH	D.O. (mg/L)	Salinity (ppt)	Signoff
Lab Water Control	18.3	7.83	10.2	29.2	Date: 5/23/25
0.5	18.2	7.78	6.0	29.9	Termination Time: 1540
1	18.2	7.74	5.7	30.4	Termination Signoff:
2	18.2	7.74	5.6	31.3	Old WQ:
3	18.2	7.65	5.1	32.2	Termination Spot Signoff:
4	18.2	7.74	5.3	33.3	
Meter ID	185A	pH27	RD13	EC11	

Mytilus sp. Development Toxicity Test Count Data

Client: **Reference Toxicant**
Test Material: Potassium Chloride
Test ID #: 109925
Project #: 40139

Test Start Date: 5/24/25
Test End Date: 5/28/25
Enumeration Date: 6/2/25
Investigator: AP/IAV#3

Concentration	Replicate	Number of Normal Larvae	Number of Abnormal Larvae	Total Number Larvae	Percent Normal Development
Lab Water Control	A	204	4	208	
	B	206	1	207	
	C	176	8	184	
	D	202	1	203	
0.5	A	234	1	235	
	B	209	1	210	
	C	204	0	204	
	D	211	3	214	
1	A	197	2	199	
	B	196	2	198	
	C	200	4	204	
	D	197	5	202	
2	A	215	9	224	
	B	215	17	232	
	C	199	3	202	
	D	216	6	222	
3	A	7	166	173	
	B	10	142	152	
	C	8	191	199	
	D	4	154	158	
4	A	0	172	172	
	B	0	188	188	
	C	0	168	168	
	D	0	144	144	

Appendix L

Test Data and Summary of Statistics for the Evaluation of the Toxicity of BWTPF Modified Elutriate Test Sediment to Mysids *(Americamysis bahia)*

CETIS Summary Report

Acute Mysid Survival Test — **Pacific EcoRisk**

Batch ID:	08-8945-4821	**Test Type:**	Survival (96h)	**Analyst:**	Robert Gee
Start Date:	22 May-25 15:10	**Protocol:**	EPA-821-R-02-012 (2002)	**Diluent:**	Not Applicable
Ending Date:	26 May-25 13:44	**Species:**	Americamysis bahia	**Brine:**	Not Applicable
Test Length:	95h	**Taxon:**		**Source:**	Aquatic Indicators, FL **Age:** 5

Sample ID:	10-7995-0318	**Code:**	BWTPF_2025AB_ME	**Project:**	39995
Sample Date:	22 May-25 15:10	**Material:**	Lab Water	**Source:**	Berkeley Water Transportation Pier Fe
Receipt Date:	22 May-25 15:10	**CAS (PC):**		**Station:**	LABQA
Sample Age:	--- (19.9 °C)	**Client:**	City of Berkeley		

Sample Code	Sample ID	Sample Date	Receipt Date	Sample Age	Client Name	Project
BWTPF_2025AB_M	10-7995-0318	22 May-25 15:10	22 May-25 15:10	--- (19.9 °C)	City of Berkeley	39995
Site Water	20-8699-5645	07 May-25 08:45	07 May-25 16:45	15d 6h (3.8 °C)		
BWTPF-2025-DU1	20-1606-8620	06 May-25 08:35	07 May-25 16:45	16d 7h (0.1 °C)		
BWTPF-2025-DU2	15-0488-1916	08 May-25 09:35	10 May-25 08:30	14d 6h (3.7 °C)		
BWTPF-2025-DU3	15-4730-6453	09 May-25 06:40	10 May-25 08:30	13d 8h (3.7 °C)		
BWTPF-2025-DU4	01-9202-7641	07 May-25 12:15	07 May-25 16:45	15d 3h (1.3 °C)		
BWTPF-2025-DU5	16-9940-7949	07 May-25 06:30	07 May-25 16:45	15d 9h (0.9 °C)		

Sample Code	Material Type	Sample Source	Station Location	Lat/Long
BWTPF_2025AB_M	Lab Water	Berkeley Water Transportation Pi	LABQA	
Site Water	Site Water	Berkeley Water Transportation Pi	Site Water	
BWTPF-2025-DU1	Sediment/Elutriate	Berkeley Water Transportation Pi	BWTPF-2025-DU1	
BWTPF-2025-DU2	Sediment/Elutriate	Berkeley Water Transportation Pi	BWTPF-2025-DU2	
BWTPF-2025-DU3	Sediment/Elutriate	Berkeley Water Transportation Pi	BWTPF-2025-DU3	
BWTPF-2025-DU4	Sediment/Elutriate	Berkeley Water Transportation Pi	BWTPF-2025-DU4	
BWTPF-2025-DU5	Sediment/Elutriate	Berkeley Water Transportation Pi	BWTPF-2025-DU5	

SIngle Comparison Summary

Analysis ID	Endpoint	Comparison Method	P-Value	Comparison Result
04-3218-8756	96h Survival Rate	Wilcoxon Rank Sum Two-Sample Test	1.0000	Site Water passed 96h survival rate
01-3728-5635	96h Survival Rate	Wilcoxon Rank Sum Two-Sample Test	1.0000	BWTPF-2025-DU1 passed 96h survival rat
06-0524-4092	96h Survival Rate	Unequal Variance t Two-Sample Test	0.0889	BWTPF-2025-DU2 passed 96h survival rat
06-5656-4777	96h Survival Rate	Wilcoxon Rank Sum Two-Sample Test	0.5000	BWTPF-2025-DU3 passed 96h survival rat
00-9997-7410	96h Survival Rate	Wilcoxon Rank Sum Two-Sample Test	0.5000	BWTPF-2025-DU4 passed 96h survival rat
13-8141-4778	96h Survival Rate	Wilcoxon Rank Sum Two-Sample Test	1.0000	BWTPF-2025-DU5 passed 96h survival rat

96h Survival Rate Summary

Sample	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
BWTPF_2025AB_M	LW	5	1.000	1.000	1.000	1.000	1.000	0.000	0.000	0.00%	0.00%
Site Water	SW	5	1.000	1.000	1.000	1.000	1.000	0.000	0.000	0.00%	0.00%
BWTPF-2025-DU1		5	1.000	1.000	1.000	1.000	1.000	0.000	0.000	0.00%	0.00%
BWTPF-2025-DU2		5	0.960	0.892	1.000	0.900	1.000	0.025	0.055	5.71%	4.00%
BWTPF-2025-DU3		5	0.980	0.924	1.000	0.900	1.000	0.020	0.045	4.56%	2.00%
BWTPF-2025-DU4		5	0.980	0.924	1.000	0.900	1.000	0.020	0.045	4.56%	2.00%
BWTPF-2025-DU5		5	1.000	1.000	1.000	1.000	1.000	0.000	0.000	0.00%	0.00%

96h Survival Rate Detail — MD5: CD9DB62BC7E27230ED698A9FCFFC8540

Sample	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
BWTPF_2025AB_M	LW	1.000	1.000	1.000	1.000	1.000
Site Water	SW	1.000	1.000	1.000	1.000	1.000
BWTPF-2025-DU1		1.000	1.000	1.000	1.000	1.000
BWTPF-2025-DU2		1.000	1.000	0.900	1.000	0.900
BWTPF-2025-DU3		1.000	1.000	1.000	1.000	0.900
BWTPF-2025-DU4		1.000	0.900	1.000	1.000	1.000
BWTPF-2025-DU5		1.000	1.000	1.000	1.000	1.000

Acute Mysid Survival Test **Pacific EcoRisk**

96h Survival Rate Binomials

Sample	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
BWTPF_2025AB_M	LW	10/10	10/10	10/10	10/10	10/10
Site Water	SW	10/10	10/10	10/10	10/10	10/10
BWTPF-2025-DU1		10/10	10/10	10/10	10/10	10/10
BWTPF-2025-DU2		10/10	10/10	9/10	10/10	9/10
BWTPF-2025-DU3		10/10	10/10	10/10	10/10	9/10
BWTPF-2025-DU4		10/10	9/10	10/10	10/10	10/10
BWTPF-2025-DU5		10/10	10/10	10/10	10/10	10/10

Acute Mysid Survival Test — **Pacific EcoRisk**

Analysis ID:	04-3218-8756	**Endpoint:**	96h Survival Rate	**CETIS Version:**	CETIS v2.1.6
Analyzed:	11 Jun-25 9:50	**Analysis:**	Nonparametric-Two Sample	**Status Level:**	1
Edit Date:	11 Jun-25 0:00	**MD5 Hash:**	84FD5A694B13B121DF4781AAB78DDD41	**Editor ID:**	006-243-107-9

Wilcoxon Rank Sum Two-Sample Test

Sample I	vs	Sample II	df	Test Stat	Critical	Ties	P-Type	P-Value	Decision(α:5%)
Lab Water Control		Site Water	8	27.5	---	1	Exact	1.0000	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0	0	1			Indeterminate
Error	0	0	8			
Total	0		9			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Variance Ratio F Test				Indeterminate
Distribution	Shapiro-Wilk W Normality Test				Indeterminate

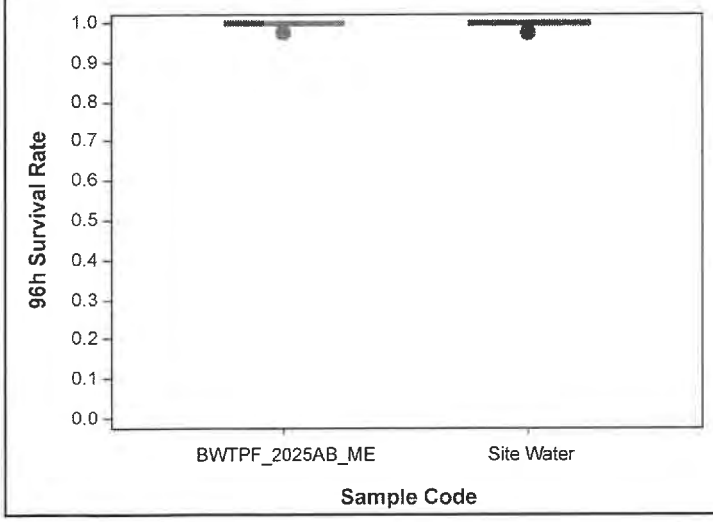
96h Survival Rate Summary

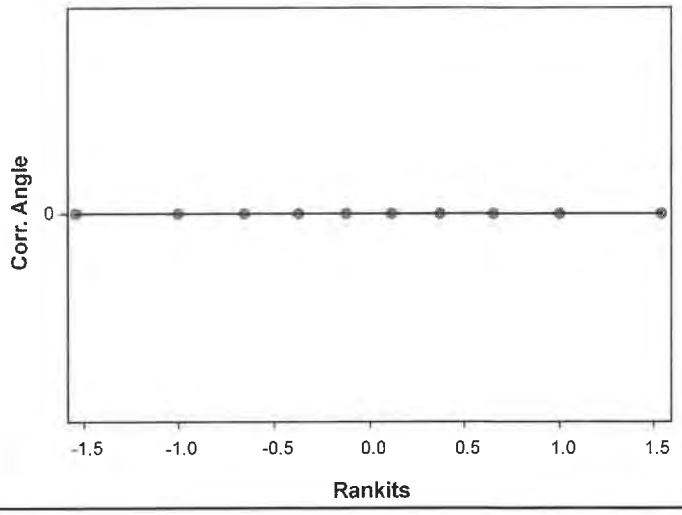
Sample	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
BWTPF_2025AB_M	LW	5	1.000	1.000	1.000	1.000	1.000	1.000	0.000	0.00%	0.00%
Site Water	SW	5	1.000	1.000	1.000	1.000	1.000	1.000	0.000	0.00%	0.00%

Angular (Corrected) Transformed Summary

Sample	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
BWTPF_2025AB_M	LW	5	1.410	1.410	1.410	1.410	1.410	1.410	0.000	0.00%	0.00%
Site Water	SW	5	1.410	1.410	1.410	1.410	1.410	1.410	0.000	0.00%	0.00%

Graphics





96 Hour Acute *Americamysis bahia* Water Column Toxicity Test

Client: Berkeley BWTPF
Test Material: Site Water
Test ID#: multiple Project # 39995
Test Date: 5/22/25 Randomization: 5, 7, 5

Organism Log #: 14916 Age: 5d
Organism Supplier: Aquatic Indicators
Control/Diluent: 25 ppt
Sample Salinity adjusted with: Crystal Sea

Treatment	Temp (°C)	pH new	pH old	D.O. (mg/L) new	D.O. (mg/L) old	Salinity (ppt) new	Salinity (ppt) old	# Live Organisms Rep A	Rep B	Rep C	Rep D	Rep E	SIGN-OFF
Lab Control	19.9	8.12		7.9		25.0		10 NC Stats	10	10	10	10	Test Solution Prep:
Site Water	19.7	7.82		8.5		25.0		10	10	10	10	10	New WQ: BR
													Initiation Date: 5/22/25
													Initiation Time: 1510
													Initiation Signoff: MG
													a.m. Feeding Signoff: NB
Meter ID	178A	pH27		RD12		EC10							p.m. Feeding Signoff: MG
Lab Control	19.7		7.86		7.3		25.7	10	10	10	10	10	Count Date: 5/23/25
Site Water	19.7		7.83		7.2		25.7	10	10	10	10	10	Count Time: 1020
													Count Signoff: BR
													Old WQ: TF
													a.m. Feeding Signoff:
													p.m. Feeding Signoff: NB
Meter ID	133A		PH27		RD13		EC11						
Lab Control	20.2		7.55		6.4		27.2	10	10	10	10	10	Count Date: 5/24/25
Site Water	20.1		7.58		6.5		27.3	10	10	10	10	10	Count Time: 1440
													Count Signoff: TF
													Old WQ: JG
													a.m. Feeding Signoff:
Meter ID	98A		PH30		RD14		EC10						p.m. Feeding Signoff:
Lab Control	19.8		7.88		7.3		27.6	10	10	10	10	10	Count Date: 5/25/25
Site Water	19.7		7.89		7.2		27.6	10	10	10	10	10	Count Time: 0814
													Count Signoff: JK
													Old WQ: KL
													a.m. Feeding Signoff:
Meter ID	177A		pH30		RD14		EC14						p.m. Feeding Signoff:
Lab Control	19.8		7.71		6.5		28.3	10	10	10	10	10	Termination Date: 5/26/25
Site Water	19.6		7.77		6.7		28.6	10	10	10	10	10	Termination Time: 1344
													Termination Signoff: SK
													Old WQ: BR
Meter ID	193A		pH29		RD14		EC10						a.m. Feeding Signoff:

CETIS Analytical Report

Acute Mysid Survival Test — Pacific EcoRisk

Analysis ID:	01-3728-5635	**Endpoint:**	96h Survival Rate	**CETIS Version:**	CETIS v2.1.6
Analyzed:	11 Jun-25 9:50	**Analysis:**	Nonparametric-Two Sample	**Status Level:**	1
Edit Date:	11 Jun-25 0:00	**MD5 Hash:**	A52021A954ED68027F1BEE9A830DECF0	**Editor ID:**	006-243-107-9

Wilcoxon Rank Sum Two-Sample Test

Sample I	vs	Sample II	df	Test Stat	Critical	Ties	P-Type	P-Value	Decision(α:5%)
Lab Water Control		BWTPF-2025-DU	8	27.5	---	1	Exact	1.0000	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0	0	1			Indeterminate
Error	0	0	8			
Total	0		9			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Variance Ratio F Test				Indeterminate
Distribution	Shapiro-Wilk W Normality Test				Indeterminate

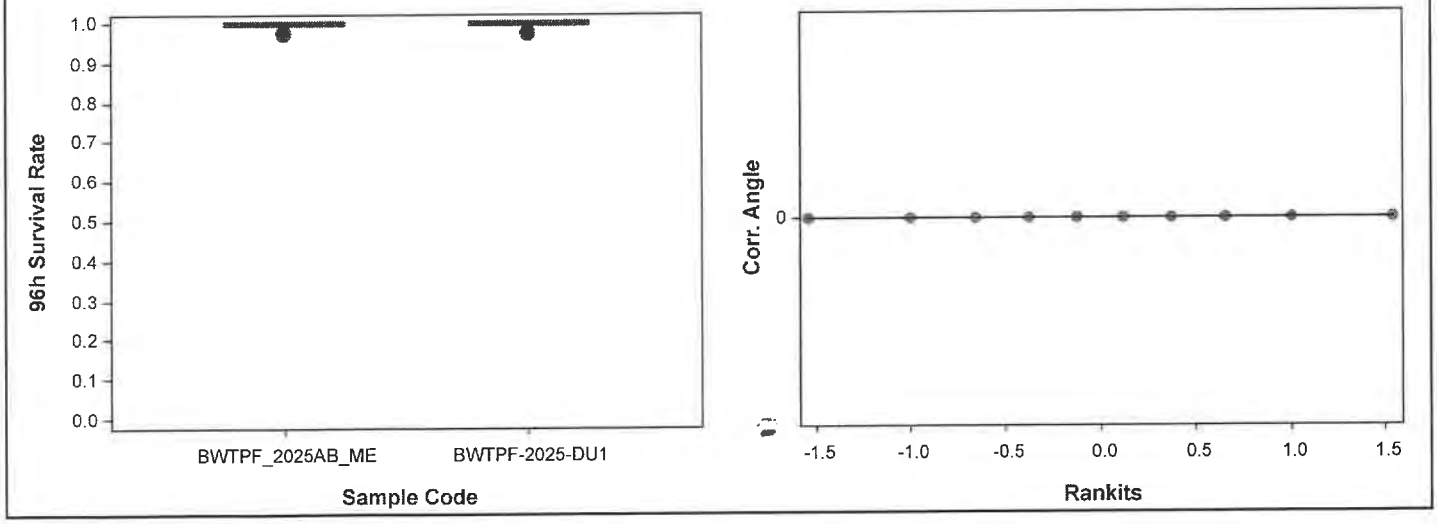
96h Survival Rate Summary

Sample	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
BWTPF_2025AB_M	LW	5	1.000	1.000	1.000	1.000	1.000	1.000	0.000	0.00%	0.00%
BWTPF-2025-DU1		5	1.000	1.000	1.000	1.000	1.000	1.000	0.000	0.00%	0.00%

Angular (Corrected) Transformed Summary

Sample	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
BWTPF_2025AB_M	LW	5	1.410	1.410	1.410	1.410	1.410	1.410	0.000	0.00%	0.00%
BWTPF-2025-DU1		5	1.410	1.410	1.410	1.410	1.410	1.410	0.000	0.00%	0.00%

Graphics



96 Hour Acute *Americamysis bahia* Water Column Toxicity Test

Client: Berkeley BWTPF
Test Material: BWTPF-2025-DU1 MET
Test ID#: 109918 Project #: 39995
Test Date: 5/22/25 Randomization: 5.7.5

Organism Log #: 14916 Age: 5d
Organism Supplier: Aquatic Indicators
Control: 25 ppt
Sample Salinity adjusted with: Hydrotech Sea

Treatment (% Elutriate)	Temp (°C)	pH new	pH old	D.O. (mg/L) new	D.O. (mg/L) old	Salinity (ppt) new	Salinity (ppt) old	NH3 (mg/L) new	# Live Organisms Rep A	Rep B	Rep C	Rep D	Rep E	SIGN-OFF
Lab Control	19.9	8.12		7.9		25.0			10	10	10	10	10	Test Solution Prep:
100%	20.1	8.09		6.3		25.0		C100	10	10	10	10	10	New WQ:
														Initiation Date: 5/22/25
														Initiation Time: 1510
														Initiation Signoff: MG
														a.m. Feeding: NB
Meter ID	178A	pH27		RD12		EC10		DR380						p.m. Feeding: MG
Lab Control	19.7		7.86		7.3		25.7		10	10	10	10	10	Count Date: 5/23/25
100%	19.6		7.83		7.1		25.4		10	10	10	10	10	Count Time: 1020
														Count Signoff:
														Old WQ: TF
														a.m. Feeding
Meter ID	133A		pH27		RD13		EC11							p.m. Feeding
Lab Control	20.2		7.55		6.4		27.2		10	10	10	10	10	Count Date: 5/24/25
100%	20.0		7.67		6.1		27.1		10	10	10	10	10	Count Time: 1440
														Count Signoff: TF
														Old WQ: IG
														a.m. Feeding
Meter ID	88A		pH30		RD14		EC16							p.m. Feeding
Lab Control	19.8		7.88		7.3		27.6		10	10	10	10	10	Count Date: 5/25/25
100%	19.6		7.97		7.4		27.6		10	10	10	10	10	Count Time: 0841
														Count Signoff:
														Old WQ: KL
														a.m. Feeding
Meter ID	177A		pH30		RD11		EC14							p.m. Feeding
Lab Control	19.8		7.71		6.5		28.3		10	10	10	10	10	Termination Date: 5/26/25
100%	19.5		7.87		6.7		29.1		10	10	10	10	10	Termination Time: 1344
														Termination Signoff: SK
														Old WQ:
Meter ID	193A		pH29		RD14		EC10							a.m. Feeding

Acute Mysid Survival Test — **Pacific EcoRisk**

Analysis ID:	06-0524-4092	**Endpoint:**	96h Survival Rate	**CETIS Version:**	CETIS v2.1.6
Analyzed:	11 Jun-25 9:50	**Analysis:**	Parametric-Two Sample	**Status Level:**	1
Edit Date:	11 Jun-25 0:00	**MD5 Hash:**	354A827300A0129211C55FDE177EA6FC	**Editor ID:**	006-243-107-9

Data Transform	Alt Hyp	Comparison Result	PMSD
Angular (Corrected)	C > T	BWTPF-2025-DU2 passed 96h survival rate endpoint	5.83%

Unequal Variance t Two-Sample Test

Sample I	vs	Sample II	df	Test Stat	Critical	MSD	P-Type	P-Value	Decision(α:5%)
Lab Water Control		BWTPF-2025-DU	4	1.63	2.13	0.0851	CDF	0.0889	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.0106237	0.0106237	1	2.67	0.1411	Non-Significant Effect
Error	0.0318712	0.0039839	8			
Total	0.0424949		9			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Variance Ratio F Test				Indeterminate
Distribution	Shapiro-Wilk W Normality Test	0.814	0.741	0.0215	Normal Distribution

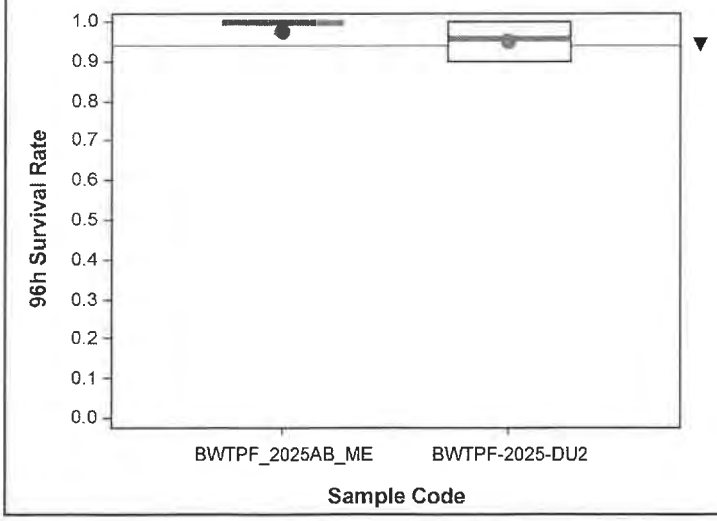
96h Survival Rate Summary

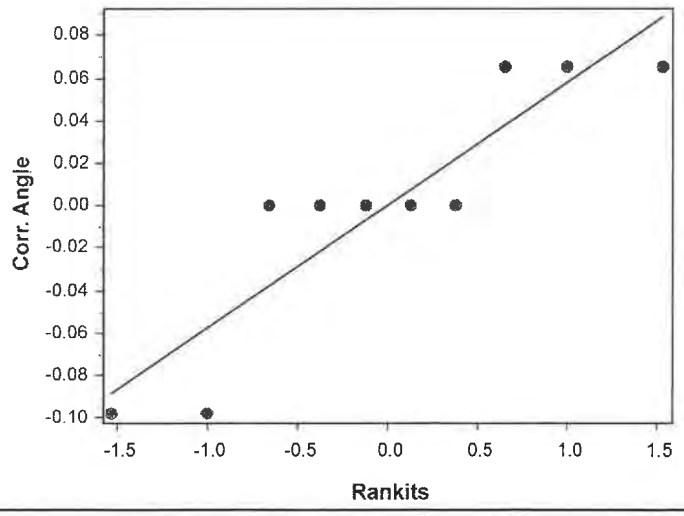
Sample	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
BWTPF_2025AB_M	LW	5	1.000	1.000	1.000	1.000	1.000	1.000	0.000	0.00%	0.00%
BWTPF-2025-DU2		5	0.960	0.892	1.000	1.000	0.900	1.000	0.025	5.71%	4.00%

Angular (Corrected) Transformed Summary

Sample	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
BWTPF_2025AB_M	LW	5	1.410	1.410	1.410	1.410	1.410	1.410	0.000	0.00%	0.00%
BWTPF-2025-DU2		5	1.350	1.240	1.460	1.410	1.250	1.410	0.040	6.63%	4.62%

Graphics





96 Hour Acute *Americamysis bahia* Water Column Toxicity Test

Client: Berkeley BWTPF
Test Material: BWTPF-2025-DU2 MET
Test ID#: 109919 Project #: 39995
Test Date: 5/22/25 Randomization: 5.7.5

Organism Log #: 14916 Age: 5d
Organism Supplier: Aquatic Indicators
Control: 25 ppt
Sample Salinity adjusted with: ~~Instant Sea~~

Treatment (% Elutriate)	Temp (°C)	pH new	pH old	D.O. (mg/L) new	D.O. (mg/L) old	Salinity (ppt) new	Salinity (ppt) old	NH3 (mg/L) new	# Live Organisms Rep A	Rep B	Rep C	Rep D	Rep E	SIGN-OFF
Lab Control	19.9	8.12		7.9		25.0			10	10	10	10	10	Test Solution Prep:
100%	20.1	8.21		5.2		25.2		<1.00	10	10	10	10	10	New WQ:
														Initiation Date: 5/22/25
														Initiation Time: 1510
														Initiation Signoff: MG
														a.m. Feeding: NB
Meter ID	178A	pH27		RD12		EC10		DR300						p.m. Feeding MG
Lab Control	19.7		7.86		7.3		25.7		10	10	10	10	10	Count Date: 5/23/25
100%	19.6		7.90		7.0		25.7		10	10	10	10	10	Count Time: 1020
														Count Signoff:
														Old WQ:
														a.m. Feeding
Meter ID	133A		pH27		RD13		EC11							p.m. Feeding
Lab Control	20.2		7.55		6.4		27.2		10	10	10	10	10	Count Date: 5/24/25
100%	20.0		7.64		6.1		27.9		10	10	10	10	10	Count Time: 1440
														Count Signoff: TF
														Old WQ: IE
														a.m. Feeding
Meter ID	88A		pH30		RD14		EC10							p.m. Feeding DC
Lab Control	19.8		7.88		7.3		27.6		10	10	10	10	10	Count Date: 5/25/25
100%	19.5		8.06		7.3		28.7		10	10	10	10	10	Count Time: 0841
														Count Signoff:
														Old WQ: KC
														a.m. Feeding HO
Meter ID	177A		pH30		RD14		EC14							p.m. Feeding
Lab Control	19.8		7.71		6.5		28.3		10	10	10	10	10	Termination Date: 5/26/25
100%	19.5		7.94		6.6		30.4		10	10	9	10	9	Termination Time: 1344
														Termination Signoff: SK
														Old WQ:
Meter ID	193A		pH29		RD14		EC10							a.m. Feeding HO

Acute Mysid Survival Test

Pacific EcoRisk

Analysis ID:	06-5656-4777	**Endpoint:**	96h Survival Rate	**CETIS Version:**	CETIS v2.1.6
Analyzed:	11 Jun-25 9:50	**Analysis:**	Nonparametric-Two Sample	**Status Level:**	1
Edit Date:	11 Jun-25 0:00	**MD5 Hash:**	D34DFFE490928BD4BAB1F7F275893D04	**Editor ID:**	006-243-107-9

Data Transform	Alt Hyp	Comparison Result	PMSD
Angular (Corrected)	C > T	BWTPF-2025-DU3 passed 96h survival rate endpoint	4.74%

Wilcoxon Rank Sum Two-Sample Test

Sample I	vs	Sample II	df	Test Stat	Critical	Ties	P-Type	P-Value	Decision(α:5%)
Lab Water Control		BWTPF-2025-DU	8	25	---	1	Exact	0.5000	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.0026559	0.0026559	1	1	0.3466	Non-Significant Effect
Error	0.0212475	0.0026559	8			
Total	0.0239034		9			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Variance Ratio F Test				Indeterminate
Distribution	Shapiro-Wilk W Normality Test	0.625	0.741	0.0001	Non-Normal Distribution

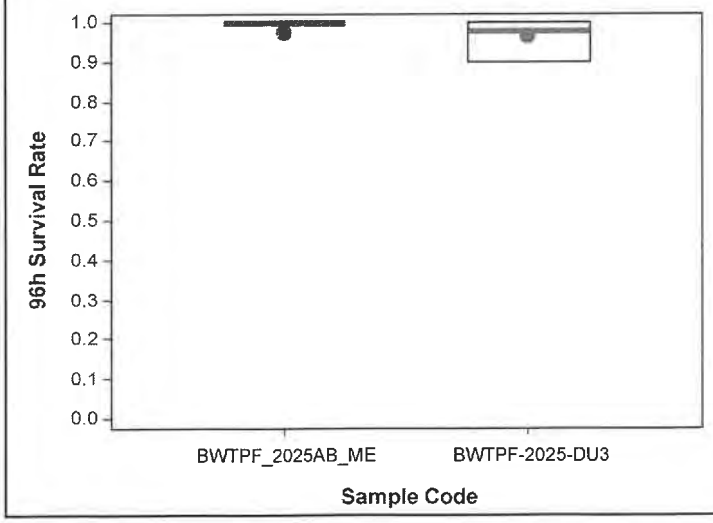
96h Survival Rate Summary

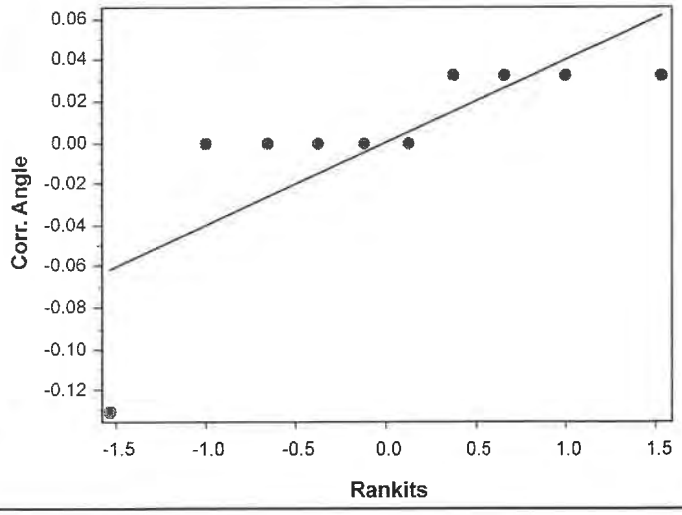
Sample	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
BWTPF_2025AB_M	LW	5	1.000	1.000	1.000	1.000	1.000	1.000	0.000	0.00%	0.00%
BWTPF-2025-DU3		5	0.980	0.924	1.000	1.000	0.900	1.000	0.020	4.56%	2.00%

Angular (Corrected) Transformed Summary

Sample	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
BWTPF_2025AB_M	LW	5	1.410	1.410	1.410	1.410	1.410	1.410	0.000	0.00%	0.00%
BWTPF-2025-DU3		5	1.380	1.290	1.470	1.410	1.250	1.410	0.033	5.28%	2.31%

Graphics





96 Hour Acute *Americamysis bahia* Water Column Toxicity Test

Client: Berkeley BWTPF
Test Material: BWTPF-2025-DU3 MET
Test ID#: 109920 Project #: 39995
Test Date: 5/22/25 Randomization: 5.7.5

Organism Log #: 14916 Age: 5d
Organism Supplier: Aquatic Indicators
Control: 25 ppt
Sample Salinity adjusted with: ~~Crystal Sea~~

Treatment (% Elutriate)	Temp (°C)	pH new	pH old	D.O. (mg/L) new	D.O. (mg/L) old	Salinity (ppt) new	Salinity (ppt) old	NH3 (mg/L) new	# Live Organisms Rep A	Rep B	Rep C	Rep D	Rep E	SIGN-OFF
Lab Control	19.9	8.12		7.9		25.0			10	10	10	10	10	Test Solution Prep:
100%	20.0	8.11		4.7		29.3		2.77	10	10	10	10	10	New WQ: JK
														Initiation Date: 5/22/25
														Initiation Time: 1510
														Initiation Signoff: MG
														a.m. Feeding: NB
Meter ID	178A	pH27		RD12		EC10		DR3800						p.m. Feeding MG
Lab Control	19.7		7.86		7.3		25.7		10	10	10	10	10	Count Date: 5/23/25
100%	19.6		8.02		7.0		25.6		10	10	10	10	10	Count Time: 1020
														Count Signoff:
														Old WQ:
														a.m. Feeding
Meter ID	133A		PH27		RD13		EC11							p.m. Feeding
Lab Control	20.2		7.55		6.4		27.2		10	10	10	10	10	Count Date: 5/24/25
100%	20.0		7.82		6.5		27.7		10	10	10	10	10	Count Time: 1440
														Count Signoff:
														Old WQ:
														a.m. Feeding
Meter ID	88A		pH30		RD14		EC10							p.m. Feeding
Lab Control	19.8		7.88		7.3		27.6		10	10	10	10	10	Count Date: 5/25/25
100%	19.6		8.11		7.3		28.3		10	10	10	10	10	Count Time: 0841
														Count Signoff:
														Old WQ:
														a.m. Feeding
Meter ID	177A		pH30		RD14		EC14							p.m. Feeding
Lab Control	19.8		7.71		6.3		28.3		10	10	10	10	10	Termination Date: 5/26/25
100%	19.5		7.94		6.2		30.2		10	10	10	10	9	Termination Time: 1349
														Termination Signoff: SK
														Old WQ: JK
Meter ID	193A		pH29		RD14		EC10							a.m. Feeding

Acute Mysid Survival Test — **Pacific EcoRisk**

Analysis ID:	00-9997-7410	**Endpoint:**	96h Survival Rate	**CETIS Version:**	CETIS v2.1.6
Analyzed:	11 Jun-25 9:50	**Analysis:**	Nonparametric-Two Sample	**Status Level:**	1
Edit Date:	11 Jun-25 0:00	**MD5 Hash:**	D5BF7BA6B362A08C451C2410EBAAEFC	**Editor ID:**	006-243-107-9

Data Transform	Alt Hyp	Comparison Result	PMSD
Angular (Corrected)	C > T	BWTPF-2025-DU4 passed 96h survival rate endpoint	4.74%

Wilcoxon Rank Sum Two-Sample Test

Sample I	vs	Sample II	df	Test Stat	Critical	Ties	P-Type	P-Value	Decision(α:5%)
Lab Water Control		BWTPF-2025-DU	8	25	---	1	Exact	0.5000	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.0026559	0.0026559	1	1	0.3466	Non-Significant Effect
Error	0.0212475	0.0026559	8			
Total	0.0239034		9			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Variance Ratio F Test				Indeterminate
Distribution	Shapiro-Wilk W Normality Test	0.625	0.741	0.0001	Non-Normal Distribution

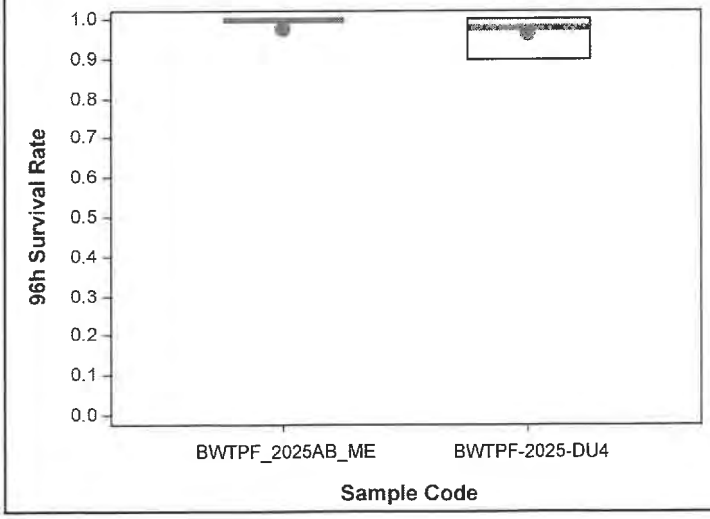
96h Survival Rate Summary

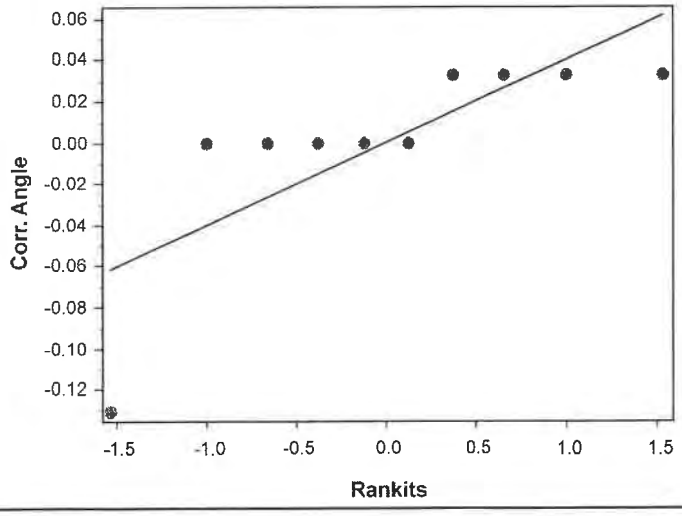
Sample	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
BWTPF_2025AB_M	LW	5	1.000	1.000	1.000	1.000	1.000	1.000	0.000	0.00%	0.00%
BWTPF-2025-DU4		5	0.980	0.924	1.000	1.000	0.900	1.000	0.020	4.56%	2.00%

Angular (Corrected) Transformed Summary

Sample	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
BWTPF_2025AB_M	LW	5	1.410	1.410	1.410	1.410	1.410	1.410	0.000	0.00%	0.00%
BWTPF-2025-DU4		5	1.380	1.290	1.470	1.410	1.250	1.410	0.033	5.28%	2.31%

Graphics





96 Hour Acute *Americamysis bahia* Water Column Toxicity Test

Client: Berkeley BWTPF
Test Material: BWTPF-2025-DU4 MET
Test ID#: 109921 Project #: 39995
Test Date: 5/22/25 Randomization: 5.7.5

Organism Log #: 14916 Age: 5d
Organism Supplier: Aquatic Indicators
Control: 25 ppt
Sample Salinity adjusted with: ~~Crystal Sea~~

Treatment (% Elutriate)	Temp (°C)	pH new	pH old	D.O. (mg/L) new	D.O. (mg/L) old	Salinity (ppt) new	Salinity (ppt) old	NH3 (mg/L) new	# Live Organisms Rep A	Rep B	Rep C	Rep D	Rep E	SIGN-OFF
Lab Control	19.9	8.12		7.9		25.0			10	10	10	10	10	Test Solution Prep:
100%	20.1	7.99		8.0		24.4		3.83	10	10	10	10	10	New WQ: MK
														Initiation Date: 5/22/25
														Initiation Time: 1510
														Initiation Signoff: MG
														a.m. Feeding: NB
Meter ID	178A	pH27		RD12		EC10		DR3800						p.m. Feeding MG
Lab Control	19.7		7.86		7.3		25.7		10	10	10	10	10	Count Date: 5/23/25
100%	19.5		7.96		7.1		25.7		10	9	10	10	10	Count Time: 1010
														Count Signoff: BL
														Old WQ: TF
														a.m. Feeding
Meter ID	133A		pH27		RD13		EC11							p.m. Feeding
Lab Control	20.2		7.55		6.4		27.2		10	10	10	10	10	Count Date: 5/24/25
100%	20.0		7.77		6.6		27.5		10	9	10	10	10	Count Time: 1440
														Count Signoff: TP
														Old WQ: JD
														a.m. Feeding
Meter ID	88A		pH30		RD14		EC10							p.m. Feeding DC
Lab Control	19.8		7.88		7.3		27.6		10	10	10	10	10	Count Date: 5/25/25
100%	19.6		8.07		7.3		27.9		10	9	10	10	10	Count Time: 0814
														Count Signoff: MK
														Old WQ: KC
														a.m. Feeding HD
Meter ID	177A		pH30		RD14		EC14							p.m. Feeding
Lab Control	19.8		7.71		6.3		28.3		10	10	10	10	10	Termination Date: 5/26/25
100%	19.5		7.98		6.3		30.2		10	9	10	10	10	Termination Time: 1344
														Termination Signoff: SK
														Old WQ: MK
Meter ID	193A		pH29		RD14		EC10							a.m. Feeding HD

Acute Mysid Survival Test — **Pacific EcoRisk**

Analysis ID:	13-8141-4778	**Endpoint:**	96h Survival Rate	**CETIS Version:**	CETIS v2.1.6
Analyzed:	11 Jun-25 9:50	**Analysis:**	Nonparametric-Two Sample	**Status Level:**	1
Edit Date:	11 Jun-25 0:00	**MD5 Hash:**	16EF2DE9D58964F4A92FFD9726AC074E	**Editor ID:**	006-243-107-9

Wilcoxon Rank Sum Two-Sample Test

Sample I	vs	Sample II	df	Test Stat	Critical	Ties	P-Type	P-Value	Decision(α:5%)
Lab Water Control		BWTPF-2025-DU	8	27.5	---	1	Exact	1.0000	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0	0	1			Indeterminate
Error	0	0	8			
Total	0		9			

ANOVA Assumptions Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variance	Variance Ratio F Test				Indeterminate
Distribution	Shapiro-Wilk W Normality Test				Indeterminate

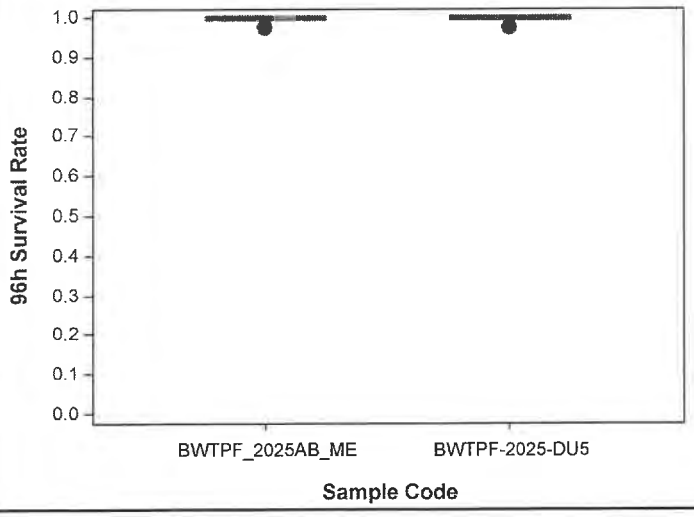
96h Survival Rate Summary

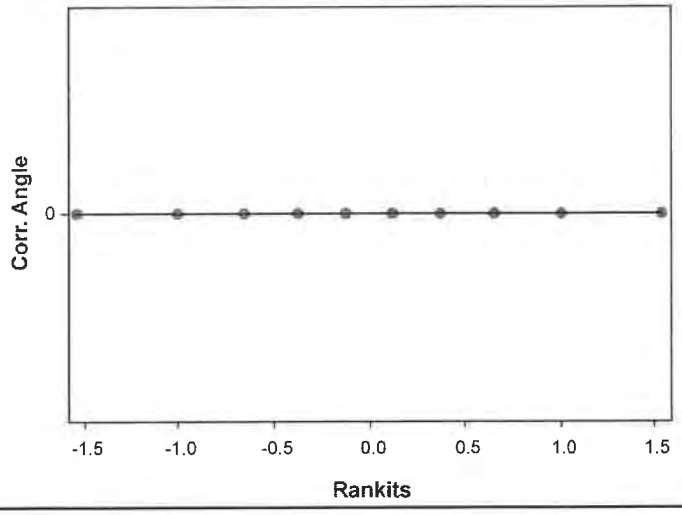
Sample	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
BWTPF_2025AB_M	LW	5	1.000	1.000	1.000	1.000	1.000	1.000	0.000	0.00%	0.00%
BWTPF-2025-DU5		5	1.000	1.000	1.000	1.000	1.000	1.000	0.000	0.00%	0.00%

Angular (Corrected) Transformed Summary

Sample	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
BWTPF_2025AB_M	LW	5	1.410	1.410	1.410	1.410	1.410	1.410	0.000	0.00%	0.00%
BWTPF-2025-DU5		5	1.410	1.410	1.410	1.410	1.410	1.410	0.000	0.00%	0.00%

Graphics





96 Hour Acute *Americamysis bahia* Water Column Toxicity Test

Client: Berkeley BWTPF
Test Material: BWTPF-2025-DU5 MET
Test ID#: 109922 Project #: 39995
Test Date: 5/22/25 Randomization: 5 7 5

Organism Log #: 14916 Age: 5d
Organism Supplier: Aquatic Indicators
Control: 25 ppt
Sample Salinity adjusted with: ~~Crystal Sea~~

Treatment (% Elutriate)	Temp (°C)	pH new	pH old	D.O. (mg/L) new	D.O. (mg/L) old	Salinity (ppt) new	Salinity (ppt) old	NH3 (mg/L) new	# Live Organisms Rep A	Rep B	Rep C	Rep D	Rep E	SIGN-OFF
Lab Control	19.9	8.12		7.9		25.0			10	10	10	10	10	Test Solution Prep:
100%	20.1	8.23		5.2		25.2		1.26	10	10	10	10	10	New WQ:
														Initiation Date: 5/22/25
														Initiation Time: 1510
														Initiation Signoff: MG
														a.m. Feeding: NB
Meter ID	178A	pH27		RD12		EC10		DR3800						p.m. Feeding: MG
Lab Control	19.7		7.86		7.3		25.7		10	10	10	10	10	Count Date: 5/23/25
100%	19.5		7.92		7.1		25.7		10	10	10	10	10	Count Time: 1020
														Count Signoff:
														Old WQ: F
														a.m. Feeding
Meter ID	133A		pH27		RD13		EC14							p.m. Feeding
Lab Control	20.2		7.55		6.4		27.2		10	10	10	10	10	Count Date: 5/24/25
100%	19.9		7.70		6.5		27.2		10	10	10	10	10	Count Time: 1440
														Count Signoff:
														Old WQ:
														a.m. Feeding
Meter ID	88A		pH30		RD14		EC10							p.m. Feeding: PC
Lab Control	19.8		7.88		7.3		27.6		10	10	10	10	10	Count Date: 5/25/25
100%	19.5		7.99		7.3		28.0		10	10	10	10	10	Count Time: 0814
														Count Signoff:
														Old WQ: KL
														a.m. Feeding
Meter ID	177A		pH30		RD14		EC14							p.m. Feeding
Lab Control	19.8		7.71		6.9		28.3		10	10	10	10	10	Termination Date: 5/26/25
100%	19.4		7.92		6.4		31.2		10	10	10	10	10	Termination Time: 1344
														Termination Signoff: SK
														Old WQ:
Meter ID	193A		pH29		RD14		EC10							a.m. Feeding

Appendix M

Test Data and Summary of Statistics for the Reference Toxicant Evaluation of the Mysid, *Americamysis bahia*

CETIS Summary Report

Acute Mysid Survival Test — **Pacific EcoRisk**

Batch ID:	13-0010-2994	**Test Type:**	Survival (96h)	**Analyst:**	Robert Gee
Start Date:	22 May-25 15:15	**Protocol:**	EPA-821-R-02-012 (2002)	**Diluent:**	Laboratory Water
Ending Date:	26 May-25 13:25	**Species:**	Americamysis bahia	**Brine:**	Not Applicable
Test Length:	94h	**Taxon:**		**Source:**	Aquatic Indicators, FL **Age:** 5

Sample ID:	20-3538-3023	**Code:**	KCl	**Project:**	40140
Sample Date:	22 May-25 15:15	**Material:**	Potassium chloride	**Source:**	Reference Toxicant
Receipt Date:	22 May-25 15:15	**CAS (PC):**		**Station:**	In House
Sample Age:	--- (20.2 °C)	**Client:**	Reference Toxicant		

Multiple Comparison Summary

Analysis ID	Endpoint	Comparison Method	NOEL	LOEL	TOEL	PMSD
01-4243-1060	96h Survival Rate	Steel Many-One Rank Sum Test	0.5	1	0.7071	6.08%

Point Estimate Summary

Analysis ID	Endpoint	Point Estimate Method	Level	g/L	95% LCL	95% UCL
19-2243-2208	96h Survival Rate	Spearman-Kärber	EC50	0.703	0.689	0.717

96h Survival Rate Summary

Conc-g/L	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	LW	4	0.975	0.895	1.000	0.900	1.000	0.025	0.050	5.13%	0.00%
0.125		4	0.977	0.905	1.000	0.909	1.000	0.023	0.046	4.65%	-0.23%
0.25		4	1.000	1.000	1.000	1.000	1.000	0.000	0.000	0.00%	-2.56%
0.5		4	0.975	0.895	1.000	0.900	1.000	0.025	0.050	5.13%	0.00%
1		4	0.000	0.000	0.000	0.000	0.000	0.000	0.000	---	100.00%
2		4	0.000	0.000	0.000	0.000	0.000	0.000	0.000	---	100.00%

96h Survival Rate Detail — MD5: 2EB5A3F0655D71F5872DD0F583879099

Conc-g/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	LW	1.000	1.000	1.000	0.900
0.125		0.909	1.000	1.000	1.000
0.25		1.000	1.000	1.000	1.000
0.5		1.000	1.000	0.900	1.000
1		0.000	0.000	0.000	0.000
2		0.000	0.000	0.000	0.000

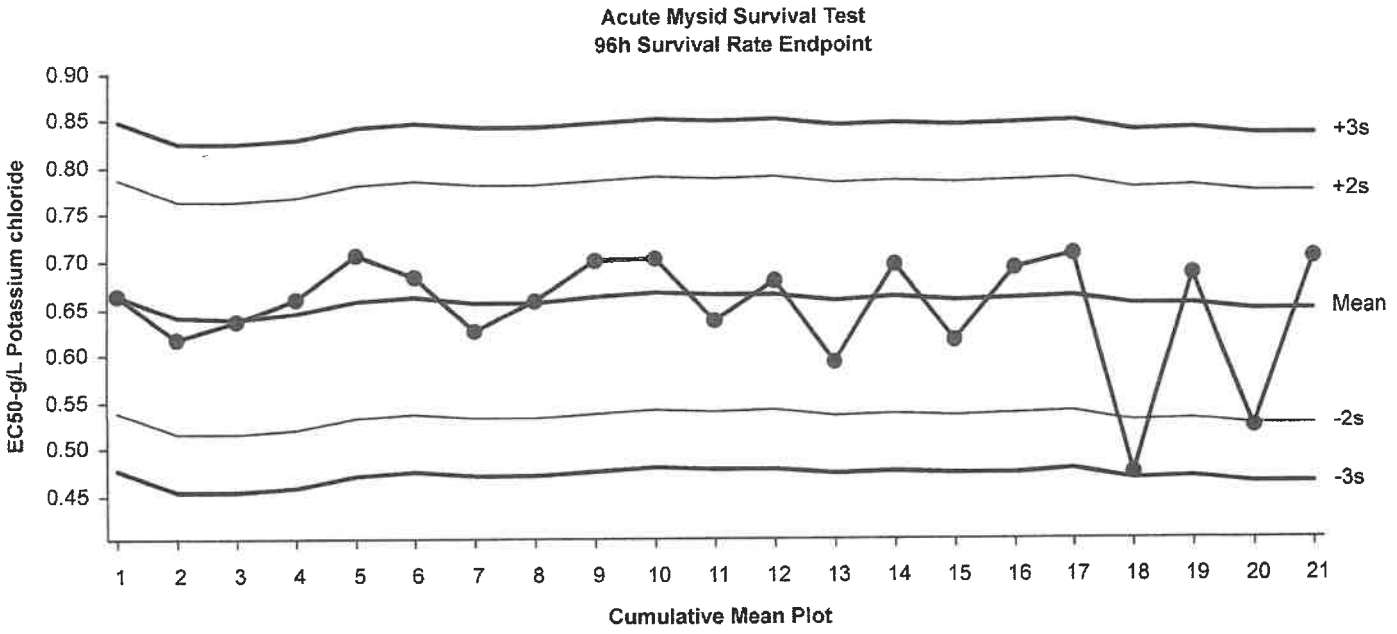
96h Survival Rate Binomials

Conc-g/L	Code	Rep 1	Rep 2	Rep 3	Rep 4
0	LW	10/10	10/10	10/10	9/10
0.125		10/11	10/10	10/10	10/10
0.25		10/10	10/10	11/11	10/10
0.5		10/10	10/10	9/10	10/10
1		0/10	0/10	0/10	0/10
2		0/10	0/10	0/10	0/10

CETIS QC Plot

Acute Mysid Survival Test — **Pacific EcoRisk**

Test Type:	Survival (96h)	**Organism:**	Americamysis bahia	**Material:**	Potassium chloride
Protocol:	EPA-821-R-02-012 (2002)	**Endpoint:**	96h Survival Rate	**Source:**	Reference Toxicant-REF



Mean:	0.6476	**Count:**	20	**-2s Warning Limit:**	0.524	**-3s Action Limit:**	0.462
Sigma:	0.06196	**CV:**	9.57%	**+2s Warning Limit:**	0.772	**+3s Action Limit:**	0.833

Quality Control Data

Point	Year	Month	Day	Time	QC Data	Delta	Sigma	Warning	Action	Test ID	Analysis ID
1	2024	Aug	22	16:20	0.6635	0.01594	0.2572			19-8051-6702	21-1391-8328
2			29	16:10	0.6169	-0.03073	-0.496			17-5842-1208	12-4234-8635
3		Sep	5	16:15	0.6373	-0.01032	-0.1666			11-8619-5905	18-6831-3510
4			12	17:43	0.6598	0.01215	0.1962			02-4193-7119	16-9519-1293
5			24	12:30	0.7071	0.05951	0.9604			06-6129-7427	20-7173-0096
6		Oct	3	15:35	0.6824	0.03481	0.5619			08-6427-2379	11-3965-1021
7			16	16:05	0.6263	-0.02127	-0.3433			20-2740-5359	07-1799-0604
8			23	16:30	0.6586	0.01098	0.1772			03-2334-1970	14-6448-2724
9		Nov	20	17:15	0.7009	0.05325	0.8594			12-8409-9322	03-4053-4162
10		Dec	11	17:40	0.703	0.05537	0.8936			15-1062-9464	08-8108-8814
11			18	15:42	0.6373	-0.01032	-0.1666			14-9553-2803	05-8562-7726
12	2025	Jan	9	16:05	0.6786	0.03102	0.5007			09-8576-1657	18-4921-3523
13			23	11:30	0.592	-0.05563	-0.8979			08-4040-2192	08-6409-9068
14			30	15:30	0.695	0.04736	0.7643			10-1518-0493	16-4406-5592
15		Feb	13	11:20	0.6143	-0.03332	-0.5378			18-4285-3312	19-1760-4153
16			19	14:35	0.6907	0.04309	0.6954			17-5259-3355	20-9163-3210
17		Apr	10	16:20	0.7071	0.05951	0.9604			11-0847-0788	11-6686-9194
18		May	1	14:53	0.4735	-0.1741	-2.81	(-)		00-9402-0904	11-3041-0428
19			8	12:13	0.6855	0.03789	0.6116			15-7455-8421	14-2867-2969
20			14	13:00	0.5227	-0.1249	-2.016	(-)		07-8081-9435	14-8447-2730
21			22	15:15	0.7029	0.05527	0.892			19-8242-1307	19-2243-2208

Analyst: RG QA: KF

96 Hour Acute *Americamysis bahia* Reference Toxicant Test

Client: **Reference Toxicant** Organism Log #: 14916 Age: 5 days

Test Material: Potassium Chloride Organism Supplier: Aquatic Indicators

Test ID#: 109926 Project # 40140 Control/Diluent: DI + Crystal Sea @ 25 ppt

Test Date: 5/22/25 Randomization: 6.4.4 Control Water Batch: 1622

Treatment (g/L KCl)	Temp (°C)	pH new	pH old	D.O. (mg/L) new	D.O. (mg/L) old	Salinity (ppt) new	Salinity (ppt) old	# Live Organisms Rep A	Rep B	Rep C	Rep D	SIGN-OFF
Control	20.2	8.17		7.7		24.8		10	10	10	10	Test Solution Prep:
0.125	20.2	8.17		7.7		24.9		10	10	10	10	New WQ: EC
0.25	20.3	8.17		7.7		25.2		10	10	10	10	Initiation Date: 5/22/25
0.5	20.4	8.15		7.7		25.5		10	10	10	10	Initiation Time: 1515
1	20.3	8.11		7.7		26.0		10	10	10	10	Initiation Signoff: KES
2	20.4	8.04		7.7		26.9		10	10	10	10	RT Batch #: 98
Meter ID	184A	pH26		RD13		EC14						a.m. Feeding Signoff: MG
												p.m. Feeding Signoff:
Control	20.2		8.32		7.4		25.5	10	10	10	10	Count Date: 5/23/25
0.125	20.1		8.34		7.5		25.8	11	10	10	10	Count Time: 1205
0.25	20.1		8.33		7.6		26.1	10	10	11	10	Count Signoff: MG
0.5	20.0		8.35		7.6		26.3	10	10	10	10	Old WQ: IG
1	20.0		8.35		7.6		26.7	7	5	5	5	a.m. Feeding Signoff:
2	20.0		8.34		7.5		27.5	0	0	0	1	p.m. Feeding Signoff:
Meter ID	185A		pH30		RD14		EC14					
Control	19.9	8.06	7.46	7.5	6.4	24.9	25.9	10	10	10	9	Test Solution Prep: IF
0.125	20.0	8.00	7.60	7.6	6.3	25.4	26.6	11	10	10	10	New WQ: IG
0.25	20.0	8.00	7.63	7.7	6.3	25.6	27.5	10	10	11	10	Renewal Date: 5/24/25
0.5	20.0	8.00	7.63	7.7	6.4	25.9	27.0	10	10	9	8	Renewal Time: 1456
1	19.7	7.97	7.71	7.7	6.7	26.4	27.4	0	1	0	0	Renewal Signoff: AP
2	19.7	7.93	7.71	7.7	6.7	27.4	28.8	—	—	—	0	Old WQ: KES
Meter ID	185A	pH30	pH27	RD14	RD13	EC10	EC11					a.m. Feeding Signoff:
												p.m. Feeding Signoff: DK
												RT Batch #: 98
Control	20.0		7.87		7.4		25.3	10	10	10	9	Count Date: 5/25/25
0.125	20.1		7.90		7.4		25.9	11	10	10	10	Count Time: 0810
0.25	20.0		7.93		7.4		25.8	10	10	11	10	Count Signoff: TK
0.5	20.0		7.98		7.4		26.1	10	10	9	10	Old WQ: KL
1	20.0		7.99		7.5		26.9	—	0	—	—	a.m. Feeding Signoff:
2	—		—		—		—	—	—	—	—	p.m. Feeding Signoff:
Meter ID	135A		pH30		RD14		EC14					
Control	20.3		7.79		7.6		26.3	10	10	10	9	Termination Date: 5/26/25
0.125	20.1		7.81		7.7		26.2	10	10	10	10	Termination Time: 1325
0.25	20.4		7.82		7.3		26.2	10	10	11	10	Termination Signoff: KES
0.5	20.2		7.81		7.2		27.3	10	10	9	10	Old WQ: KK
1	—		—		—		—	—	—	—	—	a.m. Feeding Signoff:
2	—		—		—		—	—	—	—	—	
Meter ID	190A		pH29		R14		EC10					

Appendix N

Bioassay Standard Test Conditions

Summary of Test Conditions and Acceptability Criteria for the Amphipod (*Leptocheirus plumulosus)* 10-Day Sediment Toxicity Test	
1. Test type	Static non-renewal
2. Test duration	10 d
3. Temperature	25 ± 1°C
4. Salinity	20 ± 2 ppt
5. Light quality	Ambient Laboratory
6. Light intensity	50 – 100 ft c.
7. Photoperiod	Continuous
8. Test chamber size	1 L
9. Seawater volume	800 mL
10. Sediment depth	25 mm (~200mL)
11. Renewal of seawater	None
12. Age of test organisms	Young adults, 2-4 mm
13. # of organisms per test chamber	20
14. # of replicate chambers/concentration	5
15. # of organisms per sediment type	100
16. Feeding regime	None
17. Test chamber cleaning	Lab washing prior to test
18. Test solution aeration	Low bubble (~100/minute)
19. Overlying water	1 µm-filtered seawater (at test salinity)
20. Test materials	Test sites, reference and control
21. Dilution series	None
22. Endpoint	% Survival
23. Sample holding requirements	< 8 weeks
24. Sample volume required	4 L
25. Test acceptability criteria	≥ 90% survival in the Control treatment
26. Reference toxicant results	Within 2 SD of laboratory mean

Summary of Test Conditions and Acceptability Criteria for the Marine Polychaete (*Neanthes arenaceodentata)* 10-Day Sediment Toxicity Test.		
1.	Test type	Static-renewal
2.	Test duration	10 d
3.	Temperature	20 ± 1°C
4.	Salinity	30 ± 2 ppt
5.	Light quality	Ambient Laboratory
6.	Light intensity	50 – 100 ft c.
7.	Photoperiod	12L/12D
8.	Test chamber size	1 L glass beakers
9.	Test solution volume	800 mL
10.	Sediment depth	25 mm (~200mL)
11.	Renewal of seawater	None
12.	Age of test organisms	2-3 weeks
13.	# of organisms per test chamber	10
14.	# of replicate chambers/concentration	5
15.	# of organisms per sediment type	50
16.	Feeding regime	None
17.	Test chamber cleaning	Lab washing prior to test
18.	Test solution aeration	Low bubble (~100/minute)
19.	Overlying water	1 µm-filtered seawater, at test salinity
20.	Test concentrations	Test sites, reference and Control
21.	Dilution series	None
22.	Endpoint	Survival
23.	Sample holding requirements	< 8 weeks
24.	Sample volume required	4 L
25.	Test acceptability criteria	≥ 90% survival in the Control treatment
26.	Reference toxicant results	Within 2 SD of laboratory mean

Summary of Test Conditions and Acceptability Criteria for the Mussel (*Mytilus galloprovinciales*) Water Column Toxicity Test		
1.	Test type	Static non-renewal
2.	Test duration	48 hours
3.	Salinity	30 ±1 ppt
4.	Temperature	16 ± 1°C (mussels)
5.	Light quality	Ambient Laboratory
6.	Light intensity	50 –100 ft c.
7.	Photoperiod	16L/8D
8.	Test chamber size	20 mL vials
9.	Test solution volume	10 mL
10.	Renewal of seawater	None
11.	Age of test organisms	Embryo ≤ 4h old
12.	# of organisms per test chamber	150 – 300
13.	# of replicate chambers/concentration	5
14.	# of organisms per concentration	750 – 1,500
15.	Feeding regime	None
16.	Test chamber cleaning	Lab washing prior to test
17.	Test chamber aeration	None
18.	Elutriate preparation water	Site water
19.	Test concentrations	Test sites, and Lab Control
20.	Dilution series	Four concentrations (1, 10, 50, 100%) and a Lab Control.
21.	Dilution water	1 µm-filtered seawater, at test salinity
22.	Endpoints	% survival and % normal development
23.	Sampling holding requirements	< 8 weeks
24.	Sample volume required	2L
25.	Test acceptability criteria	≥70% survival and normal development in the Lab Controls, <10% abnormal in Lab Control

Summary of Test Conditions and Acceptability Criteria for the Mysid (*Americamysis bahia*) Water Column Toxicity Test	
1. Test type	Static non-renewal
2. Test duration	96 hours
3. Salinity	25-30 ppt ± 10 ppt
4. Temperature	20 ± 1°C
5. Light quality	Ambient Laboratory
6. Light intensity	50 –100 ft c.
7. Photoperiod	16L/8D
8. Test chamber size	400 mL beaker
9. Test solution volume	200 mL
10. Renewal of seawater	None
11. Age of test organisms	1-5 days; 24-hour range in age
12. # of organisms per test chamber	10
13. # of replicate chambers per concentration	5
14. # of organisms per concentration	50
15. Feeding regime	Daily
16. Test chamber cleaning	Lab washing prior to test
17. Test chamber aeration	If needed to maintain >40% saturation
18. Elutriate preparation water	Site water or Clean sea water
19. Test concentrations	Test sites, and Lab Control
20. Dilution series	100% and a Lab Control.
21. Dilution water	Natural seawater/artificial seawater
22. Endpoints	% Survival
23. Sampling holding requirements	< 8 weeks
24. Sample volume required	2L
25. Test acceptability criteria	≥90% survival in the Lab Controls